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Apprenticeship supply in the Member States of the European Union

Final report

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Apprenticeship supply in the Member States of the European Union

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Executive Summary

Objectives of the study

- The present study is intended to provide an overview of the supply of apprenticeship-type schemes in the EU Member States. For this purpose, the study discusses the effectiveness of these schemes in raising employability and facilitating labour market transitions of apprentices in the EU. Also, the study provides a number of recommendations for improving the functioning and performance of this type of VET schemes.

Concept of apprenticeship used in the context of this study

- "Apprenticeship-type schemes" are understood in the context of this study as those forms of Initial Vocational Education and Training (IVET) that formally combine and alternate company based training (periods of practical work experience at a workplace) with school based education (periods of theoretical/practical education followed in a school or training centre), and whose successful completion leads to nationally recognised initial VET certification degrees. This definition makes no explicit reference to the existence of a contractual direct relationship between the employer and the apprentice.

Overview of apprenticeship-type schemes in the EU

- Apprenticeship-type schemes are well spread all over the European Member States. 24 EU Member States have VET schemes which can be labelled as mainly company based, in the sense that more than half of the training activities take place in a company. However, in a wide majority of these countries, company-based apprenticeships coexist with other mainly school-based training schemes, where tuition takes place at school most of the time, but there are significant components imparted at companies in a real work setting.
- In the whole EU-27, approximately 3.7 million pupils follow apprenticeship studies in a strict sense (2009 data). However, another 5.7 million students attend other apprenticeship-type schemes, mainly school-based VET training with some compulsory work-based training in companies. All in all, European enterprises supplied company training positions for a total of about 9.4 million students in total. Apprenticeship-type students represent approximately an 85% of total secondary VET students and 40.5% of total secondary students in the EU-27. These figures descend to a 33% and a 16% respectively if only strict apprenticeships are considered. The countries with the highest numbers of VET students following apprenticeship-type schemes are the largest countries, e.g. Germany, Italy or France.
- This study has also elaborated an in-depth analysis of nine specific case studies of concrete relevant apprenticeship-type schemes in an array of selected EU Member States (i.e. Denmark, Estonia, France, Germany, Poland, Slovakia, Spain, The Netherlands and the United Kingdom).
- This in-depth analysis shows the existence of important differences amongst schemes and countries in terms of the main actors involved in the design of these schemes, the role that enterprises play in the provision of vocational skills and professional qualifications, the uneven distribution of work-based training and school training, the existing requisites for enterprises and students to participate in the schemes, the different criteria used to select students who access to apprenticeship places, the presence of work contracts versus agreements between enterprises and students or, finally, the different available financing and quality assurance mechanisms.

Lessons learnt from apprenticeship-type schemes

- Both at European and national level, public authorities and social partners are aware of the importance of strengthening the workplace learning/apprenticeship dimension within VET studies as a key option for promoting this type of studies.
- Apprenticeship-type schemes facilitate rapid school-work transitions for students in comparison to exclusively school-based VET schemes: the combination of theoretical and practical skills acquired in enterprises is regarded as useful both for enterprises and for VET students, considering that training contents are closer to enterprises' needs, students get in direct contact with companies and many of them remain after the apprenticeship period. Also, apprenticeship-type schemes provide a very strong signal for detecting skills shortages identified by enterprises.
- However, apprenticeship-type schemes are subject to a number of criticisms and challenges. First, advantages of rapid school-work transitions seem to be transitory in time, so apprenticeships' long run employment prospects are less clear. Second, it is not clear that skills acquired in workplace training within concrete enterprises are equally "transferable" to other enterprises (either in the same or in other sector). Thirdly, not all suitable employers participate in apprenticeship-type schemes, although all of them (directly or indirectly) benefit ("free rider" issue). Fourthly, the access to apprenticeship-type studies is subject to significant biases in terms of gender, ethnic origin or ability considerations. Finally, there is a risk of apprentices being used as a source of cheap labour by some companies.
- As a consequence of the global economic crisis initiated in 2008, the number of students interested in pursuing VET has experienced a remarkable increase whereas the amount of apprenticeships and in-company training placements offered by enterprises has experienced an opposite downward trend in many Member States, since employers are hard pressed by the uncertain business climate.
- The current international geographical mobility of apprenticeship-type students is still low, despite of the interest of having a practical training placement in a foreign company. Existing barriers (in terms of costs, information, recognition of studies, language difficulties, etc.) still seem to outweigh the clear advantages that international mobility has for students, enterprises and VET centres.
- This report has shown that Member States are very aware of these challenges, so they are very active in the setting up of policy measures and initiatives (often in close collaboration with social partners) to counteract these difficulties and make their national apprenticeship-type VET schemes more responsive to the requirements identified at national level; additional incentives for companies, administrative simplification, information systems matching supply and demand, increased modularisation and flexibility, etc. Amongst these changes, Member States are paying special attention to the establishment of initiatives to facilitate progression of VET/apprenticeship-type students into tertiary level education.
- These policy actions at national level are being supported by public authorities at EU level. The recent *Youth Opportunities Initiative*, officially launched 20th December 2011 is a good example of this, where special attention is paid to support apprenticeship-type schemes and the increase in the number of apprenticeship places in Europe.

Recommendations

This report also contains a number of recommendations for further policy action in the context of apprenticeship-type VET studies. The most important suggestions can be summarised as follows:

- Improve the general image of VET, especially in some EU Member States where this image is poorer.

- Increase the importance and use of the workplace training dimension in VET.
- Ensure a correct balance in the provision of both occupational skills and generals skills and competences to students.
- Adapt apprenticeship-type VET contents and systems to enterprises' real needs.
- Ensure homogeneous quality standards of apprenticeship-type VET studies, specially the work-based training dimension.
- Promote horizontal and vertical links between Apprenticeship-type VET studies and other adjacent types of education. Ensure lifelong leaning possibilities of apprenticeship-type VET students.
- Assure a sufficient provision of apprenticeship-type places, especially in the current context of economic crisis.
- Facilitate access of students to apprenticeship-type VET studies.
- Reinforce continuous training activities of VET school teachers and company trainers.
- Foster internationalisation of apprenticeship-type VET studies.
- Take into account social-related considerations in apprenticeship-VET studies, including the access of all types of students and the "cheap labour" and "early drop-out" issues.
- Reinforce early career guidance and counselling activities.
- Foster cooperation of different stakeholders in the design/management of apprenticeship-type schemes
- Facilitate exchange of information and good practices amongst stakeholders of all EU Member States.

Résumé

Objectifs de l'étude

- Le travail présent vise à fournir un aperçu général de l'offre des régimes du type apprentissage dans les États-membres de l'UE. A cet effet, l'étude examine l'efficacité de ces programmes visant à augmenter l'employabilité et faciliter les transitions sur le marché du travail des apprentis dans l'UE. En outre, l'étude fournit un certain nombre de recommandations pour améliorer le fonctionnement et les performances de ce type de régime.

Concept d'apprentissage utilisé dans le cadre de cette étude

- «Les régimes du type apprentissage" sont considérés dans le cadre de cette étude comme l'éducation et la formation professionnelle initiale qui correspond à une formation qui combine en alternance le milieu de travail (périodes de stage dans le lieu de travail) et le milieu scolaire (périodes de formation théorique / pratique, suivies dans un centre scolaire ou un centre de formation). Quand celui-ci s'accomplit avec succès il sera sanctionné par un diplôme d'éducation et formation professionnelle initiale reconnu par l'Etat. Cette définition ne fait aucune référence explicite à l'existence d'une relation contractuelle directe entre l'employeur et l'apprenti.

Vue d'ensemble des régimes du type apprentissage dans l'UE

- Les «régimes du type apprentissage» sont bien répandus entre les États membres. Les 24 États membres de l'UE disposent de programmes d'éducation et formation professionnelle (EFP) qui peuvent être considérés comme étant principalement basés dans l'entreprise, dans le sens que plus de la moitié des activités de formation ont lieu sur le site de travail. Cependant, dans la majorité de ces pays, cet apprentissage basé dans l'entreprise coexiste avec d'autres modèles d'apprentissage basés principalement dans le cadre scolaire où la plupart du temps, la formation se déroule dans les établissements scolaires, avec quand même une composante importante de formation dispensée dans les entreprises dans un contexte de travail réel.
- Dans l'ensemble de l'UE-27, environ 3,7 millions d'élèves suivent des études d'apprentissage dans un sens strict (données de 2009). Cependant, 5,7 millions d'étudiants de plus fréquentent d'autres programmes d'apprentissage, principalement d'éducation et formation professionnelle basé principalement dans les centres scolaires qui exigent, toute fois, une formation obligatoire dans les entreprises. L'ensemble des entreprises européennes fournissent des postes de formation pour environ un total de 9,4 millions d'étudiants. Les étudiants sous modèle d'apprentissage représentent environ 85% du total des étudiants d'éducation et formation professionnelle secondaire et 40,5% du total des élèves d'enseignement secondaire dans l'UE-27. Ces chiffres se réduisent à 33% et 16% respectivement si l'on considère l'apprentissage seulement dans un sens strict. Les pays avec le plus grand nombre d'étudiants ayant des régimes du type apprentissage s'avèrent être les plus grands comme, par exemple, l'Allemagne, l'Italie ou la France.
- Cette étude contient également une analyse en profondeur de neuf études de cas concernant des régimes du type apprentissage qui se distinguent dans un tableau d'États-membres sélectionnés (Danemark, Estonie, France, Allemagne, Pologne, Slovaquie, Espagne, Pays-Bas et le Royaume-Uni).
- Cette analyse en profondeur montre l'existence de différences importantes entre les régimes appliqués et les pays en ce qui concerne les principaux acteurs intervenant dans la conception de ces régimes, ainsi que le rôle que les entreprises jouent dans la presta-

tion des compétences et qualifications professionnelles, la répartition inégale de la formation acquise dans l'entreprise et dans le milieu scolaire, les conditions de participation existantes requises, tant aux entreprises comme aux étudiants, les différences de critères utilisés pour sélectionner les étudiants qui accèdent aux places d'apprentissage, l'existence de contrats de travail versus accords conclus entre les entreprises et les étudiants ou, enfin, les différents mécanismes disponibles en matière de financement et d'assurance de qualité.

Enseignements tirés des régimes du type apprentissage

- Tant au niveau européen comme au niveau national, les pouvoirs publics et les partenaires sociaux sont conscients de l'importance de renforcer la formation/apprentissage sur le lieu de travail dans l'éducation et formation professionnelles comme une option clé pour la promotion de ce type d'études.
- Les régimes du type apprentissage facilitent une rapide transition école-travail pour les étudiants en comparaison avec les régimes d'EFP exclusivement basés dans le milieu scolaire: la combinaison de compétences théoriques et pratiques acquises dans les entreprises sont considérées étant utiles, autant par les entreprises que par les étudiants de l'EFP, considérant que le contenu de la formation s'ajustent plus aux besoins des entreprises, les étudiants entrent en contact direct avec les entreprises et beaucoup d'entre eux y demeurent après la période d'apprentissage. En outre, les régimes du type apprentissage s'avèrent comme un instrument très puissant pour détecter les manques de compétences identifiées par les entreprises.
- Toutefois, les régimes du type apprentissage sont soumis à un certain nombre de critiques ainsi que de défis. Tout d'abord, les avantages perçus de la rapide transition école-travail semble être temporaire, puisque l'apprentissage considéré comme une passerelle efficace pour l'emploi durable n'est pas si claire. Deuxièmement, il n'est pas évident que les compétences acquises dans le milieu de travail au sein d'entreprises concrètes soient «transférables» à d'autres entreprises (soit dans le même secteur ou dans d'autres). Troisièmement, tous les employeurs ne sont pas susceptibles de participer des régimes du type apprentissage n'y participant pas tous, même si tous en tire des bénéfices (directement ou indirectement) (« Free Rider»). Quatrièmement, l'accès aux études d'apprentissage est soumis à des déséquilibres significatifs en raison du sexe, de l'origine ethnique ou des capacités. Enfin, il existe le risque dans certaines entreprises que l'apprenti soit considéré comme une source de main-d'œuvre bon marché.
- Suite à la crise économique mondiale initiée en 2008, le nombre d'étudiants intéressé à suivre une EDF a connu une importante augmentation. Par contre le nombre d'apprentis et les stages de formation offerts dans les entreprises a subi une tendance inverse dans de nombreux États membres, étant donné que les employeurs subissent l'influence de l'incertitude du système économique.
- L'actuelle mobilité géographique des étudiants du type apprentissage au niveau international est encore faible, en dépit de l'intérêt d'avoir un stage au sein d'une entreprise étrangère. Les barrières existantes (en termes de frais, information, reconnaissance des études, difficultés linguistiques, etc.) semblent l'emporter sur les avantages évidents que la mobilité internationale présente pour les étudiants, les entreprises et les centres d'éducation et de formation professionnelle.
- Ce rapport montre que les États membres sont très conscients de ces défis, et se montrent très actifs dans l'application de mesures politiques et initiatives (souvent en étroite collaboration avec les partenaires sociaux) pour neutraliser ces difficultés et pour que ces régimes de type apprentissage soient plus réceptifs aux besoins identifiés au niveau national, motivations supplémentaires pour les entreprises, simplification administrative, systèmes d'information ciblant à caser l'offre et la demande, augmentation de modulation et flexibilité, etc. Parmi ces changements, les États membres soulignent de façon

particulière la mise en place d'initiatives visant à faciliter la progression des étudiants de l'EFP et du type apprentissage dans l'enseignement de niveau tertiaire.

- Ces initiatives politiques au niveau national sont prises en charge par les pouvoirs publics au niveau de l'UE. La récente initiative «Youth Opportunities Initiative» lancée officiellement le 20 Décembre 2011 en est un bon exemple et d'où une attention particulière a été accordée au soutien des régimes du type apprentissage et à l'accroissement du nombre de places d'apprentissage en Europe.

Recommendations

Ce rapport contient également un certain nombre de recommandations pour une action politique future dans le cadre de l'éducation et la formation professionnelle du type apprentissage. Les suggestions principales peuvent se résumer comme suit:

- Améliorer l'image générale de la formation professionnelle et en particulier dans certains États membres de l'UE où celle-ci est moins bonne.
- Augmenter l'importance et l'utilisation de la formation en milieu de travail dans l'EFP.
- Assurer un juste équilibre dans le développement des compétences professionnelles et les compétences générales des étudiants.
- Ajuster les contenus et les systèmes aux besoins réels des entreprises.
- Assurer des standards de qualité homogènes dans le cadre de l'éducation et formation professionnelle du type apprentissage, spécialement dans la formation obtenue en milieu de travail.
- Promouvoir les liens horizontaux et verticaux entre les études d'EFP du type apprentissage et d'autres types d'éducation adjacente. Assurer la possibilité d'accéder à un apprentissage tout au long de la vie, aux étudiants d'EFP du type apprentissage.
- Assurer une offre suffisante d'espaces pour l'EFP du type apprentissage, spécialement dans le contexte actuel de crise économique.
- Faciliter l'accès des étudiants aux études d'EFP du type apprentissage.
- Renforcer les activités de formation continue des enseignants des centres scolaires ainsi que des formateurs dans les entreprises.
- Favoriser l'internationalisation des études d'EFP du type apprentissage.
- Prendre en compte les considérations sociales liées à l'EFP du type apprentissage y compris l'accès de tout type d'étudiants ainsi que la considération de «travail pas cher» et «d'abandon précoce»
- Renforcer la fourniture de service de conseil et orientation professionnelle précoce.
- Favoriser la coopération des différentes personnes concernées dans la conception / gestion des régimes du type apprentissage.
- Faciliter l'échange d'informations et de bonnes pratiques entre toutes les personnes concernées dans tous les États membres de l'UE.

Zusammenfassung

Ziele der Studie

- Die vorliegende Studie gibt einen Überblick über das Angebot an Formen der dualen Berufsausbildung in den Mitgliedstaaten der EU. In diesem Zusammenhang diskutiert die Studie die Effektivität dieser Ausbildungsformen in Bezug auf die Sicherstellung der Beschäftigungsfähigkeit und des Arbeitsmarktübergangs von Auszubildenden in der EU. Zudem zeigt die Studie eine Reihe von Empfehlungen zur Verbesserung der Funktionsweise und Leistungsfähigkeit dieser Art der Berufsausbildung auf.

Begriff der dualen Berufsausbildung im Rahmen der Studie

- "Duale Berufsausbildung" ist im Rahmen dieser Studie definiert als jene Formen der beruflichen Erstausbildung, die betriebliche Ausbildung (Gewinnung praktischer Arbeitserfahrung am Arbeitsplatz) und schulische Ausbildung (theoretische oder praktische Ausbildung in einer Schule oder Bildungseinrichtung) kombinieren und deren erfolgreiche Absolvierung zu einem national anerkannten Berufsbildungsabschluss führt. Die Definition setzt hingegen nicht voraus, dass eine direkte vertragliche Beziehung zwischen dem Arbeitgeber und dem Auszubildenden besteht.

Überblick über Formen der dualen Berufsausbildung in der EU

- Formen der dualen Ausbildung sind in den Mitgliedstaaten der EU weit verbreitet. 24 Mitgliedstaaten haben Arten der Berufsausbildung, die als vorwiegend betrieblich bezeichnet werden können in dem Sinn, dass mehr als die Hälfte der Ausbildungszeit in Betrieben absolviert wird. In den meisten dieser Länder stehen neben der betrieblich orientierten dualen Ausbildung (im engeren Sinn) allerdings auch andere, stärker schulbasierte Ausbildungen zur Verfügung, bei denen der Unterricht größtenteils in Schulen stattfindet, wenngleich es auch hier oft Ausbildungskomponenten in der realen Arbeitsumgebung in Unternehmen gibt.
- In der EU-27 insgesamt befinden sich ca. 3,7 Mio. Auszubildende in einer dualen Berufsausbildung im engeren Sinn (Daten 2009). Weitere 5,7 Mio. Auszubildende befinden sich in anderen Formen der dualen Ausbildung – insbesondere schulische Berufsausbildung mit gewissen verpflichtenden Arbeitspraktika in Betrieben. In Summe stellten europäische Unternehmen betriebliche Ausbildungsplätze für etwa 9,4 Mio. Auszubildende zur Verfügung. Die duale Berufsausbildung im weiteren Sinn hat einen Anteil von ca. 85% an allen Schülern in der sekundären Berufsausbildung und einen Anteil von 40,5% an allen Schülern der Sekundarstufe in der EU-27. Diese Anteile sinken jedoch auf 33% bzw. 16%, wenn nur die duale Ausbildung im engeren Sinn betrachtet wird. Die großen EU-Länder, insbesondere Deutschland, Italien und Frankreich, haben auch die höchste Zahl an Schülern in einer dualen Berufsausbildung.
- Im Rahmen der vorliegenden Studie wurden neun konkrete Formen dualer Berufsausbildung in ausgewählten EU-Mitgliedstaaten (Dänemark, Deutschland, Estland, Frankreich, die Niederlande, Polen, Slowakei, Spanien und Vereinigtes Königreich) im Sinne von Fallstudien im Detail analysiert.
- Diese Analyse brachte deutliche Unterschiede zwischen den Ausbildungsformen bzw. Ländern zutage, und zwar in Bezug auf die bei der Konzeption der Ausbildung involvierten Akteure, die Rolle der Unternehmen in der Vermittlung der beruflichen Fähigkeiten und Kenntnisse, die Anteile praktischer betrieblicher gegenüber schulischer Ausbildung, die notwendigen Voraussetzungen für die teilnehmenden Unternehmen und Auszubildenden, die bei der Besetzung von Ausbildungsstellen angewendeten Kriterien

zur Auswahl von Kandidaten, die erforderlichen Arbeitsverträge oder Arten von Vereinbarungen zwischen Unternehmen und Auszubildenden sowie die Finanzierungs- und Qualitätssicherungsmechanismen.

Wesentliche Studienergebnisse zur dualen Berufsausbildung

- Öffentliche Institutionen und Sozialpartner sowohl auf europäischer als auch nationaler Ebene sehen es als wichtig an, die Komponente des Lernens am Arbeitsplatz bzw. im Betrieb innerhalb berufsbezogener Ausbildungsformen zu stärken, um diese Ausbildungsform zu fördern und attraktiv zu machen.
- Eine duale berufliche Ausbildung begünstigt - im Vergleich zu ausschließlich schulischen Formen der Berufsausbildung - einen raschen Übergang von der Ausbildung in den Arbeitsmarkt. Die Kombination von theoretischen und (in den Betrieben gewonnenen) praktischen Kenntnissen und Fähigkeiten wird in dieser Hinsicht sowohl von den Unternehmen als auch von den Auszubildenden als nützlich betrachtet, da sich die Ausbildungsinhalte stärker am Bedarf der Betriebe orientieren, die Auszubildenden in direkten Kontakt mit Unternehmen kommen und nach der betrieblichen Ausbildung oftmals weiterbeschäftigt werden. Eine duale Berufsausbildung ermöglicht es auch, allfälligen Fachkräftemangel in den Unternehmen frühzeitig zu erkennen.
- Dennoch stehen duale Ausbildungsformen einer Reihe von Herausforderungen gegenüber und sind auch Kritik ausgesetzt. Während der rasche Übergang in den Arbeitsmarkt einen Vorteil darstellt, sind die Befunde bezüglich der langfristigen Beschäftigungsaussichten bei dualen Berufsausbildungen schon weniger eindeutig. Zweitens sind die im Rahmen der betrieblichen Ausbildung in einem bestimmten Unternehmen gewonnen Kenntnisse und Fähigkeiten nicht notwendigerweise in einem anderen Unternehmen (sei es innerhalb derselben oder in einer anderen Branche) gleichermaßen anwendbar. Drittens bieten nicht alle Arbeitgeber Ausbildungsplätze an, obwohl grundsätzlich alle (direkt oder indirekt) davon profitieren (Trittbrettfahrer-Problematik). Viertens bestehen beim Zugang zu Formen der dualen Berufsausbildung häufig starke Ungleichheiten nach Geschlecht, ethnischer Abstammung oder Behinderung. Schließlich besteht das Risiko, dass Auszubildende lediglich als billige Arbeitskräfte angesehen und eingesetzt werden.
- Infolge der Wirtschaftskrise, die 2008 ihren Ausgang genommen hat, ist die Zahl der Personen, die eine Berufsausbildung aufnehmen wollen, deutlich gestiegen. Demgegenüber ist die von den Unternehmen angebotene Zahl der Ausbildungs- und Praktikumsplätze in vielen Mitgliedstaaten zurückgegangen, da die Unternehmen auf Grund der unsicheren Wirtschaftslage sehr unter Druck stehen.
- Gegenwärtig ist die internationale grenzüberschreitende Mobilität von Auszubildenden in dualen Systemen nach wie vor gering, wenngleich grundsätzlich durchaus Interesse an Praktikums- und Ausbildungsplätzen in ausländischen Unternehmen besteht. Barrieren wie die Kosten, mangelnde Information, fehlende Anerkennung von Abschlüssen, Sprachschwierigkeiten etc. scheinen nach wie vor mehr Gewicht zu haben als die Vorteile, die internationale Mobilität für die Auszubildenden, Unternehmen und Bildungseinrichtungen hat.
- Der vorliegende Bericht zeigt, dass sich die Mitgliedstaaten der genannten Herausforderungen bewusst sind. Entsprechend werden vielfältige Maßnahmen und Initiativen ergriffen (oftmals in Kooperation mit den Sozialpartnern), um den Problemen entgegenzuwirken und die nationalen Systeme der dualen Berufsausbildung auf die aktuellen Anforderungen auszurichten: zusätzliche Anreize für Unternehmen, administrative Vereinfachungen, Informationssysteme für die Zusammenführung von Angebot und Nachfrage, verstärkte Modularisierung und Flexibilität etc. Ein besonderer Schwerpunkt wird dabei von den Mitgliedstaaten auf die Erhöhung der Durchlässigkeit von der dualen Berufsausbildung zu tertiären Ausbildungsformen gelegt.

- Die Maßnahmen auf nationaler Ebene werden durch Initiativen und Instrumente auf EU-Ebene unterstützt. Die jüngste Youth Opportunities Initiative, am 20. Dezember 2011 offiziell eingeführt, ist dafür ein gutes Beispiel. Sie legt besonderes Augenmerk auf die Förderung von Formen der dualen Ausbildung und die Erhöhung der Zahl betrieblicher Ausbildungsplätze in Europa.

Empfehlungen

Der vorliegende Bericht enthält auch eine Reihe von Empfehlungen für weitere politische Maßnahmen im Bereich der dualen Berufsausbildung. Die wichtigsten Handlungsfelder können wie folgt zusammengefasst werden:

- Verbesserung des allgemeinen Images der Berufsausbildung – insbesondere in jenen Mitgliedstaaten wo dieses Image besonders schlecht ist.
- Erhöhung der Bedeutung und Nutzung der betrieblichen Ausbildungskomponente in der Berufsausbildung.
- Sicherstellung eines angemessenen Gleichgewichts zwischen der Vermittlung berufsbezogener und allgemeiner Kenntnisse, Fähigkeiten und Kompetenzen.
- Ausrichtung der Inhalte und Systeme der dualen Berufsausbildung auf den tatsächlichen Bedarf der Unternehmen.
- Sicherstellung einheitlicher Qualitätsstandards in der dualen Berufsausbildung, insbesondere bei der betrieblichen Ausbildungskomponente.
- Förderung der horizontalen und vertikalen Durchlässigkeit zwischen dualer Berufsausbildung und anderen Ausbildungsformen. Sicherstellung von Möglichkeiten des lebensbegleitenden Lernens für Personen in der dualen Berufsausbildung.
- Sicherstellung eines ausreichenden Angebots an betrieblichen Ausbildungsplätzen, insbesondere auch in der gegenwärtigen Wirtschaftskrise.
- Erleichterung des Zugangs zur dualen Berufsausbildung.
- Förderung der Weiterbildung von Berufsschullehrern und Ausbildnern in Unternehmen.
- Förderung der Internationalisierung der dualen Berufsausbildung.
- Berücksichtigung sozialpolitischer Aspekte in der dualen Berufsausbildung, u.a. der Frage der Zugänglichkeit für alle Personengruppen, des Problems der Billigarbeitskräfte und des vorzeitigen Ausbildungsabbruchs.
- Förderung und Angebot frühzeitiger Berufsorientierung und -beratung.
- Förderung der Zusammenarbeit der unterschiedlichen Akteure bei der Konzeption und Verwaltung dualer Berufsausbildung
- Förderung des Austausches von Information und bewährten Praktiken zwischen den Akteuren aller EU Mitgliedstaaten.

1. Introduction

1.1 Setting the scene: rationale of the study and concept of apprenticeship

1.1.1 Rationale of the study

The Council of the European Union underlined in June 2011 the fact that young generations have an essential role in influencing the future of the EU and its social, economic, cultural and environmental development. However, the financial and economic crisis has had especially negative effects on young people (European Council, 2011). Amongst other indicators, the high youth unemployment rate (21.1% in the EU-27 for people less than 25 years in 2010[1]) shows the seriousness of these effects and calls for attention on the long-term adverse impacts that early unemployment can have on young people.

The Council Conclusions acknowledge that significant numbers of young people face challenges in transitions from education to work and that skill mismatches between labour demand and supply often hinder the chances of young people to find adequate employment, especially when this is due to a lack of appropriate competences. In particular, "the lack of work experience constitutes a serious obstacle to young people's ability to enter the labour market".

In this situation, the Council invites Member States to implement reforms to improve the quality of education and training systems, in order to facilitate and speed up labour market transitions of young people by further strengthening vocational education and training (VET), including apprenticeships, as well as other work experience schemes and voluntary work.

Thus, this is the general framework of the present report on the *Apprenticeship Supply in Member States*, which the Directorate-General for Employment, Social Affairs and Inclusion commissioned to IKEI Research & Consultancy. A situation where young people's transition from school into the labour market, even if not a new problem, appears at the present moment as particularly difficult and in need of additional efforts both from the education and training stakeholders as from the labour market agents.

This implies the development of a wider range of policies and measures to support young people to acquire the skills and competences they need to enter the labour market, to prevent youth unemployment and to support young people financially through social security benefits (Mutual Learning Programme, 2011). These policies include overall reforms of the school or vocational training systems, measures focusing on specific sectors, occupations or subjects on certain professions and skills required by the labour market, youth guarantee measures, specific active labour market policies, employment subsidies, company-based HR measures or, last but not least, training schemes to bridge the gap between school education and the labour market. Amongst these, apprenticeship-type schemes can play a very relevant role.

Generally speaking, existing national systems of vocational education and training are very diverse amongst EU Member States and even within countries themselves (indeed, in some countries it makes little sense to refer to it as a single 'system'). In any case, several EU Member States have extensive vocational programmes at upper secondary level which attract more than half of overall students.

[1] Eurostat, Labour Force Survey

Apprenticeship schemes combine education and training in schools or other VET institutions with workplace based training, although the role that this workplace based training is also different in the diverse national experiences. In some countries with a longstanding tradition in apprenticeship, these schemes are specifically referred to as the "dual system" (e.g. Austria, Germany), although it is a clear trend that many EU Member States are including within their vocational programmes some elements of workplace based learning (although with important differences between and within countries).

This type of schemes are currently viewed as route that facilitates access into the labour market, where the combination of theoretical and practical skills acquired in enterprises is usually regarded as useful both for enterprises and for VET students. Also, apprenticeship-type schemes seem to perform favourably compared to exclusively school-based education at the same level of training and tends to increase the employment opportunities in early working life, facilitating therefore the transition into full working life. Apprenticeship type-schemes also have the capacity to be more responsive to changing skill demand than institution-based VET.

Considering these advantages and positive outcomes, the extension and strengthening of apprenticeship-type schemes in the European Union appears as a desirable target, particularly in those countries which lack of a well established tradition on this domain and where the systems are weaker and less developed.

1.1.2 The concept of apprenticeship

However, there is not a single and commonly accepted definition of apprenticeship. Cedefop, the European Centre for the Development of Vocational Training, defines apprenticeship as "*Systematic, long-term training alternating periods at the workplace and in an educational institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation*" (CEDEFOP, 2008a). Thus, this definition establishes the existence of a contractual relationship between the employer and the student (linked to remuneration) as a "sine-qua-non" requirement for defining an apprenticeship specific scheme.

Nonetheless, recent work by Eurostat discusses a different operational definition (Eurostat, 2010):

> ***Apprenticeships*** *aim at completing a given education and training programme in the formal education system. Learning time alternates between periods of practical training at the workplace (inside or outside the employer premises) and general/theoretical education in an educational institution or training centre (on a weekly, monthly or yearly basis).*
>
> *An apprenticeship has to fulfil the following criteria:*
>
> - *The apprenticeship is a component of a formal education programme*
> - *Upon successful completion, as evidenced by a qualification or certificate, apprenticeships qualify for employment in a specific occupation or group of occupations.*
> - *The characteristics of the apprenticeship (e.g. occupation, duration, skills to be acquired) are defined in a training contract or formal agreement between the apprentice and the employer directly or via the educational institution.*
> - *The participant (apprentice) receives remuneration (wage or allowance).*
> - *The duration of the contract or formal agreement is at least six months and at most six years. (Duration criteria to be discussed in the TF meeting)*
> - *In most cases, the apprenticeship contract or formal agreement involves an employer and a person not having any other formal arrangement with the latter before the apprenticeship starts.*

This definition can be considered more open than the one by Cedefop, in the sense that the requirement of a contract between the company and the apprentice is less strict and can be substituted by a "formal agreement" via the training centre to which the student belongs. On the other hand, the existence of a remuneration or allowance is kept, while a temporal requisite is introduced (at least six months), though this is still subject to discussion[2].

Considering the inexistence of a single and clear-cut definition of apprenticeship and given the aforementioned diversity of vocational training systems in the European countries, within the context of this research Apprenticeship-type schemes will be defined as those forms of Initial Vocational Education and Training (IVET) that formally combine and alternate company based training (periods of practical work experience at a workplace) with school based education (periods of theoretical/practical education followed in a school or training centre), and whose successful completion leads to well and nationally recognised initial VET certification degrees.

In this sense, the research will also consider those situations where no contractual linkage exists between the employer and the apprentice, for instance, those schemes where the relationship is established between the company and the training centre (although the apprentice develops part of his/her learning activities in a working place).

This approach is close to Cedefop's definition of **alternance training** as "education or training combining periods in an educational institution or training centre and in the workplace. The alternance scheme can take place on a weekly, monthly or yearly basis. Depending on the country and applicable status, participants may be contractually linked to the employer and/or receive a remuneration".

Some additional clarifications are needed:

- As part of initial VET, apprenticeship-type schemes are primarily aimed at young people, although they may also include aged workers who, for instance, want to obtain a formal qualification.
- The scope of the research will be aimed solely at apprenticeship–type schemes that lead to nation-wide recognised Vocational Education and Training (VET) degrees, either in Upper secondary (ISCED 3B)[3] or in tertiary levels (ISCED 5B)[4].

By way of contrast, the definition adopted in the scope of this research does not include the following elements:

- Those VET degrees where work based training is not formally required as an inseparable part of the curricula required for obtaining the degree.
- Special apprenticeship-type schemes aimed at those students who have not completed lower secondary school are not the central focus of the research. These schemes are a form of compensatory education for combating school failure (typically pre-vocational IVET), although they may also combine workplace and school based training.

[2] The same document by Eurostat defines **traineeship** as "another form of vocational training offering practical experience at the workplace (inside or outside the employer premises)…The traineeship corresponds either to a component of a formal education programme or to a non-formal training activity organised by an education, training or employment institution... A traineeship offers paid or unpaid vocational training to students but also to unemployed or inactive persons for a limited period of time…The borderline between apprenticeship and traineeship within a formal educational programme can be difficult."

[3] Upper secondary education (ISCED 3) corresponds to the final stage of secondary education in most OECD countries. ISCED 3B specifically corresponds to Vocational or technical programmes. Usually, these ISCED 3B degrees programmes provide direct access to ISCED 5B.

[4] Tertiary-type B programmes (ISCED 5B) are typically shorter than those of tertiary-type A (ISCED 5A) and focus on practical, technical or occupational skills for direct entry into the labour market, although some theoretical foundations may be covered in the respective programmes. They have a minimum duration of two years full-time equivalent at the tertiary level.

- Apprenticeship-type or in-company practices linked to University degrees (ISCED 5A)[5] will neither be considered as far as, again, they constitute a completely different area from apprenticeship-type IVET.

The adoption of this wide definition of "Apprenticeship-type schemes", allows for the inclusion in the research of a range of existing or new developments of combined workplace and school based training that some Member States are implementing and that do not strictly fit in the traditional definition of apprenticeship. To gain knowledge on these new developments is precisely one of the main objectives of the research project.

1.2 European Policy context on VET and Apprenticeship

During the past decade, European policy with regards to employment and education was narrowly linked to the Lisbon Strategy adopted in 2000. As it is well known, this Strategy aimed at preparing the transition to a knowledge-based European economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market. The strategy also included the modernisation of the European social model, investing in people and combating social exclusion, as well as sustaining the healthy economic outlook and favourable growth prospects by applying an appropriate macro-economic policy mix.

Education and training policies are central to the creation and transmission of knowledge and are a determining factor in the society's potential for innovation. Thus, these policies were central to the Lisbon Strategy, complementing and acting in synergy with other areas of Community action, including employment, social inclusion, research and innovation, culture and youth policy, etc. Accordingly, the strategy's goals were largely dependent on a review and modernization of the education and training systems of European member states.

The role of initial education and vocational training (IVET) in meeting the goals initially set out in the Lisbon strategy can be seen in the targets laid down by the European Union for 2010:

- countries should reduce the share of early school-leavers (aged 18 to 24) to 10%;
- a minimum of 85% of young people (aged 20-24) should have completed at least upper secondary education;
- at least 12.5% of adults (aged 25-64) should participate in lifelong learning.

Following the Lisbon strategy, education policy in the EU has been shaped by a series of statements conforming what has been named as the Copenhagen Process, with enhanced national cooperation in vocational education and training. Participating countries agreed priorities to improve VET and worked on them together, with support from the European Commission and involvement of the social partners. Participating countries are the members of the European Economic Area (EEA – the 27 EU Member States, Iceland, Norway and Liechtenstein) and the EU candidate countries Croatia, the former Yugoslav Republic of Macedonia (FYROM) and Turkey. The most relevant policy statements involved were the following ones:

- The Copenhagen declaration (2002) which established the European dimension to vocational education and training (VET) including recognition of qualifications and competences. Priorities agreed in the Copenhagen declaration were to make qualifications

[5] Tertiary-type A programmes (ISCED 5A) are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture

more easily understood, improve VET quality and information and guidance. Common reference levels and principles were recognised as central to achieving these priorities.

- The Maastricht communiqué (2004) which established action plans at national level to increase investment in VET, increasing flexibility in VET systems so they are capable of meeting the needs of employers and assisting those most vulnerable to changes in the labour market At Maastricht, countries agreed to work together on shared national priorities, including promoting the attractiveness of VET.
- The Helsinki communiqué (2006), which drew attention to the need for IVET to be a more attractive option for young people. Focusing on the question of parity of esteem between VET and general education, the Helsinki communiqué underlined VET's dual challenge, namely to deliver excellence to attract the best and brightest students and to support inclusion by helping integrate those at risk into the labour market.
- The Bordeaux communiqué (2008) reinforced the importance of implementing common European instruments and principles. It concluded that, up to that point, the Copenhagen process had proved effective and that a European VET area is being built based on transparency and mutual trust.
- Finally, the Bruges communiqué (2010) including a package of objectives and actions to increase the quality of vocational training in Europe by making it more accessible and relevant to the needs of the labour market. The Bruges Communiqué includes a mid-term plan aimed at encouraging concrete measures at national level and support at European level. European associations of training institutions also supported the plans in a declaration at the Ministerial meeting.

Table 1.1 European priorities for VET under the Copenhagen process

2002: Copenhagen declaration
▪ Strengthen the European dimension ▪ Improve transparency, information and guidance systems ▪ Recognise competences and qualifications ▪ Promote quality assurance
2004: Maastricht communiqué
▪ Put Copenhagen tools into practice ▪ Improve public/private investments ▪ Address the needs of groups at risk ▪ Develop progression and individualised paths ▪ Strengthen planning and partnerships; identify skill needs ▪ Develop learning methods and environments ▪ Expand teachers' and trainers' competences ▪ Improve VET statistics
2006: Helsinki communiqué
▪ Improve image, status, attractiveness of VET; good governance ▪ Develop further, test and implement common tools by 2010 ▪ More systematic mutual learning; more and better VET statistics ▪ Take all stakeholders on board
2008: Bordeaux communiqué
▪ Implement tools and mechanisms ▪ Raise quality and attractiveness ▪ Improve the links between VET and the labour market ▪ Strengthen cooperation arrangements
2010: Bruges communiqué
▪ Review the use of incentives, rights and obligations to encourage more people to take up training ▪ Implement the 2009 recommendation on quality assurance in vocational training. ▪ Encourage the development of vocational schools, with the support of local and regional authorities ▪ Introduce internationalisation strategies to boost international mobility ▪ Increase cooperation with business to ensure training is relevant, for instance by giving teachers the possibility of practical training in companies. ▪ Launch communication strategies to highlight the benefits of vocational training

Source: Cedefop and DG Employment, Social Affairs and Equal Opportunities

The Bruges Communiqué is part of the new 'Europe 2020: a European strategy for smart, sustainable and inclusive growth', which replaces the Lisbon strategy as the EU's growth strategy for the coming decade. The three mutually reinforcing priorities for growth should help the EU and the Member States deliver high levels of employment, productivity and social cohesion.

Concretely, the Union has set five ambitious objectives - on employment, innovation, education, social inclusion and climate/energy - to be reached by 2020 (see table). Each Member State will adopt its own national targets in each of these areas. Concrete actions at EU and national levels will underpin the strategy.

Table 1.2 Europe 2020 targets and flagship initiatives The 5 targets for the EU in 2020

TARGETS AND BENCHMARKS
1. Employment ▪ 75% of the 20-64 year-olds to be employed
2. R&D / innovation ▪ 3% of the EU's GDP (public and private combined) to be invested in R&D/innovation
3. Climate change / energy ▪ greenhouse gas emissions 20% (or even 30%, if the conditions are right) lower than 1990 ▪ 20% of energy from renewables ▪ 20% increase in energy efficiency
4. Education ▪ Reducing school drop-out rates below 10% ▪ at least 40% of 30-34–year-olds completing third level education
5. Poverty / social exclusion ▪ at least 20 million fewer people in or at risk of poverty and social exclusion
FLAGSHIP INITIATIVES
▪ **'Innovation union'** to improve conditions and access to finance for research and innovation to turn ideas into products and services that create growth and jobs.
▪ '**Youth on the move**' to improve the performance of education systems and ease the entry of young people into the labour market
▪ **'A digital agenda for Europe'** to speed up the roll-out of high-speed Internet and reap the benefits of a digital single market for households and firms
▪ **'Resource efficient Europe'** to help decouple economic growth from use of resources, support the shift to a low-carbon economy, increase use of renewable energy sources, modernise transport and promote energy efficiency
▪ **'An industrial policy for the globalisation era'** to improve the business environment, notably for small- and medium-sized enterprises, and to support development of a strong, sustainable and globally competitive industrial base
▪ **'An agenda for new skills and jobs'** to modernise labour markets and empower people by developing their skills throughout life to increase labour participation and match labour supply and demand better, including through labour mobility
▪ **'European platform against poverty'** to ensure social and territorial cohesion that shares the benefits of growth and jobs widely so people experiencing poverty and social exclusion can live in dignity and take an active part in society

Source: http://ec.europa.eu/europe2020/index_en.htm

Education and training have a fundamental role to play in achieving the 'Europe 2020' objectives, notably by equipping citizens with the skills and competences which the European economy and European society need in order to remain competitive and innovative, but also by helping to promote social cohesion and inclusion. Within this framework, the importance of VET is also recognised in Europe 2020, combining strategic long-term objectives with short-term priorities on four pillars:

- lifelong learning and mobility;
- quality and efficiency of education and training;
- equity and social cohesion; and
- creativity and innovation.

Coming down to apprenticeship-type schemes, it is important to underline that the Bruges communiqué mentions that "work-based learning is a way for people to develop their potential. The work-based component contributes substantially to developing a professional identity and can boost the self-esteem of those who might otherwise see themselves as failures. Learning on the job enables those in employment to develop their potential while maintaining their earnings. A well performing VET, which enables learning on and off-the-job on a part-time or full-time basis, can thereby also strongly contribute to social cohesion in our societies" (Bruges Comuniqué, 2010) .

The communiqué emphasises the labour market relevance of VET, stressing that the employability of VET graduates should be enhanced through cooperation and partnerships between social partners, enterprises, education and training providers, employment services, public authorities, research organisations and other relevant stakeholders, in order to ensure a better match between labour market needs and the development of knowledge, skills and competences. The communiqué explicitly states that:

- Work-based learning carried out in partnership with businesses and non-profit organisations should become a feature of all initial VET courses;
- Participating countries should support the development of apprenticeship-type training and raise awareness of this.

Also, the mid-term plan for 2011–2014 includes actions at national level so that Governments, social partners and VET providers should make the necessary arrangements to:

- maximise work-based learning, including apprenticeships, in order to contribute to increasing the number of apprentices in Europe by 2012;
- create opportunities for enhanced cooperation between VET institutions and enterprises (profit and non-profit), for example through traineeships for teachers in enterprises;
- provide VET institutions with feedback on the employability of VET graduates;
- pursue work on setting-up monitoring systems on transitions from learning to work.
- address legal and administrative obstacles related to the transnational mobility of apprentices and trainees;
- encourage professional chambers, business organisations and other relevant organisations to support the host and sending enterprises in providing appropriate conditions for apprentices and trainees in transnational mobility.

The above mentioned EU 2020 objectives are to be pursued following a series of flagship initiatives (see previous table) amongst which two are worth being highlighted in the framework of the present research.

On the one hand, the initiative **Youth on the Move** under the Smart growth and Education dimension of the 2020 Agenda, which is intended to establish a youth employment framework at the EU level outlining policies aimed at reducing youth unemployment rates. This should promote, with Member States and social partners, young people's entry into the labour market through apprenticeships, stages or other work experience, as well as increasing job opportunities for young people by favouring mobility across the EU.

Youth on the move considers early workplace experience essential for young people to develop the skills and competences required at work. Learning at the workplace in apprenticeship-type training is judged a powerful tool for integrating young people gradually into the labour market (European Commission, 2010). However, the provision and quality of apprenticeship-type training greatly varies among Member States. Some countries have recently started to set up such training schemes. The involvement of Social Partners in their design, organisation, delivery and funding is important for their efficiency and labour market relevance. These actions should be further pursued in order to increase the skills base in voca-

tional pathways, so that by the end of 2012 at least 5 million young people in Europe should be able to enrol in apprenticeship training (currently, the figure is estimated to be 4.2 million.

On the other hand, the **Agenda for New Skills and Jobs** proposes thirteen actions which will contribute to improving the functioning of Europe's labour market, increase job flexibility and security, provide incentives to invest in training, ensure decent working conditions and facilitate job creation. Specifically, the Agenda stresses that employers should be encouraged to co-invest and participate in the activities of education and training institutions, particularly in higher education and vocational education and training; these partnerships can develop and update skills profiles, multidisciplinary curricula and qualifications, and facilitate the provision of work-based learning, from apprenticeships to industrial PhDs. These structured partnerships could offer an efficient and systemic means of developing this interaction (European Commission, 2011).

Finally, it is worth stressing the so-called **Youth Opportunities Initiative**, officially launched last 20th December 2011. This Initiative, built upon the EU 2020 flagship initiatives **Youth on the Move** and **New Skills for New Jobs**, as well as on the June 2011 Council Conclusions on youth employment and the Council Recommendations on early school leavers, is intended at speeding up the implementation of the existing youth policy framework, while focusing even more on young people who are facing the most serious problems on the labour market. This Initiative explicitly recognises the key role that quality apprenticeships and traineeship places can have for equipping young people with the skills needed to enter the labour market, stressing the key role of enterprises in the provision of these places.

For this purpose, the Commission has designed a number of policy measures in the context of this **Youth Opportunities Initiative**. Amongst them, the Commission will use €1.3m of ESF Technical Assistance to support setting up apprenticeship-type schemes through the ESF so to increase, in cooperation with Member States and social partners, the number of apprenticeships schemes in Europe by a 10% by the end of 2013 (i.e. 370,000 new apprenticeships). Also, the Commission will try to gear funds from the ERASMUS and Leonardo da Vinci programmes towards placements in enterprises, resulting in a support for at least 130,000 placements in 2012.

1.3 Objectives of the study and structure on the report

The present study, namely "Study on the Apprenticeship Supply in Member States" is intended to provide an overview of apprenticeship-type schemes in the EU Member States, with a special focus on nine specific EU Member States (i.e. Denmark, Estonia, France, Germany, Poland, Slovenia, Spain, The Netherlands and United Kingdom) in order to conduct more detailed analyses on the characteristics of the main national schemes. The study discusses the effectiveness of these schemes in raising employability and facilitating labour market transitions and geographical mobility of apprentices in the EU. The study also provides recommendations for improving the functioning and performance of this type of VET schemes and for increasing the availability of apprenticeship places (considering the possible effects of the economic crisis).

For this purpose, the report is structured around six main chapters, in addition to this introductory chapter 1. Thus, this chapter has tried to explain the rationale of the study as well as the concept of apprenticeship-type schemes used in the context of this research, as well as a brief explanation of the current European Policy context on VET and how Apprenticeship fits into it.

Meanwhile, chapter 2 is interested in presenting a general overview of existing apprenticeship-type Schemes in the EU-27. For this purpose, the chapter provides a general charac-

terisation of apprenticeship type schemes in Europe, including information about the main features of these schemes, ISCED levels covered, the available data on the number of participants and, finally, recent/planned changes affecting the apprenticeship schemes. This information is provided for each one of the EU 27 countries.

Chapter 3 is interested in characterising and providing an in-depth analysis of existing apprenticeship-type schemes in nine selected EU Member States (i.e. Denmark, Estonia, France, Germany, Poland, Slovakia, Spain, The Netherlands and the United Kingdom) where a specific case-study has been conducted. For this purpose, and having in mind the wide array of possible apprentice-ship-type, the chapter focuses its attention on the most important apprenticeship-type schemes existing in each country in terms of largest share of students. In this respect, a series of different topics will be analysed, such as the main actors involved in the design of the national apprenticeship-type schemes and the definition of training curricula and contents, the role of enterprises, schools and students in these apprenticeship-type schemes, the existing contracts and agreements between partners involved, financing and quality assurance related issues and, finally, a discussion on the geographical mobility of students.

Chapter 4 is interested in analysing the recent or planned changes on the apprenticeship-type schemes in the nine selected EU Member States, as well as the effects of recent economic crisis on the apprenticeship type schemes.

Subsequently, chapter 5 tries to identify the main leassons learned from existing apprenticeship-type schemes. In this sense, the chapter is structured around several sections, including a general valuation of VET studies, an assessment of the contribution of apprenticeship type schemes to school-labour transitions, the capacity of these apprenticeship-type schemes to adapt to companies/labour market needs or the issue of transferability of acquired skills between enterprises/sectors. Also, the chapter analyses the issue of student progression to further Education and Training (including Higher level Apprenticeships), an assessment of financing of apprenticeships and cost-sharing mechanism and, finally, a discussion about social-related considerations in apprenticeship-type schemes.

Finally, chapter 6 provides a series of conclusions and recommendations stemming from the report.

In addition to the Bibliography used, the report provides additional information included in 5 annexes. Thus, and within this same document, Annex A provides a note on the methodology used for conducting the whole research, whereas Annex B list the names of the interviewed experts in the context of the research. Meanwhile, Annex C includes a table summarizing all existing Apprenticeship-type schemes in the EU-27 Member States and the main characteristics of these schemes. Subsequently, and in a separate document, Annex D includes country fiches per EU Member States detailing the identification of general IVET and Apprenticeship-type schemes in each individual Member State, the general characteristics of national schemes, information on financing aspects and number of participants and, finally, information on recent/planned changes in VET policy affecting the national apprenticeship scheme. Finally, Annex E provides an in-depth case study country report about Apprenticeship-type schemes per analysed case study Member States, that is to say, Denmark, Estonia, France, Germany, Poland, Slovakia, Spain, The Netherlands and the United Kingdom.

2. Overview of existing Apprenticeship-type Schemes in the EU-27

2.1 General characterisation of apprenticeship type schemes

This section presents an overview of existing apprenticeship-type schemes in all Member States of the EU. The overview includes information about the main features of these schemes, ISCED levels covered, the available data on the number of participants and, finally, recent/planned changes affecting the apprenticeship schemes.

This general overview has been elaborated using mainly central sources, plus information at national level for selected countries[6]. It is important to stress that the overview tries to extract the main elements contained in the country fiches by EU Member State presented in an Annex to this report.

The overview shows a great variety of vocational training systems in the Member States, starting from the own importance of VT in the overall educational system. While in countries like Austria, Czech Republic, The Netherlands or Germany a wide majority of students follow the vocational path; in others like Cyprus, Latvia, Lithuania or the UK the majority follow the general education path.

Focusing on the characteristics of the vocational education supply, it is interesting to remark that in all Member States there are schemes at upper secondary level where workplace training plays a relevant role, in the sense that a significant share of the tuition takes place in the setting of a company where the students actually work as part of their training during a stipulated period. This means that apprenticeship-type schemes in the sense adopted in this study[7] are well spread all over the European countries.

In thse sense, in 24 of the member States there are VT schemes which can be labelled as *mainly company based*, in the sense that more than 50% of the training takes place in the companies. These are the countries which could be considered to have an apprenticeship system in a strict sense. In fact in many of these countries these studies are referred to in the national educational system as "apprenticeship" (in the national language).

[6] Please see Methodology Annex for details

[7] Please see section 1.1.2. on the concept of apprenticeship

Table 2.1 Existence of apprenticeship-type schemes according to their nature (company vs. school based) in the EU-27 countries

COUNTRY	Apprenticeship-type schemes at Upper secondary level		Apprenticeship-type schemes at Tertiary level
	Mainly company based schemes	Mainly school based schemes	
Austria	X	X	X
Belgium	X	X	
Bulgaria	X	X	
Cyprus	X	X	X
Czech Republic		X	X
Denmark	X		X
Estonia	X		
Finland	X	X	X
France	X	X	
Germany	X	X	X
Greece	X		
Hungary	X	X	X
Ireland	X	X	
Italy	X	X	
Latvia	X	X	X
Lithuania	X	X	
Luxembourg	X	X	
Malta	X	X	
Netherlands	X	X	X
Poland		X	X
Portugal	X	X	
Romania	X		
Slovak Republic	X		X
Slovenia	X		X
Spain		X	X
Sweden	X	X	
United Kingdom	X	X	X

Source: Own elaboration.

However, in 18 of these countries, company based apprenticeship coexists with other vocational training schemes which are mainly school based. In these "looser" apprenticeship-type programmes, tuition takes place at school most of the time, but there are significant components of the curriculum which must be imparted at companies. These components refer basically to practical skills and competences that can only be obtained in a working environment where the students must spend some hours or days per week (even some full weeks stay).

In 3 countries, just this apprenticeship-type school based schemes exist (i.e. Czech Republic, Poland and Spain), while in other 6 (Denmark, Estonia, Greece, Romania, Slovakia and Slovenia) the strict-sense work-based system is the only formula to follow an apprenticeship (in the so-called dual system).

On the other hand, in 13 countries apprenticeship-type schemes at tertiary level (ISCED 5B) have been identified. The tertiary level apprenticeships exist both in countries with apprenticeship schemes in the stricter sense, as in those with mainly school based schemes.

It must be mentioned that in several countries the apprenticeship-type schemes are relatively recent or have been transformed as the result of reform processes generally intended to make vocational training more flexible and to brig it closer to the qualification needs of the production system. This is the case in countries such as Cyprus, Estonia, France, Hungary, Ireland, Lithuania, Portugal, Romania, Slovakia, Slovenia, Spain or UK.

But even in traditional apprenticeship countries diverse reforms are being introduced. In some cases (e.g. Austria) the reforms intend to assure that all school graduates who cannot find a company-based apprenticeship are given the opportunity to learn an apprenticeship-trade at a supra-company training centre (thus adopting a wider approach to apprenticeship than the traditional one). Also, in Germany measures have been taken to increase the number of available apprenticeship places. In Denmark a new alternative pathway has been introduced with the intention to reduce early dropouts in IVET.

Meanwhile, the following table presents some statistical data on the quantitative presence of apprenticeship-type schemes in the different EU Member States. In this regard, this table provides statistical information and estimates on the number of students by EU countries, differentiating them between strictly apprenticeship students (according to national criteria) and apprenticeship-type students (that is to say, students involved in mainly school-based VET training where compulsory work-based training is part of the curriculum).

Table 2.2 Estimate of number of students in Apprenticeship-type studies by EU 27 Member States, secondary education, 2009 (thousands) (*)

	Apprenticeship students (according to national definitions) (1)	Apprenticeship-type scheme students (2)	Total Apprenticeship-type students (1+2)
Austria	132.0	170.0	302.0
Belgium	22.2	613.3	635.6
Bulgaria	1.3	163.5	164.8
Cyprus	0.3	0.9	1.2
Czech Republic	-	347.4	347.4
Denmark	95.0	-	127.7
Estonia	0.6	-	0.6
Finland	70.0	181.9	251.9
France	427.7	605.6	1,033.2
Germany	1,659.3	25.4	1,684.7
Greece	14.0	-	14.0
Hungary	45.6	10.9	56.5
Ireland	26.2	30.0	56.2
Italy	644.6	976.6	1,621.2
Latvia	0.4	34.9	35.3
Lithuania	0.3	22.4	22.7
Luxembourg	7.3	6.0	13.3
Malta	0.7	7.0	7.7
Netherlands	171.9	351.8	523.8
Poland	-	851.1	851.1
Portugal	14.6	110.0	124.7
Romania (**)	-	-	-
Slovakia	2.0	-	2.0
Slovenia	64.2	-	64.2
Spain	-	271.3	271.3
Sweden	7.0	170.9	177.9
United Kingdom	279.7	749.1	1,028.8
European Union (27 countries)	3,686.9	5,700.2	9,419.8

(*) Data excludes ISCED level 5 studies, with the only exception of the French data on apprentices.

(**) No data available for apprenticeship students in Romania since the implementation of this type of training is very recent in time

Source: Eurostat, national case study country reports and CEDEFOP's ReferNet reports and Information and data on apprenticeship schemes of the LLP Committee (LLP/076/2009).

Own elaboration by IKEI

According to the available information for 2009, it can be estimated that in the European Union as a whole there were a total of 3.7 million students involved in apprenticeship studies in a strict sense (according to national criteria), with another 5.7 million students in-

volved in mainly school-based VET training where compulsory work-based training is part of the curriculum (apprenticeship-type schemes). All in all, the European Union needed in 2009 company training positions for a total of 9.4 million students in total (although, of course, with different degrees of involvement depending on the country and type of apprenticeship schemes). These figures suppose that Apprenticeship-type students represent approximately an 85.2% of total secondary VET students and a 40.5% of total secondary students in the EU-27.

In this sense, the very diverse characteristics of the apprenticeship-type schemes (either workplace or school based) available in each EU-27 countries are described below.

2.2 Apprenticeship-type schemes in the case study countries

2.2.1 Denmark

IVET programmes in Denmark only exist in a dual apprenticeship system, alternating between school-based and work-based training. In order to be admitted into the main program of the VET, the students must enter a training agreement with an approved company which offers training. The most typical training agreement is the so-called Ordinær uddannelsesaftale (Regular training agreement). Also, it is worth stressing the short-cycle higher education programmes (kort videregaende uddannelse - KVU). These programmes qualify students for performing practical tasks on an analytical basis, where these programmes are school-based although they often include work placements and/or project work for a company.

An interesting aspect in the Danish VET System consists of a new pathway known as "New Apprenticeship". This programme was introduced in 2006 as an alternative pathway into IVET and is part of the Government's strategy for reducing dropout within IVET (completion rates have fallen from 59% in 2000 to 48% in 2008). Pupils undertaking an IVET programme via the new apprenticeship pathway spend the first year of their education receiving practical training within an enterprise (whereas the traditional dual system starts with a college-based basic introductory stage). The initiative is aimed in particular at pupils who may struggle or lack the motivation to complete the more theoretical school-based education without first gaining a practical insight into the field.

The number of students directly entering an IVET programme at 16 (after completing compulsory schooling) is falling, with a growing proportion either being admitted following a period in the labour market, or, as is becoming increasingly common, after completing a school-based upper secondary education. According to the Statistical Department of the Danish Ministry of Education, in 2009 54,528 students were following a VET main course and 40,447 a basic course; moreover, the number of students with VET training agreements was 50,622. The regular training agreement is the most common one; almost 82% of the students follow a regular training agreement (38,128 in 2011). With regard to new apprenticeship: in some of the technical vocational programs about 40%of the students chose this route, but the share is very small in other vocational and training programs. Concerning tertiary level education, in 2008 and 2009, there were 9,571 and 11,345 students enrolled in KVU.

2.2.2 Estonia

In Estonia, apprenticeship is integrated into regular IVET as a "workplace based study form" ("töökohapõhine õppevorm"). Thus, apprentices can study on different levels and programmes in the Estonian VET system (mainly ISCED 3B, 3C and 4B). 1/3 of the curriculum

is delivered through theoretical instruction and 2/3 through practical training in an enterprise (so majority of skills and knowledge is learned by actual working). The study programme (content and objectives) for workplace based study form (apprenticeship) is the same as for school based study form.

In any case, the Estonian VET system can be characterised as a primarily school-based one which combines theoretical and practical work (at enterprises and at school). More precisely, work practicing in enterprises must form at least 1/4 of vocational training in the programme. Examples of existing VET schemes include the so-called Secondary vocational education ("Kutsekeskharidusõpe") (ISCED 3B), Vocational Training based on Basic Education ("Kutseõpe põhihariduse basil") (ISCED 3C) or the Vocational Training Based on Secondary Education ("Kutseõpe keskhariduse basil") (ISCED 4B). It is important to stress that since the autumn 2009 there is no obligatory enterprise-based training for the students in school-based study form, where the only condition is that practical training (in school and enterprises together) should make up at least 50% of the curricula. This is due to the economic crisis, since finding a practice place in a company has become increasingly difficult.

The legal framework for apprenticeship training (workplace-based training) is relatively recent, as it was issued in March 2007. The new regulation establishes that Apprenticeship is integrated into regular IVET and is formalised as one of two study forms (apprentices can study on all levels in the VET system), and there is no age limit. In fact, the programme has been popular for people already working and who need formal qualifications. Concerning the effects of the crisis on VET, it seems that nowadays it is more difficult for schools to find places for practical training in the companies. Students can no longer expect any stipend from the employer. To solve the problem of the lack of places for practical training, many schools have opened their own workshops or model companies and sell their services to the general public.

VET in Estonia has a low popularity and tends to be undervalued (in comparison to other European countries). Out of all the students at ISCED level 3, about 34% study on VET tracks. In 2010/11 academic year, there were 17,478 students in ISCED 3 vocational programmes, and 10,180 students in Post-Secondary Non-Tertiary vocational programmes (ISCED 4). The number of students in school based initial vocational training in 2010/11 academic year was 27,448, whereas the number of students in workplace based initial vocational training (apprenticeship) was 564.

2.2.3 France

Vocational path at ISCED 3 level in France offers non-academic education linked to businesses and their professions. Studies for vocational examinations can all be undertaken within the school system in vocational high schools, or through apprenticeships. As pupils in vocational high schools ('lycée professionnel'), most students study for the Vocational Baccalauréat (BAC Pro) (3 years of study) or for the Vocational Aptitude Certificate (CAP) which requires 2 years of study. For these students, training takes place mainly in the teaching establishment and includes compulsory training periods in a professional environment. Interestingly, these training periods in a professional environment may last from 12 to 22 weeks, depending on the type of diploma and the specialism, and an agreement is signed by the hosting organisation, the school and the student. Also, students may opt also for the apprenticeship route. In this way, and after an apprenticeship contract is signed an apprentice and an employer, the employer undertakes (apart from the payment of a salary) to provide the apprentice with complete vocational training, given in part within the company and in part in an Apprentice Training Centre. In return, the apprentice undertakes for his training, to work for this employer for the duration of the contract and to do this training course. The theoretical training period in an Apprentices' Training Centre (CFA) covers around 25% of the duration of the contract, whereas the remaining period of practical train-

ing in the company is carried out under the responsibility of an apprentice supervisor who fulfils the role of tutor and has the teaching and vocational competencies required by the law. Apprenticeship contracts are mainly aimed at young people between 16 and 25, and they enable to obtain diplomas or certificates listed in the national directory of vocational certificates. Finally, and concerning tertiary VET (ISCED 5B) studies, students can decide to embark on a 2-year study programme leading to a Higher Technician's Certificate (Brevet de Technicien Supérieur - BTS). In this case, work experience schemes lasting from 4 to 6 weeks are part of the curricula.

Finally, it is important to stress the so-called Professionalization Contract ("contrat de professionnalisation"), designed for Youth aged 16 to 25 years; Job-seekers aged 26 and over and, finally; Beneficiaries of Income of Active Solidarity (RSA), the specific solidarity allowance (ASS) or allowance for disabled adults (AAH). This contract of employment signed between an employer and employee is intended to help the integration or return to employment for young people and adults through the acquisition a professional qualification (certificate, diploma, professional qualification...) recognized by the State and / or a professional sector. The contract alternates periods of general, technological education and professional, company based work in an activity related to the qualification sought.

One of the most interesting aspects of the French apprenticeship system is its funding. The State sets a minimum apprentice wage level for apprentices and an employer levy to support apprenticeship, so training is mainly funded through an apprentice tax paid by all business. Interestingly also, since the start of the 2009 school year the vocational path has been revised. Changes allow the rising of young people's qualification in the vocational path and ease their way towards higher education. This change introduces greater flexibility and permeability within the French education system. On the other hand, a collection of measures was implemented in 2009, known as 'Active Youths' (or 'Jeunes Actifs'), aimed at facilitating the hiring of young people through apprenticeship contracts, due to the economic downturn.

In 2010, among 2,449,900 students in upper secondary education in France (ISCED 3), 42% are in vocational training. Among these students in vocational education, 32% are in apprenticeship. With regard to tertiary level education, in 2009 there were 476,802 students in ISCED 5B programmes (both in school-based and work-based pro-grammes). In 2008, 4.9% of the DUT students and 20.2% of the BTS students followed the apprenticeship system (work-based). Finally, in France there were 147,990 professionalisation contracts signed in 2010.

2.2.4 Germany

The main German IVET path is the so-called "Dual System" (ISCED 3B). Its aim is to provide broad-based basic vocational training and the qualifications and competences required to practise an occupation as a skilled worker. Training takes place on the basis of a private-law vocational training contract between a training enterprise and a young person. The apprentice is trained in an enterprise for 3 to 4 days a week and in the vocational school for up to 2 days a week. Programmes normally last 3 years (some occupations only require 2 years). Work-based training places are usually offered in both private and public enterprises, where the suitability of training enterprises and in-company training personnel is monitored by the relevant autonomous industrial bodies (Chambers). The professional competences in occupations to be acquired in in-company training are specified in a training regulation and included by the training enterprise in an individual training plan. Concerning the tertiary VET level, Dual study programmes combine in-company vocational training with theoretical studies. By combining practical in-company training with theoretical instruction, students have the chance to acquire two qualifications at once in a large number of study programmes: a vocational training qualification and an academic degree. Dual courses of

study are an especially innovative, attractive and practical way of studying that has enjoyed increasing popularity.

On the other hand, it must be stressed that Germany's labour market is closely intertwined with the apprenticeship-place market. Therefore, and as a consequence of the economic crisis, several measures have been put into practice in order to increase the number of apprenticeship places. Also, the Federal Ministry of Education and Research (BMBF) has financed various programmes designed to create additional places and to improve in-company training conditions. An example of this is 'JOBSTARTER - *Für die Zukunft ausbilden*' (training for the future).

The dual system is the largest provider of education at upper secondary level. In 2009, 64.8% of the students opted for a dual-system apprenticeship (2010 BIBB data). After registering a constant increase in new training place contracts since 2005, a decline was noted from 2008 onwards, and in 2010 the number of new apprenticeship contracts declined to 560,073. In fact, over the last years, apprenticeship places have failed to match the strong demand from young people and some wait several years for a place. Finally, concerning ISCED 5B, in 2007 there were 328,429 students. Moreover, ISCED5 Dual Study programmes are be-coming increasingly popular in Germany.

2.2.5 Netherlands

The Dutch Upper Secondary Vocational Education is provided through the vocational programmes known as MBO (middelbaar beroepsonderwijs). MBO vocational programmes are offered at 4 different levels (MBO level 1-ISCED 2; MBO level 2 'basic vocational education' - ISCED 3C short; MBO level 3 'professional education'- ISCED 3C long and, finally; MBO level 4 'middle-management VET'- ISCED 3A. Additionally, there is also a higher 'MBO level 4' known as 'specialist training' (ISCED 4). It is the highest level of the qualification structure for senior secondary VET. The Dutch Vet system offers 2 different learning pathways, school-based (with practical periods in enterprises) and the dual system. The school-based programmes (BOL – beroepsopleidende leerweg) offer practical periods in enterprises, which makes up at least 20% of the study time and a maximum of 60%, and this route can be taken as a full-time or a part-time student. Meanwhile, the dual pathway (BBL – beroepsbegeleidende leerweg) combines learning and working, and training takes place in a company during at least 60% of the study time. Both pathways function in the market as communicating vessels; the same qualifications/diplomas can be achieved via both pathways. Usually, the BBL route is more attractive for adults (young adults), whereas youngsters tend to opt for school-based programmes with practical periods in the curriculum. Concerning Higher Education IVET, it is professionally oriented and it can be also obtained in a dual learning pathway.

There have been no substantial changes since the redesign of the system in 1996. In any case, the qualification structure in Senior Secondary Level IVET (MBO Programmes) has been slightly redesigned in 2010, and it is working towards a new competence-based qualification structure, based on 'occupation competency profiles'. Concerning the economic crisis, the Dutch Government and the social partners signed a social agreement in 2009 in response to the recession, considering issues such as the creation of a Youth Unemployment Plan or the longer stay of youngsters within the education system. This program was called the School Ex Program.

IVET is very popular in The Netherlands. Indeed, 68% of the school population participates in a vocational programme and 32% in general education. Thus, following data available for 2009, there were about 520,000 students in VET programs, out of approx. 730,000 students following secondary education. The BOL (school-based) fulltime route has the most students: about 342,000 in the school year 2009/10. The BBL-route has grown in the period

2006-2010, from 141,000 students in 2006/07 to 172,000 in 2009/10. Concerning MBO's (vocational programmes), participants in the school-based path-way are mainly youngsters, while 40% of those following the dual pathway are aged 25 and over. In any case, general education is viewed as a superior path towards higher education, and improving parity of esteem between the two tracks is a policy priority.

2.2.6 Poland

In Poland, it is possible to identify different types of IVET schemes: Profiled general secondary schools (liceum profilowane, ISCED3A), Technical Secondary Schools (Technikum, ISCED 3A), Basic Vocational Schools (zasadnicza szkola zawodowa, ISCED 3C) and Supplementary Technical Secondary Schools (Technikum uzupelniajace, ISCED 3A). Practical vocational training is organised in the form of practical training classes at school and vocational placements. Thus, all these schemes include the so-called "vocational placements", which take place during summer holidays and are compulsory for pupils. Students undergo practical training at enterprises under real work conditions. The average duration of a placement is 160 hours per academic year (approx. 4 to 6 weeks), although the exact duration of a placement is determined by the school headmaster depending on the type of a school and the specialisation taught. As well as this, VET is provided at Tertiary level by Technical Universities (Politechniki) and State Higher Vocational Schools (Państwowe Wyższe Szkoły Zawodowe). These institutions are entitled to provide first and second level studies as well as uniform master studies (but not doctoral studies). First level programmes (lasting 3 to 4 years) are focused on preparing graduates for a particular profession. Vocational placements are also included, lasting up to 12 weeks per academic year depending on the field of education.

According to the regulation of the Minister of National Education, the cur-rent structure of the Polish VET system has been available since 16 July 2008. Moreover, in the year 2008 the Minister of National Education set up an advisory group in order to develop proposals of modernisation of the VET system, adjusting the VET system to the labour market needs. Interestingly also, it must be pinpointed that the period of 'practical vocational train-ing' in formal VET schools was recently normalized through the Regulation of the Minis-ter of National Education of 15 December 2010 on vocational training. Amongst other aspects, this Regulation has abolished previously existing apprenticeship scheme (mło-dociani pracownicy), basically attended by trainee juvenile workers in craft basic vocational schools founded by craftsmen organizations.

Finally, and after years of bigger popularity of general education, since the school year 2006/2007 a significant increase of interest in vocational education has been noted, maybe due to changes on the labour market connected to the Polish accession to the EU. The available data for the 2009/2010 school year shows that 568,100 pupils attended Technical Secondary Schools, 235,700 Basic Vocational Schools and 47,300 Profiled General Secondary Schools. Concerning Tertiary Level institutions, in the 2008/2009 school year there were 1,927,762 students attending VET courses.

2.2.7 Slovak Republic

All VET schools are categorised as secondary specialised schools (SOŠ, *stredná odborná škola*). In these schools, the balance between school and work-based training is not officially/formally established in the curricula. Programmes are school based and even practical training is usually school based (vocational training is organised in alternance with theoretical education in school workshops or in places suitable for training contracted by schools during the whole school year). There are several study programmes offered at secondary specialised schools, such as the study branch with practice ("*odbor s praxou"*, ISCED 3A)

the study branch with vocational training ("*odbor s odborným výcvikom*", ISCED 3A) or the training branch (ISCED 3C). Meanwhile, and as far as IVET at Tertiary Level is concerned, there are several courses provided by secondary schools, such as "specialising programmes are of at least 2 years in length completed by an absolutorium exam" (ISCED 5B) or the "higher professional programmes are of 3 years in length completed by an absolutorium exam" (ISCED 5B). Again, programmes are mainly school based.

One of the most visible changes of the New Education Act 2008 is the development of a single stream of secondary VET, eliminating the so-called secondary vocational schools. Thus, since September 2008, the VET stream is only provided by secondary specialised schools (SOŠ, *stredné odborné školy*). In practice it means that all secondary vocational schools have been renamed to secondary specialised schools. As well as this, increasing enrolments in ISCED 3A programmes and in particular in grammar schools (gymnasium, offering an academic/general pathway) and a lack of graduates of ISCED 3C programmes has been subject of criticism of businesses. This criticism led to the development and implementation of a new Act on VET in 2009 (Act No. 184/2009). This new Act on VET stimulates employers to contract students, as it recognises related eligible costs of employers as tax deductible. Thus, it establishes an area for the participation of employers into VET, as well as for the admission of private investment resources into this type of education, in effort to facilitate assertion into the labour market and to prevent from current mismatch between IVET and labour market needs.

In 2008, there were 193,898 pupils (participants) in IVET in the Slovak Republic who were preparing in secondary vocational schools. Secondary VET schools have dominated permanently over secondary general schools. According to 2009 data, 71.6% of the students in ISCED3 followed the vocational path (28.4% the general path). However, it must be stressed that the general education stream has been in a gradual increase since 1989 till present.

2.2.8 Spain

The Spanish Education System does not contemplate the figure of apprentices as such. In any case, there is a type of working contract known as 'Training Contract' ("*Contrato para la Formación*"), which provides participants with practical and theoretical learning, and which is specially aimed at people suffering from lack of qualifications. In any case, the Spanish IVET system distinguishes two main types of degrees, that is to say, the Intermediate Level Vocational Training ("*Ciclo Formativo de Grado Medio*")(ISCED 3B) and the Advanced Vocational Training ("*Ciclo Formativo de Grado Superior*") (ISCED 5B). Both degrees last 2 academic years each, and also both of them include a module of workplace training (which is not considered as employment). This Workplace Training Module ("*Formación en Centros de Trabajo*", FCT) takes place during the last year of the training, and the number of hours in the module range between 400 and 600 hours (10-20 weeks). This workplace training module is compulsory for all vocational training students, and the module is not associated with any specific unit of competency, but it does affect the general competencies of the training course.

In Spain, it is worth stressing that general/academic education has traditionally been a preferred choice, whereas the vocational path was mainly an option for students who failed primary education and had fewer economic resources. However, it seems that this general trend is currently changing, as the Ministries of Labour and Education are working together in order to raise attractiveness of VET, improving its quality and the perception of society. The recent 2006 Organic Law on Education (Ley Orgánica de Educación, LOE) has reinforced the role of IVET studies within the general education system, stressing the importance of the Workplace Training Modules. Moreover, the Law 2/2011 for a Sustainable Economy has

tried to promote permeability within the Spanish education system, as well as more flexible and adaptable training programmes.

Concerning some statistical figures, approximately 281,787 students participated in Intermediate Level Vocational Training (ISCED3B courses) in the 2010/11 academic year, which means 31.4% of the students at upper secondary level. Concerning ISCED5B, there were approximately 256,228 students (15.1% of the total students in ISCED5), according to data for the academic year 2010/11. The percentage of secondary education students that decide to follow initial VET studies has experienced a remarkable upward trend in the last years.

2.2.9 United Kingdom

Within the UK, there is no unified VET structure and provision is profuse. Historically, VET has developed in an ad hoc way, rather than through central planning. In this sense, the UK system distinguishes between a school-based approach and a work-based approach. In the first case, it is possible to identify the IVET provided by Sixth form colleges and FE (Further Education) Colleges, who offer amongst others, vocational courses aimed at ISCED 3 level. In any case, there is a wide variety of programmes, and the balance between school-based and work-based training varies on the course/college. Meanwhile, and as far as Tertiary Level IVET is concerned, it is possible to identify several possibilities, such as the so-called Higher National Certificates and Diplomas (HNCs and HNDs) or the Foundation Degrees. There is no separate identification of 'vocational' higher education in the UK, so most institutions offer both vocational and general courses. Again, some of these programmes involve a combination of college and workplace learning, but the balance between theory and practice varies. More precisely, Foundation Degrees, which were designed in conjunction with employers, were introduced in 2001; they integrate academic and work-based learning.

In addition to these school-based schemes, the UK has got an Apprenticeship scheme. Through this scheme, students formally combine employment-based training in a broad range of sectors with training provided either by a college or other training provider, where students gain recognised qualifications. There are three levels of Apprenticeship available, that is to say, i) Intermediate Level Apprenticeships (ISCED 3C), ii) Advanced Level Apprenticeships (ISCED 3A & 3B) and finally, iii) Higher Apprenticeships (ISCED 5B). There is no single set time to complete Apprenticeships (they normally last between 1 and 3-4 years) and they vary widely in content and size depending on the type of programme and the level attained. Apprentices receive pay and have the status of employees of the organisation where they work. They have a contract and also an individual learning plan, which employers develop with the help of local learning providers. Apprentices typically spend one day per week at college studying the technical certificate and the remainder of their time in training or work with their employer.

In England, the new Apprenticeship Act was passed last year 2009, and a National Apprenticeship Service (NAS) was set up in April 2009 having end to end policy responsibility for Apprenticeships and providing a single contact point for employers and apprentices. A key part of this service is the new on-line system for Apprenticeship vacancy matching. As well as this, UK is working on legislation which will put the Apprenticeship programme on a statutory basis, aiming at ensuring that an Apprenticeship place is available for all qualified young people by 2013. Concerning the economic crisis, several measures have been implemented; for instance, the apprenticeship 'Clearing House' was a rapid response service aimed at finding new employer places for apprentices facing redundancy. As well as this, the 'Small Change, Big Difference' Ten Minute Rule Bill aims at increasing the number of private sector work-based apprenticeships available to young people, placing a duty on companies who receive large public sector contracts to employ additional apprentices.

Since the start of the modern apprenticeship reform in 1994, one million apprentices have joined the programme. In England, it is estimated that 5.5% of the 16 year olds are engaged in government-supported work-based learning (National Statistics, 2008). There were 239,900 Apprenticeship starts in the 2008-09 academic year and 143,400 Apprenticeship framework achievements. Since then, with the economic downturn persisting, the number of Apprenticeship places has declined. The reason for the decreasing number of Apprentices is partly the unwillingness of the firms to recruit Apprentices who have initial training needs and their wish to reduce discretionary spending, although the Government's goal of promoting Apprenticeships. Finally, concerning tertiary education, in the 2009-2010 academic year there were 258,000 students attending university, and 99,475 studying a foundation degree.

2.3 Apprenticeship type schemes in other EU countries

2.3.1 Austria

In Austria, it is possible to identify several VET schemes related to upper secondary level. The most important one is the "Dual VET System", also called 'apprenticeship training' (Lehre, Lehrlingsausbildung). This dual VET constitutes a particularly practice-oriented variant of VET, where training takes place at the training company (80% of the tuition hours) as well as at a vocational school (20%). The apprenticeship diploma represents a full professional qualification. In addition to this "dual syetem", it is possible to identify other mainly school-based VET schemes, such as the VET schools (berufsbildende mittlere Schulen, BMS)(ISCED 3B) and the VET colleges (berufsbildende höhere Schulen, BHS) (ISCED 3A/4A). In both cases, tuition hours include a 10% of working practice at an enterprise. Referring to tertiary level VET studies, it is possible to identify the so-called Fachhochschulen (ISCED 5B), intended to provide a scientifically founded vocational qualification well tailored to concrete occupational fields, where periods of work placement form a mandatory part of the curriculum).

All Austrian stakeholders and decision-makers consider it imperative to maintain the high importance of VET, stressing the importance of increasingly gaining young people for the VET path by launching advertising and information campaigns, as well as safeguarding the quality of VET paths. As far as recent changes are concerned, and in 2006, the Vocational Training Act was amended, providing a legal basis for modularising apprenticeship which aims at making VET system more flexible (better linking IVET and CVET) and responsive to sectoral needs as well as increasing the number of training enterprises (modular apprenticeship consists of a basic module as well as main and specialised modules, allowing acquisition of qualifications according to special production modes and services of particular sectors). Also, the so-called 'Training guarantee for young people up to the age of 18' has been introduced in June 2008, basically intended to assure that all compulsory school graduates who do not have a place at an upper secondary school or cannot find a company-based apprenticeship place are given the opportunity to learn an apprenticeship trade at a supra-company training centre.

Concerning available statistical information, large participant figures reflect the high attractiveness of the Austrian IVET. Thus, some 80% of 16 year-old students attend VET paths (in a broad sense), whereas the apprenticeship system (also known as 'dual VET') provides post-compulsory education and training for around 40% of all young people. In 2009 the apprenticeship statistics of the Federal Economic Chamber detailed some 40,000 training companies, which were training ca. 132,000 apprentices.

2.3.2 Belgium

The Belgian IVET system is very complex due to the political system and state structure of the country. In any case, it is possible to identify three main VET schemes that combine to different degrees work-based and school based training periods, this is, the "Alternance Education" (Upper Secondary- ISCED 3), the so-called "Apprenticeship" (ISCED 2 & 3) and, finally, the "Industrial Apprenticeship Contract". Thus, "Alternance education" is aimed at students in part-time compulsory education, and it consists of an agreement under which there is alternance between training in enterprise and theoretical training (usually students attend schools for 2 days per week, and for 3 days they are involved in work experience). Meanwhile, Apprenticeship is a recognized form of part-time compulsory education, and it is mainly organised for self-employed occupations, small industries and craftsmanship, combining both practical and theoretical training (practical training takes 4 days a week with a self-employed person or within an SME whereas theoretical training is provided by specialised trainers for 1 day a week). Finally, the industrial apprenticeship contract is aimed at young people with a poor school record who intend to carry out an alternance type education.

The Belgian Government is currently working on the development of courses of Higher Vocational Education, where workplace learning plays a key role, in close co-operation with the professional sectors. Also, and as a consequence of the economic crisis, more investment in training related to the latest developments in environmental technology, mobility, chemical, building automation, ICT, etc is promoted.

Finally, most Belgian young people attend technical and vocational streams in Secondary Education, although these streams have less standing than general education. In 2006, the rate of attendance in vocational secondary education (ISCED3) in the Flemish-speaking community (75 %) and also the 62 % in the French-and German-speaking community was higher than the European average 46% (Eurostat data). Moreover, the number of students in VET training has been increased due to the financial and economic crisis. Specifically, in Wallonia region, the number of students enrolled in 2007 was 8,965.

2.3.3 Bulgaria

VET courses in Bulgaria are organised according to different framework programs, which in some cases are also open to adults. Main Upper Secondary Level courses for students and with a school and work based combination of training are included within B and C framework programmes, which were approved by the Minister of Education and Science in 2003. Thus, Program B final certificates equate to ISCED 3 Level, and the ratio between compulsory vocational training and work placement is 15.4:1. Meanwhile, Program C certificates equate to ISCED 3 Level, and the ratio between compulsory vocational training and work placement varies between 13:1 or 14:1. Also, in Bulgaria it is also possible to identify the so-called "Craftsmanship training", intended to provide training by a master at a specific job in the handicraft enterprise. In any case, it is out of the formal IVET system and it is not a popular training form in Bulgaria.

Looking at the future, changes are planed in the legislative programme to modify this "craftsmanship training". On the other hand, the challenges related to the accession to the European Union point out to the need to increase greatly the funds spent on training

Training in the versions of Framework Program C are the most popular in the Bulgarian VET system in terms of pupils. Generally speaking, around 164,839 students were enrolled in VET during the 2009/10 school year (numbers have decreased as a consequence of the economic crisis; e.g. 179,566 students 2007-2008).

2.3.4 Cyprus

In Cyprus, it is possible to identify within the formal IVET education system two main directions, that is to say, the theoretical one (100% school-based) or in the practical direction (*Theoritiki Katefthinsi* or *Praktiki Katefthinsi*) offered by technical schools (*Technikes Scholes*, TS). In this Practical Direction, the first and second years are completely school-based, whereas the third year of studies combines a school-based environment with a real workplace. Meanwhile, and as far as tertiary level VET is concerned, in Cyprus there are four Public Institutions of Tertiary Education (non university level) offering programmes with a strong vocational content (ISCED 5B). These programmes include practical training amounting to a significant content of the programme. In addition to the apprenticeship-type schemes within the formal education system, the Apprenticeship System (Systima Mathiteias, SM) is a 2-year initial vocational education and training programme providing practical and theoretical training to young people who have not successfully completed their lower-secondary compulsory education (it is associated with failure at school). A subsidy scheme aims to promote in company training of apprentices in the private sector, subsidising companies for part of social insurance contributions for the apprentice.

Since 2005 a modernisation of the system is under way, in order to develop a New Modern Apprenticeship; this should include 3 different levels: Preparatory Apprenticeship (age group 14-16), Core Body (age group 15-20) and Post Secondary Apprenticeship (age group 17-25). Other examples of short-term measures recently developed include revising curricula, reviewing analytical programmes, training teaching staff, acquiring software and improving administration and management of the system. Interestingly also, in view of the economic recession, the Ministry of Labour is offering additional subsidies to employers to hire apprentices.

According to Eurostat, and concerning 2008/2009 enrolments, only 12.8% of the Upper Secondary Students choose the vocational/technical path. This level of participation in vocational programmes is one of the lowest percentages among European countries. According to Eurostat, the number of graduates in ISCED 3 (Technical Upper Secondary) has increased slightly from 1,215 in 2005/2006 to 1,245 in 2008/2009. Interestingly also, 262 participants enrolled in the Apprenticeship System in the school year 2008-2009.

2.3.5 Czech Republic

The Czech Republic does not have an apprenticeship scheme, but the education system includes work placements and practical training. Generally speaking, two main upper secondary level VET schemes are available, that is to say, the so-called Secondary technical schools and the secondary vocational schools. Secondary technical schools (střední odborná škola – SOŠ) include within the study plans work placements in companies and other institutions for an average of 6-8 weeks, during which students experience the feel of a real workplace, facilitate contacts between the students and employers. SOS provide secondary technical education in 4-year programmes completed by a maturita examination, which entitles graduates to apply for higher education and to perform mid-level technical, business and similar jobs. Meanwhile, secondary vocational schools (střední odborné učiliště – SOU) provide a vocational qualification in 2- and 3-year programmes, resulting in the acquisition of a secondary vocational qualification (ISCED 3C). It is completed with a final examination and the student gets a "vocational certificate" (výuční list), also known as "apprenticeship certificate". Approximately, 35-45% of the study plan hours include practical training, usually held at schools or at the workplaces of natural or legal persons who have been authorised for this training (workplaces must sign an agreement with the relevant school). It is also worth stressing the existence of tertiary professional schools (vyšší odborné školy – VOŠ), who provide tertiary professional education (ISCED 5B) to secondary school leavers with a maturita certificate (normally 19 and older). Most of the programmes include practical training in the form of a work placement over 3 months long.

In 2008 the MŠMT (Ministry of Education, Youth and Sports) adopted an action plan to support vocational education and training, intended to expand and strength the Czech VET system. Finally, most Czech pupils at upper secondary level attend vocational programmes (74 % of pupils in 2009/2010), which means a total of 347,414 students in Vocational Upper Secondary Education. The proportion of pupils in vocational programmes decreased by 8 % during the period of 2002/03 - 2009/10. In the academic year of 2009/2010, for the first time in many years the overall proportion of pupils in vocational programmes has slightly increased

2.3.6 Finland

In Finland, the largest share of IVET students decides to follow the school-based VET path. The scope of upper secondary level vocational qualifications taken after basic education means full-time studies for 3 years (120 credits) at a vocational institution. Even if the education and training mostly takes place in institutions, all qualifications include approximately 6 months (at least 20 credits) of instruction in the workplace (on-the-job learning). The objective is to familiarise students with real working life to enhance their employment opportunities, as well as to ensure vocational skills that stem from working life needs.

Interestingly, vocational qualifications may also be completed as apprenticeship training. Apprenticeship training is available to both adults and young people, but in Finland, most of the apprentices are adults (most of them already employed). Apart from vocational qualification certificates, apprenticeship training allows achieving a further vocational qualification or a specialist qualification. The apprenticeship training is based on a written working contract of fixed duration between the apprentice and the employer, and the practical training periods take place at the workplace in connection with ordinary work assignments (approximately 70–80% of the time is spent in the training workplace, complemented by theoretical studies arranged at institutions providing vocational education and training). Finally, IVET at Tertiary Level is offered at polytechnics (ammattikorkeakoulu), where degrees provide the knowledge and skills for professional expert functions and with a professional emphasis (at ISCED 5 level). Compulsory practical on-the-job training, worth a minimum of 30 ECTS (approx. 7 months), enables many students to combine their diploma project included in the degree programme with hands-on work experience and to apply their theoretical knowledge in real situations.

Broadly speaking, the popularity of vocational education and training has increased since the early 2000s, basically due to several campaigns organised by the Ministry of Education and social partners to improve the image of vocational training. On the other hand, and as part of the overall reform of adult education and training, outlined in the 2008-2012 national development plan for education and training, a working group appointed in 2008 by the Ministry of Education proposed a creation of an apprenticeship-type further education scheme at university level for those who already have a higher education degree.

According to 2007 data (Eurostat), there were 235,338 participants in VET school-based education system (66.7% of students in ISCED3 level). Moreover, in 2008 some 70,000 students took part in apprenticeship training. The number of participants in apprenticeship training has traditionally been relatively low in Finland, but student volumes have increased considerably in recent years. Also, the number of students more than tripled during the period 1994–1999, doubled again from 1999 to 2007.

2.3.7 Greece

In Greece, VET Upper Secondary Level schools (EPAL and EPAS) offer exclusively school-based training (practical training is offered within the school premises). In any case, some VET schools have incorporated visits to enterprises as a means to help trainees realize the actual dimensions of work. Furthermore, 6 months of optional practical training after the acquisition of VET certificate might be offered.

Interestingly, and as an alternative to the formal (school-based) IVET System, there exists an apprenticeship programme known as Mathiteia, which equates to the Upper Secondary Level of education. Apprenticeship is defined as alternating training in a school and the workplace (4 days a week, in the mornings, students practice in an enterprise, whereas in the afternoons, they attend classes at Apprenticeship vocational schools). The apprentice is contractually linked to the employer and receives a wage. At the end of their studies, trainees acquire a Specialty Certificate (ISCED Level 3C).

The overall number of participants in upper secondary IVET (ISCED 3) in 2008, including pupils of apprenticeship EPAS and students in the school-based system, is 106,376, according to statistics of the Ministry of Education and Religious Affairs and the National Statistics Service of Greece. On the other hand, in the school year 2007-2008, 13,964 students attended Apprenticeship.

2.3.8 Hungary

In Hungary there are 2 different types of VET schools, that is to say, the Vocational training schools (szakiskola) (ISCED 3C), and the Secondary Vocational Schools (szakközépiskola) (ISCED 3A and ISCED 4C). Both cases combine school-based and work-based training to different degrees. In this sense, the practical training part of vocational programmes might be offered through 3 different forms, i.e. i) "School-based" one (practical training is organized at any 'practical training place' maintained/operated by either a VET school, a legal entity, an economic organization, an individual entrepreneur or a 'central training place' of a Regional Integrated Vocational Training Centre); ii) "Alternance training" (Practical training provided on the basis of a cooperation agreement between a vocational school and an enterprise) and, finally; "Apprenticeship training" (practical training provided by an enterprise on the basis of a student contract (tanulószerződés) made between a student and an enterprise, under the supervision of a representative of the relevant local economic chamber). The majority of ISCED 3C practical training is organized outside the school (typically in apprenticeship training). Normally, during the school year, one week of theoretical instruction alternates with one week of practical training, and during the summer holiday period, it is provided without interruption. Finally, and as far as Tertiary level IVET is concerned, this refers to higher level VET (felsőfokú szakképzés, FSZ) programmes awarding an ISCED 5B level vocational qualification (szakképesítés). In this case, practical training is provided in similar forms to those described for Upper Secondary Level Education, both in school workshops and at economic organizations, following the 3 forms explained for Upper Secondary Education.

One of the key goals of the recent Hungarian VET policy is to promote apprenticeship contracts with an innovative content and further the increase of the number of economic organizations offering practical training, helping students' integration in the workplace. In this sense, the option of organising practical training outside the school based on a student contract has been brought to the policy agenda since 1 January 2007. Interestingly also, a new form of VET was started from the school year 2010/11. The so-called early VET (előrehozott szakképzés) allows students to start vocational training right at the age of 14 and takes 3 years to complete. The programme offers primarily work-based training. Finally, a scholar-

ship programme has been launched in February 2010 for training vocational school students in occupations in high demand in the labour market.

Finally, and according to the data provided by the National Institute of Vocational and Adult Education of Hungary, in the 2009/2010 school year nearly two thirds (63.6%) of full-time students at upper secondary level studied VET. In 2008, 77,506 students participated in school based initial vocational training whereas 45,587 students participated in the apprenticeship system.

2.3.9 Ireland

In Ireland, it is possible to identify three main VET schemes with some work-based practical content. In this sense, the most relevant one is the so-called "Apprenticeship". Within apprenticeship training, apprentices receive alternating on and off-the-job training (80% work-based, 20% school-based), and 100% of the subjects are vocational. Apprentices are recruited and employed in their chosen occupation by companies approved by FAS, and receive wages when training on-the-job, and a trainee allowance during off-the-job training. On successful completion of this training, an apprentice receives an Advanced Certificate awarded by FETAC, the Further Education and Training Awards Council. The corresponding ISCED level is 4, but oriented to level 5B. In addition to this, "Post Leaving Certificate" courses (PLC) aim to provide a bridge between school and work for those who need further initial vocational education to enhance their employment opportunities and their entry into a series of possible occupations. They are 90% school-based, whereas they also include a 10% work-based training period. They lead to certification from the Further Education and Training Awards Council (FETEC), which equates to ISCED 4A/B oriented to level 5A/B. Finally, it is worth stressing the existence of "Entry-level" VET provided by publicly-funded sectoral agencies for various particular sectors (Tourism, Agriculture and Food, Fisheries), where theoretical training is complemented by periods of industry work experience.

In recent years there have been several initiatives to increase progression from the VET sector into higher education, in particular the introduction of Post Leaving Certificate (PLC) courses. Also, the national partnership agreement 'Towards 2016' has recommended that measures should be introduced to promote take-up of apprenticeship by older workers. With regard to the current economic crisis, and since 2008 onwards, FAS amended the apprenticeship scheme rules to permit redundant apprentices to progress to their next off-the-job phase in their apprenticeship without having to complete the next on-the-job stage. In this sense, a Redundant Apprentice Rotation Scheme was also introduced whereby employers are supported to provide on-the-job training for a redundant apprentice while their employed apprentice is attending an off-the-job training phase.

Finally, and as far as statistical information is concerned, there has been a rapid expansion in total apprentice registrations from 1998 to 2006 (16,125 to 29,801 registrations, respectively). However, apprentice numbers have declined significantly in the time period 2007 and 2008 (28,500 and 26,170, respectively). On the other hand, in 2007-08 there were approximately 30,000 persons enrolled on full-time PLC courses.

2.3.10 Italy

The Italian IVET system is a complex one, and it includes school-based schemes (although combined with practical training periods at enterprises) and Apprenticeship schemes. In this sense, school-based schemes refer to Vocational upper secondary education (ISCED 3 level) in two main forms, either Technical education (provided by the technical schools ("istituto tecnico")) or Vocational/Professional education (provided by the vocational schools ("istituto professionale")). In both cases, students alternate study and work periods (known as

'Traineeships'). The balance between school-based and work-based training depends on the pathway and on the agreements signed between schools and enterprises (there is not an employer-employee job relation, and youngsters do not receive any salary). Also, post Secondary Education (Non Tertiary) (ISCED 4) is offered through two different pathways (the Higher Technical Institutes (Istituti Tecnici Superiori, ITS)) and the IFTS courses (Higher technical education and training). In both cases, 30% of the activities are dedicated to work-based training. Finally, it is possible to identify the so-called Initial Vocational Training ("Formazione Professionale Iniziale" FPI), intended to facilitate labour insertion of young people into the job market in a short time, and that includes a minimum of 30% of hours are devoted to training on the job through "traineeship" schemes similar to those offered in vocational and technical schools.

In addition to this school based scheme, in Italy it is possible to identify the so-called Apprenticeship ("Apprendistato") IVET scheme. Apprenticeship in Italy is defined, accordingly to the new Consolidated Act on Apprenticeships, recently passed last July 2011, as open-ended contracts aimed at training young people, where this new Act is intended to better clarify the legal and institutional position of apprenticeships in Italy. Meanwhile, the type and duration of the training, and also the number of apprentices that can be employed, are to be established by national collective bargaining agreements covering the relevant sectors, and by intersectoral agreements. Basically, there are three different types of apprenticeships, that is to say, i) Apprendistato per la Qualifica e per il Diploma Professionale (Training apprenticeships), aimed at young people aged between 15 and 25, where the contract can last up to a maximum of three years (four in the case of regional diplomas); ii) Apprendistato Professionalizzante o Contratto di Mestiere (Professional Apprenticeships), designed for young people aged 18 to 29 who require a form of professional training, where the contract can last no more than three years (five for artisans); iii) Apprendistato di Alta Formazione e Ricerca (Advanced Training and Rresearch Apprenticeships), aimed at people who require high levels of professional training in the field of research, doctorates and to enter professional associations, and designed for young people aged 18 to 29.

Law 53/2003 and D.Lgs. 226/2005 have separated the general/academic system and the vocational education and training system respectively under the state and the regions responsibility. It has been also established that the two systems have equal dignity and that 'it is granted the possibility to pass from the licei system to the vocational education and training system'. Meanwhile, the Law 30/2003 has introduced some reforms in the apprenticeships system, basically distinguishing the three different types of apprenticeships previously referred to. Also, and in 2008, the guidelines for the reorganisation of the whole higher technical education and training system (ISCED 4) were issued. This reorganisation was meant at spreading the higher technical and scientific culture and strengthening post-secondary training of non-academic nature.

It is also important to stress the agreement signed between the government, regions, provinces and social partners last 27 October 2010 to re-launch the apprenticeship contract, because the use of such contracts had fallen considerably in recent years.

In the 2008-09 school year, there were 917,200 students in Technical Schools and 551,117 in Vocational Schools. Meanwhile, the number of students in IFP 3-year courses (First Level) was 152,885. On the other hand, in 2008 the number of apprentices employed was 644,593, of which 7.5% were in right-duty apprenticeship, 91.8 % in profession-oriented apprenticeship and 0.7 % in higher apprenticeship. Meanwhile, in 2009 the number of apprenticeship was 591,000, probably explained by the economic crisis.

2.3.11 Latvia

Latvian Vocational Upper-secondary education (profesionālā vidējā izglītība) (ISCED 3) is provided at vocational secondary schools. Two different options are offered, that is to say, Vocational education programmes (ISCED 3C) (which includes a practical training at schools and enterprises of 65% of all tuition time) and Vocational secondary educational programmes (ISCED 3A&3B) (who combine theory and practical training on a 50:50 basis). Moreover, vocational schools might also offer post-secondary non-tertiary vocational education (ISCED 4B). They are focused towards mastering purely professional skills and knowledge, and they include school-based and work-based training (balance of 35:65). As far as Tertiary IVET is concerned, 'First level higher professional education programmes', are available at colleges and higher education institutions, where training contents include practical placement in enterprises. Finally, an apprenticeship system exists on a small scale mainly in the crafts sector in traditional professions, and it is regulated by the Law on Crafts. This system is not part of formal IVET, and the apprenticeship is based on a contract concluded between apprentice and master. During the apprenticeship, theoretical training might be offered by vocational schools or the Chamber of Crafts. Through the apprenticeship system it is possible to obtain the journeyman (Amata zeļļa diploms) and, thereafter, master craft qualification (Amata meistara diploms).

As far as recent changes in the Latvian Vet system are concerned, the Ministry of Education and Science has designed the 'Guidelines for Optimisation of Vocational Education Establishments Network for 2010-2015' aimed at providing further implementation of the vocational education system structural reforms by optimising the number of vocational schools and their geographical coverage and by differentiating vocational schools (new types of schools are planned to be formed). Concerning the apprenticeship system, the Chamber of Crafts is planning to introduce several measures to increase interest in apprenticeship, they include: providing more information to VET schools and improving the network of craft masters who would be interested in training apprentices.

Finally, and concerning statistical information, the general secondary education pathway is more popular than vocational secondary education, since general education is considered to have a higher 'prestige' (around 62.1% of students choose general education). In 2008/2009, 35,300 students participated in upper-secondary vocational programmes, and 15.1% of the students in ISCED 5 level courses (19,242) were following ISCED 5B programmes (data for 2007).

2.3.12 Lithuania

IVET programmes at Upper Secondary Level are provided by vocational schools. Two main different programmes are offered, that is to say, ISCED 3C programmes (designed for students who only wish to obtain a vocational training diploma (profesinio mokymo diplomass) providing access to labour market), and the ISCED 3A&B programmes (aimed at those willing to complete general upper-secondary education or professional qualifications). In both cases, wok-based training might vary between 20-25% of the tuition hours. Concerning IVET at post-Secondary Non-Tertiary Level (ISCED 4), they are designed for students who have completed upper-secondary education and received a matura certificate, but are not academically inclined. These programmes are offered in vocational schools (the same as ISCED 3 programmes), and 80% of the tuition hours are school-based (20% work-based). Finally, VET at tertiary level is delivered through non-university higher education programmes (ISCED 5) which are designed for those wishing to obtain non-university higher education. Practical training (including placement for practice in enterprise) should constitute at least a third of the total study programme time.

Interestingly enough, the new Law on VET, entered into force last 1st January 2008, has introduced Apprenticeship as a form for VET organisation. Apprenticeship ("Pameistrystës Profesinio Mokymo Organizavimo Forma") combines training organised at the work place with theoretical training, where practical training should comprise at least 60-70 % of the total time allocated to teaching vocational subjects. A student and a company sign a labour contract and, together with the school, a trilateral training agreement. Currently, only a few schools provide a work-based apprenticeship route, and limited to a number of professions.

Also, the new Law on VET defines national qualification framework, describes validation of learning outcomes acquired outside formal education, sets principles for VET quality assurance, etc. On the other hand, seeking to improve standing of VET and its attractiveness to stakeholders, management decentralisation is being implemented through the reorganisation of state VET schools into self-governing institutions, with increased autonomy (including budgetary one).

Finally, the majority of students in upper secondary education prefer general education orientation programmes (73.1% of the students chose the general/academic path in 2009). Meanwhile, approximately 30% of the students in higher education programmes prefer non-university higher education.

2.3.13 Luxembourg

IVET at Upper Secondary Level includes an intermediate cycle and an upper cycle (3-4 years, ISCED 3). The intermediate and upper cycles of technical secondary education include three different strands, that is to say, the vocational system ("régime professionnel"), the technician training system ("régime de la formation de technician") and the technical system ("régime technique"). Technician and technical systems are only offered in a school-based format. However, the vocational system might be provided following different formats, that is to say, i) Apprenticeship ("apprentissage"), which includes practical in-company training under an apprenticeship contract and the attendance of vocational courses in a technical secondary school (comparable to the German Dual System); ii) Mixed system ("filière mixte"), where some practical in-company training is combined with full-time vocational classes in a technical secondary school in the last year and, finally; Full-time stream ("filière de plein exercice"), completely school-based. Meanwhile, it is worth stressing the so called Advanced technician's certificate ("Brevet de technicien supérieur"–BTS), a higher-level course in technical secondary education where students combine theoretical education with alternance periods of practical training (often work placements in enterprises).

As far as legislative changes are concerned, the 2008 VET Law aims at reforming VET based on lifelong learning and competences. In this sense, a new approach is to be developed concerning school-based and work-based training, and it is expected that technician training path will also include the apprenticeship system, promoting work-based training. Also, the Luxembourgish Government plans to overhaul promotion criteria and transition harmonisation from one cycle to another in order to introduce a simpler promotion and guidance system allowing students to progress and to prevent unnecessary failures.

In the school year 2007/2008, there were 3,162 students in the technician training system and 4,112 in the vocational system.

2.3.14 Malta

In Malta, Most of the VET courses in Malta are only school-based, but a great majority of them are also offered through an apprenticeship or alternance system (combining school

and on-the-job training). As well as this, many school-based courses offer a period of work experience of a few weeks. In any case, In this sense, IVET may or may not involve apprenticeship depending on the course/sector, as well as on the training model chosen by the student. The Employment and Training Corporation (ETC) is responsible for the administration of the apprenticeship scheme. The Corporation is responsible for providing a training placement, monitoring the student's progress and also carrying out a number of monitoring visits during the apprenticeship year. The apprentice, the employer (also known as sponsor) and the ETC enter into a contractual agreement stating the rights and obligations of all parties during the apprenticeship. Basically, there are two apprenticeship schemes. Both of them lead to a ISCED 3 level Journeyman's Certificate, that is to say, the Technician Apprenticeship Scheme (TAS) (which leads to an occupational competence at technician level) and the Extended Skills Training Scheme (ESTS) (apprentices receive a Craftsman level certificate). Apart from the TAS and the ESTS, there are also a lot of vocational courses in a wide variety of sectors (ISCED 3 & 4). Many of these vocational courses can be either school-based or follow an alternance/apprenticeship model.

The last decade has seen a great investment in IVET in Malta with the setting up of MCAST-the Malta College of Arts, Science and Technology, the umbrella institution providing vocational education and training. The Strategic Plan 2007-2009 of the MCAST highlights the need for a vocational education and training provision that establish a credible alternative to the university education. New Vocational Degrees by MCAST were first offered in September 2009. Also, the Government is committed to developing more flexible pathways and better transitions. Moreover, a closer link between vocational education provision and industry is currently part of those projects financed by the European Social Fund, making vocational education more responsive to industry needs. Due to the economic crisis and fewer opportunities of work in the labour market, many young people are currently encouraged to further their studies.

Since the MCAST (Malta College of Arts, Science and Technology) was set up in 2001, the number of students continuing with upper-secondary education beyond compulsory age has increased. The number of students in IVET has also increased, and a balance in numbers between the general and the vocational strands has been reached. By the end of 2009, 698 apprenticeships were registered with ETC.

2.3.15 Portugal

In Portugal, young people can choose to follow the IVET path through different types of vocational programmes. The most important ones in terms of number of students is the so-called Vocational Courses ("Cursos profissionais") (ISCED 3), which includes a technical training component that accounts for a 13% of spent training time in a work environment (either simulation practices or real practices within an enterprise). Another option is the so-called Technological Courses ("Cursos tecnológicos"), also leading to ISCED 3 level qualifications, which includes a placement for a period of 216 hours of practical training in a workplace. Another option is the so-called Education and Training Courses ("Cursos de educação e formação"), intended to young people aged 15 or over who have abandoned or are at risk of leaving the regular education system, which also includes a practical component to be developed in the workplace, in the form of a traineeship under the individual supervision of a training facilitator. It is also interesting to stress the existence of the so-called Apprenticeship courses ("Cursos de aprendizagem"). This Apprenticeship training is an IVET pathway and not a separate sub-system and carried out in alternance training schemes. Apprenticeship courses are provided by the vocational training centres of the Institute for Employment and Vocational Training, under the Ministry of Labour and Social Solidarity. Courses last for 3 years and include a practical workplace training (accounting for at least 40% of total course length). An apprenticeship contract is established between the training organisation and the trainee. Finally, and referring to IVET at Upper Secondary non-Tertiary Level

(ISCED 4), in Portugal it is possible to identify the Technological Specialisation Courses (CETs), that prepare individuals for a scientific or technologic specialisation in a specific training area and award a level 4 vocational qualification. These courses include a workplace training component, aimed to apply knowledge and acquired know-how for practical activities. It cannot be lower than 360 hours, but no higher than 720 hours. This training component is developed in partnership between the training organisation and enterprises

Concerning apprenticeship, a recent legislative reform (Decree-Law no. 88/2006 of 23 May) has made its organisational structure more flexible and adaptable to changes. Interestingly also, and in the end of 2008, the Portuguese Government issued the Implementing Order no. 1497/2008 with a new legal framework of apprenticeship courses. This new regulation updates the apprenticeship study plans and also regulates access conditions, organisation and management of the courses, as well as the evaluation and certification of learning outcomes.

In recent years, the focus on the importance of vocational education as a valuable alternative to other education paths has had an impact, so the number of students enrolled in vocational courses has risen from 28,000 in 1998/1999 school year to 91,000 in 2008/2009 school/year. Referring to the 2007/2008 school year, the number of students enrolled in different courses were the following one: i) Technological courses, 13,096 students; Vocational courses, 88,515 students; Apprenticeship courses, 14,629 students; Education and training courses, 6,602 students; Specialised art courses ("Cursos do ensino artístico especializado"), 1,809 students.

2.3.16 Romania

The Romanian IVET system is primarily a school-based system, although IVET programmes include practical activities that normally take place in school workshops (such as 'exercise' or 'training' companies for interactive learning). Occasionally, practical training might take place in companies (based on agreements concluded between schools and companies).

Interestingly also, and since 2005, an Apprenticeship system has been introduced in Romania (workplace apprenticeship or "Ucenicie la locul de munca"), derived from the approval of the so-called Apprenticeship Law (Law no.279/2005). In this sense, apprenticeship is regarded as a special and distinct form of vocational training combining employment, in the form of a closed-end, determined duration contract, with vocational training, to be provided by the employer, both practical and theoretical (provided within the working hours). The apprentice (aged between 16 and 25 years old) is contractually linked to the employer and receives remuneration, and the employer assumes responsibility for providing the trainee with training leading to a specific occupation. All enterprises can engage into apprenticeship contracts provided that they do have the necessary facilities and have a specifically designed training program. In addition to that, they must specifically employ a so-called "apprenticeship foreman", possessing a "trainer's training certificate". Unfortunately enough, the apprenticeship path has seen a rather slow application. The reason for this is the legal and red-tape requirements for enterprises, as well as the advent of the economic crisis, which has drastically reduced the options of employers to offer apprenticeship training.

There are no data available on the number of apprenticeship participants.

2.3.17 Slovenia

In Slovenia, there are three VET programmes at upper secondary level offering apprenticeship-type schemes, that is to say, the Vocational Secondary Education (ISCED 3C), the Technical Secondary Education (ISCED 3B) and the Vocational-technical secondary Educa-

tion (ISCED 3B). Concerning the Vocational Secondary Education programmes, they last 3 years and include at least 24 weeks of practical training with employers, where they are provided by vocational schools in cooperation with employers. Meanwhile, the Technical Secondary Education last 4 years and include practical training with a minimum duration of 4 weeks. Finally, Vocational-technical secondary Education last 2 years after vocational secondary education and include practical training periods in enterprises. As far as IVET at tertiary level, it is provided at higher vocational colleges (višje strokovne šole). These colleges offer 2-year post-secondary vocational education at ISCED 5B level, and the general requirement for admission is successful completion of upper-secondary education. Approximately 40% of each curriculum is devoted to practical training in firms.

The introduction of the new Law on Vocational Education and Training in 2006 has resulted in the abolishment of the apprentice status introduced in 1996. In this sense, and with the 2006 VET Law, the dual system and school education have been united into a single form of vocational and technical education, where the practical training at work (period of training with an employer) has become an integral part of all educational programs for vocational education. Thus, all students are entitled to a predetermined number of weeks of practical training at a workplace. The relationship is regulated through an individual contract, which is signed by the employer, student and parents. The other possibility is a collective contract, which is signed by the school and employer for several students.

Approximately 40% of upper-secondary level students enrol in general secondary education courses (gymnasia), whereas 30% enrol in technical secondary education and another 30% in vocational secondary education. According to Eurostat data, in 2009 there were approximately 64,219 students enrolled in ISCED3 level vocational programmes.

2.3.18 Sweden

Swedish upper secondary programmes that are primarily vocationally-oriented give broad basic education within the vocational field, and they also provide the foundation for further studies. These programmes are typically school-based, in the sense that 85% of the training time takes place in schools and the remaining 15% (at least 15 weeks) at a workplace outside the school, the so-called workplace training (APU – Arbetsplatsförlagd utbildning). Education providers (organisers of schooling such as municipalities, independent schools, etc.) are responsible for finding workplace training opportunities and for supervising students. Opportunities for arranging workplace learning vary as schools are dependent on the links they have established with private and public organisations and the local business community. In any case, the Swedish IVET system is often criticized for not sufficiently preparing students for an specialised occupation. In this sense, an for a few occupations that do require occupational certification (i.e. electrician, plumber or car mechanics), social partners have made an agreement concerning apprenticeship education, through which learners must complete an apprenticeship-like programme administered by joint training boards at the sectoral level, complementary to the school-based learning. On the other hand, several enterprise-based upper secondary schools have also been started during recent years, intended to provide more company-based education and training.

Having in mind this situation, the Swedish Parliament has decided to reform upper secondary school. A national test period started in 2008, with the launch of a pilot programme related to Apprenticeship ("Gymnasial lärlingsutbildning"), which is expected to be introduced as a parallel path to the traditional school-based one in the academic year 2011/2012. Thus, training will be offered both as school-based education and as secondary apprenticeship with the same terms of objectives. Some of the reasons for implementing this new system include employer complaints for the inadequate work preparedness of vocational graduates as well as their inadequate general education levels. This new apprenticeship programme will last for 3 years and more than 50% of the total education will be

work-placed. Learners in upper secondary apprenticeship will receive a vocational upper secondary diploma on completion of their studies/training.

In 2008/09, there were 177,935 students enrolled in IVET at upper secondary schools in Sweden, representing 49.5 % of the upper secondary student population enrolled in national programmes. Interestingly also, and during the academic year 2009/2010, there were almost 7,000 students participating in the apprenticeship pilot project started in 2008.

3. Characterisation and typology of apprenticeship-type schemes

3.1 General introduction

This chapter 3 is interested in characterising and providing an in-depth analysis of existing apprenticeship-type schemes in nine selected Member States (i.e. Denmark, Estonia, France, Germany, Poland, Slovakia, Spain, The Netherlands and the United Kingdom). For this purpose, a number of different topics will be analysed, such as the main actors involved in the design of the national apprenticeship-type schemes and the definition of training curricula and contents, the role of enterprises, schools and students in these apprenticeship-type schemes, the existing contracts and agreements between partners involved, financing and quality assurance related issues and, finally, a discussion on the geographical mobility of students.

In this respect, and having in mind the wide array of possible apprenticeship-type schemes in the nine selected Member States, the chapter will focus its attention on the most important apprenticeship-type schemes existing in each country in terms of largest share of students. In this sense, the concrete apprenticeship-type schemes analysed per Member State are the following ones:

- In Denmark, the VET system is characterised by a program consisting of a school-based basic course[8], and a main course. In the main course, practical training in a company alternates with instruction at a vocational college, with a typical duration of three to three and a half years. In order to be admitted into the main program of the VET, the students must enter a training agreement with an approved company which offers training. In this sense, the VET system identifies four main apprenticeship type schemes accordingly to the kind of training agreement signed, this is, the "Regular Training Agreement[9]" ("Ordinær uddannelsesaftale"), the "New Apprenticeship[10]" ("Mesterlære"), the "Combination training agreement" ("Kombinationsaftale[11]") and the "Short training agreement" ("Kort uddannelsesaftale[12]"). All these apprenticeship type schemes will be taken into account in this research[13].
- In Estonia, the analysis will be concentrated on the "Apprenticeship study" ("Õpipoisiõpe"), often known as "Workplace based study" ("Töökohapõhine õpe"). Apprenticeship studies were introduced in 2002 as a PHARE pilot project. Since 2008, the promotion of Apprenticeship studies has been financed exclusively by the state budget. It is a minoritarian option for VET students (2% of total VET students), and these studies are available at all of the ISCED levels where vocational education is provided in Estonia, i.e. ISCED levels 2, 3 and 4. The duration of the studies depends on the particular ISCED level and specific program, and can vary between 6 months and 4 years. A distinctive

[8] This basic course is flexible in duration (between 20 and 40 weeks in industry) and depends on the individual student's prior qualifications and ambitions. This basic course is followed by a main course

[9] The most common agreement. The agreement is formed between the student and one company, and the agreement includes the entire main program.

[10] The new apprenticeship has been available since August 2006 and was introduced to make allowances for practical orientated students. This agreement includes the entire vocational program, and the first year of the VET is carried out through practical training in a company.

[11] With a combination agreement, the student enters a training agreement with two or more companies and together these partial agreements constitute the entire VET program. Since 2008, the "Flex combination training agreement" ("Flexkombinationsaftalen) has been incorporated into the combination agreement.

[12] The short training agreement is well suited for companies who are not able to undertake an entire training period for example if the company is very specialised

[13] Furthermore, a school-based practical training is offered under special circumstances for students who are not able to sign an agreement with an enterprise.

characteristic of workplace-based studies is that one-third of the curriculum is delivered through theoretical instruction and two-thirds through practical training in an enterprise. Apprentices sign a study and work contract.

- In France, there are two main existing apprenticeship schemes, that is to say, the so-called "Apprenticeship contract" ("Contrat d'Apprentissage") and the "Professionalisation contract" ("Contrat de professionnalisation")[14], both signed between an employer and the apprentice. In this sense, the analysis will be primarily focused on the first one. This "Apprenticeship contract" is intended to enable young people aged 16 to 25 years to follow a general education curriculum, both theoretical and practical, in order to acquire a professional qualification based on a diploma or a professional title. This contract alternates learning phases in training centres (CFA) and in enterprises. This is an employment contract available in France since 1971 and its duration varies from 1 to 3 years. Apprenticeship can be implemented in all sectors.
- In Germany, the national system of Initial Vocational Education and Training (IVET) offers young people a wide choice of different paths leading to vocational qualifications[15]. Notwithstanding this, the well known dual system of vocational training forms the core of the German IVET-system and is also by far its most important single component in quantitative terms (indeed, some 86% of upper secondary students in vocational pathways enrol in the dual system, while the rest do so mainly in full-time vocational schools). For this reason, the analysis carried out in this chapter is focused on this dual system of apprenticeship training.
- In Poland, there are no apprentices as such[16]. However, the Polish IVET sub-system includes the so-called "vocational placements" in enterprises. These "vocational placements" are intended to apply and broaden vocational knowledge and skills in a real work environment and they are compulsory for pupils of all vocational schools, regardless of the type of school or the degree level. "Vocational placements" of an apprenticeship type are generally organised during summer holidays, and the average duration of a placement is 160 hours (3 to 4 weeks) per academic year. The exact duration of a placement is determined by the school headmaster depending on the type of school and the specialisation taught. These placements are additional to the practical vocational training received in school workshops and laboratories, and they can not be considered as employment, as there is not a contractual relationship between the company and the student.
- In Slovakia, initial vocational education and training is primarily school based, basically the so-called secondary vocational schools (Stredná Odborná Škola, SOŠ). In this regard, there are no apprenticeship schemes in the strict sense, and all participants are seen as pupils (students). Notwithstanding this, enterprises have the possibility to partly participate in the training of students for which they are interested as future employees, combining school-based and work-based training (these students are sometimes called

[14] The "Professionalisation Contract" ("Contrat de professionnalisation") is rather geared toward job seekers, be they young or not, and it is available in France since 2004. The contract alternates periods of general and technological training (with a duration of between 15% and 25% of the total duration of the contract) and working periods in an activity related to the qualification. The contract duration is usually between 6 to 12 months.

[15] See German national report for further details

[16] Current rules governing the VET (Regulation of the Minister of National Education of 15 December 2010) normalize the principles of vocational education of pupils/students and young workers. Before this legal framework, there was a special type of VET referred to young workers and structured as an apprenticeship scheme (młodociani pracownicy). According to this scheme, trainee juvenile workers attended craft basic vocational schools founded by craftsmen organizations. At the present time, these schemes do not exist any more.

"apprentices", regardless the fact that legislation does not make such differentiation). This is however a marginal case, not more than 1% of all students[17].

- In Spain, the Spanish Education System does not contemplate the figure of apprentices as such. However, the Spanish IVET sub-system is structured around two types of vocational training cycles, i.e. middle-level training cycles ("ciclos formativos de grado medio" in Spanish, which equate to ISCED 3B Level) and upper-level training cycles ("ciclos formativos grado superior", which equate to ISCED5B Level). Both cycles include a compulsory "in-company training" module ("Formación en Centros de Trabajo", or FCT) which accounts for approximately 400-600 hours (around 20-30% of the total training hours of an IVET cycle), and it takes place at the workplace. This "in-company training" module of IVET can not be considered as employment, as there is not a contractual relationship between the company and the student[18].
- In The Netherlands, the apprenticeship type scheme mainly analysed in this report corresponds to the so-called BBL-route ('beroepsbegeleidende leerweg'), firstly introduced in the school year 1997/98 with the endorsement of the law named 'Wet Educatie en Beroepsonderwijs' (WEB). This BBL-route implies that a student immediately starts working in a company and goes one or two days a week to school to learn the theory, where the student can use this route to get a level 2, 3 or 4 degree. BBL students have to spend at least 60% of his or her time working at a company. In any case, and when relevant, some references to the BOL-route will be made[19].
- In the United Kingdom, the analysis will be focused on apprenticeships as formally defined in the UK system. The Apprenticeship framework was first introduced in 1990 and, despite some revisions in the last years, it is based on a predefined number of Guided Learning Hours to be delivered via a combination of on-the-job and off-the job training. Apprenticeships are available from the age of 16 and there is no upper age limit, and the government has set out its intention that they become the key route to qualification, particularly for low skilled adults in work. Apprenticeships cover all sectors and range from levels equivalent to upper secondary schooling to undergraduate education. The intensity and duration of training depends upon the sector and level of qualification being studied.

3.2 Main actors involved in the design of the national apprenticeship-type schemes, definition of training curricula and contents

Generally speaking, the analysis of the information contained in the case study country reports shows that several organisations are involved in the design of the national apprenticeship-type systems, including the definition of legislation, curricula and examinations (OECD, 2010):

- The State at a central level, usually under the aegis of the Ministry of Education;
- The social partners (usually through a range of committees).

[17] Slovakia is an interesting case in itself, since the country has experienced a remarkable shift from traditional practices during the Communist regime where all VET students were apprentices combining off-the-job training at vocational schools and on-the-job training under contract with an enterprise that usually co-financed their training and offered students pocket money. In this regard, economic changes after 1989 influenced the co-operation of schools with enterprises, in the sense that the latter became unable to maintain their participation in the mandatory vocational training of students. Thus, almost all VET students traditionally contracted and co-financed by relevant enterprises became "state students" fully dependent on the state budget and involved in state managed schools. However, the new Act on VET already in force since September 2009 stimulates again apprenticeship training and the employers' involvement in alternate training practices, basically through recognising related eligible costs of employers as tax deductible.

[18] In fact, the in-company training is based on an agreement between the training centre and the company, so the pupil is considered to be a student, not an employee

[19] The BOL-route ('beroepsopleidende leerweg') can also (partly) be seen as an apprentice-type scheme. The student goes to school all week, but has one or more periods of internships during a school year. Students in the BOL-route have to spend a minimum of 20% and a maximum of 60% of their time in work-based training

- In some countries (i.e. France, Germany, Slovakia, Spain), regional and municipal authorities also have a role in establishing and/or complement existing standards.
- In other countries (i.e. Denmark, Estonia, Poland, Slovakia, Spain or The Netherlands), vocational schools also play a key role in the definition of curricula and educational profiles of apprenticeship-type students.

Table 3.1 Actors involved in the design of apprenticeship-type schemes by conutry

Actors involved	DK	ST	FR	DE	PO	SL	ES	NL	UK
State at central level	●	●	●	●	●	●	●	●	●
Regional/municipal authorities			●	●		●	●		
Social Partners	●	●	●	●	●	●	●	●	●
Vocational schools	●	●			●	●	●	●	

Source: National reports

To start with, it is usually the State (basically via existing Ministries of Education or equivalent bodies) the institution responsible of the VET-related legislative corpus framework (including the curricula and training contents for IVET), assuring therefore that students' degrees are nation-wide recognised and therefore all students receive training that covers comparable content (regardless of where they undergo their training). In this respect, training curricula stipulate in binding terms what has to be learned for a particular sector/occupation/profession, providing the competency requirements for professional qualifications and their levels (CEDEFOP, 2008).

Just to give some examples, the French Ministry of Education is the main institution[20] that builds the curriculum and develops the legal national framework for apprenticeship schemes and the nationally-recognised diplomas. Meanwhile, the German Federal Ministry of Education and Research has overall responsibility for the strategy in vocational education and training, so it is responsible for the Vocational Training Act ("Berufsbildungsgesetz", BBiG) (i.e. the main Law regulating vocational training) and is also responsible for programmes to improve VET. In Slovakia, the Ministry of Education is responsible for the development of overall VET strategies, including the national Act on VET recently passed in 2008, whereas the Spanish Ministry of Education is responsible for the development of the overall education programmes, setting the minimum contents of educational programmes and regulating the validity of qualifications throughout Spain, following for this purpose the routes suggested by the Education Law ("Ley Orgánica de Educación"). Also, the Dutch Ministry of Education, Culture and Science is responsible, amongst other duties, of the Act on Vocational and Adult Education ("Wet educatie en beroepsonderwijs – WEB").

In some of the analysed Member States (i.e. France, Germany, Slovakia, Spain), regional governments also play an important role in this domain. For instance, French Regional Authorities ("Conseils Régionaux") implement apprenticeship and continuing professional development schemes, but provided a general national scheme is respected. Meanwhile, and in Germany, there are substantial differences across Federal States ("Länder") with regard to the organisation and content of teaching in the school part of the dual system, as these States have sole responsibility for this (including school curricula)[21]. Meanwhile, and in Spain, regional governments regulate the non-basic elements of the educational system in their particular regions and develop or extend basic national contents developed by the Spanish Ministry of Education according to the regional context. In Slovakia, regional self-governments are responsible for the elaboration of regional VET strategies.

[20] Other Ministries involved include the Ministry for Agriculture (for agricultural courses) or the Ministry for Youths and Sports (for training in this area).

[21] Also, the Standing Conference of Federal States' Ministers for Education and Cultural Affairs ("Ständige Konferenz der Kultusminister der Länder", KMK) issues framework curricula for vocational education at vocational schools, although these framework curricula are harmonised with the Federal Government's training directives (CEDEFOP, 2010a)

In addition to the role played by public authorities, social partners, often in collaboration with State/public institutions, also have a significant role in the design of the apprenticeship system in the large majority of countries, including the definition of curricula and examinations for their respective trades/sectors. In general, this influence of the social partners is determined by the overall strength of social dialogue in each national labour market. In this respect, and in some countries (i.e. Denmark, Germany or the Netherlands), the role and influence of the social partners is qualitatively strong, with a special focus at sector level. Thus:

- The Danish Social Partners (i.e. the Danish Employers´ Confederation (DA) and the Danish Confederation of Trade Unions (LO)) are represented, amongst other actors[22], in the Council of the Basic Vocational Educations (REU), which gives the Education Minister advice about the VET educations. Also, the educational framework and contents/competency goals of each of the 110 existing national VET educations are decided by the Education Minister in close cooperation with the so-called sector trade committees (composed by sector representatives of employers and employees).
- In Germany, for each one of the existing 350 training occupations, a detailed Training Directive ("Ausbildungsordungen") has to be developed. These training directives stipulate in compulsory terms what has to be learned for the particular occupation. Training directives are developed and updated by German social partners' representatives, although the directives are formally issued by specialised Federal Ministries (usually the Federal Ministry of Economic Affairs and Technology in agreement with the Federal Ministry of Education and Research).
- In The Netherlands, social partners actively participate in the board of the so-called VET Knowledge Centres ("Kenniscentrum Beroepsonderwijs Bedrijfsleven (KBB)"). These centres are responsible for establishing and maintaining the qualification dossiers[23]. There are currently 17 such centres which represent more than 40 different branches of the industry. The umbrella organization of these centres is called Colo.

Meanwhile, and in the specific case of the United Kingdom, the role of social partners is mainly limited to employers' organisations, which play an active role through the so-called Sector Skills Councils (SSCs). Basically, these SSCs are active in the improvement of learning supply through the definition of National Occupational Standards for the profession/sector[24], influencing and shaping sector qualification frameworks or designing apprenticeship frameworks in particular. In this sense, SSCs participate in the Office for Qualification and Examination Regulation (OFQUAL), which regulates general and vocational qualifications in England and Northern Ireland[25].

In other countries, the emphasis is much more focused on listening to the social partners' voice. Thus, and in Poland, vocational education curricula for each sector/profession are approved by the Ministry of Education after consultations with representative entrepreneur organisations. Meanhile, representatives of the main Spanish employers and workers organisations collaborate with public authorities in the so-called General Council for Vocational Training ("Consejo General de Formación Profesional"), a consultative and tripartite body on improvements concerning VET policies in general and new VET degrees and qualifications proposed by Public Authorities in particular. Also, Spanish social agents collaborate with the so-called National Institute of Qualifications ("Instituto Nacional de las Cualificaciones")[26].

[22] i.e. regional associations, the National Association of Municipalities, etc.

[23] A qualification dossier describes key tasks, processes and competencies that make up a specific job and are therefore the basis of a national recognized VET course.

[24] National occupational standards (NOS) are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. The NOS form the basis of National Vocational Qualifications competencies.

[25] Different arrangements exist in Wales and Scotland.

[26] This Institute is responsible for defining, drawing up and updating the National Catalogue of Professional Qualifications. This catalogue lists the professional qualifications according to the appropriate competences for each profession.

Interestingly also, the recent Slovak Act on VET has opened the room for the participation of social partners in the newly created sectoral and regional VET Councils, where employers' organisations and representatives of trade unions and/or employees, together with representatives of the state national and regional administration, collaborate for the preparation of sectoral/regional VET strategies.

Interestingly enough, in some of the analysed Member States it is possible to identify a trend towards increasing the autonomy of schools in preparing the curricula and on the way courses are delivered, so provided educations are adapted to the local labour market and local enterprises' needs (CEDEFOP, 2008). An interesting example in this regard is given by Slovakia, where the recent Education Act of 2008 has introduced curricular decentralisation, in the sense that curricula is now elaborated autonomously by schools in co-operation with regional/local stakeholders. Also in Denmark, Estonia, Poland, Spain or The Netherlands, individual schools have the possibility to adapt parts of the existing nationally/regionally defined curricula to the requirements of the local enterprises. In some cases, local social partners play a very important role in this process. Special attention deserves the case of Denmark, where local social partners represented in the individual VET school's direction boards elaborate (in collaboration with the school) a local education plan which contains the individual school's arrangement of all the instructions defined at national level. In the specific case of Estonian apprenticeship studies, schools are even obliged by the Regulation of Implementing Workplace Based Study to (adapted from the existing school curriculum)[27].

Finally, it should not be forgotten that in the dual training countries (i.e. Denmark, Germany) enterprises are always allowed to teach their trainees more (in terms of company-specific know-how or special skills) than the minimum requirements specified at national level in the existing training directives. Also in Spain, enterprises have a certain degree of freedom to adapt the compulsory "in-company training" module to their infrastructural, technological and organisational conditions, as well as according to the student's profile[28].

The precise role of companies in the implementation of the apprenticeship-type schemes is analysed in the next section.

3.3 Role of enterprises and characteristics of company based training

Role of enterprises

Obviously enough, enterprises have a key role in the delivery of apprenticeship-type VET schemes, in the sense that company based training activities are a substantial part in the curricula of these schemes and in the more traditional systems constitute the very basis and raison d'être of the schemes as such. Generally speaking, the main goals to be fulfilled by the company based training activities include, amongst others and despite possible sector or country differences, the following ones[29]:

- Provide students with a comprehensive (professional) education, that is to say, all the vocational skills, knowledge and qualifications (vocational competence) necessary to engage in skilled occupational activity and therefore practice the particular occupation.

[27] The main reason behind it is the need to take into account the needs of a specific student and also available training possibilities in the enterprise. Thus, the school and enterprise are both heavily involved in preparing the curriculum to ensure that these outcomes can be achieved in the company and agree how it can be assessed.

[28] This possibility has to be made in close collaboration with the VET centre but always respecting the predefined set of professional competences which students should master when they finish the learning process in the company, as established by law.

[29] Information obtained from the national country reports

- Give apprenticeship-type students an opportunity to undertake a significant level of work-based learning to ensure their competencies are developed in an applied real-work setting.
- Complement the attainment of professional competencies acquired in the education centre, by carrying out a set of pre-determined training activities in a real productive workplace, including skills associated with functioning in working environment and interacting in a working team (social skills).
- Enable trainees to acquire the necessary occupational experience and the learning about the organisation and relationships existing in a workplace.
- Identify potential candidates that may become future employees
- Establish permanent cooperation channels between vocational schools and enterprise in the professional education domain.

Despite these general goals, enterprises in general company based training in particular plays a very different role in the analysed Member States. Thus, and as far as the percentage that company based training represents in relation to the total training time, it is possible to distinguish two main different situations:

- On the one hand, in some of the analysed Member States (i.e. Denmark, Estonia, France, Germany, The Netherlands, Slovakia or the United Kingdom [30]), company based training represents the largest share of total training hours, usually between 66%-70% of total training time. Thus, and in Denmark, approximately two-thirds of the VET education takes place as training in a company, although this percentage may be up to 90% in the case of the so-called "New Apprenticeship" scheme. In Estonia, the Regulation of Implementing Workplace Based Study states that two-thirds of the curriculum has to be delivered through practical training in an enterprise, whereas in France, approximately 66% of the total training hours have to be within an enterprise. In Germany, students spend approximately 60% of their time in company based training activities, whereas in The Netherlands, BBL-route students spend not less than 60% of their total training time in enterprises (it can be more), whereas this percentage is lower amongst BOL-rote students (up to a minimum of 20% and no more than 60% of their time has to be spent at enterprises). Finally, and in The United Kingdom, the Specification of Apprenticeship Standards in England suggests that no more than 70% of the Guided Learning Hours (GLH) must be delivered on-the-job.
- On the other hand, and in the remaining analysed Member States (Poland, Spain), the importance attributed to company based training periods (basically in the form of vocational placements /in-company training periods) is much lower (i.e. 4-6 weeks during school holidays per year in the case of Poland or between 20-30% of the total number of hours of the VET cycle in the Spanish case).

Ways and requisites for enterprise participation

Concerning the way enterprises are allowed to participate in apprenticeship type training schemes, it is important to stress that this participation is always on a voluntary basis, so enterprises are always "free" to be involved or not. In any case, some Member States where apprenticeship schemes are not fully developed carry out special activities to encourage enterprises to take on apprentices. Examples include the activities conducted by the so-called Apprenticeship developers (involved in the search and encouragement of potential enterprise candidates) of the United Kingdom, where Government bodies and agencies in England undertake a range of different marketing activities to encourage the provision of apprenticeships by enterprises.

[30] In the minority case of students who carry out their training within an entreprise

All in all, it is possible again to distinguish different groups of situations. On the one hand, and in Member States such as Denmark, France, Germany, or The Netherlands, enterprises have to be previously approved by a competent authority to become a learning/training enterprise. Thus:

- In Denmark, the interested enterprise must send an application to the trade committee within the respective branch, formed up by representatives of the sector social partners. The trade committee assesses whether the company is able to carry out the practical training in order to obtain the goals within the specific education, and offer satisfying training conditions. Companies with a reasonable quantity of employees and the necessary array of tasks will get an approval without limitations. If the company, however, does not have a wide range of tasks, it might be approved for a combination training agreement.
- In France, companies willing to hire an apprentice must fill-in a form from the Consular Chambers (chambers of agriculture, chambers of commerce and industry, chambers of trade). The approval is subject to the enterprise's fulfilment of several conditions such as some working and employment conditions (equipment, hygiene and health and safety issues, professional and pedagogical skills of the enterprise trainers, etc.)
- In Germany, enterprises willing to recruit and train apprentices within the dual system have to be examined and authorised by the "competent bodies" ("Zuständige Stelle") (i.e. the local craft chamber, chamber of commerce and industry, other business chamber)[31]. For this purpose, special vocational training committees ("Berufsbildungsausschüsse") are set up, and composed by six delegates from employers and six from employees (trade union members). In addition, also six teachers representing vocational schools are members of the vocational training committees, though only in an advisory capacity (without voting rights). Elements analysed in the assessment include the availability of suitable training premises/premises and the trainers' necessary personal and technical qualifications (see more explanations on this later on in this same section)[32].
- In The Netherlands, only enterprises officially recognized as a learning company ("erkend leerbedrijf") can offer apprenticeship places. The existing 17 sector VET knowledge centres[33] are responsible for the official recognition of learning companies, according to a number of criteria such as quality level of existing facilities, existence of suitable company trainer(s) ("praktijkopleider" in Dutch), description of the daily activities to be conducted by the apprentice, etc.

Interestingly enough, in the particular UK case, the existing obligations on employers involved in apprenticeship training are kept to a minimum, that is to say, an appropriate level of support is ensured for apprentices to underpin their work-based learning as well as effective policies and practices related to the employment rights areas.

[31] By way of the Vocational Training Act, the state has assigned business chambers with public/sovereign tasks in the dual system. The chambers supervise company-based training, register apprenticeship contracts, assess the suitability of training firms and monitor their training. Furthermore, they also assess the aptitude of VET trainers, provide advice to training firms and apprentices and organise and carry out the final exams. The chambers also have an arbitration board that can be called in when a dispute arises between the training company and the trainee

[32] Interestingly enough, German training premises where the necessary vocational skills, knowledge and qualifications cannot be imparted in their entirety shall be deemed to be suitable if these can be imparted through initial training measures taking place outside the training premises (e.g. by way of co-operation with other enterprises or with training centres/schools).

[33] As mentioned, representatives of social partners participate in these knwoledge centres.

Table 3.2 Requisites for enterprise participation in apprenticeship-type schemes by country

Country	Requisites
Denmark	Application to the trade committee within the respective branch, formed by representatives of sector social partners, which assess the company
Estonia	Vocational schools are the main agents involved in the evaluation and monitoring of individual enterprise
France	Companies willing to hire an apprentice must fill-in a form from the Chambers and fulfil the conditions
Germany	Enterprises have to be examined and authorised by the "competent bodies" (i.e. chamber of commerce). Special bipartite VT committee.
Poland	Vocational schools play a key role in the final selection of the participating companies. Mutual agreement company-training centre
Slovakia	Enterprises sign a cooperation agreement with Vocational Training Institutions
Spain	Vocational schools play a key role in the final selection of the participating companies. Mutual agreement company-training centre
The Netherlands	17 sector VET knowledge centres are responsible for the official recognition of learning companies
United Kingdom	Very few requisites for employers involved in apprenticeship training

Source: National reports

Meanwhile, and as far as other analysed Member States are concerned (i.e. Poland, Spain), enterprises usually participate in vocational placements/in-company training modules by mutual agreement with the vocational school (so both parties conclude an agreement on apprenticeship)[34], although vocational schools play a key role in the monitoring and final selection of the participating companies. Just to give an example, the Spanish VET schools are responsible for deciding if the company is suitable (in terms of appropriate technical equipment, training coordinators, appropriate staff facilities, etc) for guaranteeing the success of the "in-company training" module. However, sectoral or regional business associations (as Confebask or Adegi in the Basque Country) and Chambers of Commerce (see below the Ciceron good practice) play sometimes a role, interacting with VT centres and their associations and encouraging and helping companies to participate.

Interestingly, in the case of Estonia, the vocational schools are also the main agents involved in the evaluation and monitoring of individual enterprises as suitable partners for providing apprenticeship training places, so the workplace meets the objectives of the curriculum and ensures the safety and health of the apprentice. Finally, in the case of Slovakia, some practical training can be provided directly by the company in its own premises and by its own staff, but under the supervision of the school and always based on an agreement between the school and the company.

Table 3.3 Spain: The Ciceron Project

The "Ciceron Project" (http://www.ciceron-fct.com/ciceron-public/) is a regional system based on an agreement signed between the Chamber of Commerce of the Autonomous Community of Castilla y Leon and the Department of Education of the Government of that Autonomous Community. Among other services, the Ciceron project boasts an online database where companies and training centres can make public their interest for collaborating in the "in-company training" module and contact each other. As well as this, the website makes all the required documentation available (i.e. agreement templates, documents for the student supervision and evaluation, etc).

Source: Spanish national country report.

In any case, not all enterprises are interested in participating in apprenticeship type schemes. Also, there are a number of barriers hampering the participation of enterprises in

[34] See section 3.8 in this report for further information on this domain.

this type of apprenticeship-type schemes (for a more detailed explanation of these elements please see more information in section 5.3).

Access to potential students/apprentices

Concerning the way enterprises get access to potential students/apprentices, it is possible to identify again different situations:

- In those countries where company based training represents the largest share of total training hours, apprenticeship is very substantially demand-led, that is to say, apprenticeships originate from employer willingness to offer places to young people within an statutory framework (contract) previously outlined, so apprentice places are a function of employer offer and enterprises are free to choose amongst the applying students. In these countries, young people are expected to actively look for an apprenticeship place, and enterprises play also an active role in advertising themselves as prospective providers of apprenticeship opportunities[35].
- However, in some of these countries, enterprises are able to select and recruit whoever they want, but with some limitations. Thus, and in Estonia, vocational schools often send young students to enterprises with whom agreements have been previously signed, although enterprises have the right to refuse the student. In the French case, enterprises may recruit whoever they want as long as the student is accepted by an Apprentice Training Centres ("Centre de Formation des Apprentis", CFA) for the diploma he/she wants to prepare. Meanwhile, and in the UK case, companies involved in apprenticeships can be considered to self-select, although it is also the case that training providers/skills broker institutions propose students for enterprises (see Maguire and Newton, 2010).
- Meanwhile, and in the remaining cases (Poland, Spain), it is usually the case that vocational centres distribute students among available vocational placement posts in different companies, although it is also the case that enterprises are free to refuse the proposed student in case he/she is regarded as inadequate by their requirements[36]. Depending on availability of places, it might also be the case that students can select amongst different companies for their workplace training.

Role of the company trainer

One of the main actors within the enterprise for the provision of workplace training is the so-called "company trainer", that is to say, the person(s) within the enterprise who is/are in charge of supervising and interacting with the apprentices. In this respect, they play a key role in the learning process, as they pass on practical training skills, but also transmit theoretical knowledge, help apprentices and trainees get used to the social codes of the workplace, and more broadly, are responsible for the professional and educational progress of apprentices and trainees (Gérard et al., 1998). In this respect, they can be regarded as a reference person for students while they are in the enterprise. For instance, and taking as a reference the French case, the company trainer's main roles are the following ones:

- He/she welcomes the apprentice to the company,
- He/she introduces the company's staff and activities to the apprentice,
- He/she informs the apprentice of the rules and practices within the company,
- He/she accompanies the apprentice along his/ her discovery of the trade,
- He/she organises and plans the apprentice's work,
- He/she enables the apprentice to acquire the necessary skills in the profession,
- He/she is informed of the progression of the apprentice's vocational training and results at the vocational school

[35] For a further discussion on existing routes for students to get access to enterprises see section 3.7 in this report.

[36] According to Spanish information, the students with the most brilliant student record are offered the best posts for training in companies. Certainly, VET schools watchfully care for long-term relationships with companies; subsequently, they try to allocate high-performance students in top companies (the most prestigious and cooperative ones), so that the training period turns out to be a success for both the company and the student

- He/she receives the vocational school trainer responsible for apprentice follow-up in the workplace,
- He/she rates the apprentices' acquisition of professional skills.

In this respect, and generally speaking, the company trainer is usually a senior craftsman with a relevant work experience in the company and the trade, usually in blue-collar occupations (although profiles obviously vary and respond more on the general characteristics of the sector) and with enough pedagogical practice and skills to accurately interact with students.

Specially in small enterprises, company trainers usually work as a trainer on a part/time basis (that is to say, they combine training duties in addition to their primary job tasks, where this role is often assumed by the owner/entrepreneur himself/herself), although large companies often have full-time trainers who fully concentrate on providing vocational training in their firm. It may be the case that general company trainers are assisted by other additional in-house specialists which train in specific subjects or techniques (i.e. the German "Ausbildungsbeauftragte" or assistant trainers).

Company trainers are usually appointed by the enterprise itself, although in some countries (i.e. Estonia, Spain or Poland) the vocational school has a right to assess whether the person is suitable for the training/supervising duties. In the Estonian case, it is stressed that company trainers should apply for the job voluntarily.

Some of the analysed Member States specify the personal and technical requirements that these company trainers have to fulfil. Thus, relevant examples include the following ones:

- In France, the master trainer must have a diploma of at least equal level to that which is prepared by the apprentice, and possess professional experience in relation with the qualifications aimed for by the diploma or course of three years of more. If he/she fails to fulfil the former criteria, the trainer may be accredited by a commission which takes an experience of a minimum of five years in the trade aimed for by the diploma or the certification the apprentice is working toward. The ministry responsible for the national certification must give an opinion regarding the professional skills of the applicant master trainer who is without the required qualifications.
- In Germany, the Vocational Training Act (BBiG) specifies in Section 30 the personal and technical qualifications required for exercising this role, including professional qualifications, appropriate work experience in their occupation, a good command of the occupational skills that they want to teach to young people as well as educational/socio-pedagogical qualifications for dealing with young people (Bundesinstitut für Berufsbildung, BIBB, 2010a).

Notwithstanding this, most analysed Member States offer training activities specifically devoted to increase the existing knowledge and teaching skills of the company trainers:

- In Denmark, a non-obligatory apprenticeship trainer education is offered within different areas, basically with the aim of providing the trainer with knowledge and competences related to their job. Furthermore, the Social Partners have developed a detailed "Trainers Guide"[37] in which rules and procedures are explained. The guide also advises the company about the working environment and training methods in order to obtain a successful apprenticeship.
- In Estonia, and on a voluntary basis, vocational schools themselves provide some basic pedagogical coaching to the company trainers[38].

[37] http://www.traenerguide.dk/

[38] During the ESF-funded apprenticeship project in 2005-2008, the companies enrolled in apprenticeship training were bound to send their company trainers on specific supervisory training. Since the end of the project, this centralized training program has stopped.

- In France, training days for master trainers (current of potential trainers) are organised by some trade chambers and some or some Apprentice Training Centres (CFAs)
- In Spain, the Council of Chambers of Commerce developed in the '90s a Manual for the in-company training module with a general guide for tutors, followed by a series of sectoral guides adapted to the different professional branches. Additionally, short introductory courses (1 day) were organised, but this practice was discontinued
- In The Netherlands, there is an (official) training for a practice trainer, but this is not always a compulsory training. In this sense, each VET knowledge centre has its own rules and regulations regarding the necessary skills of a practice trainer, including both practical and pedagogical skills
- In the United Kingdom, and depending on the sector, training may be supplied to ensure that company trainers fully understand the requirements of their role. This is the case, for instance, of CiTB-Construction Skills, who offers funding opportunities for this purpose.

In this respect, special attention deserves the German case, where company trainers are required to pass a special trainer aptitude examination established by the so-called "Trainer Aptitude Regulation" ("Ausbilder-Eignungsverordnung", AEVO) before they become officially recognised company trainers. Local Chamber of Industry and Commerce or Chamber of Skilled Crafts are in charge of examining and verifying that only those persons who are properly qualified (in other words, who have earned the above-mentioned qualifications) provide in-company vocational training. This compulsory training was suspended on a test basis from 2003 until 2009 (so to engage more small enterprises in dual training practices) but subsequently it has been reintroduced.

Evidence from various countries suggests that when apprentice supervisors receive specific training, particularly to carry out their pedagogical role, they do a better job of developing the skills of apprentices and such preparation has got positive outcomes. For instance, better supervision increases the productive contribution of apprentices during the training period, improves learning outcomes and creates a better pool of potential recruits for the company[39]. Also, training for workplace trainers may have additional spill-over benefits, since the competences acquired by trainers tend to be shared within the company (OECD, 2010).

According to some available estimations, in The Netherlands there were about 300,000 "practice trainers" amongst the 223,000 registered learning companies in 2010, whereas, in Germany, a total number of 676.428 persons (76,6% male, 23,4% female) were registered as approved trainers with the competent bodies in 2009 (interestingly, about three/quarters of them were older than 40 years old) (Bundesinstitut für Berufsbildung (BIBB), 2011).

3.4 Role and characteristics of school based training

Functions of school based training

Despite the key role that workplace based training plays in the analysed apprenticeship-type schemes, also school based training fulfils a number of key goals for the students' education and personal and professional development. In this sense, two very important roles within the whole apprenticeship training can be highlighted (OECD, 2010):

- On the one hand, it serves as an extended platform for all young people to further develop the general knowledge and skills that are needed in civic society and the knowledge economy (own language, foreign languages, maths, social studies/business stud-

[39] Interestingly, one of the main reasons for the reintroduction of the German compulsory trainer aptitude examination is because first evaluations of the suspension show that in companies without qualified training staff, apprentice dropout rates were higher and companies complained more about the performance of their apprentices (Bundesinstitut für Berufsbildung, BIBB, 2008)

ies, PC skills, sport, etc). In this way, the analysed countries require apprentices to consolidate and improve their numeracy and communication skills and to acquire underpinning theoretical knowledge in addition to occupational competency[40].

- On the other hand, school-based training provides young people with theoretical (and also practical) vocational-related knowledge and qualifications required for becoming a fully competent worker, particularly relevant within the current framework of continuous adaptation to technical change.

In the case of countries with mainly work-based apprenticeship schemes, this theoretical/practical school-based training is strongly coordinated with the work-based training provided by enterprises, so schools have extensive contacts with the regional business community. In the French case, regular contacts are put in place between the Apprentice Training Centres (CFA) and the company when the apprentice is at work. In Germany, part-time vocational schools decide on how to allocate teaching in consultation with training enterprises (provided some general standards are fulfilled). For instance, and when a vocational school has enough trainees learning the same occupation, it puts them together into a specialised class. If this is not possible, schools try to put trainees who learn similar recognised occupations together in one class. Special classes can also be set up especially for large enterprises that have a large number of trainees at a single location (Bundesinstitut für Berufsbildung, 2010).

Meanwhile, in the mainly school-based apprenticeship type Member States (Poland, Slovakia or Spain), vocational schools complement theoretical classes relating to a profession with strong emphasis on practical training in school workshops and laboratories. In this respect, and interestingly enough, the recently passed Slovak Act on VET establishes the so-called regional Centres of VET, basically aimed at concentrating financial and human resources in special training facilities with higher equipment standards and high quality vocational training supply. Also in the case of Poland and Spain, vocational schools are responsible for arranging and supervising the practical training that takes place in the vocational placements/in-company training practices within enterprises.

Percentage of total training and periods of tuition

Concerning the importance attributed to the school-based training provision within the total training hours as well as the existing time arrangements, the situation is very different amongst analysed Member States. In this sense, and focusing the attention on those case studies Member States where mainly work-based schemes are available, the situation is as follows:

- In Denmark, school based training represents a 35% of the total number of training hours, although in the specific case of the so-called "New Apprenticeship" scheme, this percentage is no higher than 10%. The school-based periods of the main courses are organised as blocks of between five and ten weeks, where these blocks are placed 2-5 times during the main course with 1-3 blocks per academic year.
- In Estonia, the Regulation of Implementing Workplace Based Study only states that school-based training must constitute one-third of the total curriculum, where the arrangements of this school-based training (how often, when) can be very flexible depending on the type of studies.
- In France, approximately 33% of the total training hours have to be school-based. Students usually alternate 1 week in the training centre with 2 or 3 weeks in the company, although there is a high degree of freedom to decide how time is allocated between

[40] In this respect, special attention deserves the special case of Denmark, where the school-based training is divided between a so-called basic course (intended to provide students with a minimum standard level that may help them to continue further their studies, where this basic course is flexible in duration and depends on the individual student's prior qualifications and ambitions) and the so-called main course, where students alternate between learning in a company and at a vocational school, according to the principles of a sandwich-type program

work and school. Interestingly, school based training is divided in two parts, that is to say, 2/3 of hours are devoted to general classes (mathematics, French, law, economics and management...) and technical classed (technology, technical drawing...) and 1/3 of hours are devoted to technical and practical training in the school.

- In Germany, trainees spend 40% of their total training time at part-time vocational schools. As a general rule, they attend part-time vocational school on average one or two days per week, although some vocational schools, however, offer a block of instruction that lasts several weeks and encompasses the entire period of schooling to be completed at vocational school. According to a decision by the Standing Conference of Ministers for Education and Cultural Affairs (KMK), vocational schools must provide at least twelve hours teaching a week, normally eight hours for vocational subjects and four hours to general subjects (i.e. German and foreign languages, social studies/business studies, religious education, sport, etc). Vocational schools decide on how to allocate teaching in consultation with training enterprises, the schools inspectorate and the competent bodies.
- In The Netherlands, students in the BBL route have to spend no more than 40% of his/her time in schools, whereas this percentage is higher amongst BOL- route students (up to a maximum of 80% and no less than 40% of their time has to be spent at schools). In an average BBL-route, the trainee works about three-four days a week and goes to school one-two days a week, whereas average BOL-route student go to school all week, but have one or more periods of internships (between 10-20 weeks) during a school year.
- In The United Kingdom, the Specification of Apprenticeship Standards in England sets expectations for guided learning hours and off the job training (BIS, 2011), that suggests that at least 30% of the Guided Learning Hours (GLH) must be delivered off-the-job. The delivery of the school-based element can vary from workplace to workplace to some degree and depends on the apprenticeship sector, Typically, the school based training takes place throughout the apprenticeship, for example, through the employer releasing the apprentice for one-day of school-based input each week or through the visit of the training provider to the workplace. However, it may be the case that this off-the-job training is delivered in the first year of the apprenticeship after which on the job assessment of competence is completed (see Newton et al., 2009; 2008).

Meanwhile, and in the mainly school-bsed schemes, and as far as Poland is concerned, the full body of the training takes place at school and it is only in the summer period when an apprenticeship placement in an enterprise takes place durings 3 to 4 weeks per academic year, although the exact duration of a placement is determined by the school headmaster depending on the type of a school and the specialisation taught at the school. In the Spanish case, school based training accounts for approximately 70-80% of the total tuition hours, where the whole of the school-based training hours take place at the beginning of the training cycle (indeed, the successful completion of all the school-based modules is a requisite to start the "in-company training" module). In Slovakia, 75% of the school based training time refers to specific vocational subjects.

Type of schools and training providers

As far as the main characteristics of the existing school based training providers are concerned, there are notorious differences amongst analysed Member States, as the existing school structures vary from one country to the other. A brief explanation per analysed Member State is presented next:

- In Denmark, there are basically 109 institutions that offer vocationally oriented educations programmes, where these institutions are technical colleges, commercial colleges, agricultural colleges and combined colleges. The quality and economic health of these institutions is supervised by the Danish Ministry of Education (Danish Ministry of Education, 2011)

- In Estonia, school based training of apprenticeship studies may take place in the existing 43 vocational education institutions, where three/quarters of them are administered by the State and the remaining 10 are private. There are also 8 professional higher education institutions where vocational education on VET study programs can be obtained.
- In France, the largest share of school-based training providers which co-train apprentices with employers are the so-called Apprentice Training Centres ("Centre de Formation des Apprentis", CFAs). These are managed by organisations which can be either private (associations, companies), semi-private (chambers of commerce and industry, chambers of trade), or public (local public teaching establishments, local authorities)[41].
- In the German dual vocational training system, vocational schools are the partners to the firms providing in-company training, adopting for this purpose a subsidiary role. They are usually public institutions, although private suppliers are also available. These vocational schools are strictly regulated by the Federal States (Länder)
- In the Polish case, vocational schools involved in VET provision include different types (see the Polish report for further details). Generally speaking, these schools are public ones, although private providers are also available.
- In Slovakia, and after the 2008 reform supported by the Education Act, all VET schools are named as Secondary Vocational Schools (Stredná Odborná Škola, SOŠ). SOŠ represent a variety of schools preparing students for both higher education and the labour market in professions requiring good general and vocational education with firm grounding in theory and also for blue collar professions. All these SOŠ are strictly regulated by the Slovak Ministry of Education.
- In Spain, the training centres that offer middle and upper level vocational training are basically public and private institutions accredited by the relevant education authority. They usually are exclusively devoted to teaching vocational training, although they may provide other types of education (i.e. non-compulsory secondary general education, academic track)[42]. Interestingly also, in Spain there are also the so-called National Reference Centres, specialised in the different productive sectors, and which are responsible for innovation and experimentation in vocational training. All these institutions must meet a series of requirements which apply throughout the whole of Spain.
- In The Netherlands, school-based training provision for both BOL and BBL-routes is offered by three different type of institutions, that is to say, the so-called regional training centres (ROCs)[43], agricultural training centres (AOCs) and trade schools. There are about 70 VET schools in The Netherlands, of which 42 are a ROC, 11 are an AOC and there are 14 trade schools. They are strictly supervised by the Dutch public authorities, mainly the Dutch Ministry of Education. Most training centers for vocational education and training are represented at national level by the Dutch Council for Vocational Education and Training ("MBO Raad").
- In the United Kingdom, typically apprenticeship school-based training providers are Colleges of Further Education or Private Training, usually known as a special category as Work-Based Learning Providers. In terms of their national representation, Association of Learning Providers is the largest association of Work-based Learning Providers in England. These school-based training providers fall within the regulatory remit of the Office for Standards in Education, Children's Services and Skills, OFSTED (see point 3.7 for further information about OFSTED).

[41] In 2008, private organisations trained 56% of the total number of apprentices, compared with 28% for semi-public organisations and 16% for public organisations

[42] In these cases, vocational training is organised independently of the other types of provision, but they may share personnel and material resources

[43] ROCs are mainly aimed at three sectors, i.e. health and social care, technology and economy. The AOCs provide training for the agriculture sector, whereas the Trade schools focus on training for an industry such as graphic arts or shipping.

3.5 Role of students in the apprenticeship type schemes

Ways of access to apprenticeship places

Concerning the way students get access to enterprises providing apprenticeship-type opportunities, the information provided in the different national case study reports show a wide availability of different paths (often combined with each other).

To start with, students may gain access to enterprises on their own, using for this purpose their own acquaintances and personal network of contacts. This situation is mentioned in several countries (Estonia, France, Germany, The Netherlands), and in Denmark it is mentioned that the main share of students gains access to apprenticeship via this path. Interestingly enough, and in the dual system countries (i.e. Denmark, Germany, The Netherlands), students themselves must find their own apprenticeship places by making a direct application to an employer[44]. Meanwhile, in the case of France, it is the other way round, in the sense that the student must be accepted by an Apprentice Training Centre (CFA) for the diploma he/she wants to prepare before companies are able to select the student.

In other countries, the process can be more complex. A good example of this is given by the UK case, where there are a range of routes into apprenticeships for workers. For example, the employers may start from the point of wishing to employ an apprentice, however it may also be the case that they identify a worker requires training and at that point contact a training provider, a skills broker, sector body, or the National Apprenticeship Service (NAS)[45] to explore options. Finally they may have an existing relationship with a training provider and ask the provider to recruit on their behalf i.e. place a young person who has recently been in relevant college-based training (see Maguire and Newton, 2010).

Also, enterprises in other countries (Estonia, Germany, The Netherlands) can play an active role in finding apprentices, using for this purpose different instruments such as advertisements in newspapers, information on available apprenticeships in own websites, etc. In the specific case of Estonia, it is mentioned that larger enterprises use apprenticeship studies as a way to educate their own workforce, so the company makes an arrangement with the school and then selects the students who will start workplace-based training. Meanwhile, and in addition to the key role that local employment offices play (subsequently explained in this same section), German enterprises use other sources such as Internet, advertisements in the regional media or other ways. Precisely, and for small enterprises, personal contacts are a very important tool for using suitable candidates, whereas large enterprises often have got highly professional application and recruitment procedures (Deutscher Industrie- und Handelskammertag (DIHK), 2011)

Notwithstanding this, vocational training schools play a very active role as intermediate agents or brokers between enterprises and students in almost all analysed Member States. For instance, and in the case of Denmark, whenever the student is registered as searching for apprenticeships, the school is committed to communicating with or referring the student of available apprenticeships posts within enterprises willing to offer apprenticeships. Furthermore, Danish, German and Dutch schools offer well-established guidance programmes for apprenticeships which examine apprenticeship occupations, the prospects they offer and the type of work involved so that students can make an informed choice of route post-16. By way of contrast, some authors argue that both France and England suffer from indifference and sometimes hostility towards work-based training in schools and little or no advice is provided (Steedman, 2010). In the case of Poland or Spain, vocational schools are in charge of securing vocational placement/in-company training practices places for their stu-

[44] In these countries, enterprises have to offer students an employment contract before they can be admitted to an apprentice training programme

[45] The main role of the National Apprenticeship Service (NAS) is to promote Apprenticeships and their value both to employers and to prospective students, as well as improve the certification arrangements for successful apprentices and coordinate the funding for Apprenticeship places

dents by concluding appropriate agreements with enterprises. For this, schools try to establish a network of contacts with companies at the local and regional level which they repeatedly recourse to in order to place their students for the on-the-job training modules of the curriculum.

Interestingly also, other institutions in some countries play also an intermediate role between enterprises and students. Examples include the French Chamber of Trades or the Job centres ("Pôle Emploi") agencies, also some Chambers of Commerce and business associations in Spain (liaising with the training centres), the local employment offices in Germany[46], or the UK National Apprenticeships Service, tasked amongst other duties with a job matching process between employers and prospective apprentices. In some countries, this intermediate role is played via developed special websites and electronic databases where both students and companies can match their respective interests. A good example of this is developed by the Danish Ministry of Education's website http://www.praktikpladsen.dk or the Apprenticeship Matching Service developed by the UK National Apprenticeship Service (NAS).

Access requirements, rights and obligations

As far as access requirements for students are concerned, in addition to motivational aspects, the conditions always include some minimum qualification requisite, basically related to having a compulsory educational level. Meanwhile, as far as age requirements are concerned, the typical situation suggests that there are no specific age limits for students applying for apprenticeship type training, although the largest majority of them belong to the 16-20 year old group.

However, some youths may need longer to reach a decision or develop the abilities required for carrying out an apprenticeship type scheme, which explains the presence of young people in their early 20s. For instance, in France the apprenticeship contract is solely aimed at young people aged 16 to 25 years old. Also, in the UK the government intends that apprenticeships play a key role for the qualification of low skilled adults in work.

Concerning the main rights and obligations for students and derived from their participation in apprenticeship type schemes, the main right but also obligation of the apprentices is to fulfil their training period, fully exploiting the possibilities offered to them.

In the case of apprentices in dual training schemes, the rights and obligations of apprentices are reflected in the contracts signed between enterprises and students[47]. For instance, in the French case, apart from attending the training centre and working for certain number of hours, apprentices have other obligations similar to the rest of employees such as work performance objectives, respecting chiefs and workmates, equipment, schedules, tasks given to them, professional confidentiality, etc. Meanwhile, and as far as rights are concerned, they are those of any employees, as their contract is a work contract, including remuneration, working time, holidays, etc.

Interestingly enough, German apprentices have the right to self-representation in some cases. In this sense, if a company has at least five employees who are under the age of 18 or who are apprentices under the age of 25, these young people may form a youth and apprentice delegation in order to represent their interests in the enterprise[48].

Meanwhile, and in those countries where no contract exists between the employer and the student, students' rights and obligations are regulated by the agreement signed between

[46] In the German case, an online survey carried out in February 2011 among 14.299 German manufacturing and service enterprises (Deutscher Industrie- und Handelskammertag, 2011) showed that the most frequently used way to find suitable apprenticeship candidates is to inform the employment offices about vacant training positions and ask the employment office to find interested and qualified applicants. Thus, up to 61% of the interviewed firms always inform the employment offices of vacant training positions and ask the employment office to find interested and qualified applicants.

[47] See next subsection for further details on this.

[48] These provisions are only valid for enterprises where a works council has been established

the vocational school and the enterprise. For instance, in the Spanish case students must complete the syllabus and perform assigned tasks and activities, as well as observe general occupational health and safety regulations. Also, they are required to attend a number of tutorial activities or personal office hours with his/her tutor in the school, and fill in a series of documents where the work they develop is registered.

Apprentices' final assessment and exams

Concerning the way the knowledge of students is finally assessed, it is the usual situation that apprenticeship students are assessed both by the school and the employer. This is the case of Estonia or France, where diplomas are obtained based on results of theoretical exams and practical exams carried out at the Apprentice Training Centres (CFAs) as well as on the master trainer's assessment regarding their practical experience. In the United Kingdom case, the assessment of apprentice students combines competencies gathered in the work place and learning provided by the school training provider. In Denmark, at the end of the apprenticeship period the company creates a declaration for the student, the school and the Social Partners describing the obtained goals, where this declaration is regarded as a "sine qua non" condition for allowing the student to pass his/her final exams.

As far as those Member States with a mainly school-based approach (i.e. Poland or Spain), the work placements/modules are usually assessed by representatives of the school in accordance with representatives of the enterprise (usually the enterprise' supervisor), based on a previously defined placement syllabus. In the Polish case, there is an examination set for assessing the vocational placements, whereas in the Spanish case this is done on a continuous basis and it is extremely unusual that the student fails the assessment.

Interestingly also, there are a number of countries (Denmark, Estonia, Germany, Netherlands or the United Kingdom) where apprenticeship students are obliged to pass a final exam for successfully completing his/her degree. Thus, and in the case of Denmark, students are examined in his/her competences in a realistic setting once the VET education is completed, where the exam typically include a combination of practical projects and theoretical tests. In the case of Germany, there is a final examination which comes at the end of the vocational training for those students who have completed their period of training, where this final examination usually consists of a written exam as well as of a practical and/or an oral section, where both theoretical and practical training contents are assessed[49]. In The United Kingdom, a final externally verified[50] exam takes place.

Also in some of these countries, social partners play a very important role in carrying out these evaluations and exams (i.e. the cases of Denmark, Germany or The Netherlands). Thus, and in Denmark, social partners play a key role in the supervision of existing exams. In Germany, the Business Chambers are responsible both of conducting the final examination and of establishing the boards of examiners ("Prüfungsausschüsse") to administer the final examinations of trainees, where each board of examiners must include equal numbers of employers' and employees' representatives and at least one vocational school teacher. In the Netherlands, the enforcement of the examination profiles is mainly the responsibility of the sector representative organisations, although the Education Inspection (part of the Ministry of Education, Culture and Science) monitors the examination processes.

The successful completion of the studies usually leads to a nationally recognised degree. In some countries, these degrees are issued by the public authorities. This is the case of France, Poland, Slovakia or Spain, where each certification is issued usually the by the national Ministry of Education. Meanwhile, in other Member States, professional organisa-

[49] In case a student does not pass the exam, he may sit it two more times, where the period of training is then extended upon application from the apprentice until the next exam date, but only for a maximum of one additional year.

[50] In the United Kingdom there are approximately 120 awarding sector bodies that verify these exams, regulated by the three government-appointed statutory education bodies: the Qualifications and Curriculum Authority (QCA) in England, the Council for the Curriculum, Examinations & Assessment (CCEA) in Northern Ireland, and the Qualifications, Curriculum and Assessment Authority (DELLS) in Wales

tions/bodies have a prominent role in this field, such as the case of Estonia (where certificates are issued by the awarding body, usually the employer or a professional association[51]), Germany (where Business Chambers issue the certificates which officially show that the apprentice has successfully terminated the vocational training in his/her training occupation) or The Netherlands (where existing VET knowledge centres play a key role in this field).

3.6 Contracts and agreements between enterprises/students/VET schools

Types of contracts and agreements

In all the analysed case study Member States, apprenticeship-type schemes are regulated by specific legal provisions between different stakeholders involved in the scheme (i.e. enterprises, students and sometimes VET schools). These legal provisions, together with the existence of a strong institutional framework, play a key role in the successful implementation of apprenticeship-type training for a number of reasons (Ryan, 2000). On the one hand, the training contracts and agreements establish the conditions of the workplace activities to be developed by the signing parties, assuring therefore that all rights and obligations are fulfilled and in line with the national regulations. Also, training contracts assure that training is provided according to the nationally defined quality standards, both in terms of training provision and in terms of suitable working conditions.

These contracts vary from one country to another with respect to the signatory parties or the contents involved (OECD, 2010). In this sense, as far as the parties are concerned, it is possible to distinguish three main groups of countries:

- In the majority of countries (i.e. Denmark, France, Germany, Slovakia[52] or the United Kingdom), the contract is solely signed between the enterprise and the student/apprentice (or his/ her statutory representative if the apprentice is a minor)[53]. This contract is usually of a fixed-term nature in France and Germany (so the contract ends when training is completed), although in other cases it can be also of a permanent nature[54]. By way of contrast, there is no additional contractual relationship between the apprenticeship student and the vocational school, although in all countries there exists an expectation that a non-formalised partnership emerges to support the apprentice's training[55]. In all these cases, these contracts between employers and apprentices are regulated by existing Labour Laws/national apprenticeship-related regulatory standards (i.e. the German Vocational Training Act, BBiG) and/or relevant sector collective agreements.
- Meanwhile, and in the cases of Estonia and The Netherlands, it is possible to identify three-party contracts. Thus, and in Estonia, three parties are required to sign a contract per every apprentice, that is to say, the school, the enterprise and the student. In the case of apprentices, they sign a study contract with the school and a work contract with the enterprise and have a four-month probation period. Meanwhile, and in The Netherlands, it is possible to identify two main contracts amongst BBL students, that is to say,

[51] Estonian Qualifications Authority [http://kutsekoda.ee/en/kutsesysteem/tunnistusesaamine]

[52] In the minority case of students who carry out their training within an entreprise

[53] In Denmark, and prior to the signing of this agreement, the student has received an education agreement

[54] in the case of Slovakia the enterprise is obliged to offer the apprentice an employment contract after successful completion of study

[55] For instance, and in the UK case, training provider and the employer work together since externally verified assessment complements the internally verified evidence gathered so that assessors may attend the employer's workplace in order to externally verify an apprentice's competence. At the outset of training, and under the ideal conditions, employer apprentice and training provider work together to establish the Individual Apprenticeship Plan.

an employment contract with the employer and a practice agreement ("praktijkovereenkomst") between the employer and the school[56].

- Finally, and in the cases of Poland and Spain, the contract or agreement is solely signed between the training centre and the enterprise or other entitites (entrepreneur organisations, etc.) arranging vocational placements (in the Polish case) (see case study below) or "in-company training" modules (the Spanish case). In both cases, there is no contractual or labour/employment relationship between the student and the company, so the student keeps his/her "student status" and he/she is not regarded as an employee (this type of contracts is therefore not regulated by the existing Labour Laws). All in all, and in the Polish case, employers may also conclude an agreement with an apprentice on a voluntary basis, determining the apprentice's duties and possible remuneration therein, where, again, this agreement cannot be identified as a classical employment contract.

Table 3.4 Polish case study: Collaborative agreement between enterprise and VET schools

The Construction company Skanska has signed since September 2007 several cooperation programmes with 14 basic vocational schools and technical upper secondary schools providing education within construction professions located all over the country. Basically, these cooperation programmes include several activities such as systematic training for teachers, provision of didactic materials and equipment to schools or, finally, agreements so that the best students of these schools follow their vocational placement periods in the enterprise, basically with the aim of providing them with subsequent employment opportunities once they finish their VET studies.

Source: Polish Ministry of National Education (MEN), 2010.

Conditions and remuneration

As far as the main contents included in these contracts, they are different amongst the Member States. However, regarding contracts between the employer and the student/apprentice, it is possible to distinguish a number of common elements despite existing national differences. Examples of these common elements include, amongst others, the start and duration of both the on-the-job/off-the-job training, a training plan including the purpose and syllabus of the provided training, working hours and holidays, the remuneration conditions for the apprentice, the length of the probation period[57] or the conditions under which the training contract may be terminated.

Meanwhile, concerning those countries where agreements are signed between the school and the enterprise receiving students for vocational placements and in-company training periods (i.e. Poland and Spain), usually these agreements are official documents that define terms and conditions for both parties, including the form and duration of placements, the training/productive activities foreseen within the enterprise (this is, a training plan) or the evaluation processes. All in all, these agreements must fulfil the basic guidelines established by the public administration, but they can be adapted to the specific conditions of the school, the student and the company.

Interestingly enough, some of the analysed countries dispose of established mechanisms and institutions for solving possible disputes between companies and apprentices. Examples include the French mediators[58], the arbitration board of the German Chambers or the Danish Trade Committees, who act as mediators between both parties in case of disagreement.

[56] In contrast, a BOL student only has a practice agreement and the BOL student only gets a compensation for the internship, and not a regular (minimum) wage as is the case with BBL students

[57] For instance, and in France, this probation period is of 2 months, whereas in Germany, the probation period lasts at least one month and a maximum of four months. In Denmark this period is also of three months.

[58] These mediators are funded by Regional Authorities (Conseils régionaux), and usually work in Apprentices Training Centres (CFAs)

Interestingly also, and in the case these problems are not solved at these Committees, there is also an additional special board of disputes ("Tvistighedsnævnet")[59].

One of the key elements in any work contractual relationship refers to the salary conditions. In those Member states where a labour relationship is established between the employer and the trainee, employers must pay a wage to the students for the productive work undertaken for the enterprise[60]. However, the calculation of this wage is subject to important national differences:

- In Denmark, companies pay wages that make up a minimum of the wage collectively agreed at sector level. The gross salary is between 8,000 and 13,000 DKK (app. 1,066-1,733 EUR) per month), and they are determined by the collective agreement regulated by the Social Partners within the area of education. Usually, the salary increases during the education according to the collective agreement, as the student gets more qualified.
- In Estonia, the salary paid by the employer to be at least equivalent to the national minimum hourly wage (in 2011, 1.73 Euro), although it can be significantly higher because many of the current apprentices already used to work in the company or were sent to the apprenticeship studies just after hiring.
- In the French case, the minimum wage for apprentices is defined by a pay scale (see table below) built on criteria of age, years of apprenticeship and depending on the gross wage decided collectively by professional branches (which cannot be below the legal minimum wage).

Table 3.5 Minimum wage for the apprentices in France (in percentages of the minimum wage as decided by the professional branch)

Age group	1st year	2nd year	3rd year	4th year*
Under 18	25 %	37 %	53 %	68 %
18-20	41 %	49 %	65 %	80 %
21 and more	53 %	61 %	78 %	93 %

For handicapped people who have extended, by exemption, the length of their apprenticeship.

N.B: On 01/01/2011, the legal gross minimum wage was 1365 € per month

Source: French National Report.

- In Germany, training employers are obliged by Law to pay apprentices an appropriate so-called "training allowance", whose amount is fixed by the social partners in the different sector collective labour agreements and also subject to the trainees' age and his/her experience within the enterprise. In this respect, enterprises are not able to pay lower training allowances (higher allowances are of course possible)[61]. In 2010, the average monthly gross training allowances (i.e. before the deduction of taxes and social security contributions) amounted to 678 EUR, where this average figure was of 688 EUR in Western Germany and 612 EUR in Eastern Germany (BIBB, 2011).
- In Slovakia, the company signing a contract with a student usually offers motivation scholarship and a wage for productive work performed in its premises, although there are no legal provisions on these.

[59] If the parts still not come to agreement, the official legal system takes over

[60] In some countries, employers may receive some help from public authorities to alleviate these costs (see an explanation of this in next subsection).

[61] Firms which do not participate in collective wage bargaining can undercut the collectively agreed training wages by a maximum of currently 20%. Nonetheless, most of these unbound firms voluntarily pay the standard allowances

- In The Netherlands, paid wages are usually the legal minimum wage in case of a BBL student as set in the collective labour agreement of the company or sector (although this wage can be higher if the employer decides so)[62].
- In the United Kingdom, there is a lower national minimum wage (NMW) rate for apprentices than other workers. From October 2011, the NMW for apprentices is £2.60 per hour whereas for workers aged between 16-17 it is £3.68, for those aged 18-20 it is £4.98, and for those aged over 21 it is £6.08. However the National Apprenticeship Service reports that most employers pay above the apprentice NMW.

On the other hand, in those countries where students do not sign any work contract with the enterprises (i.e. Poland and Spain), they may receive some compensation for the work carried out in the vocational placements/in-company training practices. In this sense, in Poland, students are entitled to receive from their schools reimbursement funds for their travel expenses (in case they have the opportunity to return everyday to their place of residence or school's headquarters) or living expenses (in case students undertake the practical vocational training in a place outside the school's headquarters and are unable to travel there on daily basis)[63]. By way of contrast, Spanish students are not legally entitled to any compensation, neither from enterprises nor schools. Notwithstanding this, it is the case that companies might voluntarily offer some payment to the student as a way of compensation for the effort and work, usually at the end of the module. Also, some regional governments may grant students some pocket money mainly aimed at covering travelling expenses.

3.7 Financing of apprenticeship-type schemes

Contributions by the different stakeholders

In response to shared benefits amongst the different participants in the apprenticeship-type schemes, a variety of funding patterns exist, involving some sharing of the costs of provision amongst governments, students (and their families), and employers (OECD, 2010).

In this sense, and focusing the attention on the case study Member States, it is possible to distinguish two main financing models. On the one hand, the model corresponding to those countries where apprenticeship type schemes are predominately school-based (i.e. Poland, Slovakia or Spain). In these countries, the public sector is the main source of finance, that is to say, national public funds[64] as well as European funds (i.e. the ESF or the Lifelong Learning Programme), although private sources (i.e. students and households, private companies', etc.) may also contribute to a lesser extent. Just to give some data, estimations from Spain and Slovakia suggest that between 85% and 96% of the respective education funds come from public sources. Usually, the amount of public funding for schools is set according to the number of students.

Meanwhile, in the remaining analysed Member States, the dual-based nature of their apprenticeship-type schemes explain that these are funded by different participants (Governments, households and students, enterprises), enterprises themselves playing a much higher role than in the previous countries. For instance, in the case of Denmark, data for 2010 shows that enterprises paid 4.0 billion DKK whereas the State´s expenses for VET was 5.9 billion DKK (data referred to 2010 and 2008). In France, up to 43% of the 6.9 billion euros devoted to apprenticeship funding in 2008 came from enterprises themselves (including wages paid by employers to apprentices), 50% came from central and regional

[62] By way of contrast , BOL students only have a practice agreement so the BOL student only gets a compensation for the internship, and not a regular (minimum) wage as is the case with BBL students.

[63] Also, the Polish legislation entitles students to receive a remuneration during the period of vocational training, where this remuneration cannot be less than 4% of the national average monthly salary.

[64] In the case of Member States with a decentralised educational policy (i.e. Spain), regional governments also contribute to the financing of VET systems.

government funds, 6% came from other sources (i.e. local authorities, products and services delivered by the Apprentice Training Centres) and, finally, 1% came from apprentices and their families.

In Germany, estimations suggest that 76% of resources devoted to apprentices come form enterprises (in 2007, the gross total costs for an enterprise per training place averaged 15.288 EUR per year), whereas the remaining 24% comes form the Länder and the Federal Employment Agency (BIBB, 2011). It should not be forgotten that some contributions from enterprises are in kind, for example in terms of the time and facilities contributed by employers to workplace training. In the United Kingdom, the overall budget made available by Government within 2010/2011s academic year for employer responsive training which included Apprenticeships was £1.3m (no da available for employers' contribution).

In this respect, some countries (Denmark, France, Poland or Slovakia) have developed special tools for channelling enterprises' contributions to, amongst other goals, apprenticeship studies:

- In the case of Denmark, all Danish companies, both public and private, contribute a fixed annual amount to the so-called Employers´ Student Reimbursement Fund (Arbejdsgivernes Elevrefusion, often referred to as AER) for each of their employees. Meanwhile, the AER fully reimburses the enterprise for trainees' wages during 100% of the time that the students attends off-the job learning, where this is the case during both the main course and the basic course. In 2010, the enterprises paid 4.013 million DKK to AER (approximately 554.933 million EUR).
- In France, any company with at least one employee is subjected to the so-called Apprenticeship Tax, which adds up to 0.50% of total payroll. Only companies training at least one apprentice and whose total payroll does not amount to 6 times the minimum annual wage are exempt from the apprenticeship tax. In addition to this, large companies who employ at least 250 people on a yearly basis and whose workforce contains fewer than 3% of people dividing their time between work and school (apprenticeship or professional contracts) are entitled to pay a so-called "supplementary Contribution to apprenticeship". In 2008, the Apprentice Tax amounted to 1,78 billion EUR, which in fact only brings a quarter of the total budget of apprenticeship[65].
- In Poland, the so-called Labour Fund operates since 1 January 1990 with the main purpose of promoting employment, vocational activation and combating the consequences of unemployment. The Labour Fund is financed mainly by contribution paid by employers on behalf of employees and by persons conducting own business activities as well as subsidies from the State Budget and the EU budget. This Labour Fund subsidises enterprises for the offered practical vocational training placements.
- In Slovakia, the Slovak Act on VET of 2009 also sets a VET Development Fund, intended to collect voluntary contributions from enterprises and non-state subjects for VET purposes. However, this Fund is subject to strong problems and criticisms due to its voluntary approach, which makes the Fund vulnerable of illiquidity.

Costs for students and financing instruments

Concerning the cost of apprenticeship-type training for students, the typical situation suggests that the costs of off-the-job education in vocational schools is usually free of charge for them, although those students who are older than a certain age might be required to partially cover their fees. Thus, in the case of Denmark, students in the basic course over the age of 18 who do not yet have a training agreement can receive grants from the Danish State Education Grant and Loan Schemes if they meet the required criteria. Meanwhile, in The Netherlands, every BBL student who is older than 18 has to pay a tuition fee to VET institutions subject to the level of study (213 Euro for level 1 or 2 BBL students and 517

[65] For further details about this Tax see the French national report

Euro for level 3 or 4 students, data for academic year 2010/2011). In Germany, the school-based element of dual vocational training is financed by the respective Federal State ("Land") and by public funds of local authorities.

Also in some countries, public authorities provide special grants for students. Thus, and in Estonia, apprenticeship students are eligible for study allowances paid by the school, including study allowances, transportation allowances or even low-interest study-loan which has to be paid back after graduating and is guaranteed by the state. In the French case, some Regional Authorities (Conseils régionaux) provide apprentices with extra funding (bonuses, transportation, housing and catering benefits, European mobility benefits, grants for young people's first professional equipment purchases, etc), specially aimed at students with lower financial means or with geographical mobility barriers. In Germany, the Federal Employment Agency provides trainees under certain preconditions with non-repayable monthly grants in the form of vocational training assistance ("Berufsausbildungsbeihilfe", BAB) (see below table). In the United Kingdom, employers do not have to pay the training costs associated with the apprenticeship as the learning provider receives the training fees from government once the apprentice 'enrols' with the learning provider.

Table 3.6 Vocational training assistance ("Berufsausbildungsbeihilfe", BAB)

The Federal Employment Agency provides trainees under certain preconditions with non-repayable monthly grants in the form of vocational training assistance ("Berufsausbildungsbeihilfe", BAB). This support is mainly aimed at increasing labour mobility and overcoming financial difficulties that stand in the way of suitable professional training for young people. The BA's total spending on vocational training assistance amounted to 584 million EUR in 2009. Entitled are young people in vocational training if (A) they cannot live with their parents during training because the training enterprise is too far away, or (B) if the training company is not too far away if (1) they are over 18 years of age, (2) are married or living in a civil partnership or (3) have at least one child.

Source: German national country report.

Meanwhile, students in dual based models are expected to (partially) back their wages (paid by enterprises) through productive work during their apprenticeship. Just to give some German data, total expenditures on vocational training by training enterprises (both within the private business sector and in the public sector) were estimated to amount to approximately 23.8 billion EUR (gross amount), although the adjustment brought about by the productive work of the trainees brings net training costs to an approximate total of 5.6 billion EUR (data for 2007) (BIBB, 2011). In this way, enterprises also (partially) meet some of the cost of on-the-job training requirements (including apprentice wages and other in-company costs) via the productive work carried out by students[66].

Financial and fiscal incentives for companies

In any case, as already suggested in a previous section of this report, enterprises in some countries reckon that they invest a lot more in the costs of education than the returns the receive from the productive activities of students. This is the case in The Netherlands (Detmar and de Vries, 2009), in Germany (Bundesinstitut für Berufsbildung (BiBB), 2011) or in the United Kingdom (Learning Skills Council (LSC), 2008), where in fact the main reason suggested by enterprises for non-participating in apprenticehip schemes refers to the high costs derived from training activities[67].

Interestingly enough, in order to encourage employers to take apprentices or to offer workplace training placements (so enterprises do not bear the costs of training alone), some countries have developed systems of financial and fiscal incentives for this purpose (OECD,

[66] In addition to pure productive benefits, enterprises also identify recruitment benefits, i.e. the value to the employer of reliable information about the capacities of the trainee, supporting therefore efficient recruitment practices amongst enterprises (Steedman, 2005).

[67] Interestingly, this problem seems to be more acute the smaller the enterprises are (see discussions in previous point).

2010). In this sense, as far as the case study Member States are concerned, nearly all of them have developed some incentives. Generally speaking, these incentives are very welcomed amongst enterprises as a way to partially cover the carried out expenses (Steedman, 2005).

Examples of these financial and fiscal incentives include the following ones:

- In Denmark, and as already mentioned, full wages paid by enterprises to apprentices during the time that the students attend school-based education (i.e. the main course or the basic course) are fully covered by the Employers´ Student Reimbursement Fund (Arbejdsgivernes Elevrefusion, often referred to as AER). In this respect, enterprises received 1.091 million DKK in reimbursement in 2010 from the AER.
- In Estonia, the apprenticeship program is usually fully funded by the State according to the state commissioned study places scheme. However, there can also be other arrangements to fund the program depending on the agreement between the vocational education institution and the enterprise. For instance, if the training of the students is in the interest of the employer, the company may take on the entire financial burden related to the company based training, whereas if the apprentice is sent to the company by the school, the school pays the salary for the supervisor in the enterprise (CEDEFOP, 2009).
- In France, Regional Authorities grant exonerations to employers for taking apprentices in the social contributions paid by employers (i.e. sickness, maternity, retirement and family contributions)[68], where these exonerations may differ from one region to the other. Also, some enterprises located in some specific areas and young innovative companies receive a tax credit of 1,600€ for each contracted apprentice. In 2008, approximately 20% of the 6.9 billion euros available for apprenticeship were devoted to companies that employed apprentices under these exonerations and tax credits.
- In Germany, there is very large variety of support measures and programmes in the field of vocational education and training, designed and implemented both by public institutions at national, Land- and municipal level[69]. Amongst them, the most important one includes the programme "JOBSTARTER - Für die Zukunft ausbilden" ("Training for the future") (later on explained in this same section). Also, the Federal Employment Agency (BA) assists companies that recruit apprentices with special needs (i.e. disabled persons, young people with learning difficulties or social disadvantages, young people who has been searching for a training place for longer than one year). Interestingly also, the so-called Training Bonus ("Ausbildungsbonus") applies to companies which take on apprentices of other companies which became insolvent or had to be closed.
- In Poland, the State is active in supporting enterprises that collaborate with schools in the provision of practical vocational training placements. In this sense, the main mechanism functions through subsidies paid to employers from the previously referred Labour Fund, so to assist them with the cost of vocational education of juvenile workers. These subsidies partially cover different costs such as the remuneration of the vocational training instructors who conduct practical training with students or the cost of work clothing, work shoes and personal protection means for students (MEN, 2010).
- In Slovakia, enterprises involved in contracts with students trained in their own premises are eligible for classifying IVET training costs for VET school students as tax deductible since the passing of the new Act on Vet in September 2009. Examples of these tax deductible expenses include motivation scholarships and/or wages provided by the employer for productive work performed in its premises.

[68] Interestingly, apprentices are also exonerated of income tax on the salary he/she receives.

[69] An overview (in German language) can be found in an annex to BIBB's data report 2011 (i.e. http://datenreport.bibb.de/Tabellle_D1-1_Internet_Zusammenfassende_Darstellung.pdf and http://datenreport.bibb.de/Dokumentation_der_Bundes-_und_Laenderprogramme.pdf).

- In Spain, some Autonomous Communities provide a very small one-off incentive per each VET student participating in the "in-company training" module[70].
- In The Netherlands, Dutch companies can benefit from a general tax benefit resulting in a reduction of tax and social insurance contributions paid for BBL apprentices. Also, enterprises in a number of economic sectors can benefit from specific grants per apprentice provided by the existing sectoral training funds.
- In the United Kingdom, different levels of government funding are available for the training costs of apprenticeships which vary by age. Full funding is available to cover the training fees of 16-18 year old apprentices. For those aged between 19 and 24 years, employers are expected to contribute 50 per cent of the training fee. Where apprentices are over 25 years old, typically employers fund the full costs of training (BIS/SFA, 2009). In addition to this, the Apprenticeship Grant to Employers introduced on a one-off basis in 2010 offers a financial incentive of £2,500 as a recruitment subsidy to employers to take on a young, unemployed person (aged 16 or 17) as an apprentice, basically with the aim of countering the negative effects of the recession on the employment and training of disadvantaged young people.

Interestingly also, some countries have developed a number of special incentives for enterprises who take on additional apprentices or who take apprentices for the first time. For instance, in Denmark, employers have the possibility of receiving a prize for establishing a new internship, also financed by the AER. Interestingly enough, and since December 2010, the reward has been increased from 50,000 DKK (approximately 6,666 EUR) to 70,000 DKK (approximately 9,333 EUR) over a period of 24 month (Danish Ministry of Education, 2010), basically to deal with the negative effects of the economic crisis. In Germany, the programme "JOBSTARTER - Für die Zukunft ausbilden" ("Training for the future") has been introduced in 2006 by the Federal Ministry of Education and Research and is intended, amongst other aspects[71], to create additional training places in the regions and support companies which either have no previous experience with training or which have grown weary of providing training[72]. Also in the United Kingdom, and since 2010, a pilot small one-off incentive has been introduced, and basically intended to foster employers not already involved in apprenticeships to take on an unemployed 16 or 17 year old into an apprenticeship position. It is expected that this incentive is being evaluated in 2011.

3.8 Quality assurance mechanisms

Monitoring and checking from educative public authorities

Apprenticeship-type schemes in general and specifically those mainly work-based require careful attention to quality assurance so to guarantee that training meets minimum standards in all workplaces, to avoid the allocation of students to unskilled tasks or to prevent training being too narrowly focused on firm-specific skills. In this sense, quality standards are defined as a set of rules defining the contents and terms of training, including the curricula and duration of training, the required resources, the assessment of training outcomes or the trainers' qualifications (OECD, 2010).

Generally speaking, all analysed Member States have developed their own framework and mechanisms for assuring quality standards and guarantee uniform minimal national stan-

[70] In any case, companies use to give this small money to students or to training centres

[71] This programme already supplies funding for more than 280 innovative projects in vocational training. Projects are selected via annual calls for proposals and are expected to focus on specific thematic priorities. They are implemented inter alia by business chambers, local and regional institutions, educational service providers and enterprises.

[72] So far, 54,500 additional training places have been generated with this Initiative, of which almost 36,000 have already been precisely filled.

dards, although these frameworks and mechanisms are subject to the specific existing national institutions.

In all cases, the public authority (usually represented by the national Ministry of Education often through the inspectorate and VT specific bodies) is the main body involved in the monitoring and quality checking of the existing apprenticeship-type schemes.

- Thus, in Denmark, the Ministry of Education is the superintendent responsible for the whole VET system and programmes, so to ensure a high quality of the educations across the education institutions.
- In Estonia, the Ministry of Education is in charge of ensuring the quality of the studies, so all the individual curricula have to correspond to the national curricula and therefore include certain learning outcomes that must be achieved. Also, professional examinations are assessed by the Ministry so to ensure that universal quality and minimum standards are achieved by students.
- In France, it is the French Ministry of Education who builds the curricula and develops the legal framework for Apprenticeship, although it is the Regional Authorities ("Conseils Régionaux") via the Labour Inspectors who control the training contents and conditions of the training provided both in Apprenticeship Training Centres and the involved companies, as well as the apprentices' working conditions within enterprises. Interestingly, these Labour Inspectors are specialised by trade.
- In Germany, the Federal Ministry of Education and Research (BMBF) has overall responsibility for the strategy in vocational education and training. It is responsible, amongst other, for the Vocational Training Act ("Berufsbildungsgesetz", BBiG). It also funds and steers the Federal Institute for Vocational Education and Training (BIBB) and is responsible for programmes to improve VET. Also, the 16 Federal States ("Länder") have sole responsibility for the part-time VET schools of the dual system and the full-time VET schools, including the design and quality assessment of the school curricula.
- In Poland, the Minister of National Education assures the appropriate and uniform quality of education. These is done via the provisions included in the Regulation of December 2010 on Vocational Training, which clearly outline, amongst other aspects, the conditions for carrying out vocational placements within enterprises.
- In Slovakia, the Ministry of Education (MŠ) via the State School Inspection (ŠŠI) is in charge of assuring that quality standards and the students' performance reach some pre-established benchmarks and conditions required by law (i.e. the Decree of the Ministry of Education No. 9/2006 Coll. on the Structure and Content of Reporting on Educational Activities, Outcomes and Conditions of School and School Facilities).
- In Spain, The Spanish Ministry of Education is responsible of setting up minimum contents and quality standards for the educational programmes (including initial VET), as well as regulating the minimum standards for the assessment of vocational qualifications. Also, regional governments (Autonomous Communities) are responsible for the regulatory development of the basic national rules in their particular regions, including quality assurance mechanisms that respect the minimum standards provided at central level.
- In The Netherlands, the Ministry of Education, Culture and Science plays an active role in the monitoring of VET provision, basically via the Education Inspection. Their form of inspection is risk-based: for the institutions and programs where things are going well the supervision is restrained. They are monitored on a basic level with simple checks without any further investigations. Institutions and programs with poor or inadequate quality or a weak financial position are more intensively monitored. In extreme cases, the Minister may impose sanctions if the quality is inadequate over a prolonged period of time.
- In England, the main body responsible of securing quality standards in Apprenticeship is the public Office for Standards in Education, Children's Services and Skills (OFSTED). Thus, in addition to regulating apprenticeship, the OFSTED has responsibility for the

regulation and quality assurance of work-based learning, including Apprenticeships, up to Level 3 (ISCED 4), whereas the QAA (Quality Assurance Agency for Higher Education) assures Apprenticeships and other provision from Level 4 (ISCED 5). Also, it is worth stressing the role of the National Apprenticeship Service (NAS), whose main role is to promote Apprenticeships and their value both to employers and to prospective students, as well as improve the certification arrangements for successful apprentices and co-ordinate the funding for Apprenticeship places.

Role of social partners and other institutions

In addition to the role of public authorities, social partners have also an active part in assuring the quality of VET and apprenticeships in some countries (i.e. Denmark, The Netherlands or the UK). Thus, Danish social partners collaborate with the Ministry of Education on assessing and improving the quality of the education and educational contents provided, where the results are communicated through supervision plans and reports available to the population (Danish Ministry of Education, 2011). Interestingly, in the German case, training directives[73] are jointly developed by representatives of enterprises and trade unions in an institutional framework under the guidance of BIBB. In the Dutch case, social partners negotiate at sectorial level the respective profiles and examinations, following a nationally prescribed format for examination. These activities are carried out via the existing 17 VET knowledge centres[74], which have a total of 800 education advisers who monitor the quality of the apprenticeship, support the learning companies and finally are responsible for actively building and maintaining a network of learning companies. Also in the UK, each Sector Skills Council[75] determines the Apprenticeship Framework for the sector at national level, where each Apprenticeship Framework must comply with the demands of the National Apprenticeship Framework so to ensure uniformity across sectors. Each Sector Skills Council also sets the standards for employers participating in Apprenticeships.

Also in the case of Germany, it is worth stressing also the key role played by the "competent bodies" ("Zuständige Stelle"), i.e. Business Chambers[76]. Thus, and by way of the Vocational Training Act, Business Chambers have been assigned by the State with key tasks in the dual system related to the supervision of the vocational training process and the validation of the examinations, as well as with the monitoring of the content and quality of training in order to ensure the comparability of vocational qualifications on the national labour market. Thus, Business Chambers are charged with the supervision of the company-based training, registration of apprenticeship contracts, the assessment of the suitability of training firms or the monitoring of their training. Furthermore, they also assess the aptitude of VET trainers, provide advice to training firms and apprentices and organise and carry out the final exams (OECD, 2010). In this regard, some authors (Ryan, 2000) argue that Germany is characterised by an extensive set of quality assuring mechanisms that underpin the overall quality of the provide training.

3.9 Geographical mobility of students

It is a well recognised fact that the adding of an international and European perspective to the national VET students is an important tool for providing them with an understanding of foreign markets, languages and intercultural skills in line with the objectives of the European Commission's Strategy for 2020 (CEDEFOP, 2010).

[73] Training directives are intended to ensure that all trainees receive high-quality training that covers comparable content and regardless of where they undergo their training. For each of the currently 348 officially recognised training occupations, a specific nationally-defined training directive strictly regulates the (minimum) content of the vocational training for that particular occupation.

[74] Social partners are represented in each one of these VET centres

[75] Social partners are represented in these Sector Skills Council

[76] Previous sections of this report have already mentioned some of the activities conducted by these "competent bodies"

In this sense, it is becoming gradually more common and accessible for VET students in general and apprenticeship-type students in particular to study abroad for some periods, although available data confirms that current levels of international geographical mobility are still low. This problem is aggravated by the fact that the existing statistics on international mobility of VET students and apprentices are very scarce and usually national-based (for a latest general European perspective see GHK, 2011).

In this sense, available information collected at national level confirms this low level of transnational mobility amongst IVET and apprenticeship-type students. Thus, and to give some data, in Estonia there were 294 participants in IVET who benefited from a Leonardo programme (there are no separated statistics about the participation of apprenticeship students) (Kirss, 2010). In France, a 2008 publication by the French Budget Ministry estimates that the share of pupils and students (with student or apprentice status) in professional training who have access to transnational mobility during the course of their training was of 0.2.% (Direction du Commerce, de l'Artisanat, des Services et des Professions Libérales, 2008). In the case of The Netherlands, only about 0.5 percent of all VET students went on an internship abroad (mainly to Great Britain, Spain, Germany, Belgium and France), although the accent of the international orientation of most schools is the international internship (in the BOL-route) and less on the international apprenticeship (the BBL route). Meanwhile, and in the United Kingdom, a monitoring report produced by Ecotec (2008) does not suggest that high numbers of Apprentices have moved through the Leonardo mobility programme (around only 152 applications approved in 2007), where placements were typically short-term (i.e. of two week duration). Finally, and as far as Germany is concerned, estimations elaborated by Körbel/Friedrich (2011) suggest that for the period 2007 until 2009, up to 3% of all apprentices have participated (at least once during their training) in transnational mobility measures. Moreover, the same authors suggest that only 1% of all enterprises that are currently training apprentices or have done so in the last five years regularly send their trainees abroad on internships (another 5% do so only from time to time).

Generally speaking, there are a number of advantages derived from the involvement in transnational mobility practices, both for students, enterprises and VET centres themselves. Thus, and as far as students are concerned, the survey elaborated by Körbel/Friedrich (2011) amongst 502 German trainees who have participated in transnational mobility projects in the period 2007-2009 showed that up to 32% of all mobile apprentices assesses the total overall benefit of the transnational mobility project they have participated in as "very high", and another 47% as "high", where elements particularly valued included the acquisition of knowledge about other cultures and people, increased self-confidence, better understanding for foreign cultures, improved capabilities to get along with other people, motivation to work abroad in later career stages, improved chances for future job application procedures and, finally, improved language skills.

Meanwhile, and as far as enterprises are concerned, the same authors carried out a survey amongst a sample of enterprises participating in transnational mobility measures. This survey showed that the main advantages of transnational mobility projects as seen by participating enterprises included increased self-reliance of trainees, higher commitment of trainees, better work performance of trainees and, finally, better interaction with foreign customers, with obvious positive impacts on the internationalisation side of the enterprise. Finally, VET schools and centres are also interested in participating in the organisation of foreign placements since it increases the attractiveness of offered training and educational programs and gives the IVET centres better ranking amongst the students' population (taken from the Polish report).

However, these advantages are often counterbalanced by some problems/obstacles that hamper the participation of students and enterprises in international mobility programmes (for a further discussion on these obstacles see CINOP/Price-Waterhouse-Coopers, 2007)). Thus, and from the students' perspective, some of the main obstacles include the lack of

foreign language and cultural background knowledge, insufficient co-financing from national/local sources (so interested students from poor families are almost excluded), the lack of placements or, finally, the lack of interest on the part of students themselves. Just to give an example, Estonian workplace-based students tend to be older than students in the school-based studies, so they are more likely to have started a family and therefore have more difficulties to spend a training period abroad).

Meanwhile, and from an enterprise's perspective, enterprises seem to be particularly concerned by a number of main factors including the high costs associated to these mobility programmes for enterprises themselves, the insufficient public support to alleviate these costs or the lack of information on existing benefits derived from transnational mobility opportunities (Körbel/Friedrich, 2011)). The same authors suggest that the participation in this type of projects is positively correlated with the size of the enterprise, and strongly stress the key role that external actors (Local Business Chambers, Local vocational Schools, etc) can play in increasing the participation of enterprises in mobility projects. Also, some of national reports suggest a number of additional reasons explaining the reluctance of enterprises to send an apprentice abroad for a certain period of time. Examples include the fact that often these apprentices carry out a valuable work within the original national enterprise (French and Polish reports), the brain-drain phenomena (suggested by the Slovak and the Estonian reports), the problem of recognition of acquired competences abroad[77] or, finally, the existence of several legal and administrative obstacles that render more difficult, for example, to fit in placements abroad in a dual training programme than it is in school-based VET programmes (i.e. legal problems generated by being employed abroad by another company) (CEDEFOP, 2010). Moreover, and in some countries (i.e. France, United Kingdom), interviewed experts suggest that international mobility issues are not yet a priority in the national VET policy agenda.

In order to solve some of these difficulties, public authorities, both at European and at national level have developed a number of support programmes and institutions intended to foster transnational mobility issues of young people in initial vocational training. In this sense, as far as European programmes are concerned[78], the most important one is the Lifelong Learning Programme under its different strands (i.e. Leonardo da Vinci programme, Comenius, Grundtvig, Erasmus), as well as other relevant examples such as the Europass Initiative.

Meanwhile, and in addition to EU programmes, some countries have developed several institutions and programmes with this purpose. Relevant examples include:

- In Denmark, it is possible for students to get apprenticeships abroad approved as a part of the Danish education through the PIU-scheme (Apprenticeship abroad), which is a Danish mobility program. The students cannot enter into a training agreement with foreign companies. Instead, there are two kinds of schemes where the actors are either a VET school or a Danish company. The students can either enter into a training agreement with a Danish company that stations the students abroad or the students can be sent out by the schools as a trainee in a foreign company after completing the basic course. AER covers or subsidises student expenditures in apprenticeships abroad (including expenditures for travelling for job interviews, moving abroad, coming back and rent). Likewise, companies stationing students can get reimbursed. PIU-coordinators at the VET Schools advise the student and take care of practical tasks. Other national organisations providing grants and subsidies exist, such as the Nordplus Junior Program (to enhance the Nordic and Baltic dimension in educations) and the DK-USA Program (Danish Agency for International Education, 2011).

[77] Interestingly, and in the German case, the German Vocational Training Act (BBiG) explicitly states that parts of initial training may be completed abroad if this serves the purpose of the training, although the total duration of such training abroad shall not exceed one fourth of the duration of training specified in the relevant training directives.

[78] For an extensive discussion on existing European support programmes see the report produced by GHK in 2011

- In France, the Permanent Assembly for Chambers of Trade and Craft (l''Assemblée permanente des chambres de métiers et de l'artisanat, APCMA) has created a website to encourage young people doing an apprenticeship to travel abroad to Germany, Poland, Italy, England or Spain, to complete an internship lasting between one and four weeks. Young graduates after an apprenticeship can be subsidised to visit one of these countries for six months to complete their training. APCMA represents the national network of Departments' Chambers for trade and crafts and it is in charge of international exchanges.
- In Germany, and in addition to the activities of the National Agency "Education for Europe" at BIBB (http://www.na-BIBB.de) (in charge of managing and initiating European educational programmes and initiatives in Germany), it is worth stressing the role played by the Chambers of Skilled Crafts and the Chambers of Industry and Commerce. These Chambers have established a Germany-wide network "Training without Borders" (http://www.mobilitaetscoach.de), where a total of 57 "mobility coaches" (i.e. specialised staff of the chambers), provide information, guidance and motivation for businesses, trainees and young skilled workers to participate in transnational mobility measures in vocational educational training, including finding suitable project partners abroad. Also, and in addition to existing European support programmes, Germany has got a large variety of national public programmes and support measures dealing with mobility in vocational education and training. Examples[79] include the programme "LEO plus" (developed by the Federal Ministry of Education and Research and intended to nationally co-finance Leonardo-mobility projects), the so-called "small projects" (aimed at training enterprises and vocational education and training centres that are participating in European programmes for the first time), the so-called "pool-projects" (intended to enable individual trainees to spend some training time abroad, even if the training employer does not want to get involved in organising an internship abroad) or, finally, the Bilateral exchange programmes of the Federal Ministry of Education and Research with France, The Netherlands, Norway and the UK.
- In Poland, there are a number of initiatives for fostering IVET students' international mobility, such as the Scholarship and Training Fund (cooperation between Poland, Norway, Iceland and Liechtenstein with respect to providing financial support of foreign placement, see www.fss.org.pl) or the Lithuanian and Polish Youth Exchange Fund (www.PL-LTyouth.eu)
- In The Netherlands, the VET Council ("MBO Raad") encourages mobility of students and teachers to be active on the (international) labour market and putting the Dutch vocational education on the map. Thus, the VET Council (in collaboration with COLO) work together on a web platform (www.workplacement.nl), where students, schools and companies can learn more about international internships on this site (information on international recognized learning companies, subsidies, etc).

All in all, it should not be forgotten that geographical mobility issues are not only relevant with regard to spending part of the apprenticeship learning period abroad but also with securing a training place sometimes in a distant area in the country where the apprentice is usually living. Just to give some data from Germany, a fifth (21%) of all training place applicants registered with the Federal Employment Agency BA applied for training places located more than 100 km from their home (data for 2007/2008), where a total of 12% of the young people entering in-company training have relocated their domicile when commencing training, while another 23% commute more than 20 km per day (Beicht & Krewerth, 2010). This regional intra-national mobility frequently results in added expenses and costs, where these costs are often met by the apprentices themselves or by their parents.

[79] For further details see the German national country report

4. Recent or planned changes and impact of the crisis on the apprenticeship-type schemes

4.1 Recent or planned changes on the apprenticeship-type schemes

This section is interested in presenting some of the main recent changes that have been introduced in the different analysed Member State case studies[80]. In this respect, the available information shows that these changes respond in many cases to national specificities. These changes can be summarised as follows:

- In Denmark, the most important changes introduced in recent years concerning the existing apprenticeship type schemes refer to the introduction of the so-called "Flex-combination" training agreement in 2001, the introduction of the "Short training agreement" in 2003 (both schemes were merged in 2008) and, finally the introduction of the "New Apprenticeship" training agreement in 2006. All these changes have mainly been launched in order to regulate the supply of apprenticeships, specially in times of economic recession, as well as facilitate the inclusion of academically challenged students in the VET system. In this sense, the "New Apprenticeship" training agreement was an initiative introduced in August 2006 in order to enable students who are academic disadvantaged but are skilled in a practical manner, to complete a VET without having to deal with academic issues in school81. All in all, the current Danish Vet system was introduced in its current form in 1991, when the "Regular training" agreement was established.
- As far as Estonia is concerned, the formal regulation concerning the procedure of workplace-based training as a form of study was introduced in March 2007 by the Ministry of Education and Research, so Apprenticeship became one of two forms of study beside school-based studies. In this respect, apprenticeship studies were introduced in 2002 as a PHARE pilot project and was followed by a European Social Fund (ESF) financed program which lasted from 2005 to June 2008. Since 2008, the promotion of Apprenticeship studies has been financed exclusively by the state budget. Interestingly also, and since autumn 2009, the compulsory company training period for students in school-based studies (which required 25% of the total volume of the studies) was abolished due to the negative effects of the economic crisis. At the moment there has been no discussion about reintroducing it. Looking at the future, the Ministry of Education and Research is planning an important policy change by issuing a new Vocational Education Institutions Act which is expected to introduce, amongst other aspects, the principle of outcome based learning throughout the entire VET system as well as performance-based funding schemes for VET schools. However, there are no planned changes in the field of forms of study, including Apprenticeship studies
- In France, last years have witnessed several changes in the existing Apprenticeship studies. Amongst them, the most important ones include the opening of apprenticeship to Tertiary education, as well as the existence of several pilot projects. For instance, and within the framework of the Great Loan ("Grand Emprunt") put in place to allocate funds to high priority projects for economic growth in France, 500 million Euro have been allocated to measures in favour apprenticeships, including the improvement of CFAs' techni-

[80] Please take into account that other sections of this report include additional changes introduced in recent years in some of the specific elements dealt with in these sections.

[81] In a later section of this report it is shown that the "New Apprenticeship" training agreement is currently also used by very academic skilled students and by adult students interested in obtaining officially recognised VET degrees.

cal equipment, the development of training programs in innovative professions or the introduction of financial support measures to finance housing for young apprentices located in rural areas. Interestingly also, the French authorities are planning the introduction of several measures so to increase the number of people in Apprenticeship studies. Examples of these measures include the simplification of the administrative treatment of apprenticeship contracts, the creation of an Apprenticeship Internet portal with relevant information for employers and students, the creation of a trade student card to entitle them to have access to student discounts/social benefits, the reinforcement of exoneration measures for the costs of apprentices paid by employers, the establishment of common goals in Apprenticeship students between the Government and Regional Authorities or several measures to facilitate the access of professionals to be master trainers

- In Germany, and during the last five years, public authorities in collaboration with social partners have introduced a number of changes in the German VET system in general and the German dual system in particular. Basically, these changes can be summarised in five main strands, that is to say, (1) Improving transition from general school education into vocational training; (2) Modularisation and increased flexibility of vocational training; (3) Increasing permeability between vocational training and higher/tertiary education; (4) International opening of the German vocational training system; (5) changes in other policy areas (i.e. Reform of the Vocational Training Act, Competence-orientation in training directives and examinations, etc). In this regard, several pilot schemes have been introduced in 2010 in order to test possible developments in subsequent years. A good example of these pilot schemes refers to the so-called funding priority "New Pathways to Dual Vocational Training - Heterogeneity as an Opportunity for Securing Skilled Labour" (see below).

Table 4.1 New Pathways to Dual Vocational Training - Heterogeneity as an Opportunity for Securing Skilled Labour

The aim of this pilot project is to develop and implement innovative concepts, instruments and methods that deal with the increasing heterogeneity of today's German youth (in terms of migration background, age, personal problems, educational background, etc), basically with the aim of expanding the number of potential trainees and ensuring enough skilled workers to meet trade and industry's needs for skilled labour. BIBB co-ordinates and links the pilot projects in cooperation with the Federal Ministry of Education and Research, where the projects focus on different questions and issues that pertain to the common theme. So far 18 pilot projects from throughout the country have been selected, to start their work in the spring of 2011 (funding period: 36 months).

Source: German national contribution.

- In Poland, it is worth stressing that the Ministry of National Education is planning to introduce by 2015 a number of relevant changes in the Polish VET system, including vocational placements (MEN, 2010a) in order to fully adapt the Polish VET system to labour market demands and the EU standards as well. Basically, these changes relate to a number of fields, namely the classification of the professions in vocational education, the structure and organisation of vocational education, the participation of employers in vocational education, the training and continuous training of vocational teachers and, finally, examination systems. Amongst these changes, some of them are specifically related to the work-based training aspect within the curricula. Examples include the rise in the number of practical training (to be held in workplaces and school workshops), the introduction of extramural courses in vocational schools (conducted in cooperation with entrepreneurs) leading to a certificate of vocational qualifications with a supplement or, finally, the employment of specialists coming from enterprises in vocational schools.
- Meanwhile, and as far as Slovakia is concerned, it is a well recognised side effect that the diminishing of the work based part in VET experienced in the early nineties as a consequence of the political transition have resulted in problems of mismatch with labour market needs and high unemployment of young people entering labour market. In this

regard, the recently adopted legislation changes (i.e. Education Act in 2008 and Act on VET in 2009) are intended to improve this situation. In this regard, the Act on VET explicitly sets for the first time responsibility towards identification of regional labour market needs, where self-governing regions have the possibility to prepare regional VET strategies in co-operation with relevant regional stakeholders. Also, the new Law adds new impetus to the renewal of the structure, curricula and methodology of VET. Basically, the final goal is to increase again the attractiveness of vocational education at upper secondary level to previous historical levels.

- In Spain, the main change affecting the VET system refers to the passing in 2006 of the so-called "Ley Orgánica de la Educación" (Organic Law on Education). In this regard, public authorities have developed a number of initiatives intended to reducing the high early school leavers' rate, the upgrading of the attractiveness and social recognition of IVET, the consolidation of the upper-level VET as an alternative to university studies, the upgrading of the quality standards of the IVET system, the promotion of international geographic mobility for VET students and, finally, the promotion of lifelong learning through a more flexible IVET system and the validation of professional work experience. On the other hand, it is worth stressing the passing in March 2011 of the so-called Law 2/2011 for a Sustainable Economy ("Ley para la Economía Sostenible"), aimed at modernizing the Spanish economy as a whole, as well as the Organic Law 4/2011, additional to the Law 2/2011 for a Sustainable Economy, which modifies the Organic Laws 5/2002 (on Qualifications and VET) and 2/2006 (on Education). Amongst the main expected changes to be introduced, three main ones can be highlighted:
  - On the one hand, increase the existing permeability between the general and the vocational paths within the Spanish Education System. Thus, the "Technician" degree (middle-level cycles) allows the direct entry within the "Bachillerato" (Upper-Secondary Level, general track), regardless of how the degree has been obtained (i.e. through formal or informal learning). Moreover, students with a 'Technician' degree will be able to obtain the "Bachillerato" degree in one single academic year (instead of in 2 years). On the other hand, students with an "Advanced Technician" degree can directly access to university studies, without passing an exam.
  - On the other hand, the Government is working on the introduction of the so-called 'specialisation courses', aimed at both "Technicians" and "Advanced Technicians". These courses take from 300 to 500 hours (from 3 to 6 months) and their objective is to update and broaden the knowledge acquired in VET cycles, in order to better adapt to the needs of the labour market. Furthermore, these courses also include workplace training and they will be available for the 26 VET professional families.
  - New employment alternatives are being discussed with social agents to deal with the high unemployment rates which currently affect Spanish youngsters, such as "training contracts" ("contratos de formación" in Spanish), "internship contracts" ("contratos de prácticas" in Spanish) or "part-time contracts"
- In the Netherlands, it is worth stressing two main changes currently in progress and related to the general VET system, that is to say, the standardisation of examination and the introduction of competence based education. As far as the standardisation of examination, and since early 2008, a nationally prescribed format for the so-called "examination profiles"[82] has been developed, where these national format has been translated to different sector formats. Meanwhile, and as far as the introduction of the so-called competence based education, it is intended to introduce in the VET curricula professional skills and competencies (attitudes to work, social competences, etc) in addition to pure technical knowledge. It is envisaged that from August 2011 all students in the first year of a vocational training will follow competence based training. This is subject to approval by parliament. Interestingly also, the government has recently put in practice the so-called "Action Plan VET Focus on Craftsmanship 2011-2015" ("Actieplan MBO Focus op vakmanschap 2011-2015", basically aimed at improving the quality of the Dutch VET

[82] An examination profile gives an outline of the process and preconditions of an examination

system and endowed with a total budget of 150 million Euro. Amongst other aspects, this Action Plan foresees the simplification and updating of the current qualification structure, increasing efforts in the professionalization (via training) of teachers in secondary VET schools, the improvement of the quality of the examinations, more attention paid to guidance and coaching of students or, finally, a reduction in the number of school years compensated by an increase in the number of school hours per year.

- Finally, and as far as the United Kingdom is concerned, the critical change related to Apprenticeship studies relates to the establishment of the Apprenticeship Framework (already back in 1994). Since then, there has been increasing interest in expanding the volume of Apprenticeships delivered, with the Leitch Report providing the key impetus to this (HM Treasury, 2006). Adding momentum is the policy to raise the participation in age in education and training, confirmed in the Education Bill 2010, which makes statutory a proposal that all young people who want one, should have access to an apprenticeship as a means to continue their studies post-16. In this regard, public ambition point out at 131,000 young people starting an apprenticeship in 2010/11. Since this target has been set, policy makers are concerned with the challenge of how to increase the volume of apprenticeships. As a result, a number of pilot initiatives have been introduced in 2010, such as the Apprenticeship Grant to Employers[83], the ATA/GTA model (which provides greater flexibility and reduces the risk to employers of taking on an apprentice by sharing an apprentice across multiple organisations) or the Apprenticeship Expansion Pilots (which enable businesses that had a proven track record in offering high-quality apprenticeships to train additional Apprentices).

4.2 Effects of recent economic crisis on the apprenticeship type schemes

The global economic crisis initiated in the second half of 2008 has had some significant effects on VET systems in general and in VET apprenticeship-type systems in particular, although this impact has been very variable. Basically, these impacts can be summarised in two main dimensions.

On the one hand, information in some countries shows that the number of students interested in pursuing VET has experienced a remarkable increase in the last two years. To give some examples, Danish statistics about students searching for training agreements after completing their basic course show that the amount increased from 3,601 students in 2008, to 7,979 in 2011. In Estonia, between the 2008/09 and 2009/10 academic years the admission of students in IVET has risen more than 10%, whereas in Spain, the number of IVET students has increased more than a 13% between 2008/09 and 2010/11 academic years. In these last cases, the rocketing youth unemployment rates are behind these changes in some of the analysed Member States (i.e. Spain), as many people who could not find work have decided to move to training, stay at school or even continue their studies to improve their qualifications (due to the poor working prospects). Also in Estonia, the percentage of apprentices that decide to continue their studies in VET or higher education has increased from 8% in 2008 to 20% in 2010, due to the negative situation of the national labour market[84].

On the other hand, the amount of apprenticeships and in-company training modules/placements offered by enterprises has experienced a remarkable downward trend in almost all analysed Member States. Just to give some data:

- In Denmark the total number of VET training agreements has reduced from 51,430 in 2008 to 46,697 in 2011, whereas school-based practical training has experienced a remarkable growth.

[83] For more information see section 3.8 of this report.

[84] Information provided at the Estonian national country report

- In Estonia, and in addition to a reduction in the supply of available training places for apprentices (from 673 to 564 in the 2008/9 and 2010/11 academic years), the previously existing compulsory company training periods for general school-based VET students were abolished in Autumn 2009 as enterprises were not able to continue the provision of workplace-based training[85].
- In France, the number of people entering apprenticeship contracts has declined a 4% because of the recession between 2008 and 2010, whereas professional contracts have declined a 21% in the same time period.
- In Germany, the number of offered training positions decreased a 8.2% (50,338 in total figures) during the reporting period from 1 October 2008 until 30 September 2009, with a highest decrease in the Eastern Federal States in comparison to the Western ones (13.0% and 7.1%, respectively)[86].
- In Spain, and despite lack of data, interviewed experts suggest that enterprises (specially the smallest ones) are currently reluctant to receive students for the compulsory "in-company training" module, especially in those regions and economic sectors particularly hit by the economic crisis.
- In The Netherlands, the intake in the BBL route has experienced a slight downward trend (1.1%) in the 2008-2009 period, compensated by an increase in the BOL route (2,7%).
- In the United Kingdom, several studies suggest a decrease in apprenticeship places in the last years. Thus, Felstead et al. (2011) argue that during 2009 there was a significant fall in the number of employers reporting their engagement with apprenticeships, whereas Cox et al. (2009) found that opportunities in apprenticeships for young people (aged between 16 and 18) were particularly limited after the economic recession started. Similarly, the report published by the Sector Skills Council for building services engineering (Summit Skills) notes that the postponement or cancellation of projects and reduction in workforce has also led to apprentices being made redundant (Summit Skills, 2009).
- By way of contrast, in other countries, the economic crisis has not had a significant effect on the provision of apprenticeship-type positions. An example of this is given by Poland, where the employers' attitudes towards providing vocational placements for school pupils and students has not been resented in the last years as a consequence of the economic crisis (information obtained from the Polish national report), where this result is probably explained by the lower effect of the crisis in this country in comparison to other EU Member States.

Generally speaking, this downward trend in the amount of apprenticeships and in-company training modules/placements offered by enterprises is primarily explained by the negative effects of the economic crisis and the reluctance of hard pressed employers to offer apprenticeship-type training posts or even pay apprentices in this market-based system. This situation is better explained by some authors (Brunello, 2009), who argue that the supply of apprentice posts tends to drop even faster during recessions than do the numbers in employment since employers may be very reluctant to take on the risk of taking on an apprentice (which often implies a contractual obligation with a long-term perspective), given the uncertain economic climate and the reduction in their incoming orders[87]. Also, existing public expenditure pressures are resulting in some countries in a reduced availability of public

[85] In any case, and despite the fact that the compulsion has been abolished, most of the VET students still benefit from company training periods. Also, and thanks to the large investments in the infrastructure of the vocational education institutions, many schools have better practice bases and a broader range of machinery than most of the enterprises, which enables students to pass the practical training period in their school

[86] In any case, demographic developments in Germany are largely compensating for the negative evolution in the number of offered training positions (BIBB, 2011a)

[87] However, it is interesting to stress that, in some cases (i.e. Germany), enterprises seem to be particularly engaged in continuing securing a suitable amount of training positions on offer, despite the economic crisis (DIHK, 2009)

resources to VET in general and the promotion of apprenticeship-type schemes in particular (i.e. in Estonia, available funding for VET has decreased an 8% in 2010).

In any case, most of the analysed EU Member States have set up special support measures intended to encourage the existing supply/demand of apprenticeship-type posts. Examples are presented next:

- In Denmark, there has been a strengthening of economic incentives for enterprises. Also, and in order to influence the amount of apprenticeships offered during the recent financial crisis, the Danish Parliament agreed upon two "Apprenticeship Packages" in May and June 2009, with the aim of averting the consequences of the financial crisis in the short run. In addition to this, two "Youth Packages" have been agreed in November 2009 and November 2010. According to interviewed experts, these packages have had a positive impact. Finally, it should not be forgotten that the Danish VET system itself is also somewhat capable of adapting to cyclical fluctuation due to the introduction of the short training agreement in addition to the regular training agreements.

Table 4.2 Approved Packages by the Danish Parliament to deal with the economic crisis

Approved Packages	Main apprenticeship-related changes
Apprenticeship packages as of the 1st of May 2009	▪ New system of awarding prizes was started; up to 50,000 DKK was awarded for establishing an apprenticeship ▪ Enhanced outreach to find apprenticeship opportunities through campaigns, starter kits for the companies and a conversion of the subsidy scheme for the education institutions´ outreach work was initiated
Apprenticeship packages as of the 2nd of June 2009	▪ A temporary extension was provided for the admission to school-based practical training ▪ Students currently attending step 1 at an education, who complete the education through school-based practical training got the opportunity to continue to step 2. This is an extension of the school-based practical training.
Youth package as of the 1st of November 2009	▪ 1.35 billion DKK was earmarked in 2010-2012 for providing 5,000 more apprenticeships ▪ 1,500 more school-based practical training agreements were offered ▪ 1,650 more apprenticeships were offered in municipalities and regions ▪ Other improvements of the conditions within the area of apprenticeships took place
Youth package as of the 2nd of November 2010	▪ The system of awarding prizes, which gave enterprises up to 50,000 DKK for establishing a new apprenticeship at the end of 2009, was raised to 70,000 DKK. ▪ The time period for the payment of prizes of award to the companies has been extended from approximately seven months to approximately two years (the period of payment on seven month caused too many companies to enter short training agreements without later extensions).

Source: Danish National report.

- In France, several measures have been taken for preventing a drop in the number of apprenticeship places offered by enterprises, although most of these measures are generally intended to develop dual training systems in France and not specifically to deal with the current economic crisis. Examples include the reinforcement of exoneration measures for the costs paid by employers of apprentices, the creation of an internet portal for apprentices (reception of employers' offers and potential candidates' CVs, provision of legal and financial information, etc), or the creation of a trade student card (where apprentices can have access to university restaurants, student housing, or various student discounts).
- In Germany, several measures have been adopted to foster the apprenticeship supply of enterprises during the economic crisis. Examples include a training bonus ("Ausbildungsbonus") granted by the Federal Employment Agency to those enterprises that took on apprentices of other companies which became insolvent or had to be closed (measure still existing), the introduction of short time work practices for trainees in

companies in difficulties, or the development of an action plan by the umbrella organisations of business chambers (i.e. DIHK and ZDH) in June 2009 which contained several measures to improve the situation on the vocational training market during the economic crisis. Amongst them it is worth stressing the assistance to apprentices of firms which had become insolvent to find another training company or the Chambers' support to enterprises in finding new apprentices for training places which had already been filled but where trainees did not step up (e.g. due to other preferred alternatives) (see Deutscher Industrie- und Handelskammertag (DIHK); Zentralverband des Deutschen Handwerks (ZDH), 2009)[88].

- In Poland, several agreements have been signed between the Polish Ministry of Education and employers' organisations aimed at promoting and encouraging entrepreneurs to offer in-company training modules/placements. Also, the amounts of public resources available in the Labour Fund for educating youth as well as for vocational placements of coordinators and teachers has increased in the last years.
- In Spain, several measures have been taken to modernize the IVET system, specially having in mind the current economic crisis. Thus, the Law 2/2011 for a Sustainable Economy, passed in March 2011 by the Spanish Government has included a number of measures, including measures to support permeability between the general and the vocational paths or the development of specific training programmes (shorter than middle-level or upper-level cycles) adapted to the training needs of a particular region. In any case, no significant changes are expected as far as the nature and extension of existing "in-company training modules".
- In The Netherlands, the ("School Ex Programme") was initiated in the spring of 2009 and has been extended until 2011, basically to stimulate examination candidates in the VET system to keep on studying after gaining their diploma to decrease the (potential) youth unemployment problem and to increase their chances on the labour market. Amongst other activities, the Programme provides (individual) training and advice at direct personal contact with the students so that the students would get advice from the school to motivate them to keep on studying. The "School Ex Programme" is currently regarded as a success within the Dutch context. Also in The Netherlands, the existence of both the BBL and the BOL routes adds an element of flexibility to the system.
- In the United Kingdom, the public policy response to the impacts of the economic crisis on Apprenticeship training has been to continue marketing the opportunities and the benefits to business, as well as maintaining public resources to cover the training costs of apprentices.

Finally, Dutch research suggests some additional side effects of the current economic crisis. Thus, the economic negative trends have exacerbated the use of apprenticeship students as full-time cheap labour instead of a student/employee in training, as well as the share of experienced unemployed professionals who try to find a job through an apprenticeship period, adding more competition for students to find a suitable place (Petit et al, 2011).

[88] In addition to these measures, it is worth stressing that the German Vocational Training Act grants trainees a right to remuneration for a period of up to six weeks and further required the training company to undertake timely endeavours to find another enterprise to continue training of the apprentice (CEDEFOP, 2010a).

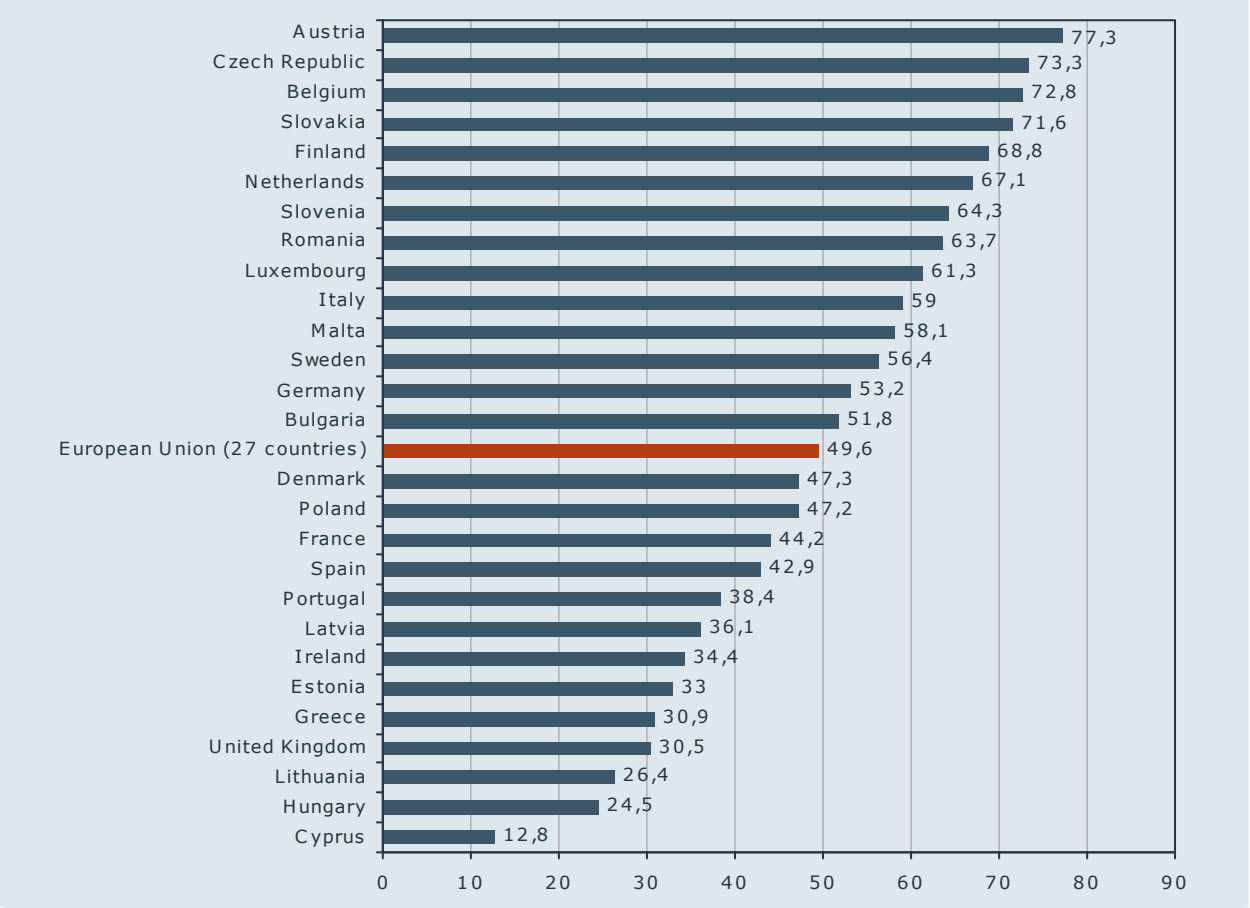
5. Lessons learned from apprenticeship-type schemes

5.1 General valuation of VET studies

Before starting an in-depth assessment of the existing apprenticeship-type schemes, it is important to provide a general perspective on the role that VET studies play in the different analysed case study Member States as well as the existing national perceptions on these VET studies.

In this respect, and to start with, it is interesting to see that in not all Member States VET studies are equally popular, in the sense that the percentage of students who opt for this type of vocational studies greatly differs amongst Member States. Just to give some data for 2009 (see next Table), and whereas in countries such as Slovakia, The Netherlands or Germany more than half of students choose the vocational path (i.e. 71.6%, 67.1% and 53.2%, respectively), in other Member States the percentage is between 40-50% (i.e. Denmark, Poland, France or Spain, 47.3%, 47.2%, 44.2% and 42.9%, respectively) or even lower (i.e. the case studies of Estonia and the United Kingdom, 33.0% and 30.5%, also respectively).

Graph 5.1 % of all students at ISCED level 3 that opt for a vocational orientation, 2009



Source: Eurostat.

Generally speaking, those Member States where VET studies are a less popular choice amongst students usually coincide with those countries where VET studies have a poor image amongst the general population (including students and parents). This is the case of Estonia, where VET is often perceived a secondary track in education compared to the general secondary schools[89] (EMOR, 2008) or in France, where vocational training routes have long been a second choice by less skilled students more than a positive choice by good students.

In Poland, and in the view of 70% of pupils, vocational schools are designated for those who fail their entry examinations the general upper secondary school[90]. Also in Spain, vocational training studies have been traditionally regarded as a "second best" option in Spain, meaning that vocational training has not been considered as a genuine option for the pupils who have finished compulsory education, especially for the most brilliant ones. In the United Kingdom, some of the interviewed experts suggest an historical lack of parity-of-esteem between vocational and academic routes (clearly in favour for the second one). Interestingly also, the French experience suggests that students from lower social class are usually more oriented towards vocational training than students from middle and upper class, sometimes oriented to general education despite their problems at school (Paulin, 2008).

By way of contrast, in other analysed Member States such as Denmark, Germany or The Netherlands, the general existing perception about VET studies in general is very positive, where this positive image is reflected in high participation rates of students in VET studies. Just as the Dutch report states, VET studies are nationally regarded as the main skill supplier to the labour market and one of the 'backbones of society and the economy'. In all these three countries, the combination of a stable and well-organised VET system based on a combination of work-based/school-based training is regarded as a key element within the national IVET contexts. Thus, and in the German case, the existing dual vocational training system is commonly viewed as a key institutional ingredient sustaining the competitive strength and competitiveness of the German economy, as well as a key element for social cohesion (CEDEFOP, 2010). In the Dutch case, the Education Council also suggests that the existence of an apprenticeship pathway is highly appreciated by enterprises and students in general (Onderwijsraad, 2009). In these three countries, some of the elements mostly valued include the closeness of the VET system to the labour market needs, the relatively easy transition from vocational training into regular employment for students, the existing ties with companies or the good quality of the provided training[91]. All these elements will be extensively discussed in further sections of this report.

Perhaps the only exception to this is given by the Slovak example, where despite the fact that seven out of ten students still opt for a VET track, the changes experienced in the Slovak VET model in the last 20 years[92] have resulted in an increasing deterioration of the VET system and overshadowed by an increasing emphasis on general academic education (OECD, 2010).

All in all, public authorities and social partners in those Member States where VET is not a well-regarded option are increasingly conscious of the key role that vocational education plays in underpinning the growing needs of the modern industry and its demand of specialised skills. In this sense, a number of initiatives are being designed in order to promote the

[89] Another problem of the Estonian vocational education stems from the national regional policy and the structure of the educational system. While the vast majority of vocational schools are owned by the state, general secondary schools, although financed by the state budget, actually belong to small local municipalities. As the financing of general high schools depends heavily on the number of the pupils, the municipalities tend to hold on to students even when they are more suited to vocational programs.

[90] Information taken from the national country report.

[91] In the specific Dutch case, the equivalence of apprenticeship pathways (BBL) and school based training (BOL)

[92] Before 1990, companies were obliged to participate in on-place training of students in vocational apprentice schools by financial support and providing workshops and qualified training personnel in their facilities. In the nineties, these relations were interrupted for several objective and subjective reasons, so the former system of companies' involvement in VET collapsed and the State had to take on board took all responsibility in VET provision.

participation of students in vocational studies[93]. Examples already mentioned include targeted campaigns to raise the image of VET and create parity of esteem between academic and vocational pathways (i.e. in Estonia), the inclusion of VET dimension in the National Development Strategies (i.e. Poland[94] or the recent introduction of the Slovak Act on VET) or facilitate the integration between academic and vocational education (i.e. the recent Spanish Law 2/2011 for a Sustainable Economy). In the United Kingdom, the recent Wolf Review (Wolf, 2011) has highlighted the importance of vocational education and training within the framework of qualifications and education in England.

Also, public authorities in some of the less esteemed VET countries are strengthening the workplace learning/apprenticeship dimension as a way to improve the national VET systems and the bridge between education, training and work[95]. For instance, and in Estonia, the Regulation of Implementing Workplace Based Study passed in 2007 introduced apprenticeship studies[96] as a part of the Estonian VET curricula. In France, and since 2005, the French Government, in collaboration with employer and employees representative organisations, has intended to position apprenticeship as a remedy for massive youth unemployment and early school dropouts without diploma. In The United Kingdom, apprenticeships have received significant support from successive governments in recent years with the previous Labour and current Coalition administrations detailing plans for their expansion (for the most recent reference see Department for Education, 2011), including campaigns aimed at attracting the attention of both students and employers to apprenticeship.

5.2 Contribution to school-labour transitions

One of the key advantages of apprenticeship-type VET schemes that combine on-the job and off-the job training in comparison to pure school-based schemes usually refers to the facilitation of rapid school-work transitions for students. In this sense, the OECD has recently suggested that those countries where dual systems prevail and with high proportions of youth in apprenticeship (i.e. Austria, Denmark, Germany or Switzerland) are precisely some of the OECD countries not only with the lowest youth unemployment rates (OECD, 2010). A similar view is held by the interviewed Danish or German experts, who suggest that the low level of unemployment among young people in their respective countries is largely influenced and supported by the existing dual training systems.

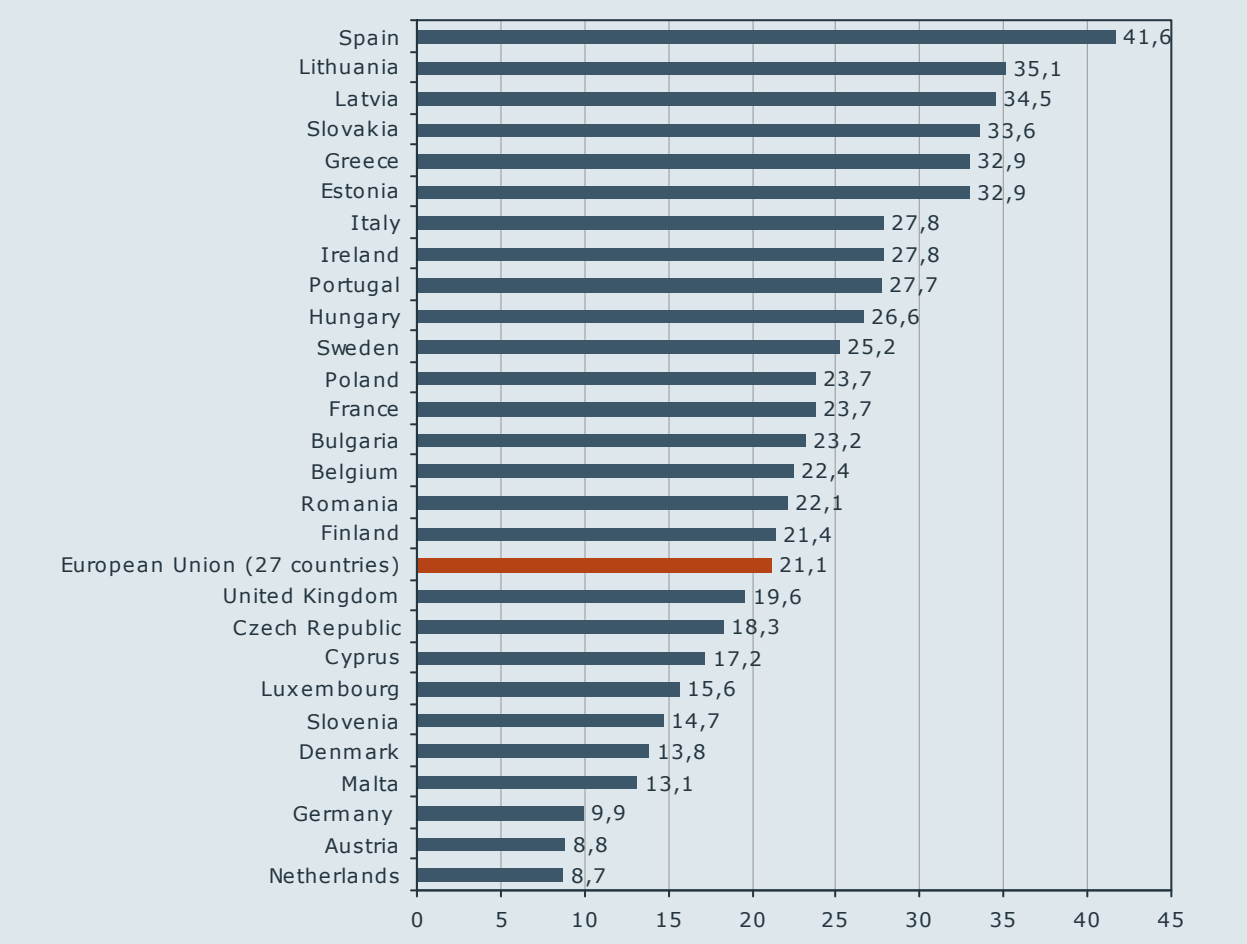
[93] See detailed information in previous point 4.1 of this report.

[94] See for instance "Krajowa Strategia Rozwoju Regionalnego" Ministerstwo Rozwoju Regionalnego/National Regional Development Strategy, Ministry of Regional Development, Warszawa, 2009

[95] See again detailed information in previous point 4.1 of this report.

[96] Apprenticeship studies were really introduced in 2002 as a Phare pilot project and were followed by a European Social Fund (ESF) financed program which lasted from 2005 to June 2008.

Graph 5.2 Youth unemployment rates (15-24 years old) by Member States, 2010



Source: Eurostat.

Interestingly also, authors such as Quintini and Manfredi (2009) suggest that transition patterns from school to work are higher in countries with strong apprenticeship systems (i.e. Germany) in comparison to other countries (i.e Italy or Spain) without strong work-based training integrated into the formal school system. Also, a comprehensive study on intra-country indicators of transitions from full-time education and training to employment (Gangl, 2003) concludes that apprenticeships perform very favourably both compared to school-based education at the same level of training and across different qualification levels, resulting in more rapid transitions from school to work amongst apprentices. This last point is important, as several authors (OECD & IZA, 2007) suggests that avoiding early labour market difficulties is particularly important for youth since long unemployment experiences at labour force entry may have persistent negative effects on employment probabilities and wages later in life.

In this sense, a significant presence of "on-the job" training periods in VET schemes results in a number of positive elements that facilitate the rapid recruitment of students by enterprises[97]:

- Thus, and to start with, training carried out at workplaces helps students to acquire practical hard skills and professional experience on equipment, working methods and technologies really used by enterprises (usually the most up-to-date ones) and demanded by enterprises. In this way, this training is usually contingent on the offer of a

[97] Obviously enough, the higher the presence of work-based training contents the more these elements apply.

place from employers, resulting therefore in a better matching of training to labour market real demand (Steedman, 2005). For instance, and in the specific Spanish case, it is suggested that "in-company training" modules gives students the opportunity to try processes and technologies not usually accessible in VET schools.

- Equally important, experience in a real-world environment allows students to develop key soft skills (i.e. problem-solving, conflict management and negotiation, entrepreneurship, teamwork, communication with customers, etc) in a much more efficient and realistic way than in classrooms or simulated work environments, enhancing therefore the labour market relevance of the students' skills. In this line of reasoning, Danish research shows that it is easier to develop professional skills in work-based training than to transfer theoretical knowledge, learned at school, into practice (Aarkrog, 2005). In Estonia, employers usually complain more about those training shortcomings in soft skills (knowledge about the practical organization of work, proper work attitudes and social skills) than about the absence of certain technical skills.
- Also, on-the job training periods facilitate students with further information on occupations and sectors in real working environments, so students can learn about the day-to-day reality of an occupation/profession (e.g. the type of tasks involved, profession ethics, working conditions, existing employers, etc). This provides critical information to students about the sector and the enterprise, reducing therefore the possibilities of possible future disappointments from both sides. Also, these information flows increase the networking possibilities of students (in terms of professional and business contacts), which might be useful in the future (quoted in the French report).
- Finally, work based training facilitates a two-way flow of information between potential employers and employees, in the sense that employers and trainees get to see each other in real life situations, making later recruitment much more effective and less costly (this element will be analysed in further detail in next section).

In addition to these elements, apprenticeship-type VET studies in general can have two additional positive elements for students:

- On the one hand, and in some countries (i.e. Denmark, Estonia or The Netherlands), apprenticeship studies are often used by individuals as a tool in the context of Lifelong Learning. Thus, and in Denmark, an increasing percentage of students in the so-called "New Apprenticeship" scheme are adults who want to get a formal qualification[98]. A similar trend is perceived in Estonia, where a large percentage of people following apprenticeship studies are adults who already work and need to upgrade their skills or obtain a formal qualification[99]. Dutch employees use the BBL route increasingly as a tool in the context of Lifelong Learning.
- On the other hand, they often serve as a good platform for the upward mobility of students, in the sense that those students who are not ready for an academic oriented education directly after upper primary school can find their way to academic colleges after completing a degree, increasing at the same time their self-esteem (especially important in the case of young people formerly confronted to serious difficulties in general education and with low interest in theoretical learning[100]). Last but not least, it should not be forgotten that VET students in some countries receive salaries and compensation while getting trained (see previous section 3.6. for further information on this point), where this element is highly regarded amongst young students.

[98] Initially, the "New Apprenticeship" scheme was thought to be an option for students with academic disadvantages. However, a relative large share of those students currently using the new apprenticeship is adults, since companies usually prefer adult students with some life experience and work experience and not students who are disadvantaged in reading and writing.

[99] One of the main benefits of the Estonian apprenticeship scheme is that it lets people continue working and therefore maintain their income, which is essential for older students who have already started a family.

[100] Quoted in the French country report.

Some of the information available in the different country reports seems to confirm some of the previously suggested elements. Thus:

- In Estonia, young apprenticeship students have a greater probability to be employed than students in school-based studies by their training employers, although empirical data is missing[101]. Also in Estonia, data for 2009 shows that 17.0% of the apprenticeship graduates had not found a job 6 months after graduating, although this percentage was only of 206% in 2007 (this result is surely explained by the acute economic crisis in Estonia) (Estonian Ministry of Education and Research, 2010).
- In France, approximately 64.2% of the population having finished an apprenticeship was in employment a few months afterwards (data for 2009), although this proportion varies from 33% to 80% according to the related diploma. Also, a larger percentage of apprentices are able to find long term employment more easily and quickly than those VET students who follow a school-based path (i.e. the Brevet d'études Professionnelles (BEP)) (72% in comparison to 53%, respectively) (CEREQ, 2007). Not surprisingly, French students in apprenticeship usually have a fairly good image of their training (Aldghi & Cohen-Scali, 2007).
- In Germany, available data shows that vocational education and training makes a significant contribution to integrating young people into permanent (regular) employment and thus to opening up professional and life perspectives. Thus, and in 2009, establishments (local units) retained some 57% of their apprentices and concluded regular employment contracts with them[102] (Institut für Arbeitsmarkt- und Berufsforschung (IAB), 2010), where retention rates seem to have been increasing steadily since 2005 (with the only exception of the economic crisis year of 2009)[103]. These retention rates significantly increase with the size of the establishment.
- In Germany also, approximately 34.5% of the successful training graduates in 2009 were unemployed immediately after successfully terminating training (31.5% in 2008), with important differences between Western and Eastern Germany (31.1 in Western Germany in comparison to 48.4% in Eastern Germany (Bundesinstitut für Berufsbildung (BIBB), 2011). However, only 8.6% of male trainees (8.0% of females) that had completed training three years ago were unemployed in 2008, where this percentage decreases to 6.7 of male trainees (5.2% in the case of women) if the time span in extended to four - six years.
- In Spain, the so-called Vocational Training Barometer shows that, broadly speaking, 78% of the Spanish IVET graduates were able to find a job in a period inferior to 1 year (data referred to year 2010). Moreover, 53% of the middle-level graduates entered the labour market in less than 3 months, while this figure goes up to 57% in the case of upper-level students (Nexos FP, 2010). These figures can be regarded as high in the Spanish context. Interestingly also, the same source of information shows that up to 30% of students chose a vocational track because they think it is easier to find a job with a VET degree (48% of the students selected this track for vocational reasons). Finally, it is very important to stress that Spanish students often see the "in-company training" module as a period during which they can demonstrate their skills and aptitudes in a working post where they may have options to be employed. In this sense, the statistics show that approximately one quarter of the VET students are hired on average by the

[101] Other characteristics explain the higher employability of the Estonian apprentices. Thus, apprenticeship students are usually much older than the graduates of school-based studies and therefore more experienced and trustworthy in the eyes of the potential employers. Also, a large proportion of Estonian apprenticeship students are sent on training by their employer, which means that they already have a guaranteed job waiting for them.

[102] Retention rates, however, partly underestimate training companies' willingness to employ their apprentices as regular employees. In fact, some training graduates voluntarily conclude employment contracts with other establishments or enterprises or pursue other educational or career pathways (e.g. by starting university studies).

[103] Indeed, this figure was up to 59% and 61% in 2007 and 2008. This positive trend in the last five years can be explained - inter alia - with the demographic trend (i.e. decreasing number of training graduates), increasing shortage of skilled labour and the improving situation on the labour market and in the general economy.

company where they had carried out their "in-company training" module (González Veiga et al, 2008), although these percentage is higher in some industrial activities.

- In The Netherlands, a recent study (Meng et al, 2010) shows that unemployment rates are higher among the lower educational levels and generally higher for BOL students than for BBL students. Just to give some data, about 90% of the students that get a degree in a BBL-route find work within a couple of months, whereas this percentage is 80% amongst BOL graduates. Furthermore, only 3% of the BBL graduates end up without work and benefits while about this percentage increases to 15% amongst BOL graduates. Also, BBL graduates earn on average more the BOL graduates. Notwithstanding these positive results, approximately 42% of BBL students think that the program is not a good preparation for the job (54% in the case of BOL students), where this negative perception is probably explained by high expectations form students (Inspectie van het Onderwijs, 2011).
- In the United Kingdom, available studies suggest that between 70-80% of apprentices continue in the employ of the employer with whom they trained, as well as in the sector in which they trained (Perez-del-Aguila et al, 2006; IoE, 2010). Also, the interview with the National Apprenticeship Service (NAS) expert suggests that young people see Apprenticeships as an attractive route to the labour market, so the demand among young people for Apprenticeships far outstrips supply (it was reported that national records demonstrate that 800,000 young people have registered on their brokerage system (the Apprenticeship Matching Service) whereas employers have created only 500,000 positions).

Despite all these positive elements, apprenticeship schemes are also subject to some critical elements that counterbalance the previously suggested positive elements from the students' perspective. In this sense, some authors have argued that the benefits in terms of lower unemployment rates for those youngsters having gone through an apprenticeship scheme seems to be a transitory one. For instance, a recent UK report shows that apprenticeship training improves early labour market insertion of participants, although this advantage is not significant after several years at work, in the sense that experienced people who come from vocational full-time schools have similar employment prospects that those experienced individuals coming from apprenticeship training (Parey, 2008).

In the same line of reasoning, German research argues, on the basis of worker self-assessment, that the value of skills learnt through apprenticeship tend to decay faster than those acquired through tertiary education (Ludwig and Pfeiffer, 2005). Also in Germany, the OECD suggests that graduates from vocational high school have the same employment rate as tertiary graduates at the beginning of their career, although these positive employment perspectives worsen over time when compared with holders of tertiary degrees (OECD, 2010). Finally, Steedman points out that apprenticeships do tend to increase the employment content of early working life, although effects on pay and promotion are less clear (Steedman, 2005).

Also very important from the students' perspective, and especially in those dual-training oriented countries where the supply of company training places is market-dominated by enterprises, not all students are able to find a suitable training contract that may allow them to carry out an apprentice. For instance, and referring to year 2010, up to one third of German prospective candidates were unsuccessful in acquiring a training place within an enterprise, so they had to find alternative paths in the meantime[104]. Also, not all successful trainees are able to select what they want, so three quarters of all trainees were able to conclude a training contract in their preferred training occupation in comparison to 17% for whom the training profession only partly corresponded with their preferences and the remaining 6% who indicated that their training occupation did not meet their original intentions (BIBB, 2011).

[104] Examples of alternative paths include continue school education, carry out vocational preparatory activities or start employment

Other critical element signalled[105] refers to the possible scarcity of vocational training centres in some specialities (i.e. animal care, book-binding, farming, watch making, leatherwork, art restoration), which often implies for students the need to move away from the family home which is not always easy for young people and their families, specially when talking about very young apprentices. Also, housing problems and a lack of transportation autonomy can prevent some from choosing dual education, as well as insufficient financial support for students.

5.3 Adaptability to companies/labour market needs; transferability of acquired skills between enterprises/sectors

In addition to more rapid school-work transitions for students, the available literature suggests that apprenticeship-type schemes can also provide a very strong signal for identifying skill shortages for which enterprises suggest needs for further workforce, as well as improve the match between labour market needs and VET provision that results from apprenticeship training being contingent on the offer from employers (Werwatz, 2002; Steedman, 2005). This market-based orientation gives a clear advantage over schemes that are (centrally) dominated by public authorities, who are not in a position to assess developments and necessities for change as effectively and quickly as companies themselves.

In this sense, provided workplace learning opportunities are a direct expression of real employers/labour market needs, as employers are only keen to offer training opportunities in areas where they identify skills shortages. In this way, apprenticeships training posts are therefore automatically linked to real labour market needs. Even where short work placements are involved (i.e. in Poland or Spain), these placements can serve to signal the skill needs of employers[106] (OECD, 2010).

In addition to this, and especially in those countries where the offer of places in school-based VET is tied to the availability of workplace training places (i.e. Denmark, Germany, The Netherlands, etc), employers may also influence both the number and mix of places and training specialities in VET schools through their willingness to offer such workplace training. Moreover, and when practical training is provided mainly in companies, the capacity of VET institutions to provide up-to-date equipment, teachers and trainers becomes less of a constraint (OECD, 2010).

Available national reports complement this perspective. Thus, interviewed national experts reckon that the Danish VET system is very focused on matching contents and methods to technological, social and economic progress within each sector, where social partners play a very significant role in this as already suggested in previous sections of this report. Also, the fact that vocational schools compose an individual education curriculum per each vocational school (provided that general frames and goals of the education are met) is regarded as a strong point in the Danish VET system, since this mechanism ensures an adaption of the educations to the local labour market and local companies. In the Estonian case, national experts argue that the joint development of individual curricula between companies and the vocational education institutions enhance the bilateral flow of information and mutual learning process, so curricula respond better to the needs of the labour market and are more up to date in the context of technological change.

[105] Problem identified in the French national report.

[106] Of course, the final mix of provision is not solely based on pure market adjustments since in many of the member States with apprenticeship systems, the state also plays an active role via expanding off-the-job practical training periods or via the provision of incentives for companies to train (see previous section 3.8 of this report).

In Germany, interviewed experts suggest that the fact that enterprises and their business associations (together with employees' representatives) are the main initiators and impulse generators for the modification of existing Training Directives or for the introduction of new ones (see section 3.2 and 3.8), which obviously favour the adaptability of the VET system to the companies/labour market needs. Moreover, the processes involved in the modification or new development of these training directives have been streamlined and shortened. In the period 2001-2010, some 208 training occupations have been newly structured. This amounts to almost 60% of the currently existing 348 training professions. Thereof, 45 have been newly created altogether and another 163 have been modernised (BiBB, 2011). In The Netherlands, the influence of the industry is preparing and drafting qualification requirements and curricula is usually regarded as very high (Onderwijsraad, 2009), whereas in the United Kingdom, National Occupational Standards (NOS) are adaptative to the requirements of the different sectors, well represented by the Sector Skills Councils.

By way of contrast, and in Spain, some interviewed experts representing enterprises criticize that the administrative process followed to approve new degrees or modify the contents of the existing ones is pretty time-consuming and legal steps slow down the revision of VET cycles, although the recently approved Law 2/2011 for a Sustainable Economy and the additional Organic Law 4/2011 streamlines existing administrative requirements for the updating of qualifications.

In addition to these benefits, employers usually benefit from offering apprenticeships for a number of additional reasons:

- To start with, all national country reports suggest that work-based training periods in enterprises are usually regarded by enterprises as one of the best possible "assessment centres" for the recruitment of future skilled employees (the so-called "recruitment" benefit (OECD, 2010)), where some authors suggest that this is one of the major motives for employers to offer apprenticeship-type periods in their premises (De Rick, 2008). Interestingly, this benefit can be double. On the one hand, and for many enterprises having a trainee, this implies that this trainee is educated from the very beginning in those precise skills that the enterprise needs as well as in the enterprise' values and cultures (skill tailoring), facilitating in this way a rapid integration of students in the enterprise and preserving at the same time important know-how and knowledge within the company. On the other hand, employers are able to obtain very valuable information of potential employees and their real capacities in real life situations for a significant period of time (even several years). Obviously enough, this information facilitates the hiring of the most suitable candidates, making later recruitment much more effective and less costly for the enterprise.
- Secondly, apprentices are expected to carry out productive work for their training enterprises (the so-called "productive" benefit (OECD, 2010)), so apprentices and trainees who undertake useful work generate a productive benefit for the employer (Mühlemann et al., 2007)[107]. Obviously enough, this positive contribution of students typically increases with experience and the length of the apprenticeship. Not surprisingly, and in those countries with the shortest work placements (i.e. Poland or Spain), companies and employers' organizations reckon that in most cases the training period in the company is too short for the student to be really productive.
- Interestingly also, most of the national country reports stress that trainees and apprentices can bring to the enterprise new knowledge and fresh perspectives related to the sector and obtained at schools (i.e. acquaintance with new machines, new emerging ideas, use of ICTs, ability in foreign languages and other international qualifications, etc). Interestingly, this advantage is particularly reckoned amongst the smallest enterprises[108].

[107] This point also raises the issue of apprentices as a source of cheap labour. This issue will be extensively discussed in a further section of this report).

[108] Information obtained from the Spanish report

- In some countries (i.e. Germany), companies reckon that those enterprises that provide in-house vocational training enjoy a higher standing among their main stakeholders (i.e. customers, suppliers, banks or the general public), and especially amongst prospective employees[109].
- Apprenticeships are also used by enterprises in some countries as a tool in the context of Lifelong Learning. Relevant examples can be found in Estonia, Netherlands or the United Kingdom, where employers often use apprenticeship studies for raising the qualification of current workers. For instance, and in the British case, some studies show that only a minority of employers recruit young people direct from education, so the large majority of Apprenticeships created in recent times have been targeted at existing employees rather to school-leavers (Shury et al, 2010).

Also, and in addition to individual benefits, it is also possible to identify benefits to the economy as a whole. Thus, and from the German perspective also, only the joint commitment of all enterprises that are capable of providing vocational training ensures that the country may have a sufficient number of qualified skilled workers, avoiding therefore a reduction in the number of qualified employees on the labour market and a subsequent increase in labour costs (BiBB, 2010).

Notwithstanding these individual and collective benefits, apprenticeship-type schemes are subject to an important challenge both for the economy as a whole and for enterprises in particular, that is to say, the extent to which the skills acquired in workplace training are easily "transferable" to other enterprises, either in the same or in other sector, facilitating therefore the labour mobility of workers. In this respect, it seems quite a big challenge to ensure that apprentices and students following company training periods may obtain the same level of experiences, competences and knowledge by the end of the training period, irrespectively of the company where they have followed this training period. Indeed, this issue seems very relevant in the current context of overspecialisation of enterprises and work mobility of employees amongst sectors[110].

In this regard, the analysed Member States have set up a number of mechanisms that facilitate the transferability issue and avoid to a certain extent derived problems. Examples include the establishment of a universal professional examination at the end of the studies (Denmark, Estonia, Germany, Netherlands, United Kingdom) (see section 3.5), the design of an standard curricula (i.e. the German "Training Directives" or the British National Occupational Standards, NOS[111]) (see section 3.8) or the introduction of cooperative solutions amongst enterprises (such as the Danish "Combination training agreement" or the German "collaborative training" ("Verbundausbildung") solutions amongst enterprises (see information on them later in this same section).

In any case, and despite these mechanisms, some countries express a concern on this issue. For instance, German research suggests that, despite existing quality assurance mechanisms, apprentices tend to assess the training provided by larger enterprises more positively than the one provided by smaller firms (Deutscher Gewerkschaftsbund (DGB), 2010). In this sense, and due to their larger material and personnel resources, large enterprises are usually able to guarantee a structured apprenticeship in full scope more easily, whereas smaller companies with less personnel must react flexibly to shifts in demand and often integrate their apprentices into work processes more in accordance with the current order- and production-situation and thus follow the training plan less strictly[112]. Similar con-

[109] Information obtained from the German report

[110] Reflection obtained from the Danish national report.

[111] National Occupational Standards are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. The NOS form the basis of National Vocational Qualifications competencies

[112] All in all, interviewed German experts suggest that that skills acquired in company-based training are easily transferable to other enterprises, sectors or occupations.

cerns are raised in the French report or in The UK report, where interviewees argue that apprentices trained by certain, prestigious employers (such as Rolls Royce or BT) would be in high demand in their sector once training completed. In the Dutch case, the national Education Council stresses the fact the mixing of general and vocational education in the Netherlands is very low and very specialised at sectoral level, which renders difficult the mobility amongst sectors (Onderwijsraad, 2009).

In addition to this "transferibility" problem, another big problem refers to the fact that not all employers participate in apprenticeship type schemes, although all of them benefit (directly or indirectly) from them (in fact, many employers prefer to recruit skilled workers on the labour market than to train them through an apprenticeship).

Just to give some data from Germany, approximately 31% of all German establishments were participating in dual training in 2009, where another 27% was officially authorised to train but (at least in that particular year) did not make use of this right and 41% of establishments were not authorised to engage in training (Institut für Arbeitsmarkt- und Berufsforschung (IAB), 2010). In this sense, the effort and the responsibility of training an apprentice can be felt as high by enterprises, and especially by small and medium-sized enterprises.

Again, data for Germany shows that there is a clear positive relation between the establishments employment size and their involvement in apprentices training, so whereas only 21% of micro establishments with 1-9 employees were training apprentices in 2009, this held true for almost all (95%) large establishments with 500 and more employees (Institut für Arbeitsmarkt- und Berufsforschung (IAB), 2010). Meanwhile, British research identifies that, overall, 25% of enterprises with 50 or more employees use apprenticeships whereas only 5% of enterprises with less than five employees do so (Learning and Skills Council (LSC), 2008; Steedman, 2010). In Poland, school headmasters prefer to conclude vocational placement agreements with large enterprises with modern production and work organisations, operating in new/innovative sectors.

The reasons underpinning this reluctance to participate in apprenticeship type schemes is due to several reasons. In this respect, the main reason suggested by enterprises for non-participating refers to the high costs derived from training activities (Detmar and de Vries, 2009; Bundesinstitut für Berufsbildung (BiBB), 2011; Learning Skills Council (LSC), 2008), where this problem seems to be particularly acute amongst smaller enterprises[113] or in situations of economic crisis[114]. In this sense, there are significant concerns amongst enterprises around the financial risk of taking on an apprentice, since enterprises may feel that they cannot compensate apprentice's wages (in those countries where this is the case) or they are not capable of minimising the additional costs/times of dealing with students (Rauner, 2007). For instance, the French report stresses some of the costs derived for enterprises taking apprentices, such as costs derived from the adaption of work stations, possible mistakes made by trainees in their work for the company due to their inexperience, administrative paperwork derived from the recruitment of apprentices, additional efforts by company trainers and employees to follow and monitor young students' work, etc. German empirical evidence shows that high training costs are mentioned as the main reason by up to 49% of those establishments that do not offer training positions, where this percentage varies from 50% amongst micro establishments (1-9 employees) to 33% amongst those establishments with more than 50 employees (BiBB, 2011).

In this sense, German evidence also suggest that almost all individual employers taking apprentices report positive net costs, although these costs may be offset by savings in other elements, particularly savings in recruitment costs. For instance, recent estimation conducted by the German Federal Institute for Vocational Education and Training (BIBB) in

[113] For solutions adopted to solve with this financial problem, please see section 3.8 of this report

[114] For a further explanation of the effects of the economic crisis on apprenticeship schemes, see section 4.2. of this report.

2007 shows that the net average net cost for a training place offered by an enterprise is 3,596 EUR per year[115] (BiBB, 2011).

In addition to financial barriers, other suggested barriers include the lack of awareness about the existing apprenticeship offer or the lack of suitable in-house training facilities, equipment or personnel (CEDEFOP, 2010). For instance, several interviewed British experts argue that a significant proportion of employers continue to refuse apprenticeships because they cannot understand them and they see it more as overhead cost rather than investment, and often linked with high bureaucratic demands on the provision of training. Concerning the problem of lack of suitable in-house training facilities/personnel by enterprises, some countries (i.e. Denmark, Estonia, Germany) have adopted interesting cooperative solutions amongst enterprises in general and SMEs in particular that may help to overcome the mismatch between the broader educational requirements of students and the curricula that enterprises may cover:

- In Denmark, the so-called Combination Agreement ("Kombinationsaftale") schemes facilitate that students enter a training agreement with two or more companies and together these partial agreements constitute the entire VET program.
- In Estonia, some of the SMEs providing company training cooperate and exchange their apprentices in different training periods.
- In Germany, collaborative training ("Verbundausbildung") allows for different options for enterprises who are unable to teach all the content prescribed by the training directives can take apprentices. These options include agreements with another firm/group of firms or with an education provider. Business chambers assist in arranging collaborative training ventures of this type. Also in Germany, Inter-company vocational training centres ("Überbetriebliche Berufsbildungsstätten", ÜBS) provide those parts of a trainee's training that an individual company cannot (see table below). The enterprises, business chambers, craft guilds and the German government bear the cost of inter-company vocational training (Bundesinstitut für Berufsbildung (BIBB), 2010)

Table 5.1 Inter-company vocational training centres ("Überbetriebliche Berufsbildungsstätten", ÜBS)

Inter-company vocational training centres provide those parts of a trainee's training that his company cannot. In addition, trainees become acquainted with the latest technical developments in their field at such facilities. Inter-company vocational training also serves a pedagogical function as a "third learning environment" where practical and theoretical competence is systematically taught. The duration of inter-company vocational training depends on what the training company is not able to teach its trainee. The enterprises, business chambers, craft guilds and the German government bear the cost of inter-company vocational training.

Source: German national contribution.

Finally, another difficulty identified by enterprises for participating in apprenticeship schemes refers to the low quality of school leavers in comparison to the growing skill requirements of the enterprises in general. This result, suggested by several studies in Denmark[116], Germany (Lüke, 2011) and The Netherlands (Detmar & de Vries, 2009), results in added difficulties for enterprises to hire students (OECD & IZA, 2007) that go beyond pure economic cycle-related reasons.

Again, German evidence seems illustrative on this point. Thus, recent data for 2011 provided by the German Association of Chambers of Industry and Commerce (DIHK) shows that almost one quarter (24%) of all firms were not able to fill offered training positions

[115] This net cost is calculated as the difference between total gross costs (15,288 Euros per year) less the productive work carried out by the apprentice for the benefit of the training enterprise (11,692 Euros per year). In any case, these figures do not consider other additional economic benefits such as the costs that would arise to recruit, familiarise and train external skilled workers, or the costs arising from recruitments of non suitable external employees.

[116] See Danish national report

(approximately 55.000 training positions in total), where the lack of suitable applications is by far (65%) the most important reason why enterprises were not able to fill offered training positions. In this respect, more than three quarters (76%) of inquired enterprises complain about a lacking training maturity of young school-leavers, where almost half (48%) of all companies observe deficiencies in elementary mathematical skills amongst school leavers, 53% of enterprises criticise oral and written communication/language skills and, interestingly also, 48% of firms negatively evaluate school-leavers' discipline. As a remedy to these deficiencies, a large number of enterprises (up to 69%) is prepared (under certain preconditions) to train also young people with learning difficulties (Deutscher Industrie- und Handelskammertag (DIHK), 2011).

5.4 Student progression to further E&T. Higher level Apprenticeships

The importance of transfer and continuing in education for VET students in general and apprenticeship-type students in particular is an important element in the current national education debates for a number of interrelated reasons (FEPS, 2009). On the one hand, "dead ends" or "terminal" programmes and/or diplomas that give no opportunity to go on in (further) education and training are very dangerous, specially in the context of young people at age 16/17 making decisions which can be, in a sense, irreversible. Second, there is an increasing importance attributed to high level education, given the relatively high rates of return attached to this form of education in many countries and the drive to increase participation at this level. In this context, national lifelong learning strategies are trying to ensure that all learning is transferable by effective transition points between all systems and levels of education (CEDEFOP, 2008).

In this respect, the analysed Member States have established several possibilities for further education at tertiary level amongst VET students in general and apprenticeship students in particular. Thus, and as far as Denmark is concerned, VET students have several possibilities for further education at tertiary level. All in all, and of all Danish students completing a VET, 7% apply for another VET afterwards, while a little more than 4% apply for a higher education within 27 months after completing a VET degree (Danish Ministry of Education, 2009a).

In France, it is relatively common that an apprentice passing his/her exams at some specific levels (i.e. for example the Professional Skills Certificate level "Certificat d'Aptitude Professionnelle", CAP[117]) decides to look for another apprenticeship contract in order to take a higher level diploma (Cohen-Scali & Aldeghi, 2006). In this respect, French apprentices can obtain through Apprenticeship several ISCED 5B level degrees, such as the Higher Technicians's Certificate ("Brevet de Techniciens Supérieurs", BTS) or the University technological Diploma ("Diplôme Universitaire de Technologie", DUT), and even an engineer degree. All in all, in France there were 97,521 apprentices in tertiary education in 2008, which represents a 4.3% of the total number of total tertiary students in France.

As far as the German experience is concerned, Germany has recently opened more pathways from upper-secondary VET to tertiary education (OECD, 2010)[118]. In this regard, several initiatives have been taken in order to facilitate the progression of dual training students into tertiary level education. For instance, the German qualification framework (DQR) now treats a completed dual training on the same level as an acquired university entrance qualification. Furthermore, the Standing Conference of Ministers for Education and Cultural

[117] A Certificat d'Aptitude Professionnelle is equivalent to an ISCED 3 level.

[118] It is important to stress that the good image of the dual system attracts a large number of students with high educational achievements (in fact, approximately one fifth of the dual system trainees have a university entrance qualification that would allow him/her to attend university as well). In this regard, a sizable share of these highly-skilled youths go on to university after completing their apprenticeship and return later to their training enterprise with a tertiary degree (not available data on this).

Affairs (KMK) has passed a resolution which is intended to increase permeability between the different levels and types of (vocational and tertiary) education. A master craftsman, for example, is allowed to directly start university studies. Also, scholarships (Advancement Scholarships-Programme) for VET graduated people with professional experience who want to start university studies have been introduced. Finally, another interesting experience refers to the launching of the ANKOM Initiative (see table below).

Table 5.2 Accreditation of prior learning experiences: The ANKOM experience

The Federal Ministry of Education and Research (BMBF) has launched the Initiative "Accreditation of Prior Learning from Vocational Education and Training and Work for Higher Education Programmes ("Anrechnung beruflicher Kompetenzen auf Hochschulstudiengänge", ANKOM). ANKOM aims at developing accreditation of prior learning achievements, identifying operational good practice and at enhancing the implementation of accreditation of prior learning procedures, policies and infrastructure in the German higher education system. The overall goal is to foster learning pathways from VET to higher education. This is achieved, for example, by crediting modulised qualifications acquired during vocational training for university studies. The BMBF has funded twelve development projects and a scientific monitoring project, and all of them are co-financed by the European Social Fund (ESF).

Source: German national contribution.

Also, German policy makers and stakeholders also attach much importance to a better linkage between initial vocational and continuous training also since the IVET-system faces growing competition from tertiary higher education. In this sense, Germany has developed in the last years the so-called "Additional Qualifications" ("Zusatzqualifikationen") credit system. These Additional Qualifications provide additional vocational skills, knowledge and qualifications over and above the training occupation profile of dual system students to supplement or broaden vocational competence, and they are attractive both for enterprises and students. Thus, they allow training companies to react at short notice to changing qualification requirements, whereas young training graduates are able to progress in their career and take over senior positions more quickly (without the need of going through long-lasting and unpaid university studies). In 2010, 80,040 trainees were engaged in acquiring additional qualifications, that is to say, a 5% of all trainees in Germany, where the main topics of Additional Qualifications include international qualifications (31,3%), followed by technology (13,6%), ICTs (11,9%) and commercial/business qualifications (11,5%) (BIBB, 2011).

Interestingly enough, the recent Spanish Law for a Sustainable Economy has paid special attention to the issue of increasing the permeability between the VET upper-level cycles and university degrees, facilitating the access of VET students to university (more details in previous section 4.1).

Concerning The Netherlands, a recent report conducted by the Dutch Education Council (Onderwijsraad, 2009) stresses that one of the strong points of the Dutch VET system is the existing available possibilities for students to continue in the education system so to obtain higher level qualifications (226,380 VET students were engaged in level 4 studies in academic year 2009/2010, that is to say, approximately 43% of the total number of VET students)[119].

Finally, and as far as The United Kingdom is concerned, progression by Level within the Apprenticeship framework and within further education is highly dependent upon the sector of the Apprenticeships, in the sense that some sectors (i.e. engineering apprenticeships, business administration) have greater need and expectation of higher level skill development (Hasluck et al, 2008). Interestingly also, the national interviewed experts suggest that ensuring opportunities to progress between different levels of skill development (including tertiary levels) is one of the critical elements of the British Apprenticeship system. Thus, ap-

[119] In The Netherlands, the only available ISCED 5 level study within the VET system refers to the so-called Associate Degree (AD), experimented as a pilot project since 2006 but not part of the formal education system (see more details later on in this same section).

prentices wishing to participate in higher education are confronted with several challenges since the awards available within the Apprenticeship Frameworks at Level 3 (ISCED 4) may be 'small qualifications' i.e. not equivalent in formal academic terms to the traditional HE access route via general study A Levels, and often do not accrue sufficient points to enter Higher Education. Also, some authors suggest that support by employers to Apprentices' progress in terms of qualifications is usually limited (Perez-del-Aguila et al, 2006), unless the apprentice is in a job role that demands higher level skills or allow for the performance of tasks at a higher level than that already achieved.

All in all, it is interesting to identify in several EU Member States the existence of several tertiary level programmes and degrees based on the combination of work-based and school-based training. Relevant examples of these degrees (some of them newly created ones) are presented next:

- In Denmark, and since 1st of August 2009 a compulsory three month apprenticeship in an enterprise or a public institution has been integrated in all short further and higher educations ("Korte Videregående Uddannelser", often referred to as KVU programmes). KVU programmes are educations at a tertiary level and can be used as further training for skilled workers. The educations have duration of 1 ½ to 2 ½ years and are classified as 5B on the ISCED scale and admission requirements include either a relevant VET or general upper secondary education. There are several examples of ways former students organise the compulsory three month apprenticeship. The "workplace apprenticeship" is the most common and well known type of scheme (it is similar to apprenticeships in VET, where the student for a period works in an enterprise or institution and takes part of the daily tasks)[120]. The structure of the apprenticeship is flexible and the above listed examples of type of schemes can be combined. The apprenticeship can take place in one or more enterprises. Whether the enterprise pay wages under the apprenticeship depends on the curriculum that vary within the different KVU programmes (Danish Ministry of Education, 2010a). IN 2009, there were 11,345 students in VET related tertiary degrees in Denmark (a 12% of the total number of tertiary students) (Danish Ministry of Education, 2011a).
- In France, approximately 4% of the tertiary level students are in apprenticeship (data for 2008). In this regard, apprentices can prepare either the Higher Technicians's Certificate ("Brevet de techniciens supérieurs, BTS") or the University technological Diploma ("Diplôme Universitaire de Technologie, DUT"), both related to a ISCED 5B level. In these cases, the distribution between school and work-based training hours varies between 33/67 to 40/60, according to specialities and schools. In 2008 there were 5,795 apprentices preparing DUT studies and 47,249 preparing the BTS (Ministère de l'Education Nationale, 2010).
- In Germany, it is worth stressing the so-called Dual study programmes ("Duale Studiengänge"). In contrast to regular university studies, dual study programmes combine in-company vocational training with theoretical studies at a university of applied sciences ("Fachhochschule"), vocational academy ("Berufsakademie"), university, administration and business academy ("Verwaltungs- und Wirtschaftsakademie") or, since 2009, at a dual university ("Duale Hochschule"). Dual courses of study are an especially innovative, attractive and practical way of studying that has enjoyed increasing popularity for years with companies and young people. By combining practical in-company training with theoretical instruction, students have the chance to acquire two qualifications at once (i.e. a vocational training qualification and an academic degree, usually a bachelor's degree). Therefore, students obtain high-quality training that benefits them both financially and in terms of (saved) time and improves their labour market and career prospects. Mean-

[120] Other possible forms include the "project oriented apprenticeship" (the student cooperates with an enterprise or institution on solving a problem defined by either the student or the enterprise), "virtual apprenticeship" (characterised by involving digitised medias", the "entrepreneur apprenticeship" (intended to give the student experience with entrepreneurship and try out innovative ideas) or, finally, the "international apprenticeship" (the enterprise carries out the apprenticeship in an enterprise located in another country).

while, enterprises obtain highly qualified and motivated young employees, and institutions of higher education benefit from the extensive contact with the world of work and create a distinctive image for themselves by offering demand-based courses of study. In 2010, the total number of dual study programmes amounted to 776 in different subjects including engineering, architecture, social services, business management, etc). Dual study programmes are becoming increasingly popular in Germany. In 2010, 50,732 students and 28,336 enterprises participated in Dual study programmes (BIBB, 2011a).

- In Spain, the so-called Upper-level training cycles ("ciclos formativos de grado superior" in Spanish) relate to 5B ISCED level qualifications, where the students who successfully complete the specific higher level vocational training obtain the title of Advanced Technician, considered to be the final qualification before starting work. However, and for those students who want to continue with their studies, this qualification also provides them with direct access to certain university studies related to the studied vocational training cycles and without the need to sit for an examination. Usually, a student starting an upper level training cycle will be 18 years old, and should have successfully completed the upper secondary education or a relevant initial VET degree. Courses last for two years or a total of 2,000 tuition hours, and include a compulsory "in-company training" module of approximately 400-600 hours (around 20-30% of the total training hours of an IVET cycle) that takes place at the workplace. In 2008-2009, 223,098 students opted for these cycles.
- In The Netherlands, the Associate Degree (AD) has recently come into existence in 2006 as a pilot project, although the decision to give the AD program a permanent status has only been taken in 2011. This is a 2-year course that enables the transition from vocational specialists, workers and job seekers to higher education. This program leads to an ISCED 5B level certificate, although the AD also allows a student to continue with the bachelor program without delay when he or she has this degree. The program is (partly) intended for VET students who finished school and still want to study but do not want to follow a 4-year Bachelor study. In the second year of the study, the student must have a job or an internship. In 2009 there were 2200 AD students (450 AD students in 2006), where half of the students come from a work situation and only one quarter comes directly from a VET education. About 50% of the AD graduates continue learning via a bachelor education.
- In the United Kingdom, it is worth stressing the so-called Foundation Degrees, introduced in 2001. These Foundation Degrees combine varying extents of work-based learning with taught elements within higher education institutions depending on sector. Foundation degrees are equivalent to the first two years of a traditional undergraduate degree within the English system and are studied, typically, over two years in full-time mode and three years in part-time mode. A Foundation Degree might be the study aim of an apprentice who has completed the requirements of an Advanced Apprenticeship, depending on the sector. According to several estimations, in 2009-10 there were 99,475 students registered on foundation degree programmes. Interestingly also, just over half (59%) of full-time entrants to Foundation Degrees progress into further higher education studies (HEFCE, 2010).

5.5 Assessment of financing and cost-sharing mechanism

As far as the assessment of the existing financing and cost-sharing mechanisms available in the different case study Member States[121]. In this regard, the analysis of the national reports provides the following main results[122]:

[121] For more details on these mechanisms please see section 3.8 with detailed information on this point

[122] See more details in the different national reports.

- In Denmark, and generally speaking, the existing Employers´ Student Reimbursement Fund (AER) is well appreciated by all stakeholders for a number of reasons. On the one hand, the Fund allows alleviating apprenticeship-derived costs for enterprises involved in this type of training, while at the same time sharing these costs with other non participating enterprises. Also, the fact that the State also partially funds the VET system facilitates that both parties (the State and the enterprises) share the responsibility of making the VET system work. Meanwhile, the existing financial incentives for enterprises (full wages paid by enterprises to apprentices during the time that the students attend school-based education) are generally appreciated by enterprises, although they doubt about the real final impact on the amount of apprenticeships provided by enterprises.
- In Estonia, there is a general concern about the fact that apprenticeship studies tend to be underfinanced to some extent since they are more costly for VET schools but receive the same level of financing as school-based VET[123]. In this respect, several interviewed experts argue that in order to raise the attractiveness of apprenticeship studies in the Estonian VET system, an additional financing coefficient should be introduced, but due to the austerity measures and general attitude towards apprenticeships it does not seem likely at the moment.
- As far as France is concerned, the qualitative information provided by the national report stresses several problems related to the French apprenticeship funding system. To start with, it is stressed that the Apprenticeship Tax is paid in the region where the company headquarters (and not the establishments) are located, which results in a very important bias in favour of the Île-de-France (the Paris) region. Despite subsequent redistribution amongst Regional Authorities ("Conseils Régionaux"), in practice some regional authorities have far more limited means for financing innovative projects. In addition to this, not all Regional Authorities give the same importance to Apprenticeship studies, resulting in important territorial inequalities amongst French regions. For instance, the Education budget devoted to Apprenticeship is not the same in all regions. Also, Regional Authorities' bonuses to companies for hiring an apprentice are very diverse, ranging from 4,000 Euro per apprentice per year in Île de France to 6,500 Euro in Lorraine. Finally, the development of Apprenticeship schemes in post-secondary education had had a negative side effect on the available budget for level 3 Apprenticeships (i.e. CAP[124], BEP[125] or "Baccalauréats Professionnel" courses.
- In Germany, it is interesting to see that several interviewed experts (including employers' representatives) point out that it is in the interest of the companies themselves to get involved in vocational training having in mind both the economic and immaterial benefits they obtain from this. In fact, a recent survey conducted in 2011 among 14,299 enterprises showed that only 5% of the enterprises indicated that involvement in vocational training was too costly and would thus represent a serious obstacle for them (Deutscher Industrie und Handelskammertag (DIHK), 2011). All in all, the active participation of the enterprise sector in vocational training does not only guarantee the provision of "real-life" training on the job but also relieves the state from substantial costs. Notwithstanding this, some interviewed experts reckon that one of the main problems of the German system refers to the existence of a large share of "free riders", that is to say, enterprises that no participate in vocational training but indirectly benefit from it (approximately 30% of all German establishments actively participate in vocational training). In this regard, some of the interviewed experts argue for the introduction of a training levy on all enterprises not involved in dual system practices[126]. Finally, an obvious weak point of the market-based dual system is the decrease of offered training positions during cyclical economic downturns, as acknowledged by all interviewed experts.

[123] Examples of elements that raise the cost of apprenticeship studies include the need to develop individual curricula, high flexibility which means that the teachers need to spend more time for the students, the need to pay the company supervisor a motivating fee or transaction costs related to the extra communication between the school and the company.

[124] Certificat d'Aptitude Professionnelle

[125] Brevet d'études Professionnelles

[126] Interestingly enough, German business associations and all Federal governments have so far rejected this proposal

- In Poland, one of the main existing criticisms refers to the low financial compensations for employers providing vocational placements for students, which deters many enterprises to participate in them. Also, and from the students' perspective, the existing compensations for travel and living expenses received by students from their vocational schools are usually low, which often results in students being reluctant to undertake vocational placements outside their place of residence due to the high cost of living.
- As far as Slovakia is concerned, and despite the short period of time passed after the main changes in the Slovak VET system, it is possible to argue that the new financial measures intended to foster the participation of employers are heavily criticised. On the one hand, the voluntary nature of the recently created VET Development Fund makes this Fund vulnerable of illiquidity results. On the other hand, existing tax deductions for employers involved in apprenticeship are not flexible and attractive enough for enterprises.
- Finally, and referring to the United Kingdom, it is suggested that employers believe that the hourly training rate for apprentices (currently set as a National Minimum Wage standard at £2.60 per hour) is too high, specially having in mind the lack of both functional (literacy and numeracy) and employability/soft skills (team-working, communication etc) that apprentices have. In addition to this, employers suggest that their level of investment is far higher than the fees associated with Apprenticeship training, where this element limits the expansion of Apprenticeship. In this regard, employers have the feeling that they are being asked to make up for the failures of the education system.

5.6 Social considerations in apprenticeship-type schemes

One of the key elements when analysing the issue of apprenticeship-type schemes refers to the existence of important social considerations. In this respect, elements to be analysed include the important bias in the access to apprenticeship-type studies in terms of gender, ethnic origin or ability considerations, as well as the problem of cheap labour (apprentices used as a source of cheap labour) and the existing phenomenon of drop-outs. This section is interested in analysing these elements.

To start with, available research in a large share of EU Member States shows that the access to apprenticeship-type studies is subject to important biases in terms of gender, ethnic origin or ability considerations.

Thus, and to start with, young women are usually underrepresented in apprenticenship-type studies compared to their share in the total population, especially as far as some specific professions and studies are concerned. To give some data, in Denmark men represent up to 70% of total students (data for 2011), whereas in Estonia men represent up to 58% of total apprenticeship students (data for academic year 2010/2011). In Germany, male apprentices have a 60.1%-share in the total number of all concluded training contracts within the dual system (data for 2009), whereas in Spain, 53.2% of Middle-level VET cycles are men (data for academic year 2008/2009). In The Netherlands, men represent up to 64% of the total BBL rote students (academic year 2009/2010).

In any case, apprenticeship-type studies are also characterised by pronounced sex-specific differences in terms of studies. In this regard, women are usually strongly over-represented in the service occupations (HORECA activies, health services, etc), while their share in production and technology-oriented occupations is usually under-proportional. To give some data form the United Kingdom, women are significantly under-represented in the sectors of construction, plumbing, electrotechnical, engineering and vehicle maintenance and repair (Marangozov et al, 2009), where similar results are also observed in other countries. Interestingly, and despite different awareness-raising initiatives developed in several countries

(i.e. "Girls days", etc), these gender-related differences have remained almost unchanged in the last ten years.

Meanwhile, and as far as ethnic origin considerations are concerned, it is interesting to identify important ethnic differences. Thus, the previously quoted British evidence suggests that some ethnic groups are underrepresented in some training specialities (Marangozov et al, 2009). For instance, people from black and Asian minority ethnic backgrounds are particularly under-represented in some learning fields such as hairdressing, construction, vehicle maintenance or electrotechnical activities. More importantly, Danish and German available studies show that young women and men with migration background have usually more difficulties in accessing (company-based) vocational training than their autochthonous counterparts. Thus, Danish data shows that the share of students with ethnic origins other than Danish are highly overrepresented in school-based practical training[127], with a share of more than 16% (higher in any case than their overall share in the VET studies is 5.8%).

Meanwhile, and in Germany, approximately one third (33.7%) of young women and less than half (47.2%) of all young men with migration background and interest in starting dual vocational training were able to start a company-based vocational training twelve months after terminating general school education, where both figures are considerably less than their peers without migration background (50.8% and 67.8%, respectively) (BIBB, 2011). According to the same institute, these results are explained by a mix of reasons, including not only lower academic levels and lower school leaving certificates often attained by young people with migration background but also to the so-called "social factors", i.e., the less favourable social background of young people with migration background, the lower school- and occupational education of their parents, the lower professional status of the father, etc[128]. All in all, these results are important, specially having in mind that the high share of youths with migration background (23% in the age group of 20-24 years old, 25% in the age group of 15-19 years old and 32% amongst children aged 5-9 years old) and the challenges derived from their successful integration the German educational and vocational system and ultimately into the labour market.

Also, one of the most important challenges for apprenticeship-type schemes refers to the successful integration of students with weak core academic skills. This issue is particularly relevant in those countries (i.e Denmark, Germany, The Netherlands) where the selection of students by enterprises gives priority to the most skilled students. In this respect, it should not be forgotten that apprenticeship studies have been designed (or re-designed) in a number of cases in recent years for dealing with this problem. Examples to be mentioned include the following ones:

- In Denmark, the Government has fostered the VET system as a way to include groups of students who usually do not get secondary educations. In this regard, the Danish government, in consultation with social partners, has developed several initiatives such as the so-called "School-based practical training" or the so-called "New Apprenticeship" (see case study table). In any case, stakeholders worry that a system compelled to pick up the students that are least skilled, might be challenged with keeping a high level of excellence and attractive for students with very good technical skills. This is supported by a public debate among vocational teachers who have assessed that students´ academic standards have declined the past years (Politiken, 2011).

[127] The school-based practical training agreement is dedicated to students who don't have a training agreement or students who lost their training agreements. This makes it possible for the students to complete the practical training of the alternating VET system, without having an apprenticeship in a company

[128] All in all, the BIBB also acknowledges that young people with migration background form a very heterogeneous group where common characteristics are difficult to be generalised.

Table 5.3 The Danish "School-based practical training" and the "New Apprenticeship"

The school-based practical training is offered within 40-50% of main programmes and is dedicated to students who do not have a training agreement or students who lost their training agreements. This makes it possible for the students to complete the practical training of the alternating VET system, without having an apprenticeship in a company. There is however quotas on the school-based practical training meaning that not all students intending to apply are admitted. Generally speaking, there are important concerns about the low quality of this school-based practical training, so social partners are currently involved in several pilot projects so to enhance the quality of this type of training.	The New Apprenticeship is an initiative introduced on the 1st of August 2006 in order make allowances for practical orientated students. This scheme was meant to include the groups of students usually not obtaining secondary educations, by enabling students who are academic disadvantaged but are skilled in a practical manner, to complete a VET without having to deal with academic issues in school. Thus, the students can enter directly into the company-based training and skip school-based training. Also, and in recent years, the new apprenticeship is also playing an important role in upgrading qualifications of unskilled employed adults who can become qualified as skilled workers through this scheme.

Source: Danish report.

- In Estonia, one of the initial target groups of the apprenticeship programme were younger people who prefer practical training to school-based studies, often identified as students with low academic levels[129].
- In France, the French Government has intended to position apprenticeship as a remedy for massive youth unemployment and early school dropouts without diploma since 2009-2010. Also, the Government has recently emphasised the use of apprenticeships as a solution to the unemployment crisis affecting unqualified young people without professional experience. In this regard, the National Assembly and the Senate have recently passed on 27th June 2011 a law bringing down the legal apprenticeship starting age from 16 to 14, basically with the goal of curbing the number of very young people leaving education with neither education nor professional experience[130].
- In Germany, the German IVET-system takes social considerations to a large extent into account, well reflected in the 2004 National Pact for Training and Junior Skilled Workers (see detailed table below). On the one hand, an extensive so-called transition system ("Übergangssystem") has been established for youths who do not yet have full training maturity or who did not succeed in acquiring a training place[131]. On the other hand, enterprises are increasingly prepared to recruit young people with lower school achievements, where some (larger) companies show special corporate social responsibility and explicitly recruit young people with social disadvantages or lower school achievements. Finally, there are a large number of effective support measures exist which directly target young people who have social or other disadvantages that limit their access to the dual training system. Examples include the so called extra-company training places ("außerbetriebliche Ausbildungs¬plätze"), the aids for assisted training ("Ausbildungsbegleitende Hilfen", abH), the company-based introductory training ("Einstiegsqualifizierung", EQ), the training modules ("Ausbildungsbausteine") programme, the vocational preparation schemes ("berufsvorbereitende Bildungsmaßnahmen")[132]. Very interestingly, some of these initiatives are aimed at an early identification of problematic pu-

[129] Equally to the Danish case, apprenticeship studies are increasingly targeted at people who have not obtained a formal qualification or who need update their skills.

[130] This measure is objected to by teacher and parent representatives, as well as by enterprise representatives, who show little enthusiasm for hiring excessively young apprentices.

[131] The "Übergangssystem" (transition system) encompasses various programmes designed to facilitate transition from general school education into vocational training (for those who have specific difficulties, for example in coping with the requirements of an apprenticeship). During a basic vocational or pre-vocational year students receive career guidance and acquire the basic vocational skills designed to help them either to obtain a dual apprenticeship or to enter a full-time school-based VET programme or to start working but without receiving a full qualification. This system is oftebn criticised for being costly and inefficient (Bundesinstitut für Berufsbildung (BIBB)/Bertelsmann Stiftung, 2011).

[132] For an explanation of these measures see German national report.

pils so to avoid future drop-out problems (i.e. the so-called Educational chains ("Bildungsketten"), see also below).

Table 5.4 German National Pact for Training and Junior Skilled Workers in Germany

In the National Training Pact, the Federal Government (in co-operation with the main German business associations (BDA, BDI, BfB, DIHK and ZDH), the Federal Employment Agency (BA), the Standing Conference of Ministers of Education and Cultural Affairs (KMK) and the Officer for Migration Issues of the Federal Government) - is committed to securing a sufficient supply of training places for young people, specially for those groups with identified difficulties (i.e. repeat applicants, socially disadvantaged young people, young people with learning difficulties or disabilities, young people with a migration background) as well as for highly talented school-leavers. Since its start in 2004, the partners to the pact set themselves both quantitative and qualitative targets whose accomplishment is assessed every year. The pact has been extended twice by the partners to the pact; most recently in 2010 when it has been prolonged until 2014.

Source: Bundesministerium für Wirtschaft und Technologie, 2011 & 2011a.

Table 5.5 Educational chains until the completion of training

Launched in September 2010, the idea behind the educational chains ("Bildungsketten") is to bring about a systematic optimisation of the transitions between general school education, the transition system and dual vocational education and training. The focus is on preventing school drop-outs, avoiding waiting loops, achieving efficient transitions into regular VET and supporting the successful completion of such training for young people who have specific learning difficulties and/or social disadvantages. The Federal Ministry of Education and Research (BMBF) has worked in conjunction with the federal states and acted in accordance with a standardised catalogue of criteria to select over 1.000 lower secondary schools and schools for pupils with learning difficulties right across the country which are to participate in the programme. For all pupils of these schools an analysis of potential will be conducted from school year 7 onwards. The aim is to identify areas of strengths and latent potential and also to specify support requirements. A school-based and extra-school support plan will be developed for young people who are in need of support. This process will be co-ordinated with all involved stakeholders, including the pupils themselves and their parents. The Ministry expects to fund approximately 60,000 such analyses of potential per year. The participants will then receive extra-school support from full-time, experienced educational guides on an individual and continuous basis. In difficult cases, this coaching will last until the completion of training. The BMBF has planned to fund 1.000 such educational guides. Their tasks are to take on a coaching role to support and monitor the young people personally and develop and implement individual solutions for problems arising in the educational development, whilst co-operating closely with regional educational and support institutions.

Source: German national report.

- In The United Kingdom, Apprenticeships are being seen as a critical route into the labour market, specially for the group of young people unemployed in the current economic crisis context. To address this concern, the Government has introduced in 2010 as a one-off measure the so-called "Apprenticeship Grant to Employers", which offers a small, financial incentive (£2,500) as a recruitment subsidy to employers to take on a young, unemployed person (aged 16 or 17) as an apprentice[133]. Also, the Government has recently announced a new programme in May 2011, which is to be known as Access to Apprenticeships and will provide a pathway programme for 10,000 disadvantaged 16 to 24 year olds. The scheme, which will be supporting by £60m in public funding, is aimed at helping those who want to pursue an Apprenticeship but who cannot find an employer to take them on since they lack the skills or experience. There are further approaches to the support of vulnerable young people in the labour market which focus on the transition into and through Apprenticeships. These include the Apprenticeship matching service which is run by the National Apprenticeship Service and its partners and provides brokerage between young people and employers. Furthermore, there are examples of Local Authority initiatives to address the needs of vulnerable young unemployed adults and prepare them for apprenticeships.

[133] This measure has been already presented in section 3.8 of this report.

As far as the issue of apprentices used as a source of cheap labour is concerned, the available results collected in the different analysed Member States provides a very differing perspective. Thus, and in some countries such as Denmark, Estonia, Slovakia or the United Kingdom, interviewed experts (particularly those from employers' associations) suggest that apprenticeship schemes are not being used by the companies as a source of cheap labour. On the contrary, apprentices are often viewed as an expensive source of labour due to the fact that employers invest significantly in apprenticeship training (in terms of red tape, additional efforts by company trainers, mistakes made by trainees, etc) to a value far beyond the fee paid to the training provider. Indeed, and in the United Kingdom, there is a big debate amongst enterprises and employee representatives whether the national minimum wage rate for Apprenticeship is set appropriately or should be lowered[134].

Meanwhile, and in the case of those countries where compulsory vocational placement programmes are in place (i.e. Poland or Spain), generally speaking it is agreed that these programmes are structured in such a way[135] as to prevent the possibility of using apprentices as a cheap labour force, although the risk is always there. In any case, the Polish report stresses that this risk is more present amongst those Polish students that independently arrange a placement with an entrepreneur operating abroad, although there are no data to confirm this.

By way of contrast, the available points of view in other analysed Member States reflect a higher concern about the risk of using apprentices as a source of cheap labour. For instance, the French report suggests that, in those cases where the skills that need to be accomplished are easily attained, it is very tempting for enterprises to accumulate apprenticeship contracts instead of creating permanent jobs[136]. In Germany, some studies suggest that approximately 43.8% of all German enterprises engaged in dual training practices pursue a so-called "investment strategy" with their apprentices (i.e. investing into the human capital of apprentices), whereas a 18.5% follow a "substitution strategy" (use trainees as a cheap substitute for unskilled or semiskilled workers), the rest is mixed or undetermined. Interestingly also, the probability of a company following an investment strategy increases in those sectors/enterprises which are relatively capital-intensive, pay high wages, have a works council and are characterised by relatively complex work processes that cannot be learned quickly (Mohrenweiser & Backes-Gellner, 2008). In the case of The Netherlands, there is a certain risk that apprenticeship students are seen by enterprises as full-time cheap labour instead of a student/employee in training, where this situation is even exacerbated by the current economic crisis (Petit et al, 2011).

Concerning the problem of early dropouts (i.e. students who leave studies without a certificate), it is possible to argue that this problem is a major challenge for all countries. In this respect, it is also the case that vocational programmes typically face higher dropout rates than general education, due partially to the profile of VET students (basically students with poorer records, students' lower social background, etc). In order to deal with this problem, public authorities are paying special attention provisions to retain students in education and training, and second chance opportunities for those who dropped out (OECD, 2010) (see Spanish case study).

[134] The Apprenticeship minimum wage rate is set at £2.50 per hour (£3.64 for 16-17 year olds who are above school leaving age but under 18 and £4.92 for 18-20 year olds), compared with the adult (21 years and above) rate of £5.93

[135] i.e. high control by vocational training centres on enterprises.

[136] On the contrary, and for those enterprises where the acquisition of skills is a lengthy and costly process, training an apprentice is seen as a long-term investment that requires mutual commitment from both sides

Table 5.6 Spanish case study: Development of a grant scheme particularly aimed at drop-out youngsters aged 18-24

The Spanish government is currently discussing the possibility to develop a comprehensive and consolidated grant scheme particularly aimed at those youngsters aged 18-24 who have abandoned the education system just after having finished compulsory education. The idea is to take them into the education system and facilitate the combination of work and study at the same time, basically through the promotion of part-time work contracts that may allow young employees to continue studying and get higher qualifications while working.

Source: Spanish report.

Generally speaking, dropout rates are technically difficult to calculate, mainly because in most educational systems a proportion of those who leave educational programmes re-enter an education/vocational programme either immediately or within a relatively short period of time[137]. This is the case of those students who terminate their contract because they decide to switch to another company or another training occupation, or those students who experience temporary illness situations (West, 2004).

In any case, the analysis of the available information in the case study Member States shows the following results that can be summarised as follows:

- In Denmark, approximately 48% of students entering at VET were able to complete their studies (data for 2008). In this regard, the high drop-out rate is regarded as a problem in order to obtain the official goal of the education of the youth population (Danish Employer Association, 2009). Also, interviewed experts argue that one of the factors influencing the drop-out rate is whether the students have a training agreement or not, in the sense that students entering a training agreement early in the basic course have lower drop-out rates than students who do not have a training agreement during basic course. Similarly, students entering regular training agreements have very low drop-out rates in comparison to students entering into a short training agreement.
- In Estonia, the annual drop-out rate of apprenticeship students ranges from 20% in 2007/08 to 36% in 2009/10 (clearly higher than the drop-out rate for the whole IVET, around 18-19% in the same period). Interestingly also, drop-out rates for apprentices have increased during the economic crisis, due to the high percentage of mature apprentices renouncing to their studies so to keep their full-time jobs.
- In France, available partial evidence suggests that approximately 17% of apprenticeship students finish their apprentice contract before obtaining a proper qualification, where half of these terminations were at the apprentice's initiative (CEREQ, 2007). Also, the available data shows that the drop-out rates are higher the lower the certification level is, the smaller the enterprise is or in some sectors (i.e. HORECA sector).
- In Germany, the available data shows that, in 2009, approximately 22.1% of all valid training apprenticeship contracts were dissolved prematurely, where the largest share of them (61.8%) were terminated within the first twelve months after the start of the dual vocational training (Bundesinstitut für Berufsbildung (BiBB), 2011). Interestingly enough, this dropout rate is slightly lower than the university one (28.4%) where, equally to the French case, these drop out rates are higher amongst smaller firms and the lower the educational attainment of students. All in all, about half of all those whose contracts are terminated continue training in the dual system, under different conditions and terms, where the percentage of contracts that are terminated before time decreases as training places become scarce (trainees have more difficulties to correct their choices of company or occupation) (Bundesministerium für Bildung und Forschung, 2003).
- In Spain, the percentage of middle-level students who get their Technician degree is around 75-80%, whereas in upper-level cycles just about 90-95% of the students end the programme (La Caixa, 2010). According to this literature, it seems that higher drop out rates amongst middle-level students are explained by age and maturity considera-

[137] This group may not be regarded as genuine dropouts.

tions (they have just finished compulsory education and in a large share of cases they have poor academic records), whereas students in upper-level cycles have already finished "Bachillerato" (upper-secondary level, academic / general track), and they are generally more mature and ready to choose their professional career. Interestingly also, and contrarily to the Estonia case, the remarkable economic boom experienced by Spain during the last decade and the resulting exceptional generation of jobs (usually poorly qualified) have encouraged youngsters to leave the education system and enter the labour market, even before having obtained a degree. However, this trend has been inverted due to the economic crisis and the lack of employment.

- In The Netherlands, approximately 30% of the vocational training students leave education without a certificate, where the percentage of drop-outs in the BBL route is slightly higher than in the school based training (BOL). Interestingly also, dropout rates are higher amongst lower level studies (Inspectie van het Onderwijs, 2011). Meanwhile, the percentage of dropouts that return to school is lower amongst BBL students in comparison to BOL ones (Only 1/5 to 1/4 of BBL dropouts return to school in comparison to 1/3 amongst former BOL students) (Wijk et al, 2011).

Table 5.7 BBL Jobs in Emmen (The Netherlands)

The main goal of the project "Jobs in Emmen" was to create BBL jobs for young people in retail, catering and logistics in the region of Emmen (The Netherlands). This project was part of the national Youth Unemployment Plan, and was aimed at young drop-out people who wanted to get a qualification in retail, catering or logistics and were not unable to attend school. This project was a initiative of the central employment agency ("UWV Werkbedrijf") in the Netherlands and several local municipalities, the regional entrepreneurs association and the regional reporting and coordinating point for early school leavers ("Regionaal Meld- en Coordinatiepunt voortijdig schoolverlaters – RMC"). Basically, the project consisted in an inventory of young people who were interested in obtaining a qualification. Subsequently, these young people were matched with the needs of the companies, resulting in an added inflow of new BBL students in the region in the already mentioned three sectors. This project is currently regarded as a best practice and as inspiration for other Dutch projects related to youth unemployment and prevention of school drop outs.

Source: Dutch national report.

- In the United Kingdom, some available studies based on 2007-08 data show that approximately 35% of Apprenticeship and Advanced Apprenticeships students do not complete their degrees (this figure was up to 63% in the 2004/2005 academic year)[138], where this percentage is higher amongst men, Black and Pakistani apprentices as well as amongst apprentices who have a learning difficulty, disability or a health problem (Hogarth et al, 2009). These authors also note that opportunities for progression to further learning and the provision of information and advice about progression opportunities are a factor in improving completion rates.

[138] Some of the British interviewed experts suggest that the improvement of the achievement rate of apprentices in recent years is the result of tightened entry criteria of students.

6. Conclusions and Recommendations

6.1 Conclusions

6.1.1 Rationale and objectives of the study

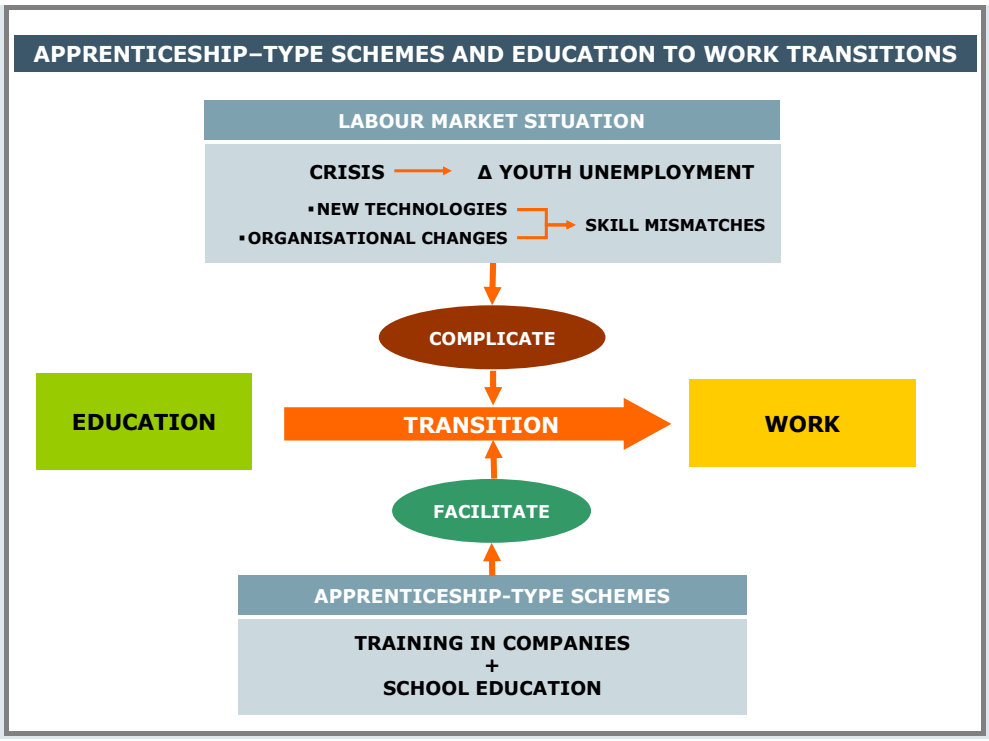
Apprenticeships as an answer to increasing challenges in the transition from education to work

Nowadays significant numbers of young people in Europe face increasing challenges in the transition from education to work. This is not a new problem, but the current situation of crisis, with growing unemployment levels in many countries, is making more and more difficult for young people to successfully move from school to work.

Apart from that, the general evolution of the economic, financial and productive systems, with the continuing introduction of new technologies and rapid changes in the organisation of the companies, are producing skill mismatches between labour demand and supply which often hinder the chances of young people to find adequate employment.

In this context, apprenticeship schemes are generally viewed as a route that can facilitate access of young people into the labour market: the combination of theoretical and practical skills acquired in enterprises is regarded as useful both for enterprises and for VET students, considering that training contents can be closer to enterprises needs, students get in direct contact with companies and many of them remain in them after the apprenticeship period.

Graph 6.1 Apprenticeship-type schemes and education to work trasitions



European policy emphasizes the key role of workplace training in initial VET. The *Youth Opportunities Initiative* recognises the key role of apprenticeships

The European policy context on education and training has come to underline the key role that workplace training can have in achieving the 'Europe 2020' objectives, notably by equipping citizens with the skills and competences which the European economy and the European society need in order to remain competitive, innovative and socially inclusive.

In this sense, the Bruges communiqué (2010) includes a package of objectives and actions to increase the quality of vocational training in Europe by making it more accessible and relevant to the needs of the labour market. The communiqué emphasises the labour market relevance of VET, stressing that the employability of VET graduates should be enhanced through cooperation and partnerships between social partners, enterprises, education and training providers, employment services, public authorities, research organisations and other relevant stakeholders, in order to ensure a better match between labour market needs and the development of knowledge, skills and competences. The communiqué explicitly states that work-based learning carried out in partnership with businesses and non-profit organisations should become a feature of all initial VET courses and that the Member States should support the development of apprenticeship-type training and raise awareness of this.

The initiative *Youth on the Move*, under the Smart Growth and Education dimension of the 2020 Agenda, is intended to establish a youth employment framework at the EU level that can promote young people's entry into the labour market through apprenticeships, stages or other work experience, as well as increasing job opportunities for young people by favouring mobility across the EU.

Also the *Agenda for New Skills and Jobs* stresses that employers should be encouraged to co-invest and participate in the activities of education and training institutions, particularly in higher education and vocational education and training; these partnerships can develop and update skills profiles, multidisciplinary curricula and qualifications, and facilitate the provision of work-based learning, from apprenticeships to industrial PhDs.

Finally, the *Youth Opportunities Initiative*, officially launched 20th December 2011, explicitly recognises the key role that quality apprenticeships places can have for equipping young people with the skills needed to enter the labour market, stressing the key role of enterprises in the provision of these places. For this purpose, the Commission will use €1.3m of ESF Technical Assistance to support setting up apprenticeship-type schemes through the ESF so to increase, in cooperation with Member States and social partners, the number of apprenticeships schemes in Europe by a 10% by the end of 2013 (i.e. 370,000 new apprenticeships).

Objectives of the study

In this context, the present study has been intended to provide an overview of apprenticeship-type schemes in the EU Member States. A focus has been put on specific countries (i.e. Denmark, Estonia, France, Germany, Poland, Slovenia, Spain, The Netherlands and United Kingdom) in order to conduct more detailed analyses on the characteristics of the main national schemes. The study discusses the effectiveness of these schemes in raising employability and facilitating labour market transitions and geographical mobility of apprentices in the EU. The study also provides recommendations for improving the functioning and performance of this type of VET schemes and for increasing the availability of apprenticeship places (considering the possible effects of the economic crisis).

6.1.2 Concept of apprenticeship

Apprenticeship-type VET schemes combine in different proportions company-based training and school-based education

A first result of the research is that there is not a single and commonly accepted definition of apprenticeship, but that different stakeholders have different views on what an apprenticeship programme is. Also, the different EU countries have VET programmes with different characteristics which are called "apprenticeships" (in the national languages: *apprentisage*, *opipoisiõpe, mesterlære, beroepsbegeleidende leerweg, duales system, etc.*).

Due to this variety of systems, in the framework of this research it has been considered convenient to adopt a wide concept of apprenticeship, in order to be able to grasp the diversity of national situations. Thus, the concept of "apprenticeship-type" schemes has been introduced.

In this sense, apprenticeship-type schemes are understood as those forms of Initial Vocational Education and Training (IVET) that formally combine and alternate company based training (periods of practical work experience at a workplace) with school based education (periods of theoretical/practical education followed in a school or training centre), and whose successful completion leads to nationally recognised initial VET certification degrees.

It can be observed that no explicit reference is made to the existence of a contractual direct relationship between the employer and the apprentice. Therefore, the definition is wider than the one used by Cedefop and closer to the concept of "alternance training" also by Cedefop. Eurostat is also working on an operational definition, which does not include employment contract requisite but requires a minimum six month time duration for the workplace training period.

Additional requisites to the apprenticeship-type schemes analysed on this report are that they are primarily aimed at young people (though may include older workers[139]) and that their completion leads to nation-wide recognised VET degrees, either in Upper secondary (ISCED 3B) or in tertiary levels (ISCED 5B)[140].

On the contrary, the definition does not in principle include VET degrees where work based training is not formally required, neither other special compensatory schemes aimed at those students who have not completed lower secondary school[141].

6.1.3 Overview of apprenticeship-type schemes in the EU

Apprenticeship-type schemes are well spread all over the European countries

As it is well known, there is a great variety of VET systems in the EU Member States. However, in all of them there are schemes at upper secondary level where workplace training plays a significant role, which means that apprenticeship-type schemes are well spread all over the European countries.

First of all, it must be underlined that most countries combine different types of schemes. Thus, in 24 of the MS, there are VET schemes which can be labelled as mainly company based, this is to say apprenticeship programmes in a strict sense, where more than half of the training activities take place in a company.

[139] In fact this is a practice and a current policy objective in some EU countries, in order to use apprenticeship-type schemes as a tool in lifelong learning.

[140] On the contrary, In-company practices linked to University degrees (ISCED 5A) are not considered.

[141] Though several countries are trying to combat drop-out problems via special apprenticeship type schemes addressed students with bad academic results.

In many countries, company-based apprenticeship systems coexist with mainly school-based schemes

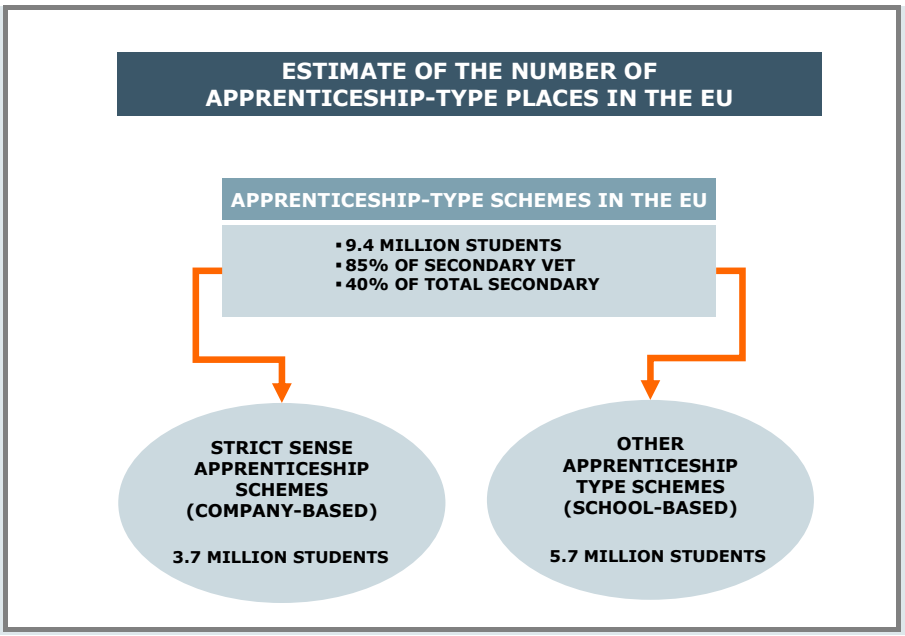
However in a wide majority of these countries, company-based apprenticeships coexist with other mainly school-based training schemes, where tuition takes place at school most of the time, but there are significant components imparted at companies in a real work setting.

In a small number of countries, just these looser apprenticeship-type school based schemes exist, while contrarily in other 6 countries, the strict-sense work-based system is the only formula to follow an apprenticeship.

It is interesting to mention that in about half of the EU countries also apprenticeships at tertiary level (ISCED 5B) have been identified. In several countries apprenticeship-type schemes are relatively recent or reformed to make VET more flexible and closer to the needs of the production system

Considering now the coverage of the apprenticeship-type schemes in terms of number of students, and in spite of all the national differences, it can be estimated that in the EU-27 approximately a total of 3.7 million pupils follow apprenticeship studies in a strict sense (2009 data). However, another 5.7 million students attend other apprenticeship-type schemes**,** mainly school-based VET training with some compulsory work-based training in companies. All in all, the Member States supplied company training positions for a total of about 9.4 million students in total.

Graph 6.2 Estimate of the number of apprenticeship-type places in the EU



These figures mean that apprenticeship-type students represent approximately an 85% of total secondary VET students and 40.5% of total secondary students in the EU-27. These figures descend to a 33% and a 16% respectively if only strict apprenticeships are considered.

The countries with the highest numbers of VET students following apprenticeship-type schemes are the largest countries, e.g. Germany, Italy, France, etc. However, countries such as Germany or Denmark stand out as the major proportion of VET students attends apprenticeship schemes in a strict sense (in the so-called Dual System).

6.1.4 Characterisation and typology of apprenticeship-type schemes[142]

Apart from Ministries of Education, in some countries regional authorities and social partners have a role in the design and governance of apprenticeship-type schemes

The State at a central level, usually under the aegis of the Ministry of Education or equivalent bodies, is generally the main institution responsible of the VET-related legislative corpus framework. In this respect, training curricula stipulate in binding terms what has to be learned for a particular sector/occupation/profession, providing the competency requirements for professional qualifications and their levels. In some countries, regional and municipal authorities also have a role in establishing and/or complementing existing standards, as it is the case in France, Germany, Slovakia or Spain

In addition to the role played by public authorities the social partners (usually through a range of committees) are also an important stakeholder. However their degree of influence is determined by the overall strength of social dialogue in each national labour market. In this sense, in some countries (i.e. Denmark, Germany or the Netherlands), the role and influence of the social partners is qualitatively strong, with a special focus at sector level.

Finally, in some of the analysed Member States it is possible to identify a trend towards increasing the autonomy of schools in preparing the curricula and on the way courses are delivered, in order to adapt to the local labour market and local enterprises' needs. Thus in several cases (e.g. Denmark, Estonia, Poland, Slovakia, Spain or The Netherlands), vocational schools also play a key part in the definition of curricula and educational profiles of apprenticeship-type students.

Enterprises have a key role in the provision of vocational skills and professional knowledge

Obviously enough, company based training activities are a substantial part in the curricula of apprenticeship-type schemes and in the more traditional systems constitute the very basis and raison d'être of the schemes as such.

Their role is basically to provide students with a set of comprehensive vocational skills and knowledge necessary to engage in a particular profession, by carrying out a set of pre-determined training and working activities in a real productive environment that complements other knowledge and competencies acquired in the education centre. Workplace training should also enable trainees to acquire the necessary learning about the organisation and relationships existing in a workplace. On the other hand, apprenticeship-type schemes also allow companies to identify potential candidates that may become future employees, as well as to establish cooperation channels with vocational schools.

Diversity in the distribution of work-based training and school training, depending on the schemes and the countries

However, with these same purposes, the percentage that company based training represents in relation to the total training time may greatly vary amongst countries and schemes. In some cases (e.g. Denmark, Estonia, France, Germany, The Netherlands, Slovakia or the United Kingdom), company based training represents the largest share of total training hours, usually between 66%-70% of total training time. On the contrary, in other countries (Poland, Spain), the length of workplace learning periods is much lower, in favour of more extensive school based modules.

[142] This section is based in the country reports, where case studies of the main national apprenticeship-type schemes where conducted.

The way school based training takes place also varies: while in some cases students attend the training centres some days all weeks, in other cases this attendance is concentrated during some periods along the course.

Table 6.1 Distribution of work-based training and school training in the main national schemes

Country	% of work-based training	% School based training and time distribution	
Denmark	66%-90%	10%-35%	By periods of 5-10 weeks
Estonia	66%	33%	Flexible arrangements
France	66%	33%	2-3 weeks company/ 1 week VET centre
Germany	60%	40%	1-2 days/week
Poland	4-6 summer weeks	Whole academic year	
Slovak Republic	>=60%	<=40%	1-2 days/week
Spain	20%-30%	70%-80%	At the beginning of training cycle
The Netherlands	>=60%	<=40%	1-2 days/week
United Kingdom	<=70%	>=30%	1 day/week

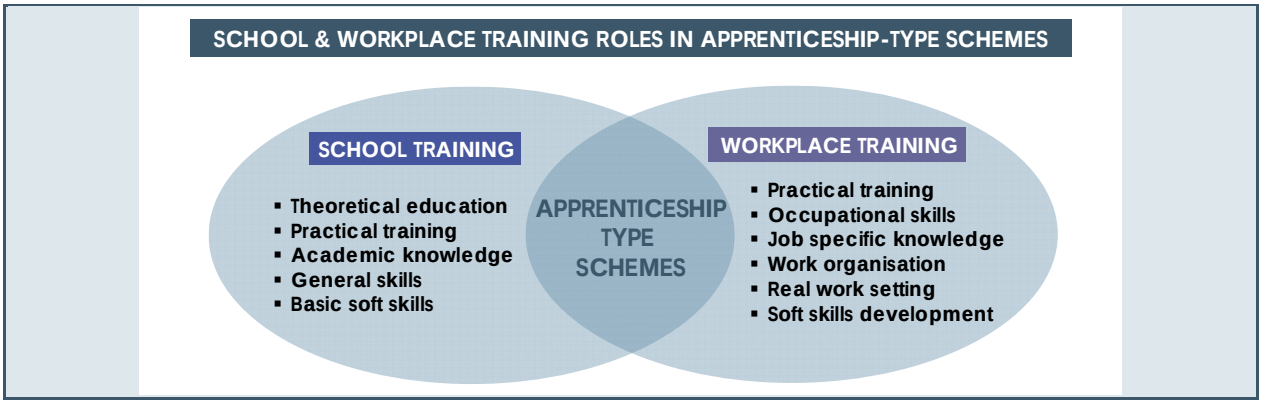
Source: National reports

School training has also a fundamental role in apprenticeship-type schemes

School training fulfils key goals for the students' education and personal and professional development, basically by helping to further develop the general knowledge and skills that are needed in civil society and the knowledge economy.

However, the sense and contents of school training can be different depending on the apprenticeship schemes. In countries with mainly work-based apprenticeship schemes, school-based training is fundamentally theoretical and strongly coordinated with the training provided at the enterprises. Meanwhile, in the mainly school-based apprenticeship type schemes, vocational schools complement theoretical classes relating to a profession with strong emphasis on practical training in school workshops and laboratories.

Graph 6.3 School & workplace training roles in apprenticeship-type schemes



Enterprises have to fulfil certain requisites to participate in the schemes

Companies' participation in apprenticeship-type schemes is always on a voluntary basis. Consequently, Member States often carry out special activities to encourage enterprises to take on apprentices (even those countries) with a well establish tradition.

However, some requisites are usually established for enterprise participation, which sometimes must be previously approved by a competent authority to become a training enterprise (DK, FR, DE). In other cases, this authorisation does not exist and enterprises typically provide the training placements by mutual agreement with vocational schools, which play a key role in the final selection of the companies (EE, PL, SK, SI, SP, NL).

A combination of paths for the selection of students and their access to apprenticeship places

There is a wide availability of different paths according to which companies can select potential apprentices or, the other way round, students can have access to apprenticeship places. These paths are often combined with each other, so that in each country different systems coexist.

Thus, in Dual System countries, apprenticeship is substantially demand-led, that is to say, apprenticeships originate from employer willingness to offer training positions and students are expected to actively look for an apprenticeship place, making direct application to employers, who can select the most suitable candidates.

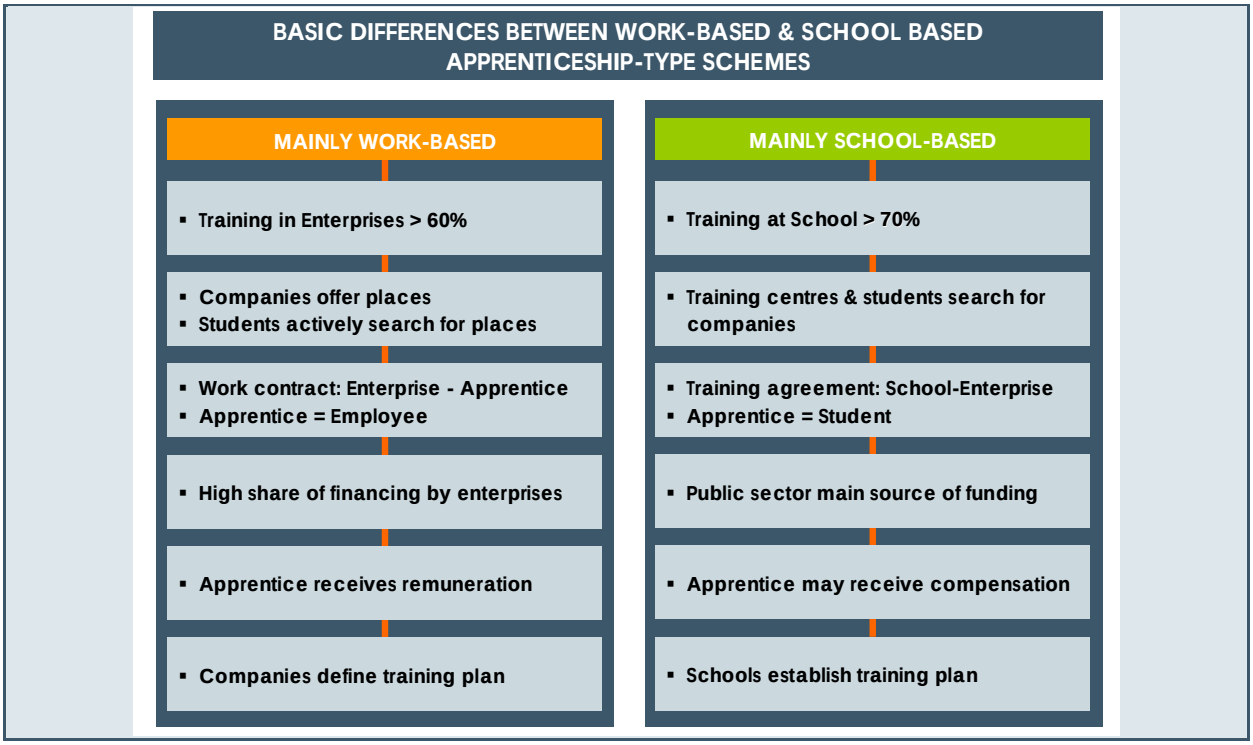
However, enterprises also publicly offer places through the Internet, or advertisements in the regional or local media. Amongst SMEs, personal contacts are a very important tool in order to identify and select candidates, while larger enterprises often have professional application and recruitment procedures with this purpose.

Also, especially in the case of school-based schemes, VET centres play a very active role as intermediate agents between enterprises and students, profiting from their networks of contacts with companies at the local level and implementing student guidance programmes..

Other institutions such as Chambers of Commerce or business associations can also act as intermediaries. In some countries, special websites and databases have been deployed for demand-supply matching (DK, NL).

The conditions for student access to apprenticeship places always include some minimum qualification requisite, while in terms of age, typically there are no specific limits for prospective students, although the largest majority belongs to the 16-20 year old group, though depending on the schemes there is also participation of young people in their early 20s, as well as older worker.

Graph 6.4 Basic differences between work-based & school based in apprenticeship-type schemes



Work contracts between enterprises and students vs. agreements with training centres

In dual training schemes, the rights and obligations of companies and apprentices are reflected in a work contract between both parties. These contracts are regulated by the existing Labour Laws or apprenticeship rules and/or collective agreements. In some countries three-party contracts may exist (company, VET centre and student). The contracts specify the duration of the apprenticeship, the balance between training and productive activities, the working conditions, the remuneration, etc. As regards the latter, employers must usually pay a wage (there are important differences among countries; normally collective agreements and minimum national wages are to be respected).

In countries where no such contract exists (Poland, Spain), students' rights and obligations are regulated by an agreement signed between the vocational school and the enterprise. This is not an employment contract and the student status prevails. The school-enterprise agreements establish the form and duration of placements, a training plan and the evaluation procedures. In these cases, students may receive some compensation (for travel and subsistence costs) or a monetary gratification for their work, but this is normally voluntary for the company.

The company trainer plays a key role in the instruction and assessment of the apprentices

One of the main actors within the enterprise for the provision of workplace training is the so-called "company trainer", the person(s) within the enterprise who is in charge of supervising and interacting with the apprentices. Usually, this is a senior skilled worker with a relevant work experience in the company and enough pedagogical practice and skills, who acts as a trainer on a part-time basis (except for large companies). Some MS establish personal and technical requirements that these company trainers, who sometimes have to complete specific courses and exams.

Company trainers are also responsible for the assessment of the practical experience of the students. In some countries, there are final exams (theoretical and practical). Apart from the company trainer and the school, also a very important role in evaluations and exams can be played by the social partners, business Chambers or sector representative organisations, which can even issue the specific degrees.

Financing of the schemes: enterprises resources and public funds

Two basic financing models can be identified. In the mainly school-based apprenticeship schemes, public funding (national, European) can add up to 85%-95% of the total costs, which is complemented by private contributions (companies, students).

In the mainly company-based schemes, the funding comes from the diverse participants, with a prominent share by the enterprises (up to 76% in Germany) together with contribution from the governments and students.

In some cases, there are Special tools for channelling enterprises' contributions: e.g. Employers´ Student Reimbursement Funds, Apprenticeship Taxes, etc.

Off-the-job education in vocational schools is usually free of charge for students. With regards to company training, usually special grants for students area available, including study allowances, low-interest loans, in order to cover travel and subsistence expenses, etc.

Students can also receive remuneration from enterprises for the work done, either as a salary (in the strict apprenticeship systems) or as a gratification (in the mainly school based schemes). However, enterprises often argue that they invest a lot more in the education of

apprentices than the returns they receive from their productive activities. With this motive, systems of financial and fiscal incentives to encourage companies are set in place in some of the countries.

Quality assurance mechanisms to guarantee minimum training standards in all work places

In general, apprenticeship-type schemes pay careful attention to quality to ensure that training meets minimum standards in all workplaces, and avoid allocation of students to unskilled tasks or to prevent training being too narrowly focused on firm-specific skills.

In this sense, all analysed Member States have developed their own framework and mechanisms, defining the contents and terms of training, including the curricula and duration of the company placements, the required resources, the assessment of training outcomes or the trainers' qualifications.

The national Ministry of Education is usually the main authority involved (often through the inspectorate and VET specific bodies), but social partners can also have an active role, together with other "competent bodies", e.g. Business Chambers.

International mobility of apprentices, a challenge for the next future

The international perspective of VET and apprenticeship recognised as an important training tool, but not yet a priority in the national VET policy agenda. Even if it is gradually more common, data shows that current international geographical mobility is still low, especially for apprentices.

Public authorities, at European and national level, have developed a number of support programmes and institutions, but some important barriers (in terms of costs, information, recognition of studies, language difficulties, etc.) still seem to outweigh the clear advantages that international mobility has for students, enterprises and VET centres. New efforts will be needed in the next future to increase the number of apprentices that spend practical training periods in companies outside their home country.

6.1.5 Recent changes and impact of the economic crisis

Many countries have recently introduced changes in their apprenticeship-type schemes

All analysed Member States have introduced in the last years a number of changes in their national apprenticeship-type schemes, where most of these changes respond to national specificities.

These modifications can be summarised in the following main strands.

Graph 6.5 Recent changes in European apprenticeship-type schemes

RECENT CHANGES IN EUROPEAN APPRENTICESHIP-TYPE SCHEMES

- **Additional incentives to enterprises to encourage the supply of apprenticeship-type posts (Denmark, Germany, France, United Kingdom)**
- **Simplification of administrative procedures (France)**
- **Improved (on-line) information systems (matching supply and demand) (France, United Kingdom)**
- **Short-time work practices for apprentices in companies in difficulties; assistance to students in insolvent companies**
- **Facilitate inclusion of academically challenged or ethnic-origin students, avoid drop-outs (Denmark, Germany, Spain)**
- **Performance-based schemes for VET schools (Estonia)**
- **Increased modularisation and flexibility of training (Germany, Spain)**
- **International opening of VET (Germany, Spain)**
- **Continuing training of teachers and trainers (Poland, Netherlands)**
- **Increase quality standards (Spain)**
- **Standardisation of examinations (The Netherlands)**
- **Guidance and coaching of students at lower secondary education (Netherlands)**

Effects of economic crisis on VET systems and VET apprenticeship-type systems in particular

The global economic crisis initiated in the second half of 2008 has had significant effects on VET systems in general and on VET apprenticeship-type systems in particular. On the one hand, the number of students interested in pursuing VET has experienced a remarkable increase in the last two years in some Member States, probably due to the poorer perspectives of finding a suitable job in the labour market amongst young people. On the other hand, the amount of apprenticeships and in-company training modules/placements offered by enterprises has experienced a remarkable downward trend in almost all analysed Member States, since hard pressed employers are more reluctant to offer apprenticeship-type training posts or even pay apprentices as a result of the uncertain economic climate.

Additional identified effects of the economic crisis include an increased use of apprenticeship students as cheap labour, as well as an increasing share of already experienced unemployed workers trying to find a job through an apprenticeship period.

Most of the analysed EU Member States have set up special support measures intended to deal with these effects derived from the economic crisis, specially the encouragement of the existing supply/demand of apprenticeship-type posts, despite public expenditure pressures.

6.1.6 Lessons learnt from national experiences wirh apprenticeship-type schemes

Different valuation of VET studies amongst Member States. Efforts to increase social recognition of VET studies

VET studies play different roles in the diverse EU Member States' educational frameworks. Thus, and whereas in countries such as Slovakia, The Netherlands or Germany more than half of students choose the vocational path, in other Member States the percentage is between 40-50% (e.g. Denmark, Poland, France or Spain) or even lower (e.g. the case studies of Estonia and the United Kingdom).

Typically, those Member States where VET studies are a less popular choice amongst students usually coincide with those countries where VET studies have a poorer image amongst the general population (including students and parents), usually considered as a "second best" option selected by less skilled students. By way of contrast, in Member States such as Denmark, Germany or The Netherlands, VET studies are perceived as a key instrument for sustaining the competitiveness of the economy.

All in all, public authorities and social partners in those Member States where VET is not a well-regarded option are developing a number of initiatives in order to promote the participation of students in vocational studies. The strengthening of the workplace learning/apprenticeship dimension within VET studies is one important strategy followed with this purpose (e.g. Estonia, France, United Kingdom).

Apprenticeship-type schemes contribute to students' rapid school-labour transitions

Evidence collected in this report shows that apprenticeship-type VET schemes facilitate rapid school-work transitions for students in comparison to more school-based VET schemes. Thus, Member States where dual systems prevail and with high proportions of youth in apprenticeship tend to have lower youth unemployment rates.

Strong "on-the job" training periods provide students with a number of advantages such as (1) acquisition of practical hard skills and professional experience on equipment, working methods and technologies really used by enterprises; (2) development of key soft professional skills (i.e. problem-solving, conflict management and negotiation, entrepreneurship, teamwork, communication with customers, etc) in an efficient and realistic way; (3) acquisition by students of real information on the day-to-day reality of occupations/professions; (4) "recruitment advantages" (in the sense that daily contact between employers and trainees makes later recruitment much more effective and less costly or increased networking possibilities of students); (5) the fact that students may receive a salary is also an attractive option for them; (6) Finally, and in some Member States (i.e. Denmark, Estonia or The Netherlands), apprenticeship studies are often used by individuals as a tool in the context of Lifelong Learning.

However, apprenticeship-type schemes are also subject to some critical elements from the students' perspective. Thus, some authors argue that the benefits for school-work transitions for apprenticeship-type students seem to be transitory in time, so the value of skills learnt tend to rank equally amongst experienced individuals, irrespectively of the type of VET scheme. Secondly, apprenticeships' long run prospects in terms of employment prospects, pay and promotion are less clear in comparison to holders of tertiary degrees, as the value of skills learnt through apprenticeship may tend to decay faster than those acquired in tertiary education. Thirdly, acquired skills can be too enterprise-specific, limiting workers' mobility afterwards. Finally, not all prospective students in dual-training oriented countries are able to find a suitable training contract that may allow them to carry out an apprentice linked to their wishes.

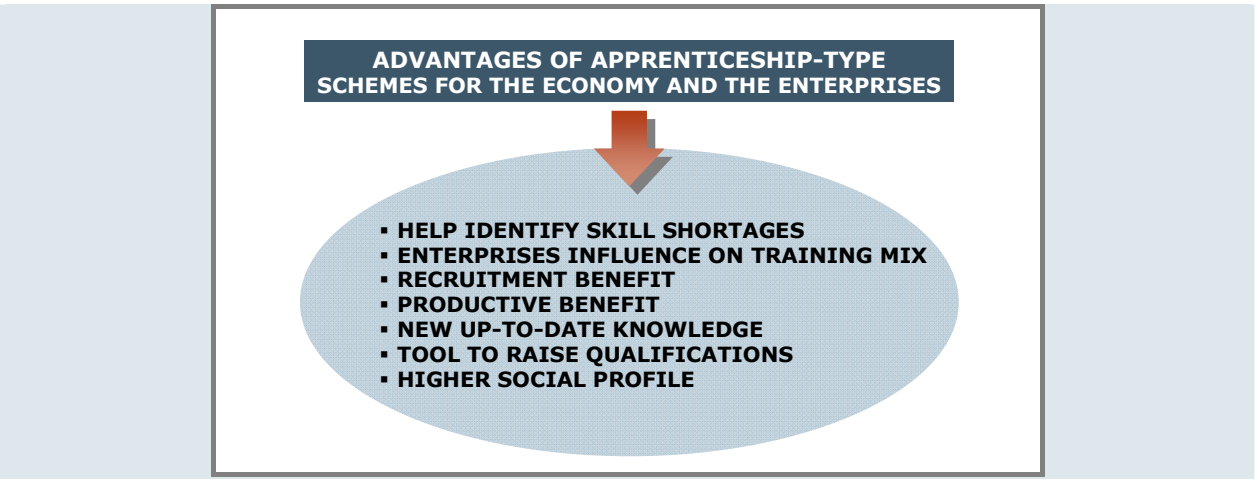
Advantages of apprenticeship-type schemes for the whole economy and for individual enterprises

Apprenticeship-type schemes have a number of advantages for the whole economic tissue. Thus, on the one hand, they provide a very strong signal for identifying skill shortages for which enterprises suggest needs for further workforce, since workplace learning opportunities provided are a direct expression of real employers/labour market needs. On the other hand, employers may also influence the number and mix of places and training specialities in VET schools through their willingness to offer such workplace training (especially in dual training countries).

Apprenticeship-type schemes have other advantages from the individual enterprise perspective: (1) Work-based training periods act as suitable "assessment centres" for the recruitment of future skilled employees ("recruitment benefit"), since employers obtain key information of potential employees' capacities in real life situations and, at the same time, ap-

prentices are educated accordingly to the enterprise's needs, values and cultures (skill tailoring); (2) apprentices and trainees undertake useful work and generate a productive benefit for the employer ("productive benefit"); (3) apprentices bring new up-to-date knowledge and fresh perspectives to enterprises, where this fact can be very important for the smallest enterprises; (4) apprenticeships are often used by enterprises as a tool for raising the qualification of current workers in some Member States (e.g. Estonia, Netherlands, United Kingdom (5) and, finally, enterprises that provide in-house vocational training enjoy a higher social profile amongst stakeholders in some countries (e.g. Germany).

Graph 6.6 Advantages of apprenticeship-type schemes for the economy and the enterprises



Transferability of acquired skills between enterprises/sectors

One of the most important challenges of apprenticeship-type schemes is to ensure that skills acquired in workplace training are easily "transferable" to other enterprises, either in the same or in other sector, facilitating the labour mobility of workers. Indeed, this issue seems very relevant in the current context of overspecialisation of enterprises and work mobility of employees amongst sectors.

Member States have set up a number of mechanisms that facilitate the transferability issue. Examples include (1) the establishment of a universal professional examination (e.g. Denmark, Estonia, Germany, Netherlands or United Kingdom); (2) the design of standard curricula (Germany) or (3) the introduction of cooperative solutions amongst enterprises (e.g. Denmark, Estonia, Germany).

Notwithstanding these efforts, available evidence suggests that apprentices tend to assess more positively the training provided by larger enterprises than the one provided by smaller firms in terms of experiences, competences and knowledge acquired by the end of the training period. Also, in some Member States (e.g. The Netherlands), the mixing of general and vocational education is very low and training much specialised at sectoral level, which obviously does not facilitate the mobility of students amongst sectors.

The issue of "free riders" and reasons for enterprises not participating

An important additional problem related to apprenticeship type schemes refers to the fact that not all suitable employers participate in apprenticeship type schemes (especially small companies), although all of them benefit (directly or indirectly) from them.

Some of the main reasons suggested by enterprises for not participating include (1) high costs derived from training activities and financial risk of taking on an apprentice (i.e. wages, red tape procedures, etc), especially in situations of economic crisis, (2) lack of awareness about the existing apprenticeship offer (i.e. in some Member States such as the United Kingdom, employers argue that they do not understand apprenticeship schemes);

(3) lack of suitable in-house training facilities, equipment or personnel; (4) low quality of school leavers as perceived by enterprises in comparison to the growing skill requirements (i.e. lack of suitable applications, deficiencies in general skills, discipline issues).

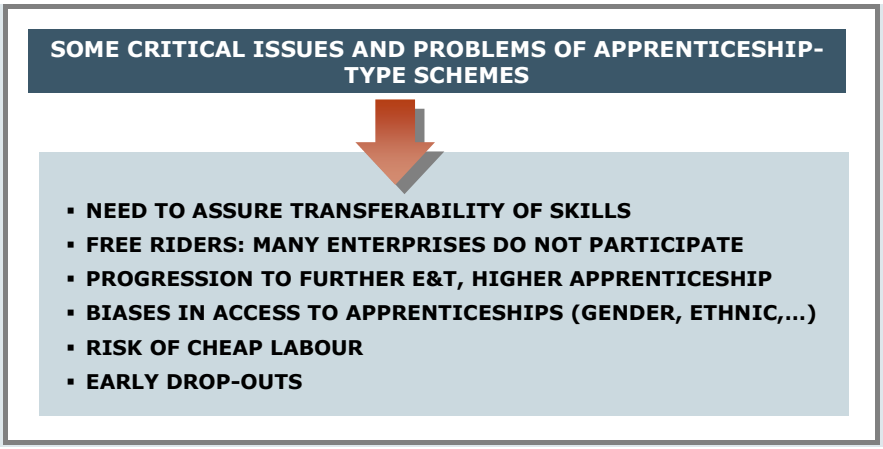
Some Member States (e.g. Denmark, Estonia, Germany) have adopted interesting cooperative/collaborative solutions amongst enterprises in general and SMEs in particular that may help to overcome the mismatch between the broader educational requirements of students and the curricula that enterprises may cover.

Student progression to further E&T. Higher level apprenticeships

The importance of transfer and continuing in education for VET students in general and apprenticeship-type students in particular is a central element in the current national education debates. Thus, national lifelong learning strategies are trying to ensure that all learning is transferable by effective transition points between the different systems and levels of education.

Member States are establishing a series of initiatives to facilitate progression of VET/apprenticeship-type students into tertiary level education, such as (1) increasing support to VET students interested in taking higher level diplomas; (2) Accreditation of prior learning experiences; (3) increasing permeability between different levels and types of education; (4) development of tertiary level degrees based on the combination of work-based and school-based training such as the German Dual study programmes, the Dutch Associate Degree or the British Foundation Degrees.

Graph 6.7 Some critical issues and problems of apprenticeship-type schemes



Important biases in the access to apprenticeship-type schemes in terms of gender, ethnic origin or capability considerations

Available research in EU Member States shows that the access to apprenticeship-type studies is subject to important biases in terms of gender, ethnic origin or ability considerations. Thus, young women and some specific ethnic groups are usually underrepresented in some specific apprenticeship-type studies and professions.

Also, young women and men with migration background more difficulties in accessing (company-based) vocational training than their autochthonous counterparts for a number of reasons such as (1) lower academic levels and lower school leaving certificates; (2) "social factors" such as less favourable social background, lower education level of parents, etc.

Particular attention deserves the successful integration of students with weak core academic skills, especially in countries where enterprises prioritise access of most skilled students. In

this regard, some Member States (e.g. Denmark, France, Germany, United Kingdom) have taken a number of public initiatives to counteract this effect.

Apprentices as a source of cheap labour in some cases

As far as the issue of apprentices used as a source of cheap labour is concerned, there are very differing perspectives amongst experts consulted in Member States, particularly depending on their specific profile. All in all, apprenticeship schemes do not seem to be used by enterprises as a source of cheap labour in countries such as Denmark, Estonia, Slovakia or the United Kingdom (apprentices are often viewed in these countries as an expensive source of labour due to the fact that employers invest significantly in apprenticeship training).

By way of contrast, experts consulted in other analysed Member States (e.g. France, Germany, The Netherlands) reflect a higher concern about the risk of using apprentices as a source of cheap labour and /or as a cheap substitute for unskilled or semiskilled workers, specially in those sectors/enterprises which are relatively labour-intensive, pay low wages, do not have works council and have simple work processes that can be learned quickly.

Problem of early dropouts amongst apprentices

The problem of early dropouts (i.e. students who leave studies without a certificate) is a major challenge for all countries, since vocational programmes typically face higher dropout rates than general education (approximately between 25-30% of the vocational training students leave education without a certificate). This drop-out rates are higher the lower the certification level is or in some specific sectors, and are partially explained by the typical profile of VET students (students with poorer academic records, students' lower social background, etc).

In order to deal with this problem, public authorities are paying special attention provisions to retain students in education and training as well as facilitating second chance opportunities for those who dropped out.

6.2 Recommendations

Having in mind the conclusions previously presented and the main lessons learnt from the ample European experience with apprenticeship-type schemes, a number of recommendations for further policy action are suggested and described next.

Need for improvement of the general image of VET, especially in some EU Member States

First of all, it is important to keep a parity of esteem between general and VET education, avoiding the existing situation in some EU Member States where VET studies still have a lower status in comparison to academic education. In this regard, a preliminary first step refers to continue the efforts to upgrade the social image of VET and apprenticeships amongst students, citizens and employers as a successful and very interesting option for all youngsters to assure their full incorporation into the labour market and further development in high-quality jobs.

Obviously enough, this initial step has to be reinforced by a number of additional and multidimensional actions to be simultaneously addressed to improve VET quality and performance and that are subsequently explained.

Need to increase the importance and use of the workplace training dimension

This report has shown that those VET systems with a strong work-based training component in a real enterprise setting provide students with a number of skills and competences in addition to pure vocational ones, such as technical and social competences, which obviously redounds in the possibility to attract talented young people to take up these VET studies.

In this regard, and without forgetting the importance of the training provided by schools, it is necessary to increase the relative weight of the workplace training dimension in VET studies, especially in those EU Member States where school-based training provision dominates.

Ensure a correct balance in the provision of both occupational skills and generals skills and competences

One of the main challenges of all VET systems in general and apprenticeship-type studies in particular is to provide young individuals with skills, knowledge and competences to access and maintain their position in the labour market and to progress well over their working lives, thereby sustaining their current and future employability prospects accordingly to the technical, economic and societal changes either in the same or in other vocational domains ("life-long learning").

For this purpose, it is of key importance to increase the breadth of knowledge provided to individuals, so the emphasis on vocational skills should be also combined with an appropriate supply of general skills and competences such as: mathematical skills, computer knowledge, a fluent command of the native language and a foreign language, communication skills, problem solving abilities, civil skills, analytical thinking and some concrete attitudes to work such as self-reliance, resilience or openness towards further training opportunities.

Adaptation of VET contents and systems to enterprises' needs

It is also important to make sure that apprenticeship-type VET studies adapt to current and future demands in the labour market and the rapidly changing requirements of enterprises. This need for adaptation may imply, for instance, provision of greater autonomy to local/regional training centres, upgrading and modernisation of their available equipments, changes in the established curricula, updating the qualification system and new means of accreditation or improving the existing linkage between vocational education and work

Ensure homogeneous quality standards of Apprenticeship-type VET studies, specially the work-based training dimension

It is essential to ensure that Apprenticeship-type VET studies meet minimum quality and content standards established and enforced by competent actors. In this regard, it is particularly important to guarantee that workplace training meets minimum standards across all companies and specialities/branches, so to avoid the allocation of students to unskilled tasks or to prevent heterogeneity and training being too narrowly focused on firm-specific skills that may prevent graduate trainees moving between companies via occupational labour markets. Examples of interesting initiatives to assure minimum quality standards may include the definition and enforcement of contents and terms of practical company training (including the establishment of a pre-defined curricula and the duration of training), the official assessment of training outcomes, the formal evaluation of the trainers' qualifications, etc.

Promotion of horizontal and/or vertical links between Apprenticeship-type VET studies and other adjacent types of education. Ensure lifelong leaning possibilities of apprenticeship-type VET studies

The current importance of apprenticeship-type schemes can be further enhanced by reinforcing the existing horizontal and/or vertical links with other adjacent types of education, so that individuals with Apprenticeship-type VET studies are not stuck for life in the same sector and/or original level of training and all the previously acquired skills and knowledge are not wasted. Thus, as far as horizontal links are concerned, it is advisable to foster stronger links and bridges between both academic and vocational routes and between vocational routes themselves, in order to facilitate the setting up of individual itineraries for students accordingly to their personal needs and aspirations, e.g., through modularised systems of qualifications allowing to combine educational courses and training units from different pathways, the mutual recognition of the different routes and the acquired qualifications, changes in the curricula design and/or the qualification structure, the shift to competence-based training, etc.

Meanwhile, further vertical integration of Apprenticeship-type VET studies with higher education can be achieved through the creation of reliable pathways from secondary vocational education to tertiary education, the encouragement of students to follow those paths, the promotion of dual Universities and dual programmes at Universities (with increased practical education in real work settings in all degrees) or the recognition and accreditation of prior learning and experience.

Assure a sufficient provision of apprenticeship-type places, specially in the current context of economic crisis

It is particularly relevant to assure a sufficient supply of apprenticeship places provided by enterprises for all students interested in pursuing this type of studies, especially in the current context of economic crisis. In this regard, particular attention should be paid to the existence of sufficient incentives for employers' participation, including the development of marketing campaigns aimed at enterprises not providing apprenticeship places, the creation of special economic incentives for the participation of enterprises, the support to collaborative solutions amongst enterprises (especially for SMEs) or the reduction of associated burdens and costs for enterprises involved in apprenticeships (in a way that balances the need for quality in workplace training). Also, the public sector can be active in the provision of apprenticeship-type opportunities within its associated enterprises/workplaces, as well as in facilitating the creation of high-quality classroom-based vocational education for those young people who may not get an apprenticeship place.

Facilitate access of students to apprenticeship-type VET studies

In addition to assure a sufficient supply of apprenticeship-type places provided by enterprises, it is important to facilitate the access of all suitable candidates. Examples of initiatives include the provision of information on enterprises offering training opportunities, brokerage services between students and enterprises (with special attention to on-line services and data bases) or specific financial support schemes to solve geographic mobility-related problems of students (housing questions, travel expenses, etc.).

Reinforce continuous training activities of VET school teachers and company trainers

In addition to the training of VET teachers in order to update their knowledge and skills to the latest working methods and techniques used by enterprises (including stages in companies, visits and interchanges), the training and accreditation of company trainers should be also a priority in those apprenticeship-type systems where VET students develop a substantial part of their skills in a real workplace.

In this regard, company trainers play a key role as link between the occupational demands of the training company on the one hand side and the apprentices on the other. Training activities aimed at these trainers should include not only occupational skills and knowledge related to the sector and the nature of the workplace learning being provided, but also other appropriate special competencies (pedagogical skills, training methods, settlement of conflicts, etc) when working with youths.

Foster internationalisation of apprenticeship-type VET studies

This report has shown that transnational mobility practices of students and teachers have a number of important advantages both for apprenticeship students, enterprises and VET centres themselves. However, the report has also shown that the participation of apprenticeship students in international programmes is still low. In this sense, it is suggested that the transnational mobility and exchange of students and teachers should be further enhanced, expanding the possibilities for studying and training abroad.

For this purpose, a number of policy initiatives might be advisable such as the introduction of ad-hoc national priorities in this domain with the participation of all relevant stakeholders, the provision of economic incentives for both participating apprenticeship students and hosting enterprises (especially SMEs), the establishment of a common statute for those apprenticeship students involved in transnational training placements, the increasing of the visibility of mobility opportunities for apprenticeship students or the further promotion of foreign language learning in VET schools. In addition to this, special attention should be paid to amplify the recognition of qualifications acquired in other countries via initiatives such as the European Qualifications Framework, the European Credit system for Vocational Education and Training (ECVET) or Europass.

Take into account social-related considerations

This report has shown that Apprenticeship-type schemes are characterised by important social-related considerations, such as the problem of cheap labour (apprentices used as a source of cheap labour), the existing important biases in the access to apprenticeship-type studies in terms of gender, ethnic origin or ability considerations or, finally, the worrying phenomenon of drop-outs.

In this regard, it is important to avoid situations where apprenticeship-type students might be used as a source of cheap labour, basically through a better regulation and control of the working conditions of apprentices. Also, Member States should keep on encouraging the participation of individuals who may have difficulties in accessing apprenticeship positions (usually individuals with poor learning records, ethnical origin/migration students, early school leavers, etc), basically through the provision of special support measures for this group of students (ad-hoc training places, special transition training programmes, extra support programmes, etc.) or the support to enterprises to incorporate these individuals into their training supply).

Finally, policy makers and enterprises should take actions to counteract future skilled labour shortage problems identified in several EU Member States (for instance, favouring the integration of foreign workers into the national enterprises).

Reinforce early career guidance and counselling activities

One of the main tools to deal with drop out problems refers to the reinforcement of career guidance and counselling activities in all basic school,s so to assist students in making well-informed decisions about education, training and career/development options available. In this regard, it is of key importance to establish stronger co-operation tools between schools, education/employment authorities and enterprises in order to include a real market perspective in schools' career guidance and counselling programmes.

Moreover, these guidance/counselling activities may help to raise the existing awareness of the whole spectrum of available VET-related occupations, avoiding current situations where the large majority of students tend to concentrate on a relatively low number of professions/occupations. Also, these activities may help to solve the present gender biases to some specific VET specialities.

Foster cooperation of different stakeholders in the design/management of apprenticeship-type schemes

It is important to assure a high level of cooperation and participation of the different stakeholders involved in apprenticeship-type VET schemes (public authorities, enterprises, VET centres, trade unions, etc), both at local, national and international level, in the design, management and delivery of the studies, including training curricula. In this regard, it is particularly relevant to ensure a significant participation of employers' representatives and individual enterprises so to make sure that the VET supply really meets demand requirements and students can benefit from an easy and good quality access to the labour market.

Facilitate exchange of information and good practices amongst EU Member States

This report has shown that there are very important differences amongst EU Member States in their apprenticeship-type schemes, both in terms of the role played by workplace training activities or the positions and responsibilities of the different parties involved (enterprises, VET schools, public authorities, trade unions, chambers, etc).

Notwithstanding these differences, it is important to pursue a continuing comparison and evaluation of existing national apprenticeship-type schemes, as well as the exchange of information and the transfer of good practices amongst Member States.

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Annex A. Methodology used in The Research

The present report has been elaborated from a combination of two main sources of information. Thus, and on the one hand, an in-depth review of existing written information on the issue of Apprenticeship-type schemes has been conducted at international level. In this respect, detailed country sheets have been elaborated per each EU Member States that provide information on main available apprenticeship-type schemes, the general characteristics of these schemes, financing aspects, number of participants and, finally, recent/planned changes affecting the apprenticeship schemes. In addition to this, an overview of existing apprenticeship-type schemes in all Member States of the EU has been elaborated, which includes information about the main features of these schemes, ISCED levels covered, the available data on the number of participants and, finally, recent/planned changes affecting the apprenticeship schemes. This overview has been based on the different elaborated country sheets.

For this purpose, the country sheets and the overview have been elaborated using the following central sources of information:

- CEDEFOP. VET-Bib bibliographic database, VET in Europe, Country Reports (2009 and 2010) (available in Internet at: http://libserver.cedefop.europa.eu/F?func=find-c&ccl_term=(DEM=apprentice?)
- European Commission's Lifelong Learning Programme, Information and data on apprenticeship schemes in the countries participating in the LLP (2009) (available in Internet at: http://ec.europa.eu/education/vocational-education/doc/annex2_en.pdf)
- Steedman H, The State of Apprenticeship in 2010: International Comparisons - Australia, Austria, England, France, Germany, Ireland, Sweden, Switzerland. A Report for the Apprenticeship Ambassadors Network, in: Paper No' CEPSP22, September 2010 (available in Internet at: http://cep.lse.ac.uk/pubs/download/special/cepsp22.pdf)
- In addition to these sources, some national websites have been consulted to solve specific doubts (mainly in UK, Italy, Belgium, etc.)

On the other hand, and having in mind the importance of reaching valuable in-depth information at national level, the study has focused specifically on nine specific EU Member States that have been treated as national case studies, due to the extent and interest of their respective apprenticeship-type schemes in the European context. Specifically, **Ikei Research & Consultancy** has focused the analysis of national case studies in the EU Member States of Denmark, Estonia, France, Germany, Poland, Slovakia, Spain, The Netherlands and the United Kingdom.

For this purpose, an extensive review of existing written information on the issue of apprenticeship-type schemes (available materials and documents, existing evaluations) has been carried out in each analysed case study Member States. Also, and in order to complement the already available information, a number of interviews with privileged informers on the research issue has been also carried out (the list with the interviewed experts can be found in Annex B). These interviews have tried to reflect as much as possible the different views of social agents, so representatives of the both sides of social partners (together with representatives of the public authority and experts on the issue) have been interviewed. Each national country report is presented in Annex D of this report.

Due to the key importance of reaching national sources of information, Ikei Research & Consultancy has collaborated with a network of national experts, who have been engaged with the collection of all the information at national level, including the interviews. This network of national experts is the following one (always co-ordinated by **Ikei Research & Consultancy**).

Table A.1 Network of national experts involved in the research

Country	Name of the experts	Name of the Institute/ research organisation
Denmark	Sandy Brinck and Mette Slottved	Oxford Research A/S
Estonia	Mihkel Nestor and Laura Kirss	PRAXIS Centre for Policy Studies
France	Isa Aldeghi and Nicolas Rose	CREDOC
Germany	Michael Holz	Institut für Mittelstandsforschung (IfM)
Poland	Kazimierz Kubiak and Professor Anna Rogut	Entrepreneurship and Economic Development Research Institute (EEDRI), Lodz Academy of Management
Slovakia	Juraj Poledna	PERITUS
Spain	Jessica Duran and Iñigo Isusi	Ikei Research and Consultancy, SA
Netherlands	Michel Winnubst and Jacqueline Snijders	EIM Business & Policy Research
United Kingdom	Becci Newton and Kari Hadjivassiliou	Institute for Employment Studies

Source: own elaboration.

In this sense, and in order to guide the information searching process, a methodological dossier was elaborated by **Ikei Research & Consultancy** in collaboration with **DG Employment, Social Affairs & Inclusion**. This methodological dossier was conceived as the basis for a mutual understanding of the objectives, methods and general concepts relevant for the study amongst all national members of the research team. The dossier also included a research guideline, to steer homogeneously the work of all partners, comprising the instructions as to how to conduct the research in practical terms. Finally, it is worth stressing that all the work (including data collection and drafting of documents) was carried out since January 2011 to December 2011.

Annex B. Experts Interviewed

B.1.1. Denmark

- Simon Neergaard-Holm, Senior Adviser, Danish Employers´ Confederation
- Jens Juul, Adviser, Danish VET Schools
- John T. Larsen, Senior Adviser, Ministry of Education
- Morten Smistrup, Education Adviser, Danish Confederation of Trade Unions

B.1.2. Estonia

- Malle Päeva, former manager of the ESF funded apprenticeship project, Foundation for Development of Lifelong Learning INNOVE,
- Kalle Toom, Head of Vocational Education Division, Estonian Ministry of Education and Research
- Tiia Randma, Educational Counsellor, Estonian Chamber of Commerce and Industry
- Aino Mölder, Head Teacher of the Workplace Based Studies in the Field of Forestry, Luua Forestry School

B.1.3. France

- Jean-Jacques Arrighi, Research officer, Centre d'études et de recherches sur les qualifications (CEREQ).
- Christophe Landour, Civil Administrator, Head of the Bureau of training and certifications with the French Ministry of Labour, Employment and Health
- Bérengère Sesqui, Head of Department, Department of Professional Training and Employability of Young People at the DARES (Directorate of Coordination of research, studies and statistics), French Ministry for Labour, Employment and Health.
- Ruby Sanchez, project manager, Department of Professional Training and Employability of Young People at the DARES (Directorate of Coordination of research, studies and statistics), French Ministry for Labour, Employment and Health
- Denis Joyel, President of FNADIR (National federation of directors' regional association of CFA (Training Centres for apprenticeship))

B.1.4. Germany

- Thomas Giessler, Head of Division VET-Policies, Confederation of German Trade Unions (DBG)
- Dr Elisabeth M. Krekel, Deputy Head of Division "Sociology and Economics of Vocational Education and Training", Federal Institute for Vocational Education and Training (BIBB)
- Dr Thilo Pahl, Head of Division "National Training Pact, Support for Vocational Training", German Association of Chambers of Industry and Commerce (DIHK)

- Peter Rechmann, Expert for Vocational Training and VET-Training Centres, Chamber of Skilled Crafts Koblenz
- Peter Thiele, Head of Division "Policy Issues of Initial and Continuing Vocational Training", Federal Ministry of Education and Research (BMBF)

B.1.5. Poland

- Dr. Jadwiga Parade, Head of the Department of Vocational Training and Continuing Vocational Training, Ministry of National Education
- Dr eng. Krzysztof Smela, National training specialist, Institute for Sustainable Technologies, National Research Institute, Department of Vocational Education Research
- Dr eng. Romana Pawlińska, Chair of the Continuing Vocational Training Committee, Polish Chamber of Training Companies in Warsaw
- Mgr Janusz Moos, Director, Centre for Teachers of Lodz
- Mgr eng. Adam Paprocki , Director, Bureau of the Chamber of Crafts in Lodz
- Mgr eng. Bogusław Słaby, President of the Fashion Industry Employers "Leviathan".

B.1.6. Slovakia

- Roman Csabay, Director, Department of Education, Youth and Sport of Bratislava Self-Governing Region
- Robert Schmidt, Vice-president for education, Slovak Chamber of Crafts (SCC)
- Marian Letovanec, Senior Adviser, National Union of Employers (NUE)
- Zdenek Rada, Director, Secondary vocational technical school

B.1.7. Spain

- Antonio Gil González, Area Manager, Spanish Ministry of Education-Sub Directorate General of VET and Career Guidance
- Patxi Sasigain (Innovation and Competitiveness Manager), Mikel Sarriegi (Knowledge and Training Manager) & Nerea Zubia (Enterprise and External Relations), , Employers Association of Gipuzkoa (ADEGI)
- Patxi Vaquerizo, Director, Vocational Training School of Usurbil
- Beatriz Zafra Caramé, Manager of Trainining Department, Superior Council of Spanish Chambers of Commerce

B.1.8. The Netherlands

- Annemarie Koks, Senior policy adviser, Ministry of Education, Culture and Science, Department for Adult and Vocational Education
- Martijn van Blitterswijk, Policy Officer on vocational education and the labour market, COLO

- Rini Romme, Advisor, MBO Raad (VET Council)
- Douwe Grijpstra, Director, Research voor beleid

B.1.9. United Kingdom

- Richard Marsh, Employer Services Director, National Apprenticeship Service (NAS)
- Graham Hoyle (Chief Executive) and Judy Brandon (National Policy Manager),
- Association of Learning Providers (AELP)
- Alison Fuller, Professor of Education and Work, School of Education in University of Southampton
- Simon Waugh, Senior Policy Adviser on Education & Skills, Confederation of British Industry (CBI)

Annex C. Summary of existing Apprenticeship-type schemes in the EU-27 Member States

Table C.1 Summary of existing Apprenticeship-type schemes in the EU-27 Member States

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
AUSTRIA	***Upper secondary level- mainly school based:*** ▪ VET schools (berufsbildende mittlere Schulen, BMS), ISCED 3B	▪ 3-4	▪ Tuition hours: – 90% school – 10% practice	▪ Approx. 80% of 16 year-old students attend VET paths (in a broad sense). ▪ The apprenticeship system ('dual VET') provides education to around 40% of all young people. ▪ In December 2008 there were 40,000 training companies, which were training ca. 132,000 apprentices	In 2006, the Vocational Training Act was amended, providing a legal basis for modularising apprenticeship which aims at making VET system more flexible and responsive to sectoral needs as well as increasing the number of training enterprises. Also, the so-called 'Training guarantee for young people up to the age of 18' has been introduced in June 2008, intended to assure that all school graduates who cannot find a company-based apprenticeship place are given the opportunity to learn an apprenticeship trade at a supra-company training centre
	▪ VET colleges (berufsbildende höhere Schulen, BHS), ISCED 3A/4A	▪ 5			
	Upper secondary level- mainly work based: ▪ Dual VET (apprenticeship, Lehre, Lehrlingsausbildung), ISCED 3B	▪ 2-4	▪ Tuition hours – 80% company – 20% school		
	▪ Training guarantee for young people up to the age of 18. ISCED 3B		▪ Training workshops		
	Tertiary level ▪ Fachhochschulen (ISCED 5B)		▪ Work placements		
BELGIUM	***Apprenticeship-type training schemes*** ▪ Alternance Education (Upper Secondary-ISCED 3)	▪ 2	▪ School: ▪ 2 days/week ▪ Enterprise : ▪ 3 days/week	▪ The rate of attendance in vocational secondary education (ISCED3) in the Flemish-speaking community (75 %) and in the French-and German-speaking community (62%) was higher than the European average 46% (2006 data). ▪ In Wallonia region, the number of students enrolled in 2007 was 8,965. ▪ The number of students in VET training has been increased due to the financial and economic crisis.	The Belgian Government is currently working on the development of courses of Higher Vocational Education (with a key role of workplace learning).
	▪ Apprenticeship (ISCED 2 & 3)	▪ 1-3	▪ School: ▪ 1 day/week ▪ Enterprise : ▪ 4 days/week		
	▪ Industrial Apprenticeship Contract (16-21 aged with poor school record)	▪ 1-3	▪ School and enterprise training		
BULGARIA	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Framework Program B	▪ 2 (lower second.) +2	▪ Theoretical/practical ratio: 5/1 ▪ School/enterprise ratio: 15/1	▪ Approx. 179,566 students were enrolled in VET during the 2007-2008 school year. ▪ Training in the versions of Framework Program C are the most popular in the Bulgarian VET system in terms of pupils.	Changes are planed in the legislative programme to modify this "craftsmanship training". Also, the challenges related to the accession to the EU require to increase greatly the funds spent on training.
	▪ Framework Program C	▪ 4-6	▪ Theoretical/practical ratio: 1.5/1 ▪ School/enterprise ratio: 13-14/1		
CYPRUS	***IVET at Upper Secondary Level*** ▪ Practical Direction programmes in Technikes Scholes (ISCED 3A)	▪ 3	▪ 2 first years: 100% school-based. ▪ Last year: 1 dy/wk in company; (school: 4 dy/wk)	▪ Only 12.8% of the Upper Secondary Students chose the vocational/ technical path in 2008/2009. ▪ The number of graduates in ISCED 3 (Technical Upper Secondary) has increased slightly from 1,215 in 2005/2006 to 1,245 in 2008/2009. ▪ 262 participants enrolled in the Apprenticeship System in the school year 2008-2009.	Since 2005 a modernisation of the system is under way, in order to develop a New Modern Apprenticeship. In view of the economic recession, the Ministry of Labour is offering additional subsidies to employers to hire apprentices.
	IVET at Tertiary Level ▪ Institutions of Tertiary IVET (ISCED 5B)	▪ 2-3	▪ Practical training including project work and industrial training		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
CZECH REPUBLIC	***Upper Secondary Level IVET- Primarily school-based*** ▪ Secondary technical schools (ISCED 3A)	▪ 4	▪ Work placements of 6-8 weeks	▪ 74 % of Czech pupils attended vocational programmes in 2009/2010). ▪ There were a total of 347,414 students in Vocational Upper Secondary Education in the year 2009/2010.	In 2008 the MŠMT (Ministry of Education, Youth and Sports) adopted an action plan to support vocational education and training, intended to expand and strength the Czech VET system
	▪ Secondary vocational schools (ISCED 3C & 3A)	▪ 2-3	▪ Practical training 35-45% (at special premises in school or at external workplace)		
	Tertiary IVET ▪ Tertiary professional schools (ISCED 5B)	▪ 3-3.5	▪ 3-month work placement		
DENMARK	***Upper secondary level*** ▪ Vocational Upper Secondary Schools (ISCED 3).	▪ 3-3.5	▪ 2/3 of training in the company	▪ In 2009 54,528 students were following a VET main course and 40,447 a basic course. The number of students with VET training agreements was 50,622. ▪ Almost 82% of students follow a regular training agreement. ▪ The number of students enrolled in KVU (Tertiary Level Education) was 9,571 in 2008 and 11,345 in 2009.	A new VET pathway known as "New Apprenticeship" has been introduced in 2006 as an alternative pathway into IVET and intended to reduce early school dropouts within IVET. Also, since 2009, tertiary level KVU programmes include a compulsory 3-month apprenticeship in an enterprise.
	Tertiary level ▪ Vocational Colleges (short-cycle higher education programmes) (ISCED 5B).	▪ 2-2.5	▪ Compulsory 3-month apprenticeship included		
ESTONIA	***Primarily workplace based study*** ▪ Apprenticeship ("töökohapõhine õppevorm").	▪ 0.5 – 4	▪ 2/3 practical training in an enterprise ▪ 1/3 theoretical instruction	▪ In 2010/11 academic year, there were: ▪ 17,478 students in ISCED 3 vocational programmes ▪ 10,180 students in Post-Secondary Non-Tertiary vocational programmes (ISCED 4) ▪ The number of students in 2010/11 academic year was: ▪ 27,448 in school based initial vocational training ▪ 564 in workplace based initial vocational training (apprenticeship)	The legal framework for apprenticeship training (workplace-based training) has been issued in March 2007. The new regulation establishes that Apprenticeship is integrated into regular IVET and is formalised as one of two study forms (apprentices can study on all levels in the VET system), and there is no age limit. Nowadays it is more difficult for schools to find places for practical training in the companies. To solve the problem of the lack of places for practical training, the schools have opened their own workshops. Since the autumn 2009 there is no obligatory enterprise-based training for the students in school-based study form.
	Primarily school based study ▪ VET at Upper secondary level ▪ Secondary vocational education (ISCED 3B)	▪ 3	▪ Practical work: 50% of the whole programme (practicing in enterprises: ¼).		
	▪ Vocational Training Based on Basic Education (ISCED 3C)	▪ 0.5- 2			
	▪ VET at Post-Secondary(non-tertiary) level ▪ Vocational Training Based on Secondary Education (ISCED 4B)	▪ 0.5-2	▪ Practical work: 50% of the whole programme (practicing in enterprises: ¼).		
FINLAND	***IVET at Upper Secondary Level (school-based):*** ▪ Programmes at vocational education institutions (ISCED 3)	▪ 3	▪ 6 months in the workplace	▪ In 2007 there were 235,338 participants in VET school-based education system (66.7% of students in ISCED3 level). ▪ In 2008, some 70,000 students took part in apprenticeship training. ▪ The number of participants in apprenticeship training has traditionally been relatively low in Finland, but student volumes have increased considerably in recent years.	Several campaigns have been organised by the Ministry of Education and social partners to improve the image of vocational training. A working group appointed in 2008 by the Ministry of Education has proposed a creation of an apprenticeship-type further education scheme at university level for those who already have a higher education degree.
	IVET at Upper Secondary Level (work-based): ▪ Apprenticeship training (ISCED 3B & 4)	▪ ISCED 3: 2-4 yrs ▪ ISCED 4: 4-12 months	▪ 70-80% of the time in the workplace		
	IVET at Tertiary Level: ▪ Polytechnics (*ammattikorkeakoulu*) (ISCED 5)	▪ 3-4	▪ 7 months of compulsory on-the-job training		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
FRANCE	***Primarily School based*** ▪ VET at Upper Secondary (ISCED 3C level) ▪ CAP (Professional Skills Certificate) ▪ BEP (Professional Studies Certificate) ▪ VET at Upper Secondary (ISCED 3B level) ▪ BP (Vocational Certificate) ▪ BT (Technician's Certificate) ▪ BAC Pro (Vocational Baccalaureate)	▪ 2 ▪ 3	▪ Compulsory training periods in professional environment of 12 to 22 weeks (*duration depends on the type of diploma*)	▪ In 2010, out of 2,449,900 students in upper secondary education in France (ISCED 3), 42% were in vocational training. ▪ Among these VET students, 32% were in apprenticeship. ▪ In 2009 there were 476,802 students in ISCED 5B programmes (both in school-based and work-based programmes). ▪ In 2010 there were 147,990 professionalisation contracts signed.	Since the start of 2009, the vocational path has been revised. Changes allow the rising of young people's qualification in the vocational path and ease their way towards higher education. This change introduces greater flexibility and permeability within the French education system. On the other hand, a collection of measures was implemented in 2009, known as 'Active Youths' (or 'Jeunes Actifs'), aimed at facilitating the hiring of young people through apprenticeship contracts.
	▪ VET at Tertiary Level (ISCED 5B level) ▪ BTS (Higher Technician's Certificate) ▪ DUT (University Technological Diploma) ▪ DNST (Specialised National Technology Diploma) ▪ DEUST (University Scientific and Technical Studies Diploma)	▪ 2	▪ Work experience schemes from 4 to 6 weeks		
	Primarily Workplace based ▪ Apprenticeship. Given at all the previous levels.	▪ 1-3	▪ Theroretical courses: 25% (400-600 hours)		
	▪ Professionalisation contract ("contrat de professionnalisation")	▪ 0.5 - 2	▪ 15%- 25%		
GERMANY	***Upper Secondary Level IVET*** ▪ Dual System- Apprenticeship (ISCED 3B) *Primarily work-based*	▪ 3	▪ Enterprise 3-4 d/wk; school 2-1 day/wk	▪ In 2009, 64.8% of the secondary students opted for a dual-system apprenticeship (2010 BIBB data). ▪ Also in 2009, there were 566,004 new apprenticeship contracts, and in 2010, 560,073. ▪ Over the last years, apprenticeship places have failed to match the strong demand from young people. ▪ In 2007, there were 328,429 students in ISCED 5B Dual Programmes (14.4% of total students in ISCED5). ISCED5 Dual Study programmes are becoming increasingly popular.	Several measures have been put into practice in order to increase the number of apprenticeship places. Also, the Federal Ministry of Education and Research (BMBF) has financed various programmes designed to create additional places and to improve in-company training conditions. An example of this is 'JOBSTARTER - Für die Zukunft ausbilden' (training for the future)
	Tertiary level IVET ▪ Dual Study Programmes (ISCED 5)	▪ 2-4	▪ Combination of in -company training with school (high practical work relevance)		
GREECE	***VET at Upper Secondary Level (work-based)*** ▪ Apprenticeship System (ISCED 3C) (*Mathiteia*)	▪ 2	▪ 4days/wk in the morning: enterprise work. ▪ 4days/wk in the afternoon + 1 full day: school.	▪ In 2008, the total number of participants in upper secondary IVET (ISCED 3), was 106,376 (including apprenticeship EPAS and school-based system). ▪ In the school year 2007-2008, 13,964 students attended Apprenticeship.	In Greece, VET Upper Secondary Level schools (EPAL and EPAS) offer exclusively school-based training (practical training is offered within the school premises). The apprenticeship programme known as Mathiteia exists as an alternative.
HUNGARY	***IVET at Upper Secondary Level:*** ▪ Vocational training school (ISCED 3C) ▪ Secondary Vocational School (ISECD 3A&4C)	▪ 2-2.5 (ISCED3) ▪ 1-2 (ISCED4)	▪ Combination of School and enterprise based-training, differently accordingly to different forms	▪ ▪ ▪ 2/3 (63.6%) of full-time students at upper secondary level studied VET in the 2009/2010 school year nearly. ▪ 77,506 students participated in school based initial vocational training (2008 data). ▪ 45,587 students participated in the apprenticeship system (2008 data).	One of the key goals of the recent Hungarian VET policy is to promote apprenticeship contracts with an innovative content and further the increase of the number of economic organizations offering practical training. A new form of VET was started from the school year 2010/11, with the so-called early VET (előrehozott szakképzés) allowing students to start vocational training (primarily work-based training) right at the age of 14.
	IVET at Tertiary Level: ▪ Colleges (főiskola) and Universities (egyetem) (ISCED 5B)		▪ Combination of School and enterprise based-training, differently accordingly to different forms		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
IRELAND	***Apprenticeship*** ▪ Work-based Apprenticeship Training (ISCED 4 oriented to level 5B)	▪ 4	▪ 20% school based ▪ 80% work based	▪ Rapid expansion in total apprentice registrations from 1998 to 2006 (16,125 to 29,801 registrations, respectively). ▪ Apprentice numbers have declined significantly in the time period 2007 and 2008 (28,500 and 26,170, respectively). ▪ Approx. 30,000 persons enrolled on full-time PLC courses in 2007-08	In recent years there have been several initiatives to increase progression from the VET sector into higher education (i.e. the introduction of Post Leaving Certificate (PLC) courses). Also, the national partnership agreement 'Towards 2016' has recommended that measures should be introduced to promote take-up of apprenticeship by older workers. With regard to the current economic crisis, and since 2008 onwards, FAS has introduced several new apprenticeship scheme rules (i.e. the so-called Redundant Apprentice Rotation Scheme)
	Post Leaving Certificate courses (PLC) ▪ Vocational courses (ISCED 4A/B oriented to level 5A/B)	▪ 1 - 3	▪ 10% work based ▪ 90% school based		
	Entry-level VET for specific sectors ▪ For various industry sectors (ISCED 4A/B oriented to level 5A/B)	▪ 1-4 (depends on sector)	▪ ▪ Mainly school based, complemented with practical training in enterprises		
ITALY	***Primarily Workplace based (Apprenticeship)*** ▪ Apprendistato per la Qualifica e per il Diploma Professionale (Training Apprenticeships) ▪ Apprendistato Professionalizzante o Contratto di Mestiere (Professional Apprenticeships) ▪ Apprendistato di Alta Formazione e Ricerca (Advanced Training and Research Apprenticeships)	▪ Max 3 ▪ Max 3 ▪ 2-4	▪ Mainly job experience, combined with school periods	▪ 917,200 students in Technical Schools and 551,117 in Vocational Schools (2008-09 school year). ▪ 152,885 students in IFP 3-year courses (First Level) (2008) ▪ 644,593 apprentices in 2008, of which 7.5% were in right-duty apprenticeship, 91.8 % in profession-oriented apprenticeship and 0.7 % in higher apprenticeship. ▪ 591,000 apprentices in 2009	Law 53/2003 and D.Lgs. 226/2005 have separated the general/academic system and the vocational education and training system respectively under the state and the regions responsibility. Also, and in 2008, the guidelines for the reorganisation of the whole higher technical education and training system (ISCED 4) were issued. The agreement signed last 27 October 2010 between the government, regions, provinces and social partners to re-launch the apprenticeship contract, as well as the "Consolidated Act on Apprenticeships", recently passed last 28th July 2011 and intended to clarify the legal and institutional position of apprenticeships in Italy.
	Primarily School based ▪ Vocational Upper Secondary Level (ISCED 3) ▪ Technical Institutes ▪ Vocational/Professional Institutes	▪ 5 ▪ 3-5	▪ Mainly school based, dependant on the degree		
	▪ Post Secondary Education (Non Tertiary) (ISCED 4) ▪ Higher Technical Institutes ▪ IFTS courses	▪ 2 ▪ 1	▪ 30% work based training		
	▪ Initial Vocational Training (FPI) ▪ First Level of Initial Vocational Training (ISCED 3) ▪ Second Level of Initial Vocational Training (ISCED 4)	▪ 3 ▪ 2	▪ 30% work based training		
LATVIA	***IVET at Upper Secondary Level*** ▪ Vocational education programmes (ISCED 3C)	▪ 2 - 3	▪ 35% theory/64% practice	▪ Around 62.1% of students choose general education. ▪ In 2008/2009, 35,300 students participated in upper-secondary vocational programmes. ▪ 15.1% of the students in ISCED 5 level courses (19,242) were following ISCED 5B programmes (data for 2007)	The Ministry of Education and Science has designed the 'Guidelines for Optimisation of Vocational Education Establishments Network for 2010-2015' aimed at providing further implementation of the vocational education system structural reforms by optimising the number of vocational schools and their geographical coverage and by differentiating vocational schools. Also, the Chamber of Crafts is planning to introduce several measures to increase interest in apprenticeship.
	▪ Vocational secondary educational programmes (ISCED 3A&3B)	▪ 4	▪ 50% theory/ 50% practice		
	IVET at Higher Education Level ▪ College programmes (ISCED 5B)	▪ 2 - 3	▪ 640 hours of practical training		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
LITHUANIA	***Apprenticeship-type schemes (mainly school-based)*** ▪ IVET at Upper Secondary Level (ISCED 3) ▪ ISCED 3C programmes ▪ ISCED 3A&3B programmes	▪ 2 ▪ 3	▪ 20-25% work based training (both cases)	▪ Majority of students in upper secondary education prefer general education orientation programmes (73.1% in 2009). ▪ According to Eurostat, in 2007 there were 9,761 students in ISCED 4 vocational programmes. ▪ According to 2007 data, 71.4% of the students in higher education programmes prefer university level programmes (ISCED 5A). In 2007 there were 56,313 students in ISCED 5B programmes.	The new Law on VET has introduced Apprenticeship as a form for VET organisation since January 2008. Also, the new Law on VET defines national qualification framework, describes validation of learning outcomes acquired outside formal education, sets principles for VET quality assurance, etc. Management decentralisation is being implemented through the reorganisation of state VET schools into self-governing institutions
	▪ IVET at post-Secondary Non-Tertiary Level (ISCED 4) ▪ Vocational training programmes	▪ 1 - 2	▪ 20% work based training		
	▪ IVET at Higher Education Level (ISCED 5) ▪ Non-university higher education Programmes (SCED 5B)	▪ 3-4	▪ Practical training at least a third of total training time		
	Apprenticeship (work-based)		▪ 60-70% practical training		
LUXEMBOURG	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Vocational system: Apprenticeship	▪ 3	▪ Dual system (apprenticeship)	▪ 3,162 students in the technician training system (school year 2007/2008) ▪ 4,112 students in the vocational system (school year 2007/2008)	The 2008 VET Law aims at reforming VET based on lifelong learning and competences. A new approach is to be developed concerning school-based and work-based training, and it is expected that technician training path will also include the apprenticeship system, promoting work-based training. Also, the Luxembourgish Government plans to introduce a simpler promotion and guidance system allowing students to progress and to prevent unnecessary failures
	▪ Vocational system: Mixed systems	▪ 3	▪ 2 yrs school-based, 1 year in-company training (mixed)		
	IVET at Post-Secondary Non-Tertiary Level ▪ Advanced technician's certificate (BTS)	▪ 2	▪ 16 weeks of practical training		
MALTA	***Apprenticeship Training (ISCED 3)*** ▪ Technician Apprenticeship Scheme (TAS) ▪ Extended Skills Training Scheme (ESTS)	▪ 3	▪ Mainly on the job training	▪ Since 2001, the number of students continuing with upper-secondary education beyond compulsory age has increased. ▪ A balance in numbers between the general and the vocational strands has been reached (no data available)	The last decade has seen a great investment in IVET in Malta. The Strategic Plan 2007-2009 of the MCAST highlights the need for a vocational education and training provision that establish a credible alternative to the university education. New Vocational Degrees by MCAST were first offered in September 2009, and flexible pathways and better transitions are currently offered.
NETHERLANDS	***Senior Secondary Level IVET (ISCED 2, 3A,3C & 4)*** ▪ MBO (middelbaar beroepsonderwijs) at 4 different levels. All of them offered in 2 learning pathways: ▪ School- based (full-time or part-time), the 'beroepsopleidende leerweg' (BOL-route) ▪ Dual pathway (apprenticeship training), the 'eroepsbegeleidende leerweg' (BBL-route)	▪ 2-4 (depending on the level)	▪ 20-60% of practical periods in enterprises (BOL) ▪ More than 60% of practical periods in enterprises (BBL)	▪ 68% of the school population participates in a vocational programme (32% in general education). ▪ In 2009, there were about 520,000 students in VET programs, out of approx. 730,000 students following secondary education. ▪ The BOL-fulltime route has the most students: about 342,000 in the school year 2009/10 (BBL-route 172,000 students in 2009/10).	There have been no substantial changes since the redesign of the system in 1996. In any case, the qualification structure in Senior Secondary Level IVET (MBO Programmes) has been slightly redesigned in 2010. The Dutch Government and the social partners signed a social agreement in 2009 in response to the recession, considering issues such as the creation of a Youth Unemployment Plan or the longer stay of youngsters within the education system.
	Higher Education IVET (ISCED 5) ▪ Associate degrees (ISCED 5B)	▪ 2	▪ Work experience placement		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
POLAND	***Upper Secondary Level IVET- Primarily school-based*** ▪ Profiled (specialised) general secondary school (ISCED 3A)	▪ 3 years	▪ Vocational placements in enterprises (4-6 weeks in summer)	▪ Since school year 2006/2007, significant increase of vocational education ▪ 2009/2010 school year: ▪ Profiled General Secondary Schools were attended by 47,300 pupils. ▪ Technical Secondary Schools: 568,100 pupils. ▪ Basic Vocational Schools: 235,700 pupils. ▪ Concerning Tertiary Level institutions, in the 2008/2009 school year there were 1,927,762 students attending VET courses.	In 2008, the Minister of National Education set up an advisory group in order to develop proposals of modernisation of the VET system, adjusting the VET system to the labour market needs. The period of 'practical vocational training' in formal VET schools was recently normalized through the Regulation of the Minister of National Education of 15 December 2010 on vocational training. Amongst other aspects, this Regulation has abolished previously existing apprenticeship scheme (*młodociani pracownicy*), basically attended by trainee juvenile workers in craft basic vocational schools.
	▪ Technical Secondary Schools (ISCED 3B)	▪ 4 years	▪ Vocational placements in enterprises (4-6 weeks in summer)		
	▪ Basic Vocational Schools (ISCED 3C)	▪ 2-3 years	▪ Vocational placements in enterprises (4-6 weeks in summer)		
	▪ Supplementary Technical Secondary Schools (ISCED 3B)	▪ 3 years	▪ Vocational placements in enterprises (4-6 weeks in summer)		
	IVET at Tertiary Level ▪ Higher Education Vocational Institutions	▪ 3-4 years	▪ Practical training: up to 12 weeks		
PORTUGAL	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Vocational Courses	▪ 3 years	▪ Technical training: 52% Work environment 13%	▪ Number of students in vocational courses has risen from 28,000 in 1998/1999 to 91,000 in 2008/2009 ▪ 2007/2008 school year: ▪ Vocational courses, 88,515 students ▪ Technological courses, 13,096 st. ▪ Apprenticeship courses, 14,629 st. ▪ Educ.& training courses, 6,602 st. ▪ Specialised art courses 1,809 st.	A recent legislative reform (Decree-Law no. 88/2006 of 23 May) has made the organisational structure of apprenticeship more flexible and adaptable to changes. The Portuguese Government has issued the Implementing Order no. 1497/2008 with a new legal framework of apprenticeship courses, updating the apprenticeship study plans and regulating access conditions, organisation and management of the courses, as well as the evaluation and certification of learning outcomes
	▪ Technological Courses	▪ 3 years	▪ Workplace training: 240 hrs.		
	▪ Apprenticeship Courses	▪ 3 years (2,800-3,700 hours)	▪ Workplace training: 40%		
	▪ Education and Training Courses (for drop-out students, 15 years and over)	▪ 1-2 years	▪ Individual plan of workplace trning.		
	IVET at Upper Secondary non-Tertiary Level (ISCED 4) ▪ Technological Specialisation Courses (CETs)	▪ 1 year ▪ (1,200-1,560 hours)	▪ Workplace training 360-720 hours		
ROMANIA	***Apprenticeship system***	▪ 6 months-3 years	▪ Practical and theoretical training provided by employer	▪ No data available on the number of apprenticeship participants	The Apprenticeship system has been introduced since 2005, derived from the approval of the so-called Apprenticeship Law (Law no.279/2005).
SLOVAK REPUBLIC	***IVET at Upper Secondary Level (mainly school based):*** ▪ Study branch with practice" (*odbor s praxou*)(ISCED 3A)	▪ 4-5 years	▪ General/Vocational ratio: 43-48% / 57-52%. ▪ Summertime working practice	▪ 193,898 pupils in IVET in 2008 ▪ 71.6% of students in ISCED3 selected the vocational stream (2009 data). ▪ the general education stream shows a gradual increase since 1989	The New Education Act 2008 has developed a single stream of secondary VET (since September 2008, the VET stream is only provided by secondary specialised schools, SOŠ). Also, the new Act on VET in 2009 (Act No. 184/2009) stimulates employers to contract students, as it recognises related eligible costs of employers as tax deductible and establishes an area for the participation of employers into VET.
	▪ "Study branch with vocational training" (*odbor s odborným výcvikom*)(ISCED 3A)	▪ 4-5 years	▪ General/Vocational ratio 43-48% / 57-52% ▪ VT in alternance, at school workshops or other suitable places		
	▪ "Training branch"(ISCED 3C)	▪ 3 years	▪ General/Vocational ratio: 25% / 75%		
	IVET at Tertiary Level (mainly school based): ▪ Secondary specialised schools (ISECD 5B)	▪ 2 -3 yrs	▪ Workplace training is exceptional		

COUNTRY	Apprenticeship-type schemes	Years	School vs practical training	Number of participants	Recent/planned changes affecting the apprenticeship scheme
SLOVENIA	***IVET at Upper Secondary Level*** ▪ Vocational Secondary Education (ISCED 3C)	▪ 3 years	▪ 24 weeks of practical training at employer	▪ According to Eurostat data, in 2009 there were approximately 64,219 students enrolled in ISCED3 level vocational programmes. ▪ 40% of upper-secondary level students are in general secondary education courses ▪ 30% in technical secondary education ▪ 30% in vocational secondary education. ▪ Entries to vocational education seem to be declining.	The new Law on Vocational Education and Training in 2006 has implied that the dual system and school education have been united into a single form of vocational and technical education, where the practical training at work (period of training with an employer) has become an integral part of all educational programs for vocational education.
	▪ Technical Secondary Education (ISCED 3B)	▪ 4 years	▪ 4 weeks of practi cal training		
	▪ Vocational-technical secondary Education (ISCED 3B)	▪ 2 years	▪ 24 weeks of practical training at employer		
	IVET at Tertiary Level ▪ Higher vocational colleges (ISCED 5B)	▪ 2 years	▪ 40% practical training in firms		
SPAIN	***Upper Secondary Level IVET*** ▪ Intermediate Level Vocational Training (ISCED 3B)	▪ 2 years	▪ Workplace training module during second year ▪ 400-600 hours (10-20 weeks) in company	▪ There were 281,787 students attending middle-level VET programmes (i.e. ISCED3B courses) (2010/11 provisional data), which means 31.4% of the total students at upper secondary level. ▪ Concerning ISCED5B, there were 256,228 students (15.1% of the total students in ISCED5) (2010/11 provisional data). ▪ Percentage of VET students has experienced a remarkable upward trend.	The Ministries of Labour and Education are working together in order to raise attractiveness of VET, improving its quality and the perception of society. The recent 2006 Organic Law on Education (Ley Orgánica de Educación, LOE) has reinforced the role of IVET studies within the general education system, stressing the importance of the Workplace Training Modules.
	Tertiary Level IVET ▪ Advanced Vocational Training (ISCED 5B)	▪ 2 years	▪ Workplace training module during second year ▪ 400-600 hours (10-20 weeks) in company		
SWEDEN	***IVET at Upper Secondary Level (school-based)*** ▪ VET programmes in vocational schools (ISCED 3A)	▪ 3 years	▪ 85% school based. 15 weeks workplace training	▪ In 2008/09, 177,935 students in IVET at upper secondary schools (49.5 % of all upper secondary students). ▪ In 2009/2010, 7,000 students in the apprenticeship pilot project	A national pilot programme related to Apprenticeship has been introduced in 2008, which is expected to be extended as a parallel path to the traditional school-based one in the academic year 2011/2012.
UNITED KINGDOM	***Primarily School based*** ▪ IVET at Upper Secondary Level (ISCED 3A, 3 B & 3C	▪ 2-3 years	▪ Mainly school based, but can be combined with work	▪ In 2007, 41.4% of the Upper Secondary students chose vocational courses (vs. 58.6% general). ▪ In England, 5.5% of 16 year olds engaged in government-supported work-based learning. ▪ In 2008/2009, 239,900 apprenticeship starts and 143,400 completions. ▪ Number of apprentices has fallen since 2009, as a consequence of the crisis.	The new Apprenticeship Act was passed in 2009, and a National Apprenticeship Service (NAS) was set up in April 2009 having policy responsibility for Apprenticeships. UK is working on legislation which will put the Apprenticeship programme on a statutory basis (so that an apprenticeship place is available for all qualified young people by 2013). Several measures have been implemented for helping apprentices and enterprises in the current economic crisis.
	▪ IVET at Tertiary Level (ISCED 5B) ▪ Higher National Certificates and Diplomas (HNCs and HNDs) ▪ Foundation Degrees	▪ 1-2 years	▪ Some programmes combine college and workplace training		
	Primarily Workplace based: Apprenticeship ▪ Intermediate (ISCED 3C)	▪ 12 mnths minim.	▪ 1 day/wk at school. 4 days/wk in company		
	▪ Advanced (ISCED 3A & 3B)	▪ 24 mnths minim.			
	▪ Higher (ISCED 5B)	▪ 2-4 yrs			

Annex D. Country fiches

EU Member States country sheets on general IVET and Apprenticeship-type Schemes[143]

This section presents a collection of country fiches (one per each EU Member State) showing the information identified per Member State on existing Apprenticeship-Type Schemes. Basically, each fiche contains the following information:

- Identification of general IVET and Apprenticeship-type schemes in the individual Member States.
- General Characteristics of national schemes
- Financing aspects
- Number of participants
- Recent/planned changes in VET policy affecting the national apprenticeship scheme

[143] These country sheets are intended to be shown as an Annex in the Final Report

AUSTRIA

AUSTRIA	
Main available IVET schemes	***Upper secondary level- mainly school based*** ▪ VET schools (berufsbildende mittlere Schulen, BMS), ISCED 3B. ▪ VET colleges (*berufsbildende höhere Schulen*, BHS), ISCED 3A/4A ▪ Training guarantee for young people up to the age of 18. ISCED 3B ***Upper secondary level- mainly work based*** ▪ Dual VET (apprenticeship, *Lehre, Lehrlingsausbildung*), ISCED 3B ***Tertiary level*** ▪ Fachhochschulen (ISCED 5B) Apart from these schemes, there are also other systems related to healthcare, education and social issues, which do offer training hours both at the workplace and at school, but which will not be further analysed in this country sheet. These schemes are the following ones: ▪ Schools for general healthcare and nursing, ISCED 4B ▪ Post-Secondary VET colleges (Akademien), ISCED 5B ▪ University colleges of education (*Pädagogische Hochschulen*), ISCED 5B
General Characteristics of existing schemes	***Upper secondary level- mainly school-based*** ▪ <u>VET schools (BMS) and VET colleges (BHS)</u> – BMHS curricula provide a combination of general education and intensive specialisation training in theory and practice, with BMS putting more weight on practical elements. The objectives and content of education and training at BMHS are established in framework curricula, regulated by the Federal Ministry for Education, Arts and Culture (BMUKK). The tuition hours are divided as follows: 90% school, 10% practice. – <u>BMS</u> (ISCED 3B): it lasts for 3 or 4 years and combines general education with a VET qualification for specific occupations. BMS is completed with a final exam. Graduates acquire VET qualifications entitling them to immediately exercise relevant occupations and giving them access to specific regulated professional activities. Following completion of additional exams, or attendance of add-on courses, graduates have access to programmes in the post-secondary and HE areas. – <u>BHS</u> (ISCED 3A/4B): it lasts for 5 years. It provides in-depth general education and high-quality specialist training that combines theory and practice. It provides a double qualification: the *Reifeprüfung* (upper secondary school-leaving exam at secondary academic schools) and VET diploma. Graduates are awarded general access to higher education, acquire the qualification for senior occupations and obtain access to regulated professions. ***Upper secondary level- mainly work based*** ▪ <u>Dual VET</u> Also termed 'apprenticeship training' (*Lehre, Lehrlingsausbildung*), Dual VET constitutes a particularly practice-oriented variant of VET: training takes place at two places of learning: at the training company (80% of the tuition hours) and at part-time vocational school (20%). Traditionally, apprenticeship training is strongly anchored in the crafts and trade sector, which train about half of all apprentices (but also in commerce, industry and in the tourism and leisure industry sector). The apprenticeship diploma represents a full professional qualification. The Ministry of the Economy and Work has the lead responsibility for the overall framework governing apprenticeship in Austria, and is responsible for the framework conditions of the school element of apprenticeship. Depending on the occupation, training lasts between 2 and 4 years (as a rule 3 years). At the end of the apprenticeship period, every apprentice can sit for an apprenticeship leave examination (ALE). The ALE consists of a practical and a theory examination. Young people themselves are responsible for finding an apprenticeship post, although external support is provided (i.e. Public Employment Service of Austria). Apprentices are taken on as trainees by their training company on the basis of an apprenticeship contract, but are also students of a part-time vocational school (they are legally considered as students, not employees). Company-based training comprises some 80% of the apprenticeship period. Social partners are essentially in charge of decisions about what in-company curriculum include. Companies that are not able to provide the full range and variety of training can train apprentices by joining forces with other companies in a training alliance. As well as company-based training, the apprentice is obliged to attend part-time vocational school. The curriculum of vocational school is prepared in analogy to the training regulation of the respective apprenticeship occupation by the Federal Ministry for Education, Arts and Culture (BMUKK). ▪ <u>Training guarantee for young people up to the age of 18</u> This scheme was introduced in June 2008 by a youth employment pact elaborated by social partners. 'Training guarantee' means that all compulsory school graduates who do not have a place

	at an upper secondary school or cannot find a company-based apprenticeship place are given the opportunity to learn an apprenticeship trade at a supra-company training centre (the so-called training workshops, *Lehrwerkstätten*). Thus, the young people are trained at training workshops, which take over the company-based part of training. The school-based part of apprenticeship training is provided at regular part-time vocational school. Regarding their rights and obligations, participants are treated equally to apprentices. Young people are employed via training institutions, which also conclude the training contract, coordinate the training, register them for vocational school and bear the costs arising due to attendance of vocational school. ***Vocational education and training at tertiary level*** ▪ Fachhochschulen(FHS) The 1993 *Fachhochschule* Studies Act (*Fachhochschul-Studiengesetz*, FHStG) created the possibility of setting up practice-oriented studies at higher education level. *Fachhochschule* programmes are not developed by the Federal Ministry for Education, Arts and Culture (BMUKK) but by private providers. In any case, they are offered following approval by the *Fachhochschule* Council (they are subject to a specified accreditation and evaluation procedure). In contrast to universities, FHS have the function of providing a scientifically founded vocational qualification, which means they are tailored to concrete occupational fields. Periods of work placement form a mandatory part of the curriculum. Successful completion of an FH master programme or diploma study provides access to subject-related university-based doctoral courses.
Financing aspects	▪ BMHS: The school provider of most public BMHS is the Federal Ministry for Education, the Arts and Culture (BMUKK). In the case of schools of agriculture and forestry, the school provider is partly the Federal Ministry for Agriculture, Forestry, Environment and Water Management (BMLFUW), partly the provinces. The costs for teaching staff are met by the BMUKK. In principle, no tuition fees need to be paid in Austria for attending a public BMHS. Pupil support (*Schulbeihilfe*) and the accommodation grant (*Heimbeihilfe*) are awarded by the BMUKK, whereas textbooks, free travel, family allowance, etc. are largely financed by the government from the Family compensation fund (*Familienlastenausgleichsfonds*, FLAF). ▪ Dual IVET: Financial resources for the school-based part of apprenticeship training (school maintenance, teachers' pay) are provided by the provinces, although the Federal Government refunds 50% of the costs for teaching staff. Textbooks, free travel, family allowance, etc. are largely financed by the government from the Family compensation fund (FLAF). The company-based part of apprenticeship training is mainly financed by the training companies. Apprentices receive remuneration (*Lehrlingsentschädigung*) for their work, which is usually laid down in the collective agreement concluded between the social partners and increases with every apprenticeship year. There are a number of public subsidies to support training companies (basic support, quality enhancement, training alliances, etc.), mainly provided by the Federal Government and Public Employment Service. This support scheme is administered by the Apprenticeship Offices (*Lehrlingsstellen*) of the Economic Chambers. As well as this, there are additional benefits regarding non-wage labour costs, which cover some insurance contributions. ▪ Training guarantee for young people: Participants are treated equally to apprentices in the Dual VET, but their training remuneration is slightly different. It is currently (key date: May 2009) EUR 240 a month for the first and second year of apprenticeship and EUR 555 a month starting with the third year. Young people are employed via training institutions, which bear the costs arising due to attendance of vocational school. ▪ Fachhochschulen(FHS): The cost of establishing and maintaining FHS are met by the *Fachhochschule* provider body (province, municipality, social partner, etc.). The running costs per study place are shared between the Federal Government and the provider. The number of student places co-financed by the Government is the subject of an agreement laid down in the respective Fachhochschule development and funding plan. The provider decides on the way the tuition fees are levied. Students are entitled to student support on certain conditions.
Number of participants	The high attractiveness of VET in Austria manifests itself in the large participant figures: some 80% of young people in the tenth grade attend a VET path. Concerning Dual VET, some 40% of young people take up dual training in one of the approximately 250 legally recognised apprenticeships at the end of compulsory schooling, which means ca. 132,000 apprentices. In any case, according to the Apprenticeship Statistics of the Austrian Federal Economic Chamber, there has been a slight drop of 1.6% among participating companies' figures from 2008 to 2009 (2008: 40,265 vs. 2009: 39,605). Concerning the new measure 'Training guarantee until the age of 18", in 2009 some 9,000 young people attended supra-company apprenticeship training.

Recent/planned changes in VET policy	All stakeholders and decision-makers consider it imperative to maintain the high importance of VET. These mainly include the continual further development of training content and structures as well as the extension of the differentiated range of paths. Social partners, which exert a considerable codetermination on the structure and content of apprenticeship training, are making efforts to increasingly gain young people for this VET path by launching advertising and information campaigns. Another major aspect to maintain the level of attractiveness of VET is safeguarding the quality of VET paths. Quality development processes have been ongoing in all school areas over the past few years. in 2006, the Vocational Training Act was amended, providing a legal basis for modularising apprenticeship which aims at making VET system more flexible (better linking IVET and CVET) and responsive to sectoral needs as well as increasing the number of training enterprises (modular apprenticeship consists of a basic module as well as main and specialised modules, allowing acquisition of qualifications according to special production modes and services of particular sectors). Also, the so-called 'Training guarantee for young people up to the age of 18' has been introduced in June 2008, basically intended to assure that all compulsory school graduates who do not have a place at an upper secondary school or cannot find a company-based apprenticeship place are given the opportunity to learn an apprenticeship trade at a supra-company training centre

BELGIUM

BELGIUM	
Main available IVET schemes	***Apprenticeship-type training schemes*** ▪ Alternance Education (Upper Secondary- ISCED 3) ▪ Apprenticeship (ISCED 2 & 3) ▪ Industrial Apprenticeship Contract The Belgian IVET system is very complex due to the political system and state structure of the country. The three communities (French, Flemish ad German) are the most important decision makers. The federal government only has a few competencies even if it finances most parts of education. Compulsory education in Belgium lasts until age 18. Typically at the age of 12, pupils transfer from primary to secondary education. Pupils enrol in a common first stage of secondary education that lasts two years (the so-called observation phase), which is an initial common cycle, from 12 to 14 years. After this so-called observation grade, pupils can choose between the following tracks: General, Technical, Artistic and Vocational. From age 16 until age 18, students attend the 3rd 2-year cycle of Secondary Education. Then, students can follow the full-time school-based track or choose part-time education.
General Characteristics of existing schemes	***Work-based training schemes*** ▪ Alternance education (Upper Secondary- ISCED 3) Alternance education is aimed at students in part-time compulsory education, and it consists of an agreement under which there is alternance between training in enterprise and theoretical training. The agreement lasts 12 months but may be renewed to enable students to complete their training cycle. Training includes both general education (including social and personal development) and preparation for employment. The education and training centres where pupils attend theoretical classes are: *Centrum voor Deeltijds Onderwijs* CDO in the Dutch-speaking Community; *Centre d'éducation et de formation en alternance*- CEFA, in the French Community; and *Teilzeitunterichtszenter* in the German-speaking Community. Students attend classes at these centres for 2 days per week, and for 3 days they are involved in work experience. Theoretical training and practical training may not exceed 38 hours per week. This type of part-time education leads to an attendance certificate, and may also lead to a qualification certificate equivalent to the certificate awarded for full-time study (ISCED 3). ▪ Apprenticeship (ISCED 2 &3) Apprenticeship is a recognized form of part-time compulsory education, and it is mainly organised for self-employed occupations, small industries and craftsmanship, combining both practical and theoretical training, in trade skills, commercial training and training for service occupations (tertiary sector). More precisely, the system is specifically oriented towards the self-employed and the small and medium-sized enterprises. The institutions responsible for the organization of apprenticeship for the middle classes are: *Syntra Vlaanderen* in the Dutch - speaking Community, *IFAPME* in the French Community and *IAWM* in the German-speaking Community. To get enrolled in a regional training centre, the admission requirements for apprenticeship training are: 1) to have completed full time compulsory education (age 16) and not having reached the age of 25 years. Additionally, the pupil has to have an apprenticeship contract; otherwise, he cannot start the training nor take part in the courses. The contract is signed by the company manager and the apprentice or his legal representative. In general terms, apprenticeships last for 1 to 3 years. Practical training takes 4 days a week with a self-employed person or within a small or medium-sized enterprise is provided by the employer. On the other hand, theoretical training is provided by trainers at a SYNTRA, IFAPME or IAWM campus and takes 1 day a week. It includes a minimum of 30 weeks per school year which includes general education (minimum 4 hours a week) and vocational technical training (minimum 4 hours a week). The employer is obliged to pay the apprentice a monthly allowance and to make sure that the apprentice follows the practical training as prescribed. When the pupil successfully completes his apprenticeship he will receive a recognised certificate (Apprenticeship certificate), which gives him access to entrepreneurial training. Once he has obtained this certificate, he immediately meets the licensing conditions regarding professional knowledge for the majority of the regulated professions. The equivalence of this certificate might be ISCED 2 or ISCED 3 depending on the training programme.

	▪ Industrial Apprenticeship Contract The industrial apprenticeship contract (*industrieel leerlingwezen contract, contrat d'apprentissage industriel* – CAI) is intended for young people, aged between 16 and 21, with a poor school record, who have lost interest in attending school. It implies a form of alternance education: theoretical training is provided in a training centre, and practical training, in an enterprise. It is contract aimed at specific training, and of determinate duration (minimum duration of the contract is 6 months). The employer must follow the practical training programme arranged, and the apprentice receives an allowance, a percentage of the minimum wage in the chosen sector. The CAI leads to a vocational aptitude certificate.
Financing aspects	The public expenditure for education by student in Belgium derives from the financial income collected by the federal government, which is transferred to the other governing levels (mainly the Communities). Access to education is free until the end of compulsory education (18 years). Therefore, schools funded or subsidised by the Community government are not allowed to charge any registration fees. In Alternance Education (training in enterprise and theoretical training in CDO or CEFA) students receive pay from the enterprise equivalent to 40% of the guaranteed minimum wage in year 1, 50% in year 2 and 58% in year 3. On the other hand, within the apprenticeship pathway, the enterprise is responsible for the costs of the practical training, and is also responsible for paying the allowance of the apprentice (a monthly minimum salary). Normally, the company manager receives a substantial reduction in their social security contributions. Public financing goes to the theoretical training (subsidies to the regional training centres) and to the guidance of the apprentice. Thus, public authorities finance partially the cost of the theoretical training and the staff. There is no cost borne by the apprentice. Finally, in the Industrial Apprenticeship contract, the apprentice receives an allowance, that is, a percentage of the minimum wage in the chosen sector.
Number of participants	While most young people attend technical and vocational streams in Secondary Education, these streams have less standing than general education. In 2006, the rate of attendance in vocational secondary education (ISCED3) in the Flemish-speaking community (75 %) and also the 62 % in the French-and German-speaking community was higher than the European average 46% (Eurostat data). Moreover, the number of students in training has been increased due to the financial and economic crisis. Specifically, in Wallonia region, 1,500 additional young people have been trained in 2009. (The number of students enrolled in 2007 was: 8,965).
Recent/planned changes in VET policy	The Belgian Government is working on the development of courses of higher vocational education (higher education). Typical of those courses is the close co-operation with the professional sectors. Moreover, workplace learning plays a key role in these courses, and pathways are transparent and flexible. On the other hand, and as a consequence of the economic crisis, more investment in training related to the latest developments in environmental technology, mobility, chemical, building automation, ICT, etc. is promoted. Green jobs in the whole of Belgium will increase, VIA Flanders in action and the Marshall plan in Wallonia.

BULGARIA

BULGARIA	
Main available IVET schemes	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Framework Program B ▪ Framework Program C *On the other hand, "Craftsmanship training" in Bulgaria could be considered as an apprenticeship–type scheme, in accordance with the Crafts Act (2001). It regulates the conditions and rules for the craftsmanship training, including training by a master at a specific job in the handicraft enterprise. In any case, it is out of the formal IVET system and it is not a popular training form in Bulgaria.*
General Characteristics of existing schemes	***IVET at Upper Secondary Level (ISCED 3)*** Secondary level lasts for 4 years, normally age 14-18; this means 2 years of Lower Secondary Education (compulsory basic education till age 16), and 2 years of Upper Secondary Education. Initial vocational education and training at upper secondary level may be provided in 2 different types of institutions: Vocational Schools and Vocational Gymnasia. Vocational gymnasia are the most popular among the institutions providing IVET in Bulgaria. The vocational education component of IVET leads to the acquisition of a qualification in a profession, as well as to the mastering of the minimum general education for secondary education. Within the VET system, practical training is part of the whole vocational training process, and work placement ("production practice") is part of the practical training. Normally, vocational training concludes with work placement at a real enterprise in the profession/specialty, but its duration is different depending on the framework programme. Approximately, students can be training at real work places for about 60 school hours. In order to provide real work conditions each school has to sign a contract with the relevant enterprise. The contract should state the tasks of the company with regard to provide the students with real work conditions. The task of the school includes the elaboration of a program for the work placement, which is then presented to the company together with the criteria for the students' assessment. The school is also obliged to provide a teacher who will be responsible for the work placement and who will control the students. The contract also includes information on the duration of the work placement, as well as the condition with regard to the remuneration of the students. VET courses are organised according to different framework programs, which in some cases are also open to adults. Main Upper Secondary Level courses for students and with apprenticeship-type schemes are included within B and C framework programmes, which were approved by the Minister of Education and Science in 2003. Both are described next: ▪ Program B: Program B is offered by both vocational schools and vocational gymnasia, and final certificates equate to ISCED 3 Level. Typical age of trainees, which undergo IVET at upper secondary level of education, is 13 - 18 years of age. B Programs normally last 4 years (2 years at lower secondary, plus 2 years at upper secondary). The ratio between compulsory and vocational subjects and practical training is 1.5:1, whereas the ratio between compulsory vocational training and work placement is 15.4:1. ▪ Program C: Program C is mainly offered by vocational gymnasia (but also by vocational schools), and final certificates equate to ISCED 3 Level. Training in the versions of Framework Program C are the most popular in the system for vocational education and training of the Republic of Bulgaria. Typical age of trainees which undergo IVET at upper secondary level in Program C courses is 13 – 19 years of age (from ninth till thirteenth grade). There are six versions of Framework Program C: Versions C1, C2, C3 and C4 are designed for students, whereas programs C5 and C6 are for people aged 16 and over. Duration of the different training versions might vary between 4 and 6 years, depending on the course and on the previous qualification of the student. The ratio between compulsory and vocational subjects and practical training is 1.5:1, whereas the ratio between compulsory vocational training and work placement is 13:1 or 14:1 (work placement for adult students might be longer). Completed vocational training within Framework program C is certified by: – certificate for completed upper secondary school – certificate for vocational qualification

Financing aspects	State and municipal schools and centres for vocational education are financed by the state budget, the budgets of the municipalities, sponsorship, donations, and national and international programmes. Thus, apart from the public budget, vocational schools raise funds themselves for maintenance from additional activities (e.g. labour market training, leasing school facilities, etc). On the other hand, in order to overcome the effects of the economic crisis, the education system has adopted measures such as reducing budgets and staff , freezing the salaries, postponing the purchase of library books and the maintenance of school facilities, etc. Finally, the system of "delegated budgets" was introduced into schools by 2009. The approach aims at strengthening the economic independence of schools, decentralizing the management of finances, searching for additional sources of funding, and achieving transparency with respect to allocation of funds.
Number of participants	Among students aged 13 to 19, (from ninth till thirteenth grade) there are more students in the vocational path than in the general path (164,839 vs. 148,627 in the school year 2009/2010). As a consequence of the crisis, the number of students has decreased; thus, in 2007/2008 there were 179,566 students in the vocational path (among which 168,610 students attended vocational gymnasia). Vocational gymnasia are the most popular among the institutions providing IVET, whereas Training in the versions of Framework Program C are the most popular in the system for vocational education and training of the Republic of Bulgaria
Recent/planned changes in VET policy	According to information published in 2009, changes were planed in the legislative programme of the Ministry of Economy, Energy and Tourism for 2009, which would lead to changes in the Crafts Act. Interestingly also, the challenges related to the accession to the European Union point out to the need to increase greatly the funds spent on training.

CYPRUS

CYPRUS	
Main available IVET schemes	***IVET at Upper Secondary Level*** ▪ Practical Direction programmes in *Technikes Scholes* (ISCED 3A) ***IVET at Tertiary Level*** ▪ Institutions of Tertiary IVET (ISCED 5B) In addition to the apprenticeship-type schemes within the formal education system, the Apprenticeship System (Systima Mathiteias, SM) is a 2-year initial vocational education and training programme providing practical and theoretical training to young people who have not successfully completed their lower-secondary compulsory education. There are not, at present, any direct and visible academic progression routes from the Apprenticeship System, and it is associated with the low educational attainment and with failure at school. Responsibility is shared between the Cyprus Productivity Centre, CPC (Kentro Paragogikotitas, KEPA), a dedicated centre of the Ministry of Labour and Social Insurance,MLSI (Ypourgeio Ergasias kai Koinonikon Asfaliseon, YEKA) and the Ministry of Education and Culture, MoEC (Ypourgeio Paideias kai Politismou, YPP). The Apprenticeship System is free of charge for students. Additionally, a subsidy scheme aims to promote in company training of apprentices in the private sector, subsidising companies for part of social insurance contributions for the apprentice. 262 participants enrolled in the Apprenticeship System in the school year 2008-2009.
General Characteristics of existing schemes	***IVET at Upper Secondary Level*** ▪ Practical Direction programmes in Technikes Scholes (ISCED 3A) Upon completion of their compulsory lower-secondary education, successful lower secondary education graduates are eligible to enrol in IVET programmes, either in the theoretical (100% school-based) or in the practical direction (*Theoritiki Katefthinsi* or *Praktiki Katefthinsi*) offered by technical schools (*Technikes Scholes*, TS). The Practical Direction is the pathway which offers an apprenticeship-type scheme. The typical age of students at the technical schools is between 15 and 18 years of age, and the duration of studies is 3 years, both in the theoretical and in the practical pathways. The first and second years of the Practical Direction are completely school-based and combine general education subjects with technological and workshop subjects. Special emphasis is given to technology and workshop skills with a 57.5% time allocation (remaining 42.5% is devoted to general subjects). The third year of studies in the Practical Direction combines a school-based environment with a real workplace. Thus, following a supervised practical training programme, final-year students of the Practical Direction are placed in approved enterprises for one day per week throughout their final year. Instructors who maintain continuous contact with the employers closely monitor their progress and performance. Upon completion all students receive an upper secondary school-leaving certificate (*Apolytirio*), both in general and technical schools. Therefore, TVE school leavers are eligible for admission to universities and other tertiary education institutions. As well as this, qualifications provide access to regulated occupations. Each employer decides about the competence of the employees since there is not an official skill accreditation body. ***IVET at Tertiary Level*** ▪ Institutions of Tertiary IVET (ISCED 5B) There are four Public Institutions of Tertiary Education (non university level) offering programmes with a strong vocational content. These institutions operate under a relevant ministry or organisation. Their main aim is to provide tertiary education for high-calibre professionals, according to the needs of the labour market. The basic admission requirement for public tertiary education institutions is the lyceum or technical school leaving certificate (*apolytirio*). Programmes normally last 2-3 years, and are technically-professionally oriented. They are organised in diploma programmes, which include different specialisations. The competent Ministry of each institution has to approve each programme, but, to a large extent, the institutions themselves design the curricula. The diploma programmes consist of basic professional studies and practical training, including project work and industrial training. Practical training amounts to a significant content of the programme. Successful completion leads to the Institution's Diploma or Higher Diploma.
Financing aspects	All public education in Cyprus is free of charge, including Upper Secondary Schools and public universities and public institutes/colleges. Education at tertiary education institutions is subsidised in the form of a grant. On the other hand, the Human Resource Development Authority, HRDA (*Archi Anaptyxis Anthropinou Dynamikou*, AnAD) approves and subsidises the practical training of students of certain specialisations in public secondary and tertiary education institutions.

Number of participants	According to Eurostat, and concerning 2008/2009 enrolments, only 12.8% of the Upper Secondary Students choose the vocational/technical path (87.4% go for general programmes). This level of participation in vocational programmes is one of the lowest percentages among European countries. Cyprus has a low percentage of students in technical schools, as most students prefer to follow the general direction to continue into higher education. Additionally, the manufacturing sector, traditionally related to technical schools, is a declining and not appealing sector. According to Eurostat, the number of graduates in ISCED 3 (Technical Upper Secondary) has increased slightly from 1,215 in 2005/2006 to 1.245 in 2008/2009. Concerning Technical School graduates, and according to the Ministry of Education and Culture (MoEC), about 53% of the graduates of the Theoretical Direction pursue studies at Institutions of Higher and Tertiary Education. On the other hand, the vast majority of the graduates of the Practical Direction enter the labour market, and only about 15% pursue studies at Institutions of Higher and Tertiary Education. Finally, with regard to ISCED5-6 (Tertiary Education), Eurostat data show that the total number of graduates has increased from 3,676 in 2005/2006 to 4,228 in 2008/2009. Moreover, participation rates in 2008/2009 show that 56.3% of the students follow ISCED 5A programmes, whereas 42.3% choose ISCED 5B.
Recent/planned changes in VET policy	In 2004, the curricula offered by STVE (Secondary Technical and Vocational Education) were modernised, with the participation of stakeholders such as the Advisory Committee for STVE, the Branches and Specialties Advisory Committees for STVE, the Employers´ Organisations, the Employees' Organisations and the HRDA (Human Resource Development Authority). Later on, in 2008, a study focusing on the organisation of the STVE was completed, aimed at strengthening the quality of STVE and improving its organisation. It was co-financed by the European Social Fund and the MoEC (Ministry of Education and Culture). On the other hand, concerning the Apprenticeship System, since 2005 an implementation and modernisation of the system is under way. The idea is to develop a New Modern Apprenticeship, to provide an alternative education and training pathway to young persons who reject or drop out of the formal education system. Main improvements include attracting a greater number of girls or ensuring mobility between education, apprenticeship system and employment, and minimise the danger of social exclusion. Moreover, 3 different levels are to be introduced: Preparatory Apprenticeship (age group 14-16), Core Body, of 3 years duration (age group 15-20) and Post Secondary Apprenticeship (age group 17-25). Other examples of short-term measures recently developed include revising curricula, reviewing analytical programmes, training teaching staff, acquiring software and improving administration and management of the system Finally, and in view of the economic recession, the Ministry of Labour and Social Insurance (MLSI) and the HRDA are promoting a significant number of measures, such as training programmes for employees and the unemployed, job placements and training for unemployed graduates, additional subsidies to employers to hire apprentices, etc.

CZECH REPUBLIC

CZECH REPUBLIC	
Main available IVET schemes	***Upper Secondary Level IVET- Primarily school-based*** ▪ Secondary technical schools (ISCED 3A) ▪ Secondary vocational schools (ISCED 3C & 3A) ***Tertiary IVET*** ▪ Tertiary professional schools (ISCED 5B) *The Czech republic does not have an apprenticeship scheme, but the education system includes work placements and practical training.*
General Characteristics of existing schemes	***Upper Secondary Level IVET*** *Students admitted at Upper Secondary Level must have completed compulsory education (15-year-olds). Vocational and technical programmes at upper secondary level are provided by the following types of school:* ▪ Secondary technical schools (střední odborná škola – SOŠ) SOS provide secondary technical education in 4-year programmes completed by a *maturita examination* (ISCED 3A), which entitles graduates to apply for higher education and to perform mid-level technical, business and similar jobs. Study plans include general subjects, and vocational subjects, depending on the relevant programme. Vocational subjects include practical exercises, laboratory work, etc. The proportions of general and vocational subjects vary depending on the fields of study and years. The ratio is around 45:55 in favour of vocational subjects. The study plans at SOŠ also include work placements in companies and other institutions. The length of these placements depends on the nature of the programme. Work placements (on average 6-8 weeks altogether), during which students experience the feel of a real workplace, facilitate contacts between the students and employers. SOŠ carry out both continuous and final assessment of students. The *maturita examination* in four-year programmes at SOŠ includes general and vocational subjects. The examination in vocational subjects is composed of a theoretical and practical part. ▪ Secondary vocational schools (střední odborné učiliště – SOU) SOU Schools provide a vocational qualification in 2- and 3-year programmes, resulting in the acquisition of a secondary vocational qualification (ISCED 3C). It is completed with a final examination and the student gets a "vocational certificate" (*výuční list*), also known as "apprenticeship certificate". The final examination does not allow for entering tertiary education (no *maturita certificate*). Graduates leave directly for the labour market. The involvement of companies in vocational training occurs primarily at school level: in order to improve their curricula, schools cooperate with labour offices, enterprises, professional associations and chambers of commerce. The study plans include general subjects, vocational subjects (the selection of which depends on the nature of the programme), and practical training. The proportions vary depending on the programme. In 3-year programmes, which are the most common, general subjects are allocated 30-35% of the instruction time, vocational subjects get 20-30% of the time and practical training 35-45%. Practicum and Vocational Training can be held at schools or at the workplaces of natural or legal persons who have been authorised for this training. Workplaces must sign an agreement with the relevant school. The quality of vocational training (including work placements or practical training in companies) is assured by the school. Evaluation of the quality of vocational training is carried out in cooperation with the company where it takes place, as well as by the ČŠI (Czech School Inspectorate). Additionally, Secondary vocational schools may also provide a small number of 4-year programmes completed by *maturita* (ISCED 3A), providing a qualification designed for the performance of more demanding manual occupations, opening up the path to higher education or a tertiary professional school. ***Tertiary IVET*** ▪ Tertiary professional schools (*vyšší odborné školy – VOŠ*) prepare students for a qualified performance of demanding professional tasks. Most of them are established at secondary technical schools and, together with them, form one legal entity. They provide tertiary professional education (ISCED 5B) to secondary school leavers with a *maturita certificate* (normally 19 and older). The objective of VOŠs is to offer students a vocational qualification for the performance of demanding professional activities, ending with *absolutorium* (vocational examination for the title of *diplomovaný specialista).*

	VOŠ provide study programmes lasting 3 to 3.5 years. The programmes may be studied full-time or part-time. The longest programmes include practical training in the form of a work placement over 3 months long. Theoretical instruction takes place in classrooms, while practical training is implemented in groups established to take account of the situation in the workplace. The curricula are designed by individual schools. However, they must be approved by the Ministry of Education, Youth and Sports (*Ministerstvo školství, mládeže a tělovýchovy* -MŠMT). The ratio between general, general vocational and specific vocational subjects is roughly 20:40:40. Practical training constitutes an important component of this type of study. It may last up to one year during which students work on a paper or project which is then evaluated jointly by the school and the relevant company or institution.
Financing aspects	Schools at the Upper Secondary Level may be public, private or church owned. Education at public schools is provided for free, while private and denominational schools may collect tuition fees. Although the state budget mainly funds public institutions, it also provides financial resources for the activities of private schools and religious schools on the basis of a contract. Meanwhile, Tertiary Vocational Schools, including public ones, may also collect tuition fees. Broadly speaking, the system of funding IVET is based on a system of state administration and self-administration in education, although there are differences depending on whether the institution is private or public. In any case, in 2001, as a result of decentralisation of public administration and the strengthening of regional and local self-administration, the responsibility for funding was delegated to regions.
Number of participants	Most pupils at upper secondary level attend vocational programmes, both ISCED 3C and 3A (74 % of pupils in 2009/2010), which means a total of 347,414 students in Vocational Upper Secondary Education. The proportion of pupils in vocational programmes decreased by 8 % during the period of 2002/03 - 2009/10. In the academic year of 2009/2010, for the first time in many years the overall proportion of pupils in vocational programmes has slightly increased.
Recent/planned changes in VET policy	One of the main changes in the VET system is the introduction of a new final examination from the year 2009, lowering the number of fields of SOU vocational courses. The main objective of the project is to implement standardized final examinations into all schools. As well as this, and within IVET at Upper Secondary Level, an extensive curricular reform is currently under way, consisting of the development and ensuing application of newly designed national curricula, implemented along with the new School Act (2005). Curricula are created on two levels: national and school, allowing for more flexible profiles. On the other hand, in 2008 the MŠMT (Ministry of Education, Youth and Sports) adopted an action plan to support vocational education and training. Its implementation should lead to an expansion and strengthening of mechanisms that increase participation in VET. Finally, it seems that there have been no significant changes which would be a direct consequence of the current economic crisis. In fact, Educational policy focuses, before, during and after times of crisis, on increasing the flexibility and enhancing the ability of the education system to respond to the labour market needs.

DENMARK

DENMARK	
Main available IVET schemes	***Upper secondary level*** ■ Vocational Upper Secondary Schools (ISCED 3). ***Tertiary level*** ■ Vocational Colleges (short-cycle higher education programmes) (ISCED 5B).
General Characteristics of existing schemes	***Upper secondary level*** ■ Vocational Upper Secondary Schools Upper secondary education includes a vocational education and training track targeted at young people who want to learn a trade or profession, and give direct access to nationally recognised occupations within the labour market. In Denmark, VET only exists in a *dual apprenticeship system*, alternating between school-based and work-based training. The programmes typically take 3 - 3.5 years. In order to be admitted into the main program of the VET, the students must enter a train-ing agreement with an approved company which offers training. The training agreement is a binding contract between both parties and can vary depending on these four following main apprenticeship type schemes: – *Ordinær uddannelsesaftale* (Regular training agreement): an agreement with one company for the entire main program. – *Mesterlære* (New Apprenticeship): for practical orientated students, starts with practical training in a company. – *Kombinationsaftale* (Combination training agreement): training agreements with two or more companies. – *Kort uddannelsesaftale* (Short training agreement): e.g. for companies who are not able to undertake an entire training period, or with relatively short production horizon. Regular training agreement is by far the most common apprenticeship scheme. In general, these programmes consist of a broad introductory basic programme which gives access to a specialised main programme. Thus, in addition to specialised subjects, students are taught area subjects (which are broad professionally-oriented subjects), and basic subjects. As an average, 2/3 of training takes place in the company. The programme for vocational specialisation starts with an on-the-job training placement. Before being admitted to the main specialisation programme, the student must have an apprenticeship contract with an approved training company (or with the college, if no training company is available). The apprenticeships (on-the-job training) are based on a contract or training agreement, between the apprentice and the company. All training companies are approved by the relevant trade committee, i.e. the social partners, and thereby have to live up to certain requirements, e.g. a certain level of available technology, ability to offer a variety of tasks within the occupation. Colleges and companies work closely together to make sure that training takes place according to the law. The school and the enterprise, along with the pupil, are responsible for planning and organising the form and content of the practical training and developing the pupil's education plan. Concerning tuition content, an individual educational plan is compiled for every student to ensure coherence between the student's wishes and the actual training programme. The students also have a personal educational portfolio that is intended to increase their awareness of the learning process. VET programmes conclude with a practical and theoretical examination, the 'journeyman's test' (*Svendeprøve*). IVET qualifies students for either entering the labour market as skilled workers (specific jobs in different trades), but it also offers the opportunity to access specific/limited short cycle higher education programmes at vocational colleges. ***Tertiary level*** ■ Vocational Colleges Vocational colleges offer a number of short-cycle higher education programmes (*kort videregaende uddannelse* – KVU) lasting 2 to 2.5 years. Admission requirements are either relevant VET or general upper secondary education. Most programmes give access to further studies within the same field e.g. professional bachelor programmes. KVU programmes qualify students for performing practical tasks on an analytical basis. Programmes are mainly school-based, however, but a compulsory three month apprenticeship in an enterprise or a public institution is included in all KVU programmes.
Financing aspects	The state finances training at colleges, and companies finance on-the-job training, i.e. the trainees receive an apprentice salary while in the company. All employers, both public and private, pay an amount into a fund called the Employers' Reimbursement Scheme (*Arbejdsgivernes Elevrefusion - AER*) which is based on the number of employees in the individual company. The money is then allocated to the companies taking in trainees so that they do not bear the cost of training alone. The companies are reimbursed for costs during school-based training. In 2010, the enterprises paid 4.013 million DKK (554.933 million EUR) to AER and received 1.091 million DKK (356,133 million EUR) in reimbursement. Concerning HE programmes in vocational colleges (Tertiary Level), they are state-financed. As they are part of the higher education system, it means they are under the jurisdiction of the Ministry of Education.

Number of participants	In 2002, about 1/3 of all companies had apprentices. The number of students directly entering an IVET programme at 16 (after completing compulsory schooling) is falling, with a growing proportion either being admitted following a period in the labour market, or, as is becoming increasingly common, after completing a school-based upper secondary education. According to the Statistical Department of the Danish Ministry of Education, in 2009 54,528 students were following a VET main course and 40,447 a basic course; moreover, the number of students with VET training agreements was 50,622. The regular training agreement is the most common one; almost 82% of the students follow a regular training agreement (38,128 in 2011). With regard to new apprenticeship: in some of the technical vocational programs about 40%of the students chose this route, but the share is very small in other vocational and training programs. Concerning tertiary level education, in 2008 and 2009, there were 9,571 and 11,345 students enrolled in KVU.
Recent/planned changes in VET policy	Since 2006, it has been possible for trainees to start directly in a company with which they have an apprenticeship contract. This pathway is known as New Apprenticeship (*Ny Mesterlære*). New apprenticeship was introduced as an alternative pathway into IVET and is part of the Government's strategy for reducing dropout within IVET. Pupils undertaking an IVET programme via the new apprenticeship pathway will typically spend the first year of their education receiving practical training within an enterprise. The initiative is aimed in particular at pupils who may struggle or lack the motivation to complete the more theoretical school-based education without first gaining a practical insight into the field. Interestingly also, since 1st of August 2009, tertiary level KVU programmes include a compulsory 3-month apprenticeship in an enterprise or a public institution (before that it was just optional).

ESTONIA

ESTONIA	
Main available IVET schemes	***Primarily workplace based study*** Apprenticeship ("töökohapõhine õppevorm"). ***Primarily school based study*** Regular IVET educational programmes which offer school and work-based training: *VET at Upper secondary level* ▪ Secondary vocational education (ISCED 3B) ▪ Vocational Training Based on Basic Education (ISCED 3C) *VET at Post-Secondary(non-tertiary) level* ▪ Vocational Training Based on Secondary Education (ISCED 4B)
General Characteristics of existing schemes	***Apprenticeship System (Workplace based study)*** There's no separate system for apprenticeship in Estonia. Apprenticeship is integrated into regular IVET as a "workplace based study form" ("*töökohapõhine õppevorm*"). Thus, apprentices can study on different levels and programmes in the Estonian VET system (mainly ISCED 3B, 3C and 4B). There is no age limit in the apprenticeship programme. In fact, the programme is meant and has been popular for people already working and who need formal qualifications. The duration of the studies depends on the particular ISCED level and specific program (as well as on the student's curriculum), and can vary between 6 months and 4 years. The academic year consists of at least 40 weeks of study. 1/3 of the curriculum is delivered through theoretical instruction and 2/3 through practical training in an enterprise (so majority of skills and knowledge is learned by actual working). The study programme (content and objectives) for workplace based study form (apprenticeship) is the same as for school based study form. Based on the school curriculum, the school works out an individualised curriculum for the apprentice. The school has to evaluate the workplace before sending an apprentice there to make sure the workplace is ready to meet the objectives of the curriculum. The structure of study is based on an agreement between the school and the enterprise. The apprentice has 2 appointed supervisors, one from the school and the other from the workplace. A three party contract between the school, the apprentice and the workplace is signed. Apprentices sign a study and work contract and have a 4-month probation period. Companies have the obligation to remunerate the apprentices at least with the minimum wage. Studies are complete after passing a professional or final examination. ***School based VET at Upper secondary level*** In the School-based form, practical work (in school) and practical training (in the workplace) shall make up at least 50% of the volume of vocational training. Before the autumn 2009, work practicing in enterprises was meant to form at least 1/4 of vocational training in the programme. However, it is important to stress that since the autumn 2009 there is no obligatory enterprise-based training for the students in school-based study form (this is due to the economic crisis, since finding a practice place in a company has become increasingly difficult). ▪ <u>Secondary vocational education ("Kutsekeskharidusõpe")(ISCED 3B)</u> Students acquire the vocational, professional and occupational knowledge, skills and attitudes necessary for independent skilled work and the general education knowledge and skills prescribed by the curriculum. The prerequisite for commencing these studies is the acquisition of basic education. The volume of studies is at least 120 weeks of study (3 years), including at least 40 weeks (1 year) of study for general education subjects. In order to graduate, students are required to sit a vocational final examination or a professional examination. This programme gives access to ISCED 4B and ISCED 5A levels. ▪ <u>Vocational Training Based on Basic Education ("Kutseõpe põhihariduse basil")(ISCED 3C)</u> The students acquire the knowledge, skills and attitudes necessary for performing skilled work in a profession, speciality or occupation. It only includes VET subjects (general subjects are limited to that required for learning the vocation). The prerequisite for commencing vocational training based on basic education is the acquisition of basic education. This programme gives access to ISCED 3A and 3B levels, and it mainly suits students who have difficulties with acquiring general upper-secondary education. The studies take place at the VET school and the students are enrolled as VET students. The volume of studies based on basic education prescribed by a school curriculum is 40 to 100 weeks of study (0.5 to 2 years). Upon graduation the person has to pass the final exam of the profession or area of specialisation, or a professional examination.

	School based VET at Post-Secondary (non-tertiary) level ▪ Vocational Training Based on Secondary Education("Kutseõpe keskhariduse basil") (ISCED 4B) Students undergoing vocational training based on secondary education acquire the knowledge, skills and attitudes necessary for independent skilled work at post-secondary level (ISCED 4B). The prerequisite is the acquisition of secondary education. The volume of studies is 20 to 100 weeks of study. Practical work and practical training make up at least 50 % of the volume of vocational training. Before the autumn 2009, work practicing in enterprises was meant to form at least 1/4 of vocational training in the programme. However, it is important to stress that since the autumn 2009 there is no obligatory enterprise-based training for the students in school-based study form. There are no general subjects offered. Upon graduation the person has to pass the final exam of the profession or area of specialisation, or a professional examination. Post-secondary VET is a growing trend, since 45% of Estonians have no occupational skills. Thus, especially older students are returning to VET schools to get a specialty.
Financing aspects	In upper secondary and post secondary non tertiary education, the VET study places are funded according to the state-funded 'study places scheme', which is provided to the VET institutions directly by the state. Through the 'study places scheme', the state orders a specific number of students to be educated in a particular curriculum group, for the next 3 years. The school is obligated to fill all the state funded study places during the whole calendar year. Thus, if the school sees that it can not cover the whole number, it can turn to a local basic or secondary school and offer to teach VET courses for their students in the same curriculum group. Out of 27,000 students 24,000 study on the state funded study places. The share of private funding in upper secondary and post secondary non tertiary education is about 30%. In very exceptional cases, the funding can be project based. In the case of the apprenticeship programme, it is also supported by the state according to the 'study places scheme'. In this case, the school pays also the salary for the supervisor in the enterprise. In any case, there can be other arrangements to fund the programme. Additionally, apprentices receive a wage during enterprise training and study allowance during theoretical studies in school. If the apprentice has a valid work contract, he/she does not get an extra wage for being in the programme. On the other hand, several municipalities support their students with different financial subsidies. There are also good examples of grants implemented by the private sector for VET students in their sector.
Number of participants	Out of all the students at ISCED level 3, about 34% study on VET tracks (the general/academic track is a more preferred option). In 2010/11 academic year, there were 17,478 students in ISCED 3 vocational programmes, and 10,180 students in Post-Secondary Non-Tertiary vocational programmes (ISCED 4). The number of students in school based initial vocational training in 2010/11 academic year was 27,448, whereas the number of students in workplace based initial vocational training (apprenticeship) was 564.
Recent/planned changes in VET policy	The regulation concerning the procedure of apprenticeship training (workplace based training) is relatively recent, as it was issued in March 2007 by the Ministry of Education and Research. Concerning the effects of the crisis on VET, it seems that nowadays it is more difficult for schools to find places for practical training in the companies. Moreover, and broadly speaking, the student can no longer expect any stipend from the employer. To solve the problem of the lack of places for practical training, the schools have opened their own workshops or model companies and sell their services to the general public, so that the students can practice their skills. Moreover, It is important to stress that since the autumn 2009 there is no obligatory enterprise-based training for the students in school-based study form. On the other hand, the new national curricula have just been prepared and are being implemented. There is a need to respond quicker to the labour market needs and the school curricula are being restructured to be more flexible. As to quality assurance, self-assessment (internal evaluation) has recently become mandatory for VET institutions. The plans to implement external evaluation or accreditation are underway, and the system will be fully operational by 2012. Concerning this issue, currently there is no connection between quality assurance and public funding through the 'study places scheme'. But according to the new system, if the curriculum group has not been accredited, there will be no funding for it. Another change in providing public funding is underway. If the school cannot find enough students for IVET courses, it can use the state funded study places to finance the short term adult education courses (can be called CVET).

FINLAND

FINLAND	
Main available IVET schemes	***IVET at Upper Secondary Level (school-based):*** ▪ Programmes at vocational education institutions (ISCED 3) ***IVET at Upper Secondary Level (work-based):*** ▪ Apprenticeship training (ISCED 3B & 4) ***IVET at Tertiary Level:*** ▪ Polytechnics (*ammattikorkeakoulu*) (ISCED 5)
General Characteristics of existing schemes	***IVET at Upper Secondary Level (school-based):*** After completing basic compulsory education (at age 16), students might choose to continue studying in the school-based VET path. The majority of the youngsters who choose IVET studies complete it in the school-based model (most students in school-based IVET are aged 16-25 years). Access criteria include previous study record in basic education or general upper secondary education, work experience and entrance or aptitude tests. The scope of upper secondary level vocational qualifications taken after basic education means full-time studies for 3 years (120 credits) at a vocational institution. 75% of the subjects are vocational, whereas 15% are general and 10% of free-choice. Even if the education and training mostly takes place in institutions, all qualifications include approximately 6 months (at least 20 credits) of instruction in the workplace (on-the-job learning). The objective is to familiarise students with real working life to enhance their employment opportunities, as well as to ensure vocational skills that stem from working life needs. Assessment is conducted by the teachers and, for on-the-job learning periods, by the teacher in charge of the period together with the on-the-job instructor or workplace instructor appointed by the employer. Under certain conditions, apart from the VET Certificate at ISCED3 level, IVET students can also take the matriculation examination which gives them access to university. The Finnish National Board of Education approves the qualification-specific core curricula and the requirements of each competence-based qualification. These are drawn up in cooperation with employers and employees, other representatives and experts of economic life as well as teachers and students. ***IVET at Upper Secondary Level- Apprenticeship (work-based):*** Vocational qualifications may also be completed as apprenticeship training, which also contain courses arranged in the institutions. Apprentices must be at least 15 years of age at the time of signing the contract and have completed the basic education syllabus or equivalent. Apprenticeship training is available to both adults and young people, but in Finland, most of the apprentices are adults. Moreover, many trainees are already employed when starting apprenticeship training. Apart from vocational qualification certificates (which provide the trainee with the same access to further training as vocational schools do), apprenticeship training allows achieving a further vocational qualification or a specialist qualification. Thus, it is possible to obtain one of the following 3 diplomas following the apprenticeship system: ▪ Initial vocational qualifications, with an average duration of 2-4 years based on the personal study plan (85% vocational subjects, 15% general). ▪ Further vocational qualifications, 4-12 months based on the personal study plan (all subjects are vocational). ▪ Specialist vocational qualifications (ISCED 4), primarily intended for adults to demonstrate their practical competence and vocational skills. They last up tp 12 months, depending on a personal study plan. The apprenticeship training is based on a written working contract of fixed duration between the apprentice and the employer, and the practical training periods take place at the workplace in connection with ordinary work assignments. Approximately 70–80% of the time is spent in the training workplace. This is complemented by theoretical studies, which may be arranged at institutions providing vocational education and training, at vocational adult education centres, or at other educational institutions. The provider of apprenticeship training (a local authority, joint municipal authority, registered association or foundation) is responsible for managing apprenticeship training and supervising the apprenticeship contracts. Moreover, overall training is based on a national core curriculum or the requirements for the relevant competence-based qualification, according to which the student's individual learning programme is formed. The learning programme is drawn up by the student, the employer and the local administrative authorities, and the students' previous education and work experience must be taken into account and accredited for it.

	Students are awarded two certificates: 1) Certificate of participation in training and 2) Qualification Certificate (*tutkintotodistus/examensbetyg*). ***IVET at Tertiary Level*** IVET at Tertiary Level is offered at polytechnics (*ammattikorkeakoulu*), where degrees provide the knowledge and skills for professional expert functions and with a professional emphasis (at ISCED 5 level). Enrolment criteria are the achievement of general or vocational upper secondary education and training. Polytechnic Degrees tend to take 3-4 years to complete. They consist of basic and professional studies, optional studies, practical training to promote professional skills and a diploma project. There are various forms of project and teamwork and studies have also increasingly been transferred outside the institution. Compulsory practical on-the-job training, worth a minimum of 30 ECTS (approx. 7 months), enables many students to combine their diploma project included in the degree programme with hands-on work experience and to apply their theoretical knowledge in real situations.
Financing aspects	The Ministry of Education has the overall responsibility for funding education and training except for labour market training which is the responsibility of the Ministry of Employment and the Economy. The majority of vocational institutions (usually VET institutions) are maintained by local authorities, joint municipal authorities and the state. Therefore, IVET is primarily free of charge for students. In terms of financing the apprenticeship system, the State is responsible for fully covering costs caused by school-based education period. Thus, the theoretical studies of apprenticeship training are free of student fees and for the time they spend in theoretical studies, students may receive daily allowance, family allowance as well as financial support for transportation and accommodation expenses from the State. In apprenticeship training, the employer pays the student a wage for the apprenticeship period. The pay varies in different fields, but is usually approximately 80% of the wages of a skilled worker in that particular field. The employer is not obliged to pay wages for time spent in theoretical training, unless otherwise agreed. Moreover, the state grants training compensation for the employers, which is compensation for the given training at the workplace. The amount of training compensation paid to the employer is agreed upon separately for each apprenticeship contract before the contract is approved.
Number of participants	Almost 95% of those leaving post-compulsory education (at age 16) continue their studies. In 2008, about 42% of those continued in upper secondary VET. Concerning the choice between school-based or work-based model, in Finland, most of the apprentices are adults, whereas the majority of the youngsters complete their IVET studies in the school-based education. According to 2007 data (Eurostat), there were 235,338 participants in VET school-based education system (66.7% of students in ISCED3 level). Moreover, in 2008 some 70,000 students took part in apprenticeship training. The number of participants in apprenticeship training has traditionally been relatively low in Finland, but student volumes have increased considerably in recent years. The number of students more than tripled during the period 1994–1999, doubled again from 1999 to 2007. Interestingly also, the path from upper secondary VET to higher education is not very common, and only about 20% of polytechnic students have a VET background. Most of the students at polytechnics have a general upper secondary qualification. Finally, and according to 2007 Eurostat data, there were 287,264 pupils studying ISCED 5 programmes.
Recent/planned changes in VET policy	Broadly speaking, the popularity of vocational education and training has increased since the early 2000s. The following facts might explain the change: 1) The upper secondary vocational education and training has been developed towards the world of work; 2) There have been several campaigns organised by the Ministry of Education and social partners to improve the image of vocational training; 3) Skills competitions, like SkillsFinland, and EuroSkills have also increased the popularity of VET. On the other hand, and as part of the overall reform of adult education and training, outlined in the 2008-2012 national development plan for education and training, a working group appointed in 2008 by the Ministry of Education, proposed a creation of an apprenticeship-type further education scheme at university level for those who already have a higher education degree. On-the-job training and learning is at the centre of this further higher education. Finally, and concerning the economic crisis, Finland has not been forced to reduce state budget appropriations for education and training. On the contrary, the Ministry of Education and Culture has decided to increase the number of initial VET study places, so VET intake has been increased with a view to investment in the future and in the shortage of labour expected to emerge after the recession.

FRANCE

FRANCE	
Main available IVET schemes	***Primarily School based*** *VET at Upper Secondary (ISCED 3C level)* ▪ Certificat d'Aptitudes Professionnelles - CAP (Professional Skills Certificate) ▪ Brevet d'Etudes Professionnelles - BEP (Professional Studies Certificate) *VET at Upper Secondary (ISCED 3B level)* ▪ Brevet professionnel - BP (Vocational Certificate) ▪ Brevet de technicien – BT (Technician's Certificate) ▪ Baccalauréat Profesionnel - BAC Pro (Vocational Baccalaureate) *VET at Tertiary Level (ISCED 5B level)* ▪ Brevet de Technicien Supérieur - BTS (Higher Technician's Certificate) ▪ Diplome Universitaire de technologie - DUT (University Technological Diploma) ▪ Diplôme National de Technologie Spécialisé - DNST (Specialised National Technology Diploma) ▪ Diplôme d'Etudes Universitaire en Sciences et Techniques - DEUST (University Scientific and Technical Studies Diploma) ***Primarily Workplace based*** ▪ Apprenticeship ("contrat d'apprentissage"). *Given at all the previous levels.* ▪ Professionalisation contract ("contrat de professionnalisation")
General Characteristics of existing schemes	***School based study-Upper Secondary (ISCED 3B & 3C)*** Vocational path at ISCED 3 level is open for pupils after junior high school. It allows entry to the world of work or a continuation of studies. The vocational path offers non-academic education linked to businesses and their professions. Studies for vocational examinations can all be undertaken within the school system in vocational high schools, or through apprenticeships. As pupils in vocational high schools ('*lycée professionnel'*), most students study for the Vocational B*accalauréat* (BAC Pro) (3 years of study) or for the Vocational Aptitude Certificate (CAP) which requires 2 years of study. All the vocational diplomas include the *Mention Complémentaire* (MC- Additional Diploma). For students under the school status, training takes place mainly in the teaching establishment (LP - *professional lycée* or *LP agricole* - agricultural lyceum) and includes compulsory training periods in a professional environment. Vocational education in school includes general education, theoretical and practical teaching defined specifically for each professional specialism, and project activities, under a specific organisation of the timetable depending on the type of diploma. On the other hand, training periods in a professional environment (PFMP), in a business or other organisation are also required. An agreement is signed by the hosting organisation, the school and the student. The duration of these periods varies depending on the type of diploma and the specialism: at least 12 weeks for the *Mention Complémentaire* (additional diploma), 12 to 16 weeks for the CAP, and 22 weeks for the Vocational *Baccalauréat*. This training period undergo evaluation (carried out jointly with the company) which is taken into account for the award of the diploma. ***School based study- Tertiary Level (ISCED 5B)*** At the end of the general and technological baccalaurétas (ISCED 3A), students can decide to embark on long (e.g. at university) or short studies. They may access a 2-year study programme leading to a Higher Technician's Certificate (*Brevet de Technicien Supérieur* - BTS), offered by Senior Technical Sections, or a University Technological Diploma (*Diplôme Universitaire Technologique* - DUT), at Technology University Institutes. In those cases, 30% of the total time is dedicated during the first year to general subjects, 33% during the second year. On the other hand, work experience schemes lasting from 4 to 6 weeks are part of the curricula. ***Work-place based study- Apprenticeship*** The apprenticeship contract is a particular type of employment contract made between an apprentice and an employer. The employer undertakes, apart from the payment of a salary, to provide the apprentice with complete vocational training, given in part within the company and in part in an Apprentice Training Centre. In return, the apprentice undertakes for his training, to work for this employer for the duration of the contract and to do this training course.

	This contract, that may be entered into with an employer from the private or public sector (local authorities, hospitals, the armed services etc), is for a period of between 1 to 3 years, depending on the duration of the training stage being studied for and the apprentice's initial qualification. Apprenticeship contracts are mainly aimed at young people between 16 (end of compulsory education) and 25. They enable diplomas or certificates listed in the national directory of vocational certificates to be obtained which range from the vocational aptitude certificate (ISCED 3) to diplomas awarded by universities or *'Grandes Écoles'* (selective universities) (ISCED 5). Apprentices at all qualification levels sit the same written examinations in general and technical subjects and the same practical tests as students on the same course in full-time education. Approximately 30% of IVET students opt for the apprenticeship system. The theoretical training period in an Apprentices' Training Centre (CFA) (managed by a local chamber of commerce, a professional sector etc), apprenticeship department (in vocational high-school) or in an apprentices' training unit (in higher education), covers around 25% of the duration of the contract, which includes a minimum of 400 hours per year (ISCED5 level diplomas should include around 600 hours per year). The period of practical training in the company is carried out under the responsibility of an apprentice supervisor who fulfils the role of tutor and has the teaching and vocational competencies required by the law. ***Work-place based study- Profesionalisation Contract*** The professional contract ("contrat de professionalization") is a contract of employment between an employer and employee. Its objective is the integration or return to employment for young people and adults through the acquisition a professional qualification (certificate, diploma, professional qualification ...) recognized by the State and / or a professional sector (but not necessarily a certificate within the formal education system). The contract alternates periods of general, technological education and professional, company based work in an activity related to the qualification sought. The "contrat de professionnalisation" is designed for: Youth aged 16 to 25 years; Jobseekers aged 26 and over and, finally; Beneficiaries of Income of Active Solidarity (RSA), the specific solidarity allowance (ASS) or allowance for disabled adults (AAH) The contract may be fixed term for a period of between 6 and 12 months. This period may be of 24 months for those without qualifications or beneficiaries of minimum wages or State aid (minimum solidarity income, "revenu de solidarité active" or aid for disabled people). Apart from these cases, the criteria for exemption from the legal duration of the contract are specified in a collective agreement. At the conclusion of a fixed term contract, no indemnity is payable. General, business and technological courses are taught by a specific center of training or the company itself if it has an internal training unit with means distinct from those of production services. These courses have a duration of between 15% and 25% of the total duration of the contract. An sector-wide agreement, however, can extend this beyond 25%, for some audiences (social aid beneficiaries) or for certain qualifications
Financing aspects	IVET is funded by the State, and in particular the Ministry for National Education, Higher Education and Research, as well as by the local administrative units. The State is responsible for the remuneration of teachers and other educational and guidance staff. However, it is the local authorities that are now responsible for investment and operations. At Tertiary level, University enrolment rights are limited and some students can obtain a financial assistance in the form of grants based on social criteria, university criteria or of interest-free loans on trust. In the apprenticeship system, apprentices are paid from between 25% to 78% of the minimum salary according to their age and progress in the training stage. Training is mainly funded through an apprentice tax paid by all businesses. The firm can choose to pay the tax to an education establishment of its choice – including universities – and there is considerable competition among education establishments for firms' contributions from the tax. Employers may benefit from exemptions from payroll contributions, consideration paid by the department council and other financial incentives according to the case and the economic situation in the apprenticeship market. Therefore, funding for apprenticeship is covered by the apprenticeship tax (0.5 % of the gross annual bill paid by the enterprises), the State (through exemptions from labour charges), as well as by the Regions (through grants for hiring the apprentices, and for operational expenses of the training centres – CFA). Despite public financial assistance, there exists excess supply of young people seeking apprenticeship over demand from employers.
Number of participants	In 2010, among 2,449,900 students in upper secondary education in France (ISCED 3), 42% are in vocational training. Among these students in vocational education, 32% are in apprenticeship. With regard to tertiary level education, in 2009 there were 476,802 students in ISCED 5B programmes (both in school-based and work-based programmes). In 2008, 4.9% of the DUT students and 20.2% of the BTS students followed the apprenticeship system (work-based). Concerning the professionalisation contract, in 2010 there were 147,990 contracts signed. As already said, The number of apprenticeship contracts signed every year (including all levels) is two times higher than the number of professional contracts.

Recent/planned changes in VET policy	Since the start of the 2009 school year, the vocational path has been revised. This revision aims to promote the raising of young people's qualification in the vocational path. The main measure consists of changing the duration of the study programme for taking the Vocational *Baccalauréat* (ISCED 3B) and bringing it into step with the General and Technological *Baccalauréats* (ISCED 3A), which were the 2 types chosen by students who wanted to access to tertiary level studies. Thanks to the changes introduced in 2009, a national examination allows Vocational *Baccalauréat* students to obtain (as for the other two *baccalauréats*), the end of secondary school studies diploma and gain their first step towards higher education. This change introduces greater flexibility and permeability within the French education system. On the other hand, a collection of measures was implemented in 2009, known as 'Active Youths' (or '*Jeunes Actifs*'), aimed at facilitating the hiring of young people through apprenticeship contracts, within the framework of the crisis. Support measures include the "zero charges" dispositive, or the purchase of a 1,800€ prime per apprentice hired, under some particular conditions.

GERMANY

GERMANY	
Main available IVET schemes	***Upper Secondary Level IVET*** ■ *Berufsschulen*- Dual VET or Apprenticeship (ISCED 3B) (in some cases ISCED4) ***Tertiary Level IVET*** ■ Dual Study Programmes (ISCED 5) Generally speaking, the German IVET system offers young people a wide choice of different paths, leading to a relatively complex system. Apart from general schemes, there are also schools for specific fields or sectors such as health, public administration, civil service, etc. These schools might include practical training (e.g. tertiary level health sector schools include practical training in hospitals and other health care institutions).
General Characteristics of existing schemes	***Upper Secondary Level IVET*** ■ Dual VET (Apprenticeship) The aim of training in the dual system is to provide broad-based basic vocational training and the qualifications and competences required to practise an occupation as a skilled worker. Compulsory full-time education must have been completed by the time of commencing vocational training. The level of education attained depends on the level that the student already had. Trainees are in average between 16 and 18 years old when beginning this programme (although for some programmes there might be older). Training is conducted in two places of learning: companies and vocational schools (*berufsschulen*), and programmes normally last 3 years (some occupations only require 2 years). Normally, the apprentice is trained in an enterprise for 3 to 4 days a week and in the vocational school for up to 2 days a week (in general terms, 60% of the tuition hours are company-based, and 40% school-based). Training takes place on the basis of a private-law vocational training contract between a training enterprise and a young person. Work-based training places are offered in both private and public enterprises, in practices of the liberal professions and, to a very limited extent, also in private households. The suitability of training enterprises and in-company training personnel is monitored by the competent autonomous industrial bodies (Chambers), and they also register apprenticeship contracts. The professional competences in occupations to be acquired in in-company training are specified in a training regulation and included by the training enterprise in an individual training plan. Small and medium-sized enterprises are often unable to provide all the learning content. There are various ways of overcoming these problems, such as the offer of inter-company training periods or the formation of coherent training structures among several enterprises. For the teaching in the vocational school (*berufsschulen*), a framework curriculum, harmonised with the training regulations, is drawn up for every recognised training occupation. Vocational schools must provide at least 12 hours' teaching a week (normally 8 hours for vocational subjects and 4 hours to general subjects). Vocational schools decide on how to allocate teaching in consultation with training enterprises, the schools inspectorate and the competent industrial bodies. Enterprises and vocational schools conduct training, but the Chambers (competent autonomous industrial bodies) are responsible for holding examinations. After completing their training in the dual system, the majority of participants then take up employment as a skilled worker. Under certain conditions, however, they may also obtain the academic standard required for entrance to a *Fachhochschule* (Tertiary Level), and go on to higher education. Interestingly also, it is possible to distinguish apprenticeship programmes at ISCED 4 level. They are considered as second cycle within the Dual System for students who have already acquired a university entrance qualification (ISCED3A) or have already completed dual training in one training occupation (ISCED3B). In this case, students are normally 19-21 years old. ***Tertiary Level IVET*** ■ Dual Study Programmes Dual study programmes combine in-company vocational training with theoretical studies at a university of applied sciences ("*Fachhochschule*"), vocational academy ("*Berufsakademie*"), trade and technical school ("Fachschule"), university, administration and business academy ("*Verwaltungs- und Wirtschaftsakademie*") or since 2009 at a dual university. In contrast to regular university studies, dual study programmes are marked by especially high practical work relevance. By combining practical in-company training with theoretical instruction, students have the chance to acquire two qualifications at once in a large number of study programmes: a vocational training qualification and an academic degree (in almost all cases a bachelor's degree. Dual courses of study are an especially innovative, attractive and practical way of studying that has enjoyed increasing popularity for years with companies and young people.

	A co-operation contract between the institution of higher education (or academy) and the training enterprise closely co-ordinates and synchronises the specific learning contents. Also between the student and the training enterprise a contractual relationship is concluded, either in the form of a training contract, a work contract or an internship agreement (the relationship is regulated through a training contract, student-employee contract or unpaid-trainee contract). *Fachhochschulen* (Universities of applied sciences), universities and *Fachschulen* (trade and technical schools) offer practical work experience through internships. "*Fachschulen*" offer programmes at ISCED 5B-level that last for 2 to 4 years, while "*Fachhochschulen*" provide vocationally orientated programmes at ISCED 5A-level, lasting from 3 to 4 years. On the other hand, some Länder offer additional VET programmes at ISCED 5B-level such as the "*Berufsakademien*" which combine teaching in institutions of higher education and practical training in companies. This programme offers 50% of the training in the company. Enterprises bear the costs of the in-company training and pay the trainee remuneration for training, including for theoretical training in the vocational academy. "*Berufsakademien*" only exist in a number of regions. Depending on the law of the Land concerned, to enter a vocational academy, applicants must have different certificates, as well as a training contract. The relevant Land law normally lays down a period of study of 3 years.
Financing aspects	Concerning the dual system, German firms that recruit apprentices do not generally receive direct subsidy from public funds, except for some particular circumstances (i.e. hiring young people with some form of disability or creation of groups of small firms to set up and run joint training facilities). Enterprises bear the costs of the in-company training and pay the trainee remuneration as regulated by collective agreement which increases with every year of training (average is about one third of the starting pay for a trained skilled worker). The school-based element of dual vocational training is financed by Land and local authority public funds. The Länder bear the costs of internal school affairs (e.g. supervision of schools, implementing curricula, teacher training, teachers' pay), and local authorities are responsible for financing external school affairs (e.g. construction, maintenance and renovation of school buildings, ongoing management, procurement of teaching and learning resources). Costs of external assessment and examinations are met by the Chambers of Commerce (or similar organisations) which are funded through a compulsory membership subscription paid by all businesses. The Federally-funded Vocational Training Development Institute (BIBB) bears much of the administrative cost of updating and developing new training occupations.
Number of participants	After registering a constant increase in new training place contracts since 2005, a decline has been noted from 2008 onwards, as a consequence of the crisis. Thus, in 2009 the number of new apprenticeship contracts declined by 8.2% to 566,004 contracts, and then to 560,073 in 2010. Over the last years, apprenticeship places have failed to match the strong demand from young people and some wait several years for a place (even if demographic trends are reducing the pressure). On the other hand, and from an education level perspective, the largest provider of education at upper secondary level is the dual system. In 2009, 64.8% of the students opted for a dual-system apprenticeship (2010 BIBB data). Interestingly also, according to data provided by the Federal Statistical Office, approx. 86% of students in VET-schemes on ISCED levels 3 and 4 enrolled in the dual training system (1,659,259 students in Dual VET in 2009). Concerning ISCED5, 57.3% of the students attended university (1,397,492 students in 2009), whereas 24.6% went to '*Fachhochschulen*' (universities of applied sciences) (600,568 in 2009). Additionally, data available for 2007 show that in 2007 14.4% of the students attending ISCED5 level chose ISCED5B Dual Programmes. It must be highlighted that ISCED5 Dual Study programmes are becoming increasingly popular in Germany.
Recent/planned changes in VET policy	Germany's economic trend in general and the labour market in particular is closely intertwined with the apprenticeship-place market. As a consequence of the economic crisis, the number of apprenticeship training places decreased. One of the measures adopted to face lack of employment in the labour market, the short-time working initiative, was also applied for apprentices. In any case, before apprentices are permitted to begin short-time work, attempts should be undertaken to transfer them to other departments not affected by short-time working. Moreover, the Federal Employment Agency grants a training bonus ("*Ausbildungsbonus*") to those enterprises that took on apprentices of other companies which became insolvent or had to be closed. As well as this, the Central Government financed various programmes designed to create additional places and to improve in-company training conditions. An example of this is 'JOBSTARTER - *Für die Zukunft ausbilden'* (training for the future), launched in 2006 by the Federal Ministry of Education and Research (BMBF) to promote innovation and structural development in VET. The programme was co-financed with ESF funding. Furthermore, many of the programmes recently implemented aim at promoting the modularisation and flexibility of vocational training, improving transition from general school education into vocational training and increasing permeability between vocational training and higher/tertiary education.

GREECE

GREECE	
Main available IVET schemes	***VET at Upper Secondary Level (work-based)*** ▪ Apprenticeship System (ISCED 3C) *VET Upper Secondary Level schools (EPAL and EPAS) only offer exclusively school-based training (practical training is offered within the school premises). In any case, some VET schools have incorporated visits to enterprises as a means to help trainees realize the actual dimensions of work. Furthermore, 6 months of optional practical training after the acquisition of VET certificate might be offered, supervised and subsidised by OEEK (the Organisation for Vocational Education and Training).*
General Characteristics of existing schemes	***Apprenticeship System (ISCED 3C)*** As an alternative to the formal (school-based) IVET System, there exists an apprenticeship programme known as *Mathiteia*, which equates to the Upper Secondary Level of education. Apprenticeship is defined as alternating training in a school and the workplace. 4 days a week, in the mornings, students practice in an enterprise, whereas in the afternoons, they attend classes at school (theory and classroom practice). Also, one day per week, students only attend classes at school. The duration of the studies in apprenticeship is 2 years (four semesters). The selection criteria of trainees are the average grade of their lower secondary certificate and their social and economic condition. Graduates of A' grade of General or Vocational school are the only ones who can enrol in apprenticeship schools. Training in school is provided by Apprenticeship vocational schools (Apprenticeship EPAS – EPAS Mathiteias), which are under the control of the Manpower Employment Organization (*Organismos Apascholiseos Ergatikou Dynamikou, OAED*) of the Ministry of Employment and Social Protection (*Ypourgeio Apascholisis kai Koinonikis Prostasias, YPAKP*). Concerning practical training, trainees become active members in the labour market from the first year of their studies. The apprentice is contractually linked to the employer and receives a wage. The employer assumes responsibility for providing the trainee with training leading to a specific occupation. Furthermore, apprenticeship EPAS focus on specialties demanded by the labour market. Changes in the labour market are reflected in the curricula which are constantly adapted to its needs. At the end of their studies, trainees acquire a Specialty Certificate (ISCED Level 3C). This certificate allows them to enter the labour market or to continue their studies in IEK- Post-secondary non-higher education (only school-based, ISCED Level 4).
Financing aspects	Apprenticeship training is provided by Vocational Schools of Apprenticeship (Apprenticeship EPAS). They are funded by the money allocated to YPAKP (Ministry of Employment and Social Protection) from the State Budget, as well as by European funds. In particular, as far as the fees of teachers and trainers and practical training of the trainees are concerned in Apprenticeship EPAS, 80% is provided by ESF and the rest 20% derives from national resources. In the apprenticeship system, the apprentice is contractually linked to the employer and receives a wage. Moreover, among the benefits provided by Apprenticeship EPAS, trainees receive food and lodging as well as books and notes. Moreover, they are insured by the employer for their practical training. Concerning theoretical training, there are no fees for pupils.
Number of participants	The overall number of participants in upper secondary IVET (ISCED 3) in 2008, including pupils of apprenticeship EPAS and students in the school-based system, is 106,376, according to statistics of the Ministry of Education and Religious Affairs and the National Statistics Service of Greece. On the other hand, in the school year 2007-2008, 13,964 students attended Apprenticeship EPAS.
Recent/planned changes in VET policy	Concerning recent changes, it is interesting to comment on the Law 3475/2006. This Law established new types of upper secondary schools offering vocational education (ISCED 3), which are known as EPAL and EPAS. These relatively new vocational schools only provide school-based education (practical training is offered within the school premises).

HUNGARY

HUNGARY	
Main available IVET schemes	***IVET at Upper Secondary Level:*** ▪ Vocational training school (ISCED 3C) ▪ Secondary Vocational School (ISECD 3A&4C) ***IVET at Tertiary Level:*** ▪ Colleges (*főiskola*) and Universities (*egyetem)* (ISCED 5B) *Practical training in VET programmes may be provided through 3 different systems: school-based, alternance training and apprenticeship.*
General Characteristics of existing schemes	***IVET at Upper Secondary Level:*** Students typically enter vocational training at the age of 16, after compulsory school. The average duration of studies is 2-2.5 years. There are 2 different types of schools: ▪ Vocational training schools (*szakiskola*) (ISCED 3C), which provide most IVET Upper Secondary Education including apprenticeship-type schemes. These programmes combine school-based and work-based training. Approximately 40% of the subjects include vocational theoretical and practical training (the rest are general subjects). Fields and time frames of general education supplementing vocational theoretical training are not defined by the framework curricula, but by the pedagogic programme of the given school. ▪ Secondary Vocational Schools (*szakközépiskola*) (ISCED 3A). Programmes are mainly school-based, but there might be some work-based training as well. Only 16%-26% of the subjects are vocational, and the Secondary School Leaving Examination allows students entering higher level studies. On the other hand, it must be remarked that Secondary vocational schools might also offer ISCED 4C level vocational training, which includes only vocational training and lasts between 1-2 years. The programme contains both school and work based elements, and it is offered for young people aged 18-23. Although secondary vocational schools may provide vocational preparatory training in their general education years, they only offer VET awarding at ISCED 4C level. At the same time, the practical training part of vocational programmes might be offered through 3 different forms: ▪ School-based: Practical training can be organized at any 'practical training place' (*gyakorlóhely*) maintained/operated by either a VET school, a legal entity, an economic organization, an individual entrepreneur or a 'central training place' of a Regional Integrated Vocational Training Centre. ▪ Alternance training: Practical training provided on the basis of a cooperation agreement between a vocational school and an enterprise. It can only take place if practical training is less than 40% of the duration of the training programme or under other particular circumstances (such as when practical training is organized by a VET school and the summer continuous vocational practice is provided at an enterprise, or when the training is provided by another practical training provider because the organizer does not meet all the conditions). ▪ Apprenticeship training: Apprenticeship training exists as a form of practical training provided by an enterprise on the basis of a student contract (*tanulószerződés*) made between a student and an enterprise, under the supervision of a representative of the relevant local economic chamber, which inspects the conditions and standard of training before and also afterwards. Through this contract the enterprise is obliged to provide adequate practical training for the student in a safe and healthy work environment, in accordance with the professional and examination requirements of the vocational qualification pursued. The student contract establishes a legal relationship between the student and the enterprise, but it does not alter the student's status within education. The majority of ISCED 3C practical training is organized outside the school (typically in apprenticeship training). Normally, during the school year, one week of theoretical instruction alternates with one week of practical training, and during the summer holiday period, it is provided without interruption. As well as this, current education policy aims to encourage students, schools and enterprises to organise practical vocational training in such a way that its first phase (basic vocational skills), should be provided in a workshop setting (typically a school workshop). Meanwhile, this should rather be followed by training at a real workplace in the final vocational year, and preferably on the basis of a student contract (as an 'apprenticeship'). ***IVET at Tertiary Level:*** Tertiary level education offered by higher education institutions includes higher level VET (*felsőfokú szakképzés, FSZ*) programmes awarding an ISCED 5B level vocational qualification (*szakképesítés*). FSZ can be organised only by colleges (*főiskola*) and universities (*egyetem*), but it may be -and is to a large extent - provided also in secondary vocational schools (*szakközépiskola*), based on an agreement between the institutions.

	The ISCED 5B level vocational qualifications do not provide a higher education graduation degree, but give access to the labour market in the occupations defined. Curricula for these courses are of a modular structure, involving a basic education/competence developing, a mandatory vocational, and an optional (specialisation) module. Practical training may be provided in similar forms to those described for Upper Secondary Level Education, both in school workshops and at economic organizations, following the 3 forms explained for Upper Secondary Education. Apprenticeship contracts (*hallgatói szerződés*) have also been available since 1 January 2006 if the practical training is provided without interruption for at least 25% of the duration of the training.
Financing aspects	According to the Public Education Law county or local councils, state bodies, churches, public or private foundations, etc. can be the maintainers of secondary vocational schools and of tertiary institutions. In any case, their primary financing source in all instances is the central state budget which can be complemented by the school maintainers' budget. Thus, higher education institutions receive per capita state support regardless of their maintainer, which is then complemented with various other sources (FSZ courses can be either exclusively state-supported or fee-charging). The state provides for obtaining the first vocational qualification, so all the national full-time programmes are free of charge as long as they are aiming at the obtaining of the 1st vocational qualifications. Moreover, students participating in VET receive several benefits: In student contracts (apprenticeship), the practical training provider has to pay regular monthly payments. Students receive 20% of the compulsory minimum wage during the first half of the first study year. This sum must be increased yearly according to the performance and diligence of the participant by a rate determined by the training organizer. In addition, students are entitled to social security benefits. Participants in training based on a cooperation agreement will receive payment during the continuous summer practice (during the rest of the year, it is optional, not compulsory). Practical training provided in VET schools is supported by supplementary per capita grants. Interestingly also, the funding of any practical training provided by an economic organisation (based either on a cooperation agreement or a student contract) is ensured by the enterprise, which can then allocate a part or the whole of its vocational training contribution to related expenses. Enterprises can also apply for the reimbursement of any expenses not covered by their vocational training contribution from the training sub-fund of the Labour Market Fund. The range and amount of costs deductible by enterprises have been increased continuously, as financial incentive, in order to encourage enterprises to enter apprenticeship training.
Number of participants	The National Institute of Vocational and Adult Education of Hungary has published the following data referred to the year 2008: ▪ Number of participants in IVET (school based and alternate training): 120,583 students ▪ Number of participants in school based initial vocational training: 77,506 students ▪ Number of participants in the apprenticeship system: 45,587 students According to the Ministry of Education and Culture, in the 2009/2010 school year nearly two thirds (63.6%) of full-time students at upper secondary level studied in one of the two types of VET schools. As well as this, the same source of information shows that in the 2001/2002 school year only 2.90% of the VET students had a student contract, whereas in the 2008/2009 year the percentage was 12.11%. On the other hand, most students participating in the Hungarian higher education take part in training awarding a higher education degree (ISCED 5A). ISCED 5B level FSZ was introduced to Hungary only in 1997, and although the number of those participating in this type of training is continuously rising, the labour market is not open and informed enough concerning these qualifications. Thus, according to 2007 data: ISCED 5A 93.8% and ISCED 5B 6.2%.
Recent/planned changes in VET policy	Generally speaking, one of the long term goals is to promote apprenticeship contracts with an innovative content and further the increase of the number of economic organizations offering practical training, helping students' integration in the workplace. The option of organising practical training outside the school based on a student contract alone (instead of a cooperation agreement) has been possible since 1 January 2007 (only in cases where more than 50% of the duration of practical training is provided at an economic organisation). In the past years VET policy has placed particular emphasis on increasing enrolment rates in VET schools, especially in occupations in short supply in the labour market. In February 2010 a scholarship programme was launched for vocational school students training in occupations in high demand in the labour market. The overall objective of the programme is to improve the competitiveness of the economy by making VET more demand driven, and at the same time to improve the prestige of VET and to make the career of skilled workers a more attractive option for students. Interestingly also, a new form of VET was started from the school year 2010/11. The so-called early VET (*előrehozott szakképzés*) allows students to start vocational training right at the age of 14. Early VET programmes take 3 years to complete, therefore students may obtain a vocational qualification as early as the age of 17 (although, in general, in Hungary the compulsory school attendance age is 18). The programme offers primarily work-based training, and it is so new that it is not officially classified yet, but it is expected that it will equate to ISCED 3C level. Finally, and concerning the effects of the economic crisis, from 2009 some Vocational Training Centres saw a shortage in their budget.

IRELAND

IRELAND	
Main available IVET schemes	***Apprenticeship*** Work-based Apprenticeship Training (ISCED 4 oriented to level 5B) ***Post Leaving Certificate courses (PLC)*** Vocational education programmes and courses in non-tertiary colleges and centres of further education (ISCED 4A/B oriented to level 5A/B) ***Entry-level VET for specific sectors*** Entry-level VET for various industry sectors provided by publicly-funded agencies (ISCED 4A/B oriented to level 5A/B) *An important feature of the Irish VET system in general is that there is not a sharp distinction between initial and further and continuing VET for the unemployed and new entrants into the workforce, whether they are young or older people. Moreover, there is not one system of IVET for young people who have completed compulsory schooling, but rather IVET policies and programmes which are implemented through different government departments and intermediary organisations. Thus, the traditional type of alternance training combining a school-based environment and a real workplace is not a feature of Irish IVET.* *At Upper Secondary Level, two different vocational certificates might be obtained: Leaving Certificate Vocational Programme (LCVP) which combines academic and work related training and opens the pathway to further education, and the Leaving Certificate Applied Programme (LCAP), mainly aimed at entering the labour market. Both certificates are 100% school-based, so they should not be considered as apprenticeship-type schemes.*
General Characteristics of existing schemes	***Apprenticeship Training*** (ISCED 4 oriented to level 5B) Apprenticeship is the recognised means by which individuals are trained to become craftspersons. The apprenticeship system is managed by FÁS (Irish Training and Employment Authority) and its regional and local offices, in co-operation with the Department of Education and Science (DES), the employers and the trade unions, under the aegis of the National Apprenticeship Advisory Committee. Apprenticeship must be at least 16 years of age and have successfully completed compulsory education (Junior Certificate). However, the majority of apprentices have already completed upper secondary level education. Thus, apprenticeship in Ireland frequently follows the Senior Leaving Certificate, and apprentices are not considered to be 'in education' as in the Dual System countries. Those seeking an apprenticeship apply directly to a company. The company must be approved by FÁS to offer apprenticeship places and the apprentice must have employed status. Within apprenticeship training, apprentices receive alternating on and off-the-job training (80% work-based, 20% school-based), and 100% of the subjects are vocational. The apprenticeship system comprises 7 phases over a period of 4 years. Three of the apprentice phases are off-the-job, and are they delivered in FÁS Training Centres and Institutes of Technology over a total of 40 weeks. The four on-the-job phases take place with the employer. Apprentices are recruited and employed in their chosen occupation by companies approved by FAS, and receive wages when training on-the-job, and a trainee allowance during off-the-job training. On successful completion of this training, an apprentice receives an Advanced Certificate awarded by FETAC, the Further Education and Training Awards Council. The corresponding ISCED level is 4, but oriented to level 5B. FÁS, in its role as the national training authority, develops curricula for all its courses, including for apprenticeship training. It is also responsible for the quality assurance and conformance of its training materials with the requirements of the National Framework of Qualifications (NFQ) and the Further Education and Training awarding body FETAC. ***Post Leaving Certificate courses (PLC)*** (ISCED 4A/B oriented to level 5A/B) Post Leaving Certificate courses (PLCs) aim to provide a bridge between school and work for those who need further initial vocational education to enhance their employment opportunities. They allow entry into a series of possible occupations, and provide a foundation for lifelong learning. PLC courses are provided in secondary level schools and further education centres and colleges. Programmes are (usually) of 1 to 3 years duration and courses adopt an integrated approach, focusing on technical knowledge, core skills and work experience (90% school-based, 10% work-based). 65% of the subjects are vocational and 35% general. They can lead to certification from the Further Education and Training Awards Council (FETEC), which equates to ISCED 4A/B oriented to level 5A/B.

	While the courses offer an alternative to programmes available in higher education, certain PLCs are accepted as bridges into university education. Some 40.8% of all participants are over 21 years, and accordingly the courses are an important re-entry route to learning for adults. ***Entry-level VET for specific sectors*** (ISCED 4A/B oriented to level 5A/B) Entry-level VET can also be provided by publicly-funded sectoral agencies for various particular industry sectors, and they are usually offered at Institutes of Technology (IT's), one the main third-level educational institutions providing courses aimed at the IVET sector. They lead to ISCED 4A/B level (oriented to level 5A/B) certificates. These include, for instance, the following: – *Fáilte Ireland*, the National Tourism Development Authority, provides full-time day and block release courses, for trainees, in the hotel, catering and tourism industry. These courses are mainly for young entrants pursuing careers in tourism and related hospitality occupations. The trainees are generally aged from 17 to 24 years, and the courses range from 1 to 4 years. Formal instruction is mainly delivered in Institutes of Technology and it is complemented by periods of industry work experience. – *Teagasc*, the Agriculture and Food Development Authority, provides training for young people wishing to pursue a career in agriculture, horticulture and equine studies. Many of the courses extend over 2 years and include course work at college and work experience. – *Bord Iascaigh Mhara (BIM)*, the Irish Fisheries Board, offers initial vocational training courses in sea and fish farming.
Financing aspects	Expenditure on initial vocational education and training (IVET) is considerable and has been growing over the last two decades as young people stay longer at secondary school and a greater proportion attend post-school education and training. Funding for IVET is very largely from central government, with only small contributions from employers or individuals. Concerning non-tertiary further education, there are nine different funding programmes in place, as well as grant schemes and allowances to support students, including mature students, into further and higher education. For instance, school leavers attending full-time Post Leaving Certificate Courses (PLC) and Institutes of Technology (ITs) courses of at least one year's duration in publicly funded colleges, do not pay fees. Funding for apprenticeship training is sourced from the employer-levied, National Training Fund (NTF), together with central government funds. The fund is fed from a levy on employers of 0.7 % of employee earnings. The levy is not a new charge but a relabeling of part of employers' social insurance contribution. The NTF funds most of the costs of apprenticeship training undertaken in FÁS, whereas the government funds most of the costs of the apprentices training undertaken in the education system, i.e. in the Institutes of Technology. Apprentices receive wages when training on-the-job, based on a percentage of the full craft wage. On the other hand, funding of apprentices during off-the-job training phases is provided by the state and apprentices receive a trainee allowance (equivalent to their wage).
Number of participants	Due to the growth in the economy from 1998-2006, there was a rapid expansion in total apprentice registrations from 16,125 in 1998 to 29,801 in 2006. During 2007 and 2008 however, due to the downturn in the construction industry, apprentice numbers have declined significantly with 3,765 new registrations in 2008, a 44% decrease in comparison to 6,763 in 2007 and 8,306 in 2006. In 2008 the total number of apprentices across all phases of training was 26,170 a decrease from 28,500 in 2007. Also during 2008 there was a significant increase in the level of redundant apprentices. On the other hand, in 2007-08 there were approximately 30,000 persons enrolled on full-time PLC courses. The programme is the largest non-tertiary, post secondary-level, initial vocational education programme in Ireland.
Recent/planned changes in VET policy	In recent years there have been several initiatives to increase progression from the VET sector into higher education, in particular the introduction of Post Leaving Certificate (PLC) courses, which increasingly link into third-level programmes. Also, the national partnership agreement 'Towards 2016' has recommended that measures should be introduced to promote take-up of apprenticeship by older workers. With regard to the current economic crisis, and during 2008, FAS amended the apprenticeship scheme rules to permit redundant apprentices to progress to their next off-the-job phase in their apprenticeship without having to complete the next on-the-job stage. To further assist redundant apprentices to complete their off-the-job training and assessments with employers, a Redundant Apprentice Rotation Scheme was also introduced whereby employers are supported to provide on-the-job training for a redundant apprentice while their employed apprentice is attending an off-the-job training phase in FÁS or the Institutes of Technology.

ITALY

ITALY	
Main available IVET schemes	***Primarily Workplace based (Apprenticeship)*** ▪ Apprendistato per la Qualifica e per il Diploma Professionale (Training Apprenticeships) ▪ Apprendistato Professionalizzante o Contratto di Mestiere (Professional Apprenticeships) ▪ Apprendistato di Alta Formazione e Ricerca (Advanced Training and Research Apprenticeships) ***Primarily School based (Traineeship)*** *Vocational Upper Secondary Level (ISCED 3)* ▪ Technical Institutes ▪ Vocational/Professional Institutes *Post Secondary Education (Non Tertiary) (ISCED 4)* ▪ Higher Technical Institutes ▪ IFTS courses *Initial Vocational Training (FPI)* ▪ First Level of Initial Vocational Training (*ISCED 3)* ▪ Second Level of Initial Vocational Training (*ISCED 4)* *In Italy, Upper Secondary Level Education starts at age 14, and compulsory education lasts until 16 years of age. Additionally, students have the right/duty (diritto/dovere) to continue their training until age 18.*
General Characteristics of existing schemes	***Apprenticeship*** The Consolidated Act on Apprenticeships, recently passed last July 2011, is intended to better clarify the legal and institutional position of apprenticeships in Italy. This Act sets out regulations that define apprenticeships as open-ended contracts aimed at training young people. This means that at the end of a vocational training period, if neither the employer nor apprentice withdraws from the agreement, the working relationship will continue and be considered open-ended. Meanwhile, the type and duration of the training, and also the number of apprentices that can be employed, are to be established by national collective bargaining agreements covering the relevant sectors, and by intersectoral agreements. However, an employer can not hire more than one apprentice for every qualified or specialised worker. As for the pay of apprentices, their salary has to be at least two levels lower than the salary figure established in the national sectoral collective agreement. Alternatively, salary levels can be established at a specific percentage of the full salary. Three types of contract are foreseen for all sectors according to this new Law: 1)- Apprendistato per la Qualifica e per il Diploma Professionale (Training apprenticeships): This apprenticeship is aimed at young people aged between 15 and 25 (it will be possible to substitute the final compulsory school year from 15 to 16 with an apprenticeship. The contract can last up to a maximum of three years (four in the case of regional diplomas). The training programme for these types of apprenticeship is to be established by the regions, in collaboration with the Ministry of Labour (LPS) and the Ministry of Education. 2)- Apprendistato Professionalizzante o Contratto di Mestiere (Professional Apprenticeships): It is designed for young people aged 18 to 29 who require a form of professional training. This form of contract can also be used in the public sector. The contract can last no more than three years (five for artisans). The minimum length of contract and type of training will be established in collective and intersectoral agreements. The training organised by an apprentice's company is to be integrated with public training programmes aimed at providing basic professional skills, for a maximum of 120 hours spread throughout the three years of the apprenticeship. 3)- Apprendistato di Alta Formazione e Ricerca (Advanced Training and Rresearch Apprenticeships): Advanced training and research apprenticeships are aimed at people who require high levels of professional training in the field of research, doctorates and to enter professional associations. This type of apprenticeship is for young people aged 18 to 29 and can also be used in the public sector. The regulation and length of the apprenticeship is established by the regions, in agreement with regional employer associations, universities, technical and professional institutes and other training and research institutes. In any of the above cases it will be possible to extend apprenticeships where periods of illness or injury last 30 days or more. This new Law substitutes the Law 30/2003, which introduced some reforms in the apprenticeships system, there are three different types of apprenticeships

Vocational Upper Secondary Level (ISCED 3)

Upper Secondary VET Training programmes are attended by pupils aged 14-19. Students can alternate study and work periods, under the responsibility of schools or training institutions. These work periods are known as 'Traineeships' and they are built on the basis of agreements with enterprises or associations. The minimum age required for starting alternance training is fixed at 16 years of age.

The balance between school-based and work-based training depends on the pathway and on the agreements signed between schools and enterprises (schools are responsible for designing pathways, keeping contacts with enterprises, etc). In these traineeship experiences there is not an employer-employee job relation, and youngsters do not receive any salary. The majority of students involved in upper secondary education (usually in the last grades of Technical and Vocational Schools) take part in work-based training experiences as trainees.

At the end of the upper secondary school (5-year programmes), students can pass a state examination and get a diploma which is required for entry into pathways of Higher technical education and training or, after attending a supplementary year, for entry into universities.

Vocational upper secondary education includes:

- Technical education, provided by istituto tecnico (technical school). The overall length of study is 5 years. Their duration is subdivided into a common basic 2-year cycle and a 3-year cycle with specialisations.
- Vocational/Professional education, i.e. istituto professionale (vocational schools). They offer courses lasting either 3 or 5 years. More precisely, they are subdivided into 2 stages. The first one is a 3-year cycle, leading to obtain a qualification diploma, the certificato di qualifica professionale (vocational qualification certificate), which can be used to enter the labour market or to enter post-qualification courses. The second stage would be a post qualification 2-year cycle that grants admission to IFTS - Higher technical education and training.

Post Secondary Education (Non Tertiary) (ISCED 4)

Higher technical education and training is offered through two different pathways. In both cases, 30% of the activities are dedicated to work-based training.

- ITS: The formative offer and the programmes is organised by the Higher Technical Institutes (*Istituti Tecnici Superiori*, ITS) leading to a higher level technical diploma. Courses last for 2 years (1800/2000 hours). ITS courses can be established by the following institutes: a technical or vocational state or non-state upper secondary school; a training institute accredited by the Region; a firm/enterprise of the professional sector; a university department or a local authority. Courses offered by Higher Technical Institutes (ITS) lead to the attainment of a Diploma of high level technician.
- IFTS system: The formative offer of the IFTS courses is organised by the Regions (on the basis of guidelines defined by a National Committee). IFTS courses (Higher technical education and training) last 1 year (a total of 800/1000 hours), and lead to a higher technical specialisation certificate. IFTS courses are planned and provided by minimum four educational institutes: school, vocational training provider, university, enterprise or another public or private subject, formally associated in the form of a consortium. IFTS courses, organised by the Regions, lead to the attainment of a Certificate of high level technical specialisation.

To access both types of courses, the possession of an upper secondary school leaving certificate is required.

Courses provided by ITS and IFTS courses are addressed both to young people and adults (courses are not organised according to age levels).

Initial Vocational Training (FPI)

Initial Vocational Training (*formazione professionale iniziale* - FPI), is offered by the recognised formative agencies operating nationwide, and it is under the competence of the Regions.

Thanks to the short duration and to the strong focus on vocational aspects of those pathways, IFP allow inserting young people into the job market in a short time.

- First Level of Initial Vocational Training

The First-level (or basic) training pathways are addressed to those who have completed the first cycle of education (lower secondary).

These paths have a 3-year length, and 35-50% of the subjects are general, whereas 50-65% are vocational subjects. Additionally, on average 30% of hours are devoted to training on the job, through traineeship schemes similar to those offered in vocational and technical schools.

The introduction of such programs into the second cycle system (ISCED 3) (Agreement State-Regions 29/4/2010) award a national relevance to this qualification.

- Second Level of Initial Vocational Training

The Second-level training pathways are addressed to those who have completed the upper secondary level of education (ISCED 3) or who have obtained a first-level vocational qualification (FPI) (many of the students who access these courses are unemployed).

Second-level vocational training courses aim at acquiring vocational skills with a high theoretical, technical and managerial content, also through practical work and stages in enterprises. Thus, the curricula include practical exercises and on-the-job training periods.

Financing aspects	The vocationally oriented streams in education (technical and vocational colleges) are funded by the Ministry of Education, University and Research, as well as the provincial authorities, whereas IVET is mostly financed by the Ministry of Education, the Regions and the Provinces. Moreover, regional authorities can also use ESF to contribute to measures aimed at reducing school dropout rates, teacher training and refresher courses and other activities. Interestingly also, Initial Vocational Training, as well as ITS and IFTS courses, are free of charge. Initial Vocational Training and IFTS courses are financed through the European Social Fund, whereas ITS are financed through ministerial, regional and private funds. Finally, concerning Apprenticeship, the State grants relief from social security contributions to firms offering apprenticeship contracts and to apprentices, who pay a reduced rate. The salary is established in the contract, on the basis of what it has been agreed in the collective bargaining. On the other hand, the regional authorities finance training courses outside the workplace, partly using funds provided by the state and the European Social Fund.
Number of participants	In the 2007-08 school year, there were 930,578 students in Technical schools and 557,251 in Vocational Schools. The year after, in the 2008-09 school year, numbers decreased to 917,200 students in Technical Schools and 551,117 in Vocational Schools. On the contrary, the number of students in IFP 3-year courses (First Level) increased from 130,431 (2007-08) to 152,885 (2008-09). On the other hand, in 2008 the number of apprentices employed was 644,593, of which: – 7.5% in right-duty apprenticeship – 91.8 % in profession-oriented apprenticeship – 0.7 % in higher apprenticeship A year later, in 2009, the number was lower, 591,000, as a consequence of the economic crisis. (The Italian law foresees a numeric limit for the recruitment of apprentices, that cannot be more than the 100% of the total of employed people in the company).
Recent/planned changes in VET policy	Broadly speaking, the 2007-2013 Programmes for Education are contributing to Italy's commitment to reduce both the rate of early school dropouts and the percentages of 15-year old students with poor reading skills and poor math skills. On the other hand, Law 53/2003 and D.Lgs. 226/2005 separated the general/academic system (*licei*) and the vocational education and training system respectively under the state and the regions responsibility. It was also established that the two systems have equal dignity and that 'it is granted the possibility to pass from the *licei* system to the vocational education and training system'. Meanwhile, the Law 30/2003 has introduced some reforms in the apprenticeships system, basically distinguishing the three different types of apprenticeships previously referred to. Interestingly also, the new reform of the Italian education system, called "Gelmini", started with the laws 133/2008 and 169/2008. The Gelmini reform entered into force the 1st September 2010 for upper secondary school (2010/2011 school year). Additionally, in 2008, the guidelines for the reorganisation of the whole higher technical education and training system (ISCED 4) were issued. This reorganisation was meant at spreading the higher technical and scientific culture and strengthening post-secondary training of non-academic nature, making both young people and adults obtain a higher level technical specialisation. As well as this, agreement State-Regions 29/4/2010 has also reformed Initial Vocational Training (FPI). It is also important to stress the agreement signed between the government, regions, provinces and social partners last 27 October 2010 to re-launch the apprenticeship contract, because the use of such contracts had fallen considerably in recent years. Finally, it is worth stressing the already mentioned "Consolidated Act on Apprenticeships", recently passed last 28th July 2011. This Act has been launched with the aim to better clarify the legal and institutional position of apprenticeships in Italy. Interestingly, this Act establishes three main types of Apprenticeship contracts for all sectors, that is to say, ▪ Apprendistato per la Qualifica e per il Diploma Professionale (Training Apprenticeships) ▪ Apprendistato Professionalizzante o Contratto di Mestiere (Professional Apprenticeships) ▪ Apprendistato di Alta Formazione e Ricerca (Advanced Training and Research Apprenticeships)

LATVIA

LATVIA	
Main available IVET schemes	***IVET at Upper Secondary Level*** ▪ Vocational education programmes (ISCED 3C) ▪ Vocational secondary educational programmes (ISCED 3A&3B) ***IVET at Higher Education Level*** ▪ College programmes (ISCED 5B) *An **apprenticeship system** exists on a small scale mainly in the crafts sector in traditional professions, and it is regulated by the Law on Crafts. The main organisation involved is the Chamber of Crafts, and the curricula of apprenticeships are not approved by the Vocational Education Administration, as these programmes are not part of formal IVET (there is no ISCED equivalence). The apprenticeship is based on a contract concluded between apprentice and master, and qualifications do not provide access to regulated professions. In any case, during the apprenticeship, an apprentice is regarded as a student; theoretical training might be offered by vocational schools or the Chamber of Crafts. Through the apprenticeship system it is possible to obtain the journeyman (Amata zeļļa diploms) and, thereafter, master craft qualification (Amata meistara diploms).*
General Characteristics of existing schemes	***IVET at Upper Secondary Level*** Vocational Upper-secondary education (*profesionālā vidējā izglītība*) (ISCED 3) is provided at vocational secondary schools, and it is open to students who have completed compulsory basic education. Two different options are offered: ▪ Vocational education programmes (ISCED 3C): Vocational education programmes last for 2-3 years. The content is divided between general and vocational subjects 60:40, and into theory and practice 35:65 respectively. The practical training usually takes place at schools and enterprises. Qualification practice training in enterprises for 3 years long programmes has a volume of 840 hours (approx. 20-22 weeks), while for 2 years programmes, the duration is 480 hours (approx. 12 weeks). Graduates receive a Certificate of vocational education and qualification level ISCED 3C. Vocational training does not give the right to continue studies at a higher education institution, but graduates may continue in 2 year vocational secondary education programmes. ▪ Vocational secondary educational programmes (ISCED 3A&3B): Vocational secondary educational programmes take 4 years. The structure of upper-secondary VET programmes combine theory and practical training on a 50:50 basis and general and vocational subjects on a 60:40 basis. When graduating, students receive a diploma and a Level ISCED 3A/3B vocational qualification. The diploma gives the rights to continue studies at a higher education institution. Moreover, vocational schools might also offer post-secondary non-tertiary vocational education (ISCED 4B). Programmes at this level are to be implemented after graduating from general secondary programmes. They are focused towards mastering purely professional skills and knowledge. Programmes last for 1-2 years and their main objective is to prepare students for entering labour market. The proportion between general and vocational subjects is 60:40, whereas the balance between school-based and work-based training is 35:65. ***IVET at Higher Education Level*** The completion of the Certificate of General Secondary Education (*Vispārējās vidējās izglītības sertifikāts*- ISCED 3A) is a requisite. The Vocational Education Law provides higher professional programmes at the level of: ▪ College programmes (ISCED 5B): Also known as 'First level higher professional education programmes', they are available at colleges and higher education institutions. Studies last for 2-3 years. The content of first level higher professional education comprises study courses, practical placement and a thesis. Training practice implies a minimum of 16 credits (approx. 640 hours).
Financing aspects	Initial vocational education is financed according to the Education Law (*Izglītības likums,* 1998), Vocational Education Law (*Profesionālās izglītības likums,* 1999), and Regulations of the Cabinet of Ministers. Subsidies come from the state general budget, local government and private sources. State subsidies are determined by the Cabinet in conformity with the numbers of students and the related per capita costs. As the majority of VET schools are state-owned and run, the national budget is the main source of funding. Subsidies for vocational education come as well from the local governments and private sources. Funding allocated to education increased from year to year during the period 2003-2007. However, in the situation of economic recession, the vocational education budget experienced rather critical reduction: by 21.5% in 2009 and by 12.2% in 2010. As a consequence, debts increased among schools, and in many cases there were cuts in support services for students.

Number of participants	Broadly speaking, the general secondary education pathway is more popular than for vocational secondary education because general education has a higher 'prestige'. The distribution of students by types of programmes (initial secondary general and vocational) has been rather stable for last five years. The ratio of students who after basic education chose general education, during the period of 2004-2007, fell from 65.7% to 62.1%, while the ratio of students preferring vocational education slightly increased from 29.6% to 30.4%. In 2008/2009, 35,300 students participated in upper-secondary vocational programmes. In 2007, 15.1% of the students in ISCED 5 level courses (19,242) were following ISCED 5B programmes.
Recent/planned changes in VET policy	Concerning the apprenticeship system, the Chamber of Crafts is planning to introduce several measures to increase interest in apprenticeship, they include: providing more information to VET schools and improving the network of craft masters who would be interested in training apprentices. As a consequence of the economic crisis and the lack of resources, the contribution of EU funds has a significant role in the implementation of structural education reforms. The European Social Fund support is provided, among others, for promoting the attractiveness of vocational education (i.e. students are provided with scholarships), or for improving the quality of vocational education. Moreover, as a reaction to the negative demographic indicators, which result in decrease of the number of students, and to the limited financial resources, the Ministry of Education and Science designed the 'Guidelines for Optimisation of Vocational Education Establishments Network for 2010-2015' aimed at providing further implementation of the vocational education system structural reforms by optimising the number of vocational schools and their geographical coverage and by differentiating vocational schools (new types of schools are planned to be formed).

LITHUANIA

LITHUANIA	
Main available IVET schemes	***Apprenticeship-type schemes (mainly school-based)*** *IVET at Upper Secondary Level (ISCED 3)* ▪ ISCED 3C programmes ▪ ISCED 3A&3B programmes *IVET at post-Secondary Non-Tertiary Level (ISCED 4)* ▪ Vocational training programmes *IVET at Higher Education Level (ISCED 5)* ▪ Non-university higher education Programmes (SCED 5B) ***Apprenticeship (work-based)***
General Characteristics of existing schemes	***IVET at Upper Secondary Level*** These programmes are designed for students who have completed lower-secondary education, and they are provided by vocational schools. The entrance age is usually 16-17 years. In these upper secondary programmes, the proportion of vocational subjects varies between 60-90% over the whole content, depending on the course. Work-based training might vary between 20-25% of the tuition hours. 2 different programmes are offered: ▪ ISCED 3C programmes: designed for students who only wish to obtain a vocational training diploma (*profesinio mokymo diplomass*) providing access to labour market. Studies last for 2 years. ▪ ISCED 3A&B programmes: aimed at those willing to complete general upper-secondary education. Those students who opt to follow the second type of programmes can acquire both professional qualifications and a secondary school certificate, that is, they get the vocational training diploma as well as the matura diploma (*brandos atestatas*) corresponding to general education, which provides access to higher education. Here, courses last 3 years. ***IVET at post-Secondary Non-Tertiary Level (ISCED 4)*** Vocational training programmes at post-secondary level are designed for students who have completed upper-secondary education and received a *matura* certificate, but are not academically inclined, and prefer to be trained as workers. These programmes are offered in vocational schools (the same as ISCED3 programmes), and their duration of programmes may be 1-2 years. Vocational subjects cover 90% of the contents of the programme, whereas 80% of the tuition hours are school-based (20% work-based). Successful ISCED 4 graduates receive a vocational training diploma (*profesinio mokymo diplomas*) providing access to the labour market. Progression possibilities to higher education are the same as for graduates from upper secondary education. ISCED 4 programmes have become more and more attractive for adults. ***IVET at Higher Education Level*** VET at tertiary level is delivered through non-university higher education programmes (ISCED 5) which are designed for those having the *matura* certificate and wishing to obtain non-university higher education. Programmes are provided in colleges (*kolegija*), and the duration of studies is 3-4 years. Practical training (including placement for practice in enterprise) should constitute at least a third of the total study programme time. Graduation of non-university higher education programmes leads to professional bachelor degree (*profesinis bakalauras*) and to vocational qualification. ***Apprenticeship*** Apprenticeship is a form for VET organisation which was introduced by the new Law on VET, which entered into force 1 January 2008. Apprenticeship (*Pameistrystės Profesinio Mokymo Organizavimo Forma*) combines training organised at the work place (i.e. enterprise, institution, organisation, farm or a freelance teacher) with theoretical training, which may be provided in a VET institution or other school. Practical training should comprise at least 60-70 % of the total time allocated to teaching vocational subjects. A student and a company sign a labour contract and, together with the school, a trilateral training agreement. Currently only a few schools provide a work-based apprenticeship route aimed at obtaining a vocational qualification in a limited number of professions. For example, Vilnius Vocational Education and Training Centre of Technology and Business (*Vilniaus technologijų ir verslo profesinio mokymo centras*) offers the industrial mechanic and energy systems electronic work-based training programmes. *(There is no information available on possible ISCED equivalences)*

Financing aspects	The Law on Vocational Education and Training (1997, new edition 2007) specifies that VET is funded from central and local government budgets, Employment Fund and other lawfully acquired sources. The main responsibility for IVET funding lays on the Ministry of Education and Science (*Svietimo ir mokslo ministerija, MES*). The Law on VET stipulates that funding for formal VET is allocated from the State budget in accordance with the methodology of calculating training costs per one student approved by the Government. This is the so called "student's basket approach", which was introduced in the new Law on VET in 2007, as well as in the Law on Studies and Science for Higher Education in 2009. Concerning tertiary level education, after adopting the Law on Studies and Science in 2009 new mechanisms for university and college funding were established, where the "student basket approach", fully covers study costs for best graduates of upper-secondary education. Students having worse study results than other students' average results may lose state funding after half period of studies.
Number of participants	The majority of students in upper secondary education prefer general education orientation programmes. According to 2009 data, 73.1% of the students chose the general/academic path. Mainly, it is because traditionally general education and higher education have been more appreciated. On the other hand, popularity of post-secondary non-tertiary programmes in 2009, compared to 2008, has increased by more than one third. ISCED 4 programmes have become more and more attractive for adults. According to Eurostat, in 2007 there were 9,761 students in ISCED 4 vocational programmes. The increasing number of students in ISCED4 caused that in 2009, compared to 2008, vocational schools attracted 10 % more students and the number of entrants to formal VET programmes was the highest in the decade (22.7 thous.). Finally, concerning tertiary level studies, 71.4% of the students in higher education programmes prefer university level programmes (ISCED 5A), according to 2007 data. This situation may be caused by relatively recent implementation of ISCED 5B programmes, which started in 2000. According to Eurostat, there were a total of 56,313 students in ISCED 5B programmes (2007 data).
Recent/planned changes in VET policy	The new Law on VET establishes principles for design, management and award of qualifications and expands variety of forms for training organisation (introduces apprenticeship). Thus, this new Law on VET should facilitate participation in VET through a number of introduced developments, as it defines national qualification framework, describes validation of learning outcomes acquired outside formal education, sets principles for VET quality assurance, etc. Following the law, students are provided with more opportunities in different pathways. On the other hand, seeking to improve standing of VET and its attractiveness to stakeholders, management decentralisation is being implemented through the reorganisation of state VET schools into self-governing institutions (*viešoji įstaiga*). Decentralisation and diversification of funding started in 2003. This allows VET providers to have a variety of stakeholders (enterprises, regional and municipal government representatives, etc.) and increases budgetary autonomy.

LUXEMBOURG

LUXEMBOURG	
Main available IVET schemes	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Vocational system (*régime professionnel*): Apprenticeship and Mixed systems ***IVET at Post-Secondary Non-Tertiary Level*** ▪ Advanced technician's certificate (BTS)
General Characteristics of existing schemes	***IVET at Upper Secondary Level (ISCED 3)*** Students may start Upper Secondary Education at age 15. The centres providing technical secondary education are the technical secondary schools or '*lycées techniques*'. IVET at Upper Secondary Level includes an intermediate cycle and an upper cycle (3-4 years, ISCED 3). The intermediate and upper cycles of technical secondary education include three different strands: – the vocational system (*régime professionnel*), – the technician training system (régime de la formation de technicien) – the technical system (*régime technique*) Technician and technical systems are only offered in a school-based format. However, the vocational system might be provided following different formats: ▪ Apprenticeship (*apprentissage*): The main feature of the vocational system is apprenticeship, including practical in-company training under an apprenticeship contract and the attendance of concomitant vocational courses in a technical secondary school. Apprenticeship in Luxembourg is an 'alternance' training system comparable to the German Dual System, and it is the traditional vocational training pathway. It consists of practical in-company training (with a tutor supervising the student) lasting 3 years, together with theoretical education in a technical secondary school. ▪ Mixed system (*filière mixte*): training including full-time vocational classes in a technical secondary school for one or two years for theoretical and practical education, then practical in-company training for one year with concomitant theoretical classes at school. ▪ Full-time stream (*filière de plein exercice*), completely school-based. The form that vocational education takes (apprenticeship, mixed or school-based) depends on the occupation. The vocational system is the most direct and simplest way of gaining a vocational qualification. These qualifications include: ▪ Technical and vocational proficiency certificate (*certificat d'aptitude technique et professionnelle* - CATP) : It provides access to the '*brevet de maîtrise'* (master craftsman's diploma). ▪ Manual proficiency certificate (*certificat de capacité manuelle* - CCM) : the same practical training curriculum as the CATP, but with less theoretical education; holders may subsequently obtain the CATP if they attend the theoretical courses. ▪ Preliminary Technical and vocational certificate (*certificat d'initiation technique et professionnelle* - CITP) : simplified practical and theoretical education in comparison with the CATP or CCM. The aim of this training is socio-occupational integration, or continued studies for the CATP. Education in the vocational system is recognised by a final apprenticeship examination organised nationally at the end of the final year. ***IVET at Post-Secondary Non-Tertiary Level*** The Advanced technician's certificate (*Brevet de technicien supérieur* - BTS) is a higher-level course in technical secondary education lasting 2 years. ▪ Students must possess a baccalaureate, technical baccalaureate or technician's certificate. In this training, the stress is on alternance between theoretical education and its practical application. Alternance may take the form of visits, work placements in enterprises (16 weeks during the two-year course) or case studies based on the realities of the workplace today. Occupational expertise is imparted by visiting instructors and by teachers who have acquired expertise over the years as a result of their close contacts with enterprises.
Financing aspects	State education is free of charge in Luxembourg and most schools in Luxembourg are in the public sector. All national investment in education and training comes from the State budget, and chiefly from the budgets of the Ministry of Education and Vocational Training and the communes. The amount of this expenditure is set annually in the budget law. Concerning the vocational system, enterprises are responsible for the apprenticeship allowances of young people in CATP, CCM and CITP training. These apprenticeship allowances vary greatly from one trade to another and from one year of apprenticeship to another. The State, through the Employment Fund (*Fonds pour l'emploi*), is nevertheless responsible for apprenticeship subsidies and awards. To promote apprenticeship, financial aid is paid to enterprises training apprentices and to apprentices successful in their year of apprenticeship and in the final examination. In practical terms, any employer employing an apprentice may claim aid equivalent to 27 % of the apprenticeship allowance paid to the apprentice, and a refund of the employer's share of social security contributions on the apprenticeship allowance paid.

	If apprentices are successful in their year, the Employment Fund pays the apprentice an award of 117 Euros per month of apprenticeship. In addition, special aid is paid to enterprises undertaking to provide work placements for students from educational options involving full-time education at school and practical training that includes work placements.
Number of participants	In the school year 2007/2008, there were 3,162 students in the technician training system and 4,112 in the vocational system.
Recent/planned changes in VET policy	Concerning transition from one cycle to another or from one system to another within the Technical Secondary Education, the Government plans to overhaul promotion criteria and to harmonise them in order to introduce a simpler promotion and guidance system allowing students to progress and to prevent unnecessary failures. The 2008 VET Law aims at reforming VET based on lifelong learning and competences. A new approach is to be developed concerning school-based and work-based training, and it is expected that technician training path will also include the apprenticeship system, promoting work-based training.

MALTA

MALTA	
Main available IVET schemes	***Apprenticeship Training (ISCED 3)*** ▪ Technician Apprenticeship Scheme (TAS) ▪ Extended Skills Training Scheme (ESTS) *The MCAST (Malta College of Arts, Science and Technology) is the umbrella institution which houses different institutes providing vocational education and training in a range of different sectors. As well as this, the Institute of Conservation and Management of Cultural Heritage (ICMCH) (in collaboration with the MCAST), and the Institute of Tourism Studies also offer vocational courses.* *In Malta, IVET may or may not involve apprenticeship: it depends on the course/sector, as well as on the training model chosen by the student. Most of the VET courses in Malta are only school-based, but a great majority of them are also offered through an apprenticeship or alternance system (combining school and on-the-job training). As well as this, many school-based courses offer a period of work experience of a few weeks.*
General Characteristics of existing schemes	***Apprenticeship Training*** Apprenticeship schemes for vocational education and training in Malta are based on the dual system, where the apprentice follows a training programme at a vocational educational institution while simultaneously carrying out on-the-job training at a place of work. This experience, together with the theoretical training, leads to a number of nationally recognised qualifications certifying competence in a particular occupational area. The Employment and Training Corporation (ETC) is responsible for the administration of the apprenticeship scheme. The Corporation is responsible for providing a training placement, monitoring the student's progress and also carrying out a number of monitoring visits during the apprenticeship year. The apprentice, the employer (also known as sponsor) and the ETC enter into a contractual agreement stating the rights and obligations of all parties during the apprenticeship. Apprentices are obliged to attend a vocational educational institution to acquire the underpinning knowledge (off-the-job training) related to their sector. Public and private sector firms provide the on-the-job training (mainly private firms). The hours of work can not exceed the ordinary hours applicable to the employer's establishment, whereas time allotted to theoretical instruction is considered as part of the normal working hours. Concerning financial support, and besides the public maintenance grants offered by the Government, apprentices also earn a stipend that is paid by the employer to support learning. Basically, there are two apprenticeship schemes. Both of them have a duration of 3 years, and lead to a ISCED 3 level Journeyman's Certificate: ▪ Technician Apprenticeship Scheme (TAS): This apprenticeship leads to an occupational competence at technician level. ▪ Extended Skills Training Scheme (ESTS). Apprentices receive a Craftsman level certificate. Entry into such programmes is usually limited to the number of sponsors, or the number of employers offering apprenticeship placements. There are instances when the number of students applying for apprenticeships was greater then the number of sponsors identified. Apart from the TAS and the ESTS, the MCAST, the ICMCH and the Institute of Tourism Studies also offer a lot of vocational courses in a wide variety of sectors (ISCED 3 & 4). Many of these vocational courses can be either school-based or follow an alternance/apprenticeship model. Thus, for instance, the MCAST offers the possibility of apprenticeship for the following courses: ▪ MCAST Certificate: ISCED 3 (2 years) ▪ OIC (Officer in Charge): ISCED 3 (2 years school-based plus 1 year of work experience) ▪ ITEC Diploma: ISCED 3 (2 years). ▪ MCAST BTEC National Certificate: ISCED 4 (2 years). ▪ MCAST Advanced Diploma. ISCED 4 (2 years). ▪ MCAST Diploma: ISCED 4 (3 years). ▪ City & Guilds: ISCED 4 (3 years). ▪ MCAST BTEC National Diploma: ISCED 4 (3 years). As well as this, there are courses offered by Institute of Tourism, both at ISCED Level 3 and ISCED Level 4, which are mainly school-based but include 14 weeks of work experience. Many of the vocational training courses offered are recognised on the UK qualifications framework, although there also home grown qualifications which are pegged to the Malta Qualifications Framework. The curriculum delivered by the different educational institutions is determined in different ways, depending on the level and type of training provided. Admission requirements for IVET courses vary according to the level of course offered; each course requires its own passes in specific subject areas. The IVET system allows students to move from one level of qualification to a higher level within the same sector, which facilitates the recognition of the level of any qualification obtained.

Financing aspects	IVET in Malta is directly funded by the government and the public budget covers the running of the institution as well as the stipends provided to students (maintenance grants). Therefore, attendance to IVET vocational courses is free of charge, although some courses require that students pay a registration fee to sit for the examinations. In the apprenticeship system, besides the maintenance grants, apprentices also earn a stipend that is paid by the employer to support learning. The rates payable to apprentices are more elevated in higher courses. In the third (and last) course, there is no maintenance grant by the Government, and it is only the sponsor who pays the wage to the apprentice (approximately €75 per week). A one-time grant of €326 is paid to cover expenses related to the purchase of educational equipment.
Number of participants	Since the MCAST (Malta College of Arts, Science and Technology) was set up in 2001, the number of students continuing with upper-secondary education beyond compulsory age has increased. The number of students in IVET has also increased, and a balance in numbers between the general and the vocational strands has been reached. By the end of 2009, 698 apprenticeships were registered with ETC.
Recent/planned changes in VET policy	The last decade has seen a great investment in IVET in Malta with the setting up of MCAST- the Malta College of Arts, Science and Technology, the umbrella institution providing vocational education and training. The Strategic Plan 2007-2009 of the MCAST highlights the need for a vocational education and training provision that establish a credible alternative to the university education. New Vocational Degrees by MCAST were first offered in September 2009. As well as this, the Government is committed to developing more flexible pathways and better transitions. Moreover, a closer link between vocational education provision and industry is currently part f a projects financed by the European Social Fund, making vocational education more responsive to industry needs. Finally, as a consequence of the economic crisis, and due to fewer opportunities of work in the labour market, many young people were encouraged to further their studies and stay on at school through the development of Foundation courses (ISCED 2), which are open to young persons with just a school leaving certificate. This has made it possible for many youths to acquire key competences for the sector they would like to work in.

NETHERLANDS

NETHERLANDS	
Main available IVET schemes	***Senior Secondary Level IVET (ISCED 2, 3A,3C & 4)*** MBO (*middelbaar beroepsonderwijs*) at 4 different levels. 2 learning pathways: ▪ School- based (full-time or part-time) ▪ Dual pathway (apprenticeship training) ***Higher Education IVET (ISCED 5)*** ▪ Associate degrees (ISCED 5B)
General Characteristics of existing schemes	***Senior Secondary Level IVET*** Upper Secondary Vocational Education is provided through the vocational programmes known as MBO (*middelbaar beroepsonderwijs*). The age of the participants in senior secondary vocational education ranges from 16 to 35 and over. MBO vocational programmes are offered at 4 different levels: ▪ MBO level 1: 6 months- 1 year duration. It equates with ISCED 2, so it is not under the scope of this report. ▪ MBO level 2: 'basic vocational education' (*basisberoepsopleiding*) lasts 2 or 3 years and prepares for executive tasks (ISCED 3C short). Access requirements: at least a basic pre-vocational education diploma. Progression to MBO level 3 is possible. ▪ MBO level 3: 'professional education' (*vakopleiding*) lasts 3/4 years (2 years after completion of an MBO level 2). It prepares people to carry out tasks independently (ISCED 3C long). Progression to programmes at MBO level 4 are possible. ▪ MBO level 4: 'middle-management VET' (*middenkaderopleiding*) usually lasts 4 years. It prepares people to carry out tasks independently and with more responsibility (ISCED 3A). Progression and transfer to higher professional education are possible. Additionally, there is also a higher 'MBO level 4' known as 'specialist training' (*specialistenopleiding*), which lasts 1 to 2 years (ISCED 4). It is the highest level of the qualification structure for senior secondary VET. Access requirements are completion of a programme at MBO level 3 or 4. Apart from publically subsidised institutions (regional multisectoral training centres, specialist trade colleges, agricultural training centres, etc.), there are also private, nonsubsidised providers that can offer VET programmes on condition that their programmes are recognised by the Ministry. Consequently, senior secondary VET is an open system. Creating a balance between general and vocational subjects in the curriculum is the responsibility of the learning provider. As well as this, assessment and examinations are the responsibility of the VET providers, and they are legally required to involve the enterprise trainers. Schools serve as linking pins between lessons and the practical training workplaces. In Upper Secondary Vocational Education (all MBO programmes) 2 learning pathways are offered: school-based and dual system. Both pathways function in the market as communicating vessels; the same qualifications/diplomas can be achieved via both pathways. As well as this, the organisation of both systems comes under the same administrative framework. The 2 pathways are explained next: ▪ School- based The school-based full-time or part-time programmes (BOL – beroepsopleidende leerweg) offer practical periods in enterprises, which makes up at least 20% of the study time and a maximum of 60% (approx 10-20 weeks). BOL-route can be taken as a full-time or a part-time student. ▪ Dual pathway (apprenticeship training) Apprenticeship training or dual pathway *(BBL –beroepsbegeleidende leerweg)* is a substantial part of senior secondary vocational education. Learning and working are combined, and training takes place in a company during at least 60% of the study time. Thus, students spend 4 days a week in a company and attend school 1 day a week. Normally, apprentices conclude two contracts, a learning/educational agreement with the VET school (*onderwijsovereenkomst*) and a 'practical learning agreement' (*praktijkovereenkomst*) with a company (and with their school). Additionally, BBL students have an employment contract (*arbeidscontract*) with the organisation/enterprise and have a regular wage, whereas BOL students only get a compensation for their internship. Compared to a BOL student, there are some differences. A BOL student only has a practice agreement and the BOL student only gets a compensation for the internship, and not a regular (minimum) wage as is the case with BBL students The apprenticeship system is becoming more attractive for adults (young adults), whereas youngsters tend to opt for school-based programmes with practical periods in the curriculum. Interestingly also, those with qualifications obtained via the dual pathway find work sooner because they have more practical experience and because most of them already have a job.

	Higher Education IVET Higher professional education (ISCED level 5) is generally open to those who have obtained a diploma by way of pre-scientific education, senior general secondary education or the longer senior secondary vocational education course (MBO level 4), normally students aged 17 and over. Universities of applied sciences (*hogescholen*) are publicly financed providers, but non-subsidised providers can also offer similar programmes, provided that they have appropriate accreditation. These Higher professional education programmes are professionally oriented. Thus, they provide education for specific professions or group of professions, and require both theoretical knowledge and specific skills. Most programmes include a work experience placement. This type of education can also be attended part-time as part of professionally oriented adult education, and, for the last ten years, in dual learning pathways. The main type of programmes offered is: ▪ Associate degrees (ISCED 5B): pilot projects with short-cycle higher education ('Associate degree' or Ad, ISCED level 5B) were introduced in the Netherlands a few years ago (2006-2007), in order to introduce the Ad in the regular education system. The AD program is not yet officially introduced (July 2011 data). The Ad programme, which normally lasts about 2 years, is constituted as an integral part of a Bachelor's programme (and it allows further progression).
Financing aspects	Both Upper Secondary VET institutions and universities of applied sciences are publicly financed providers. Block grant funding is the main system used, within the macro budget at national level. The amount of money provided is based in part on the number of students per course/learning path and in part on the number of certificates/diplomas awarded per institution. In the case of Higher Professional Education, there is also a fixed budget. Moreover, the subsidised educational institutions can also offer specifically contracted educational activities, paid by employers/employees, as a source of private funding. With regard to the apprenticeship/dual system, a tax facility of EUR 2,500 (EUR 180 million per year) for each place occupied is offered to companies offering learning places for apprentices. As an average, companies spend EUR 8,400 for 'guided learning activities' for each participant in the dual system (senior secondary and higher VET level) and EUR 1,750 for students in practical learning periods in full-time school-based VET (2006 data). In this sense, employers in different sectors of the economy have formed 'Training and Development Funds' to finance their training activities. Finally, students have to pay tuition fees to Secondary VET institutions and universities of applied sciences. As well as this, students in Senior Secondary VET have to pay fees to the government. On the other hand, full-time students receive financial support from the age of 18 under the Student Finance Act (via the OCW- Ministry of Education, Culture and Science).
Number of participants	In general terms, the number of participants in VET is high, both for youngster and adults In senior secondary education, 68% of the school population participates in a vocational programme and 32% in general education. Thus, following data available for 2009, there were about 520,000 students in VET programs, out of approx. 730,000 students following secondary education. The BOL-fulltime route has the most students: about 342,000 in the school year 2009/10. The BBL-route has grown in the period 2006-2010, from 141,000 students in 2006/07 to 172,000 in 2009/10. Concerning MBO's (vocational programmes), participants in the school-based pathway are mainly youngsters, while 40% of those following the dual pathway are aged 25 and over. With regard to the Associate Degree (AD), it is still in its pilot form and in 2009 only 0.3% of the students in tertiary level education followed this program. On the other hand, at the beginning of 2011 there were about 223 000 official learning companies, with a total of 300 000 practice trainers.
Recent/planned changes in VET policy	There have been no substantial changes since the redesign of the system in 1996. In any case, the qualification structure in Senior Secondary Level IVET (MBO Programmes) has been recently redesigned, and it is working towards a new competence-based qualification structure, based on 'occupation competency profiles' (as of August 2011 all VET courses should be based on the new competence based qualification). Interestingly also, it can be said that improving parity of esteem between the general education track and the vocational track is a policy priority, as general education is commonly viewed as a superior path towards higher education. Finally, and concerning the economic crisis, the Dutch Government and the social partners signed a social agreement in 2009 in response to the recession, considering issues such as the creation of a Youth Unemployment Plan or the longer stay of youngsters within the education system. This program was called the School Ex Program.

POLAND

POLAND	
Main available IVET schemes	***Upper Secondary Level IVET- Primarily school-based*** ▪ Profiled (specialised)general secondary school (ISCED3A) ▪ Technical Secondary Schools (ISCED 3A) ▪ Basic Vocational Schools (ISCED 3C) ▪ Supplementary Technical Secondary Schools (ISCED 3A) ***IVET at Tertiary Level (ISCED 5B)*** ▪ Tertiary Level Vocational Institutions (Technical Universities and Higher Vocational Schools). *Current rules governing the VET (Regulation of the Minister of National Education of 15 December 2010) normalize the principles of vocational education of pupils/students and young workers. Before this legal framework, there was a special type of VET referred to young workers and structured as an apprenticeship scheme (*młodociani pracownicy*). According to this scheme trainee juvenile workers attended craft basic vocational schools founded by craftsmen organizations. At the present time, these schemes do not exist any more.*
General Characteristics of existing schemes	***Upper Secondary Level IVET- Primarily school-based*** The basic criterion for admittance to all schools at the upper secondary level is completion of the lower secondary school. Students enter this level when they are 16 years old. Practical vocational training is organised in the form of practical training classes at school and vocational placements. Thus, students have practical training in school laboratories and workshops during the academic year. Additionally, during summer holidays, there are vocational placements in enterprises under real work conditions. More precisely, students undergo practical training at enterprises with which the school headmaster has concluded an appropriate agreement (including apprenticeship program, timing and length, rights and obligations, etc.). Vocational placements are compulsory for pupils. The average duration of a placement is 160 hours per academic year (approx. 4 to 6 weeks), although the exact duration of a placement is determined by the school headmaster depending on the type of a school and the specialisation taught. In the case of basic vocational schools and technical secondary schools, school headmasters secure vocational placement places for their students by concluding an appropriate agreement with an enterprise or an entrepreneur organisation or some other organisation organising vocational placements. ▪ Profiled general secondary school (liceum profilowane) The profiled (or specialized) general secondary school (*liceum profilowane*) is a new type of school and a new educational pathway implemented as a result of the 1999 educational reform. This type of school, besides general education, provides education in general vocational profiles. Education in a *liceum profilowane* lasts 3 years. The balance between general and vocational subjects is 87% vs. 13%. Leavers may be able to continue their education in new post-secondary schools, which started in 2005. Moreover, with an upper secondary school leaving certificate (*matura*), leavers can access higher education institutions. ▪ Technical Secondary Schools (Technikum) These schools enable the acquisition of both an upper secondary school-leaving certificate (*matura,* which allows accessing higher education), and vocational qualifications to the level of technician. Education lasts 4 years. The balance between general and vocational subjects is 64% vs. 36%, whereas the proportion between theoretical and practical training varies from 20/80% to 25/75%. ▪ Basic Vocational Schools(zasadnicza szkola zawodowa) It awards a vocational qualification diploma but does not lead to a *matura*. It confers the qualifications of a skilled worker. Education in this type of school lasts 2 or 3 years, depending on the vocation. The balance between general and vocational subjects is 47% vs. 53%. In basic vocational schools, practical training consumes around 50% of all hours envisaged for vocational subjects. ▪ Supplementary Technical Secondary Schools (Technikum uzupelniajace) It is aimed at Basic Vocational School leavers, and it is a 3-year secondary vocational school with a follow-up curriculum to that of the basic vocational school. Its goal is to bring the pupils' education up to the intermediate level and prepare them for the examination confirming their vocational qualifications and for the matura exam. At completion, pupils are awarded the technikum leaving certificate. The proportion between theoretical and practical training varies from 25/75% to 75/25%. ***IVET at Tertiary Level*** ▪ Tertiary Level Vocational Institutions Tertiary Education institutions include Technical Universities (*Politechniki*) and State Higher Vocational Schools (*Państwowe Wyższe Szkoły Zawodowe*).These institutions are entitled to provide first and second level studies as well as uniform master studies (but not doctoral studies). First level programmes (lasting 3 to 4 years) are focused on preparing graduates for a particular profession. Subjects of general education are mandatory for all directions of education and should comprise 15-20% of all teaching hours. Tertiary education students also enjoy vocational placements similar to those at upper secondary level. But in this case the duration might be longer: up to 12 weeks per academic year depending on the field of education and the university requirements.

Financing aspects	The basic premise of the system of financing education is the guaranty of free schooling for students under 18 years of age in all types of public schools. Moreover, schools sending students to a practical vocational training reimburse students for their travel costs and provide free accommodation and meals, etc. A large part of the state budget expenditure on education is allocated as a general subsidy to local governments, earmarked for the financing of tasks such as administration of schools and public educational institutions. Thus, a large majority of public schools and other educational institutions are administered by local governments: *gminas* (municipalities), *poviats* (district) and *voivodships* (regions). Schools offering vocational education are and administered by *poviat* governments, while regional governments manage schools with regional significance. On the other hand, authorities in charge reimburse employers for the remuneration of practical vocational training instructors (including an educational subsidy), provide bonus for vocational placement coordinators as well as educational subsidies for them, and compensate for the cost of work clothing, etc. for the apprentice. Additionally, there is a mechanism for subsidies for employers from the labour fund to assist with the cost of vocational education of juvenile workers (it is financed mainly by contribution paid by employers as well as by subsidies from the State Budget and the EU budget).
Number of participants	After a couple of years of bigger popularity of general education, since the school year 2006/2007 a significant increase of interest in vocational education has been noted (maybe due to changes on the labour market connected to the Polish accession to the EU). These are the figures available for the 2009/2010 school year: ▪ -Profiled General Secondary Schools were attended by 47,300 pupils. ▪ -Technical Secondary Schools: 568,100 pupils. ▪ -Basic Vocational Schools: 235,700 pupils. Concerning Tertiary Level institutions, in the 2008/2009 school year there were 1,927,762 students attending VET courses. Although technical studies in Poland cover all faculties, out of two million students only 15% choose faculties associated with industry. On the other hand, according to the Polish Craft Association, 92,652 pupils participated in apprenticeship placements organised in 24,815 craft enterprises in the school year 2008/2009.
Recent/planned changes in VET policy	Practical trainings at schools and vocational placements in enterprises were and are accessible to pupils of vocational schools under legal regulations applied at different periods of time. The system and economy transformation made it necessary to implement some changes within the compulsory education and vocational training system. According to the regulation of the Minister of National Education, the current structure of programmes/schools of the Polish VET system has been available since 16 July 2008. Moreover, in the year 2008 the Minister of National Education set up an advisory group in order to develop proposals of modernisation of VET system in Poland. The advisory group consists of representatives of ministries, employers, trade unions, sectoral organisations, chambers and academia. The modernisation plans aim at adjusting the VET system to the labour market needs and the European Union VET strategy. Interestingly also, it must be pinpointed that the period of 'practical vocational training' in formal VET schools was recently normalized through the Regulation of the Minister of National Education of 15 December 2010 on vocational training. Amongst other aspects, this Regulation has abolished previously existing apprenticeship scheme (młodociani pracownicy), basically attended by trainee juvenile workers in craft basic vocational schools founded by craftsmen organizations. Finally, by 2015 the Ministry of National Education plans to introduce several changes to the national curricula for vocational placements and vocational education. These changes will affect the structure and organisation of vocational education, participation of employers and training and continuous training of vocational teachers.

PORTUGAL

PORTUGAL	
Main available IVET schemes	***IVET at Upper Secondary Level (ISCED 3)*** ▪ Vocational Courses ▪ Technological Courses ▪ Apprenticeship Courses ▪ Education and Training Courses ***IVET at Upper Secondary non-Tertiary Level (ISCED 4)*** ▪ Technological Specialisation Courses (CETs)
General Characteristics of existing schemes	***IVET at Upper Secondary Level*** After completing their basic education, Upper Secondary education lasts 3 years, comprises a single cycle and begins at the age of 15. Young people can choose to follow the vocational path through different types of vocational programmes. These programmes qualify students to enter the labour market, but also allow the continuation of studies, as they confer a double certification qualification (both academic and vocational). ▪ Vocational Courses ("Cursos profissionais") The main purpose of Vocational Courses or *Cursos Profissionais* is to prepare students for the labour market (ISCED 3). These courses last 3 academic years. They are divided into modules of varying length, which can be combined in different ways which allows more flexibility. The programmes cover three components: social and cultural, scientific and technical training. The technical component varies from course to course and is intended to endow trainees with practical competences. These can be developed under the form of simulation practices within training, or of real practices within the workplace. The technical component varies from course to course and accounts for approximately 52% of total training hours, of which 13% are spent training in a work environment. The successful completion of these courses leads to a ISCED Level 3 vocational qualification (allowing access to the labour market) and a diploma in upper secondary education, allowing students to pursue their at higher education. ▪ Technological Courses ("Cursos tecnológicos") These courses aim to give students access to the labour market, but they also allow students to pursue their studies at a post-secondary course or higher education. They last for 3 schooling years. The curriculum covers general, scientific and technological training. Each course includes two core disciplines, two technical and technological disciplines, one discipline of a practical or theoretical/practical nature and an integrated technology area that embraces a specialist discipline, a technological project and a traineeship (workplace training). The placement is for a period of 240 hours, made up of 216 hours of practical training in the workplace and 24 hours spent on tasks agreed by the trainee and his or her tutor. These courses are provided by the public schools network of the Ministry of Education. ▪ Apprenticeship courses ("Cursos de aprendizagem") Apprenticeship training is an IVET pathway and not a separate sub-system. Apprenticeship courses are initial training courses aimed at young people, carried out in alternance training schemes, privileging the insertion in the labour market and also enabling the pursuing of studies. More precisely, apprenticeship courses are a double certification training alternative, as they simultaneously confer an ISCED level 3 vocational qualifications and the upper secondary academic qualification. Apprenticeship courses are provided by the vocational training centres of the Institute for Employment and Vocational Training (in Portuguese, *Instituto do Emprego e Formação Profissional* – IEFP), under the Ministry of Labour and Social Solidarity. These courses are intended for young people who must be aged under 25 and must have fulfilled lower secondary level education. Courses last between 2,800 and 3,700 hours (3 years), and include different components: socio-cultural training, scientific training, technological training and practical workplace training (accounting for at least 40% of total course length). The practical component is accompanied by a training facilitator appointed by the organisation responsible for workplace training. An apprenticeship contract is established between the training organisation (the coordinator organisation and the one providing support to alternation between work and training periods) and the trainee. This contract does not generate a subordinated working relationship and ends upon the completion of the course or training action for which it was concluded.

	▪ Education and Training Courses ("Cursos de educação e formação") Education and training courses are intended for young people aged 15 or over who have abandoned or are at risk of leaving the regular education system, as well as for young people who have completed 12 years in school and wish to acquire a vocational qualification. This is a varied and flexible form of training, intended to complement other forms of training and to ensure a continuing structured training in sequential stages, allowing people to gradually acquire higher levels of qualification. There are 5 different types of courses, which may last between 1 and 2 years, depending on the previous qualification of the student. The final certification provided after each course might vary as well, as each training cycle's completion allows students to pursue further studies in the subsequent level. All courses comprise the following training components: Social and cultural, Scientific, Technological and Practical. The practical component is structured in an individual plan or activity itinerary to be developed in the workplace, in the form of a traineeship under the supervision of a training facilitator. Apart from these types of courses, there exist also other training schemes are available at sectoral level, such as the Tourism industry. Hotel and Tourism Schools (*Escolas de Hotelaria e Turismo*), which are supervised by the Ministry of the Economy and Innovation (MEI), develop and support initial training schemes leading to various levels of qualification and occupational routes, aiming to answer to the qualification needs in the tourism industry. Courses vary in length from one to three academic years. They also enable the pursuing of studies, mainly in the form of postsecondary courses in specialised technology or tertiary education in a polytechnic school. ***IVET at Upper Secondary non-Tertiary Level (ISCED 4)*** ▪ Technological Specialisation Courses (CETs) Technological Specialisation Courses (CETs) are post-secondary non-tertiary training courses that prepare individuals for a scientific or technologic specialisation in a specific training area and award a level 4 vocational qualification. The level 4 vocational qualification is achieved by a conjugation of a secondary training, general or vocational, with a post-secondary technical training. The course lasts approximately 1 year (between 1200 to 1560 hours). CETs are addressed to students who have passed an upper secondary course (level 3) or a legally equivalent qualification. Training pathways vary according to projects' characteristics and participants' profiles and give emphasis to a notoriously vocational content where the general, scientific technological and workplace training components are included. The workplace training component aims to apply knowledge and acquired know-how for practical activities. It cannot be lower than 360 hours, but no higher than 720 hours. This training component is developed in partnership between the training organisation and enterprises. Successful completion of the course leads to a diploma in specialised technology and a Level 4 vocational certificate, and allows trainees to pursue their studies at tertiary education level. Training received through CETs can be transferred to the tertiary education course to which the CET gives access.
Financing aspects	In Portugal, the cost of the vocational education and training system is covered almost entirely by public funding through contributions from the State budget (*Orçamento de Estado* – OE), the Social Security Budget (*Orçamento da Segurança Social* – OSS) and the European Social Fund (ESF). Under the Basic Law of the Education System (LBSE), basic education is free. All costs associated with registration, attendance and certification are covered, and some pupils may be eligible for free use of school books and materials as well as for free meals and accommodation, depending on the socioeconomic situation of their family. School transport is free for pupils attending basic education. The initial vocational education and training offered within the education system is essentially funded by the ME's budget, though the POPH contribution to the funding of training pathways is also significant. The POPH is the programme which implements the thematic agenda for human potential inscribed in the National Strategic Reference Framework (QREN) and is a funding source which supports, through Axis 1 – Initial Qualification, the following courses: apprenticeship system courses, vocational courses, education and training courses for youth and specialized technology courses.
Number of participants	These are the data available for 2007/2008, according to the Education Statistics and Planning Office of the Ministry of Education: – Technological courses – 13,096 – Vocational courses – 88,515 – Apprenticeship courses – 14,629 – Education and training courses – 6,602 – Specialised art courses (Cursos do ensino artístico especializado) – 1,809

	In recent years, the focus on the importance of vocational education as a valuable alternative to other education paths available within the education and training system has brought an increase in the demand for this type of courses. Thus, for instance, the number of students enrolled in vocational courses rose from 28,000 in school year 1998/1999 to 91,000 in 2008/2009.
Recent/planned changes in VET policy	Concerning apprenticeship courses, a recent legislative reform (Decree-Law no. 88/2006 of 23 May) has led to a new legal framework for this type of courses in order to make their organisational structure more flexible. The alternance training scheme between training and work continues to be the main feature, where the role of enterprises as partners for training activities is crucial. In the end of 2008, the Portuguese Government created the Implementing Order no. 1497/2008 with a new legal framework of apprenticeship courses. This new regulation updates the apprenticeship study plans and also regulates access conditions, organisation and management of the courses, as well as the evaluation and certification of learning outcomes.

ROMANIA

ROMANIA	
Main available IVET schemes	***Apprenticeship system*** *The Romanian IVET system is a school-based system, and there is no much information available on apprenticeship-type schemes.* *Upper secondary level of vocational education (ISCED 3) is provided in high schools through the technological and vocational pathways. For the vocational pathway, and after compulsory education in 'Arts and Trades Schools' 2-year programmes, 1 year completion year is needed. The technical pathway includes a total of 2 years in Upper Cycle High School (age 16-18). IVET programmes are a combination of theoretical and vocational subjects and practical activities. Practical activities normally take place in school workshops (such as 'exercise' or 'training' companies for interactive learning). Occasionally, practical training might take place in companies (based on agreements concluded between schools and companies).*
General Characteristics of existing schemes	***Apprenticeship System*** The vocational training of the employees may take place in the form of on the job apprenticeship (workplace apprenticeship or "*Ucenicie la locul de munca"*). The apprentice is contractually linked to the employer and receives remuneration. The employer assumes responsibility for providing the trainee with training leading to a specific occupation. According to the special law that regulates the institution of apprenticeship in Romania, namely the Apprenticeship Act of 2005 (Law no.279/2005), apprenticeship is regarded as a special and distinct form of vocational training combining employment, in the form of a closed-end, determined duration contract, with vocational training, to be provided by the employer, both practical and theoretical (provided within the working hours). According to the law and to its application norms, individuals entitled to apprenticeship are those aged between 16-and 25 years, provided that they had no prior qualification in the trade for which they demand entering into an apprenticeship contract. The contract as such, cannot be longer than 3 years but, also not shorter than 6 months, depending on the qualification. All enterprises can engage into apprenticeship contracts provided that they do have the necessary facilities and have a specifically designed training program. In addition to that, they must specifically employ a so-called "apprenticeship foreman", possessing a "trainer's training certificate".
Financing aspects	While the apprentice is considered a full time employee, he or she is entitled to all associated rights, with minimum salary as well as with working time regulations being applied. Also, employers must provide housing and accommodation for apprentices if they are unable to shuttle between home and work.
Number of participants	The Apprenticeship Law is relatively recent (2005) and in 2007-2008 school year it had not been implemented yet, so there are not data available on the number of participants.
Recent/planned changes in VET policy	The Apprenticeship Act of 2005 has seen a rather slow application. One cause for this was the legal requirements and red-tape for enterprises. As well as this, the advent of the economic crisis has drastically reduced the options of employers to offer apprenticeship training. In this sense, and concerning the impact of the crisis on the VET system, it can be said that the effects are visible on the vocational training providers, where activity has been shrinking. The National Reform Programme includes a set of recovery measures as a direct response to the crisis, such as giving financial aid from European Social Fund for the companies who engage unemployed persons or for vocational training programmes. Many vocational training providers have actually applied for European funds, for the loss of orders that would have come with the loss of income among students/ customers.

SLOVAK REPUBLIC

SLOVAK REPUBLIC	
Main available IVET schemes	***IVET at Upper Secondary Level:*** ▪ Secondary specialised schools (ISECD 3A&3C) ***IVET at Tertiary Level:*** ▪ Secondary specialised schools (ISECD 5B) *Apprenticeship-type schemes are very limited: programmes are school based and training in workplace can be organised only after agreement between the school and the organisation offering workplace training.*
General Characteristics of existing schemes	***IVET at Upper Secondary Level:*** All VET schools are categorised as secondary specialised schools (SOŠ, *stredná odborná škola*). Only graduates from basic schools with completed lower secondary (general) education are entitled to enter secondary specialised schools. The balance between school and work-based training is not officially/formally established in the curricula. Programmes are school based and even practical training is usually school based. Nevertheless, students may be educated for individuals and legal entities at school in theory, receiving practical training at the workplace; this is however a marginal case, permanently below 1 %. Moreover, training in workplace can be organised only after agreement between school and organisation offering workplace training. The study programmes offered at secondary specialised schools are: ▪ "study branch with practice" (*odbor s praxou*): ISCED 3A. The ratio General/Vocational subjectsis approximately 43-48% / 57-52%. The duration of studies is 4-5 years, and the number of hours of practical training is at least 1200. Students participate at working process or assist there in a form of continuing activity for a period set by curricula; it usually happens within summertime. The student receives a 'maturita' school leaving exam certificate at the end of the programme. ▪ "study branch with vocational training" (*odbor s odborným výcvikom*): ISCED 3A. The ratio General/Vocational subjects is approximately 43-48% / 57-52%. The duration of studies is 4-5 years, and the number of hours of practical training is at least 1200. Vocational training is organised in alternance with theoretical education in school workshops or in places suitable for training contracted by schools during the whole school year. The student receives a 'maturita' school leaving exam certificate at the end of the programme. ▪ "training branch": ISCED 3C. The ratio General/Vocational subjects is approximately 25% / 75%. The duration of studies is 3 years, and the number of hours of practical training is at least 1520. The student receives a certificate of apprenticeship. ***IVET at Tertiary Level:*** There are different programmes for ISCED 3A Graduates, offered in secondary schools. Despite the ISCED coding 5B, in the new Education Act 2008 they are still not accepted as tertiary programmes, and they are regulated in the same way as upper secondary programmes described above. They provide a high level of education according to the legislation, i.e. higher professional education level. Again, programmes are school based and training in workplace can be organised only after agreement between school and organisation offering workplace training. These ISCED 5B programmes are: ▪ Specialising programmes are of at least 2 years in length completed by an *absolutorium* exam (ISCED 5B). These programmes are aimed at acquiring new specific knowledge and skills related to the previously received education and training within the same or similar branch of study. ▪ Higher professional programmes are of 3 years in length completed by an *absolutorium* exam (ISCED 5B). In contrast to specialising programmes no strong interlinking in content with previous study is required.
Financing aspects	There is no substantial difference in funding the respective levels of education, except the difference caused institutionally. There are different laws regulating VET establishments and Higher Education institutions. Since January 2004 all secondary schools were funded equally through per capita funding from the state budget, regardless their ownership status. From 2005, fiscal decentralisation came into force through the redefinition of the income tax revenue. Through the decentralisation reform, self-governing regions and municipalities are entitled to receive additional contribution from the state budget for the financing of secondary VET institutions. Regional schools are dominantly state budget funded. State contributions to budgets of respective educational institutions are substantially based on normatives (per student contributions from the state budget). All schools regardless of type and ownership (i.e. also private schools) are subsidised from the state budget equally based on current normatives figures. These normatives are composed of wage normatives and operational normatives.

Number of participants	Secondary VET schools have dominated permanently over secondary general schools, and the upper secondary IVET stream is among the strongest in the EU countries (almost ¾ of all of the students in 2006). Thus, the ratio between students at general and vocational upper secondary education is in favour of vocational branches. In 2008, there were 193,898 pupils (participants) in IVET in the Slovak Republic who were preparing in secondary vocational schools. According to 2009 data, 71.6% of the students in ISCED3 followed the vocational path (28.4% the general path). However, it must be stressed that the general education stream has been in a gradual increase since 1989 till present.
Recent/planned changes in VET policy	One of the most visible changes of the New Education Act 2008 is the development of a single stream of secondary VET, eliminating the so-called secondary vocational schools. Thus, since September 2008, the VET stream is only provided by secondary specialised schools (SOŠ, *stredné odborné školy*). In practice it means that all secondary vocational schools were renamed to secondary specialised schools. As well as this, increasing enrolments in ISCED 3A programmes and in particular in grammar schools (*gymnasium*, offering an academic/general pathway) and a lack of graduates of ISCED 3C programmes has been subject of criticism of businesses. This criticism led to the development and implementation of a new Act on VET in 2009 (Act No. 184/2009). This new Act on VET (2009) stimulates employers to contract students, as it recognises related eligible costs of employers as tax deductible. Thus, it establishes a motivating area for the participation of employers into VET, and also for the admission of private investment resources into this type of education, in effort to facilitate assertion into the labour market and to prevent from current mismatch between IVET and labour market needs.

SLOVENIA

SLOVENIA	
Main available IVET schemes	***IVET at Upper Secondary Level*** ▪ Vocational Secondary Education (ISCED 3C) ▪ Technical Secondary Education (ISCED 3B) ▪ Vocational-technical secondary Education (ISCED 3B) ***IVET at Tertiary Level*** ▪ Higher vocational colleges (ISCED 5B)
General Characteristics of existing schemes	***IVET at Upper Secondary Level*** With the new Vocational Education Act (2006), the dual system and school education were united into a single form for IVET, where the practical training is an integral part of all educational programs for vocational education. Thus, all students are entitled to a predetermined number of weeks of practical training. The student spends part of the practical education in the school and the other part with an employer, performing tasks of a certain profession at the end of secondary education. The relationship is regulated through an individual contract, which is signed by the employer, student and parents. The other possibility is a collective contract, which is signed by the school and employer for several students. Students are medically insured and have the right to award in accordance with the sectoral collective agreement concluded by employers and employees (trade unions). In Slovenia, there are 3 VET programmes at upper secondary level offering apprenticeship-type schemes. All programmes are based on modules, and they also include open curriculum, completed with a *vocational matura* certificate. These 3 programmes are: ▪ Vocational Secondary Education (ISCED 3C) It is aimed at students who successfully finished elementary school (*osnovna šola*), from age 15. Normally, students are 15-18 years old, and programmes last 3 years. Practical training has an approximate duration of 24 weeks. These programmes are provided by vocational schools in cooperation with employers. The final examination certificate enables students to enter the labour market or to continue education in 2-year vocational-technical secondary education. Programmes at Vocational Secondary Education include at least 24 weeks of practical training with employers. ▪ Technical Secondary Education (ISCED 3B) It is aimed at students who have successfully finished elementary school. Normally, students are 15-19 years old, and programmes last for 4 years. Practical training has a minimum duration of 4 weeks. These programmes are designed primarily as preparation for vocational higher education and professionally-oriented higher education. Education ends with the *poklicna matura* (vocational matura examination). Transfers between vocational and technical programmes are allowed. Transfers from technical education programmes to any academic higher education programme are possible by the *maturitetni tečaj* (matura course). ▪ Vocational-technical secondary Education (ISCED 3B) It is aimed at students who have gained secondary vocational education (ISCED 3C). These programmes last 2 years after vocational secondary education, and students are 18-20 years old. They consist of 2-year further technical courses for those who have completed 3-year vocational secondary courses. This course is at an equivalent educational level to 4-year technical secondary education courses. Furthermore, there exist 2 other vocational courses: ▪ Short-term vocational education programmes: aimed at children with special needs or who have had difficulties during elementary school (age 15-17/18). These last for 2 years and a half and provide an ISCED 3C certificate. ▪ Vocational courses: designed for those who have not passed the Matura or wish to obtain a vocational qualification and employment. These courses last for 1 year and provide an ISCED 4 certificate. ***IVET at Tertiary Level*** Higher vocational education is provided at higher vocational colleges (*višje strokovne šole*). These colleges offer 2-year post-secondary vocational education at ISCED 5B level, and the general requirement for admission is successful completion of upper-secondary education. Approximately 40% of each curriculum is devoted to practical training in firms. At the end of the study, students receive a diploma with the title of vocational qualification, allowing them to start working in specific occupations.
Financing aspects	On the field of IVET, education of youngsters is free. Funds are provided by the Ministry of Education according to its financial plan, which is an integral part of the national budget. The amount varies from school to school and it depends on the number of students and the type of programmes. Full-time students of higher vocational colleges with a state-subsidised place pay no tuition fees, but do pay administrative fees (registration and certification costs). They may receive a scholarship to cover living costs.

	On the other hand, concerning 'apprenticeship' or 'practical training' offered by the employers, the apprentice receives compensation or other form of stimulation. In most cases it is wholly or partly financed by the government; the government provides a financial incentive for part of the practical training at the employers' request after the training is finished. The cost of insurance of students during practical training is paid by the State.
Number of participants	After compulsory school, approximately 98% of the students continue their education at upper-secondary level. A total of 40% of students enrol in general secondary education courses (*gymnasia*). Others (approximately 60%) enrol in technical secondary education (approx. 30%) or vocational secondary education (approx. 30%). According to Eurostat data, in 2009 there were approximately 64,219 students enrolled in ISCED3 level vocational programmes. According to provisional data, there are 17,119 students enrolled in higher education vocational colleges in the 2007/08 academic year.
Recent/planned changes in VET policy	The Apprenticeship system was introduced by law in 1996, but with the introduction of the new Law on Vocational Education and Training in 2006, the apprentice status introduced in 1996 was abolished. With the 2006 VET Law, the apprenticeship system was extended to the overall system of vocational and technical education, and the dual system and school education were united into a single form. As well as this, new expressions such as 'practical training' or 'learning agreement' were included. The new generation of educational programs (curricula), which were adopted in 2006 to 2008, provided that the students have a period of training with an employer, i.e. practical training to work. A network of intercompany training centres (MIC) has been set up, in order to promote co-operation between schools and social partners, and develop and maintain active and regular liaison with the regional business community on skills needs. As well as this, and given the decreasing number of students in Upper Secondary VET, various campaigns have been implemented to promote vocational education among young people.

SPAIN

SPAIN	
Main available IVET schemes	***Upper Secondary Level IVET*** ▪ Intermediate Level Vocational Training (ISCED 3B) ***Tertiary Level IVET*** ▪ Advanced Vocational Training (ISCED 5B) *The Spanish Education System does not contemplate the figure of apprentices as such. In any case, there is a type of working contract known as 'Training Contract' (Contrato para la Formación), which provides participants with practical and theoretical learning, and which is specially aimed at people suffering from lack of qualifications.*
General Characteristics of existing schemes	***Upper Secondary Level IVET*** ▪ Intermediate Level Vocational Training (ciclo formativo de grado medio). It is taken by students over the age of 16 and a diploma of Graduate of Compulsory Secondary Education is a prerequisite for entrance to this type of education (or a Vocational Training Technician Diploma). The duration of these studies is 2 academic years. When finishing, students receive a Technician Diploma. The training courses are organized into professional modules, which can be of two types: those associated with a unit of competency (the most specific) and transversal or basic modules to build basic transversal skills. The regulations governing education have produced a series of general, basic guidelines to define a common legal structure for the academic aspects of vocational education. Using the basic national legislation as their starting point, each Autonomous Community regulates the aspects related to assessing vocational training. The curriculum for the training courses includes a module of workplace training (which is not considered as employment). Those who can prove that they have work experience related to their professional studies can be exempted from it. The Workplace Training Module (Formación en Centros de Trabajo, FCT) takes place during the last year of the Intermediate Level Vocational Training. The number of hours in the module is stated in the official programme of each training course. They normally range between 400-600 hours (20-30% of the total tuition hours, that is, 10-20 weeks). It is a block that takes place in a company, which is not associated with any specific unit of competency, but it does affect the general competencies of the training course. This is one of the fundamental ways of linking the worlds of education and work, which guarantees the quality of the VET and the matching of training to the requirements of the productive system. The training programme is designed jointly by the tutor from the education centre and the tutor from the workplace, and both the company and the professional training centre sign a cooperation agreement. The Workplace Training Module is a compulsory module for all vocational training students, and successful completion of this module is an indispensable condition for obtaining the diploma or certificate. When assessing the workplace practical training module, the person appointed by the workplace to be responsible for the training takes part in the assessment. ***Tertiary Level IVET*** ▪ Advanced Vocational Training (ciclo formativo de grado superior) Students enter this level over the age of 18. An advanced level training course lasts 2 years. Advanced level vocational training is made up of training courses for different professional families. Its aim is to provide students with the following: professional skills that fit each qualification; knowledge of the basic legislation and their rights and obligations; and, the knowledge and skills needed to work confidently and avoid workplace risks. Finally, it is intended that the students should acquire the attitudes and professional maturity needed to encourage them to continue learning. In general, the centres that offer specific advanced level vocational training are the same ones that offer intermediate level training. Advanced Vocational Training also includes a module for training in the workplace (Formación en Centros de Trabajo, FCT), where there is not a contractual link between student and employer. It takes place in the second year and consists of between 400 and 600 hours of training and activities. The characteristics of the FCT module in Advanced Vocational Training are the same as in the case of Intermediate Level Vocational Training (see above). Students who finish specific advanced level vocational training satisfactorily obtain the qualification of Advanced Technician.
Financing aspects	Concerning Initial and Vocational Training, its financing in Spain comes from public funds and contributions from private institutions and the households. Funds are not only allocated to public education institutions but they can also be allocated to private centres in the form of subsidies or scholarships and financial aid for students. In centres, the amount of financing is set according to the number of students. In general terms, the last two decades have seen a spectacular increase in spending on education.

	With regard to the Workplace Training Module (Formación en Centros de Trabajo, FCT), there is no obligation to pay students for the work performed. On the other hand, in some Autonomous Communities there are financial incentives for companies, but in any case this is a very low and symbolic amount of money which is not a real motivation for companies to participate (many companies even give it to students).
Number of participants	There is still an uneven distribution between the vocational and the general tracks, being IVET a less preferred option. However, it is possible to observe a clear upwards trend in the number of total students enrolled in IVET studies both in middle-level and upper-level programmes. According to 2010/11 academic year data (provisional data) there were 281,787 students attending middle-level VET programmes (i.e. ISCED3B courses), which means 31.4% of the students at upper secondary level. (Latest definitive data are for the year 2008/09: 249,506 students, 29.7%). Concerning ISCED5B, there were 256,228 students (15.1% of the total students in ISCED5), according to data for the academic year 2010/11 (provisional data). Latest definitive data (year 2008/09) show that there were 223,098 students in ISCED5B, i.e. 13.9% of the total of students in ISCED5.
Recent/planned changes in VET policy	The structure of the education system was partially changed in 2006 by the Ley Orgánica de Educación, LOE (Organic Law on Education) (it has been progressively implemented, and there are still a few aspects which have not been completely applied in the whole territory) The LOE established and regulated Spanish VET, including Intermediate Level and Advanced Level Vocational Certificates. During the last decade, the Spanish Government has implemented several support measures aimed at increasing the number of students in the vocational track. Moreover, Public Authorities have tried to increase quality, efficiency and flexibility of VET supply. Thus, the Law 2/2011 for a Sustainable Economy has tried to promote permeability within the Spanish education system, as well as more flexible and adaptable training programmes.

SWEDEN

SWEDEN	
Main available IVET schemes	***IVET at Upper Secondary Level (school-based):*** ▪ VET programmes in vocational schools (ISCED 3A) *Most IVET in Sweden is school-based. Sweden does not have broad apprenticeship training as part of the upper secondary school system. Apprenticeship or Gymnasial lärlingsutbildning exists today as a pilot, and it is expected to be permanent from 2011.*
General Characteristics of existing schemes	***IVET at Upper Secondary Level (school-based)*** Upper secondary programmes that are primarily vocationally-oriented give broad basic education within the vocational field, and they also provide the foundation for further studies (all upper secondary programmes can lead to higher education). Vocationally-oriented programmes last for 3 years, and they include both general and vocational subjects. These programmes are typically 85% school-based. This means that they contain at least 15 weeks at a workplace outside the school, the so-called workplace training *(APU – Arbetsplatsförlagd utbildning).* Education providers (organisers of schooling such as municipalities, independent schools, etc.) are responsible for finding workplace training opportunities and for supervising students. Opportunities for arranging workplace learning vary as schools are dependent on the links they have established with private and public organisations and the local business community. Therefore, it can be difficult to secure sufficient high quality placements. The Swedish National Agency for Education determines which courses are compulsory for national specialisations. By combining specific subjects from different programmes, a municipality can put together specially designed programmes (specialutformade program) to meet local and regional needs. In general terms, vocational programmes provide a broad preparation for a particular sector rather than a specialised occupation. The leaving certificate from school is recognized but the student is not considered to be a fully skilled worker. Therefore, the acquisition of more specialised skills is often the responsibility of the employer. As a consequence, for a few occupations that do require occupational certification (such as electrician, plumber or car mechanics), social partners have made an agreement concerning apprenticeship education, through which students can work as apprentices for a certain time before getting a certificate, issued by the branch/sector. That is, learners must complete an apprenticeship-like programme administered by joint training boards at the sectoral level, complementary to the school-based learning. These joint training boards issue journeyperson certificates (*Yrkesbevis*), which are well known and widely used, but which are not part of the public educational system. On the other hand, several enterprise-based upper secondary schools have also been started during recent years. This type of school provides more company-based education and training, often with education adapted to the enterprise's own needs. This type of upper secondary school receives the same funding formula as other schools, follow the core upper secondary curricula and students receive the same upper secondary leaving certificate.
Financing aspects	In principle, all IVET is provided at upper secondary school level and is almost entirely (over 99 %) financed by public funds. Upper secondary level IVET is fully funded by municipalities, both through State funds (State grants) and municipal taxes. Calculation of State grants is determined by several underlying factors such as the size of the population in the municipality, its age structure, population density, social structure and number of immigrants. Each municipality determines how it will allocate resources to individual schools and organise its activities. Concerning in-company training, most of it is paid by companies rather than through State subsidies or via training levies or funds. Finally, with regard to costs assumed by students, various forms of financial assistance are available, such as study assistance through grants and loans.
Number of participants	In 2008/09, and according to national definitions, there were 177,935 students enrolled in IVET at upper secondary schools in Sweden, representing 49.5 % of the upper secondary student population enrolled in national programmes. On the other hand, and concerning the apprenticeship pilot project started in 2008, data available show that during the academic year 2009/2010 there were almost 7,000 students participating in the pilot program.
Recent/planned changes in VET policy	The Swedish Parliament has decided to reform upper secondary school. Implementation of the reform is now in full swing and a national test period started in 2008, with the launch of a pilot programme. Some of the reasons for implementing this new system include employer complaints of the inadequate general education of vocational graduates and their lack of work preparedness. From academic year 2011/2012, a new apprenticeship programme, known as *Gymnasial lärlingsutbildning*, will be introduced as an alternative in all upper secondary VET programs, as a parallel path to the traditional school-based one. Thus, training will be offered both as school-based education and as secondary apprenticeship with the same terms of objectives.

	This new apprenticeship programme will last for 3 years and more than 50% of the total education will be work-placed. Learners in upper secondary apprenticeship will receive a vocational upper secondary diploma on completion of their studies/training. Concerning retribution, apprentices may or may not earn a wage. Employers that hire and supervise apprentices will receive approximately SEK 25,000 per apprentice per year to cover the cost.

UNITED KINGDOM

United Kingdom	
Main available IVET schemes	***Primarily School based*** *IVET at Upper Secondary Level (ISCED 3A, 3B & 3C)* ▪ Sixth form colleges ▪ FE Colleges *IVET at Tertiary Level (ISCED 5B)* ▪ Higher National Certificates and Diplomas (HNCs and HNDs) ▪ Foundation Degrees ***Primarily Workplace based*** ▪ Apprenticeship (ISCED 3 & 5B) *Within the UK, there is no unified VET structure and provision is profuse. Historically, VET has developed in an ad hoc way, rather than through central planning. Most of NVQ (National Vocational Qualifications) standards do not specify training programme or the time framework.* *The qualifications framework and programmes of study in Scotland differ from the rest of the UK. The information contained in this sheet will mainly refer to England*.
General Characteristics of existing schemes	***Primarily School based*** ***IVET at Upper Secondary Level*** After completion of compulsory education in secondary schools (16 years), young people may choose, among others, to move to a college and study vocational subjects. Programmes are normally 2 years in duration, but a number of students take 3 years and the phase is generally considered to be ages 16 to 19. Shorter programmes equate with ISCED3C programmes, whereas longer ones equate with ISCED3A&3B. There is a wide variety of programmes, and the balance between school-based and work-based training varies on the course/college. These vocational qualifications may include the Diploma, NVQ as well as BTEC and City and Guilds. The main providers of upper secondary education are: ▪ Sixth form colleges They are post compulsory educational establishments where students prepare for their GCE (General Certificate of Education) A-level examination during the final 2 years of secondary schooling. These provide mainly full time courses. Much of their offer is academic, but they also offer a small range of vocational courses. ▪ FE (Further Education) Colleges Further Education Colleges includes specialist colleges, offering a wide range of courses, for adults as well as young people. Most offer academic courses (such as A Levels), but their focus is much more strongly vocational. Collectively, FE colleges make up the largest sector of VET providers within state provision, and they generally offer a common curriculum of nationally-recognised qualifications. Students at FE colleges may attend full- or part-time (in the UK it is very common to be employed while studying). Learners following a FE course for entry to an occupation, combine training for specific occupations with work. Further education courses are generally up to the standard of GCE A-level. FE often provides an entry to university or/and full employment. ***- IVET at Tertiary Level*** In the UK there is no separate identification of 'vocational' higher education; most institutions offer both vocational and general courses. Universities typically provide higher education (HE) for those aged 18 and over, although HE may be delivered by other institutions including further education colleges, employers and private providers. ▪ Higher National Certificates and Diplomas (HNCs and HNDs): Those are the most usual sub-degree HE qualifications, as well as vocational qualifications in their own right. Both of them equate with ISCED 5B level. HNDs are normally offered as full-time, 2-year courses or through a longer part-time route. HNCs normally last 1 year full-time, or 2 years part time. HNC/D students can easily progress to degree courses. Some of those programmes involve a combination of college and workplace learning, but the balance between theory and practice varies. ▪ Foundation Degrees Foundation Degrees were introduced in 2001. These were designed in conjunction with employers and combine varying extents of work-based learning with taught elements within higher education institutions depending on sector. Since their introduction in 2001, Foundation Degrees have expanded at 25% per annum (20,800 students in 2007).They are shorter than Bachelor degrees, mainly in applied and vocational subjects, and designed to be taught in HE and FE colleges. They are intended to solve skills shortages, preparing more HE students for the world of work and widen participation. They integrate academic and work-based learning through close collaboration between employers and programme providers.

	Primarily Workplace based- Apprenticeship Modern Apprenticeships were introduced by Government in the mid-1990s (due to structural change in the economy) as a high quality work-based alternative to full time educational routes. After compulsory education, young people may choose to enter employment with training through programmes such as an apprenticeship (employment-based training). Through this programme, students formally combine employment-based training in a broad range of sectors with training provided either by a college or other training provider, where students gain recognised qualifications. There is no single set time to complete Apprenticeships and they vary widely in content and size. In general, they normally last between 1 and 3 years (or even 4 years), depending on the type of programme and the level attained. There are three levels of Apprenticeship available for those aged 16 and over: 1 - Intermediate Level Apprenticeships: ISCED 3C. These take a minimum of 12 months, and allow entry to an Advanced Level Apprenticeship. 2 - Advanced Level Apprenticeships: ISCED 3A & 3B. These take a minimum of 24 months. 3 - Higher Apprenticeships: ISCED 5B. Higher Apprenticeships work towards work-based learning qualifications such as NVQ Level 4 and, in some cases, a knowledge-based qualification such as a Foundation degree. The present apprenticeship includes the following basic elements: ▪ A National Vocational Qualification (NVQ), offering progression routes to further education; ▪ Key Skills (e.g. communication, application of number, IT, etc.) ▪ Technical Certificate (or knowledge-based element). ▪ A module on employment rights and responsibilities. Apprentices receive pay and have the status of employees of the organisation where they work. They have a contract and also an individual learning plan, which employers develop with the help of local learning providers. Apprentices typically spend one day per week at college studying the technical certificate and the remainder of their time in training or work with their employer. The Specification of Apprenticeship Standards for England (2011) sets out that apprentices will receive a minimum of 280 guided learning hours in any year. Apprentices can enter higher education or employment depending on the successful completion of the corresponding apprenticeship training.
Financing aspects	With regard to the apprenticeship scheme, employers are expected to enter into a contract of employment with an apprentice and, having done so, to take responsibility for paying the agreed wage and other costs. There is no set rate of pay for apprentices, however all employed apprentices must receive a wage of no less than £2.50 per hour. Apprenticeship funding is available from the National Apprenticeship Service (transferred from public funding from the Government), which is a specially designated agency (until 2009, it was the LSC- Learning and Skills Council who managed this programme). The size of the contribution varies depending on the sector and the age of the candidate. Thus, full government funding is available to cover the training fees of 16-18 year old apprentices. For those aged between 19 and 24 years, employers are expected to contribute 50 per cent of the training fee. Where apprentices are over 25 years old, typically employers fund the full costs of training. A government-funded trial was established in 2010, as part of trials to test approaches to Apprenticeship Expansion, which offered an incentive to employers to take on an apprentice. This involved payment of a small one-off payment to employers not already involved in apprenticeships to take on an unemployed 16 or 17 year old into an apprenticeship position. On the other hand, Government funding to cover the cost of theoretical training is not paid directly to the employer, but it is paid directly to the organisation that provides the apprentice training. Finally, the majority of funding for school-based IVET (whether undertaken at a further education – FE – college or school) originates from the central government departments. Publicly funded secondary schools in England and Wales receive their funding from local authorities (LA) based on the *funding formulae* (number of students, their age, students with special education needs, etc). Concerning tertiary level education, all universities benefit from state funding through national funding councils.
Number of participants	In terms of participation rates, the UK has traditionally had higher rates of participation in academic/general rather than purely vocational routes (in 2007, 58.6% of the Upper Secondary students chose general courses). Since the start of the modern apprenticeship reform in 1994, one million apprentices have joined the programme and by 2008, almost 50% of British Gas engineer recruits were apprentices. The available data for England indicate that the number of people taking an apprenticeship has trebled since 1999. It is estimated that 5.5% of the 16 year olds are engaged in government-supported work-based learning (National Statistics, 2008). In the year to 2008, a record 234,000 people started an Apprenticeship, representing a 4% increase on 2007. There were 239,900 Apprenticeship starts in the 2008-09 academic year and 143,400 Apprenticeship framework achievements. This represents the highest number of Apprenticeship starts and achievements ever in an academic year.

	Since then, with the economic downturn persisting, the number of Apprenticeship places have declined: the number of 16 to 18 year-olds start-up Apprentices fell by 7.5% in 2009, whilst the number of 19 to 24 year olds starting Apprenticeship dropped by 5.9%. The reason for the decreasing number of Apprentices is partly the unwillingness of the firms to recruit Apprentices who have initial training needs and their wish to reduce discretionary spending, although the Government's goal of promoting Apprenticeships. The most recent announcement, contained within the Schools White Paper (2010) envisages that 131,000 young people would start an apprenticeship in 2010/11. Finally, concerning tertiary education, in the 2009-2010 academic year there were 258,000 students attending university, and 99,475 studying a foundation degree.
Recent/planned changes in VET policy	From a general point of view, Governments in England have sought to bridge the gap between general education and vocational training by achieving parity of esteem between different types of qualifications. Thus, the new national qualifications framework encourages transfer and mixed learning programmes among traditional general education, school and college-based vocationally related education, and work-based vocational provision. In England, the new Apprenticeship Act is very recent: year 2009. A National Apprenticeship Service (NAS) was set up in April 2009 having end to end policy responsibility for Apprenticeships and providing a single contact point for employers and apprentices. A key part of this service is the new on-line system for Apprenticeship vacancy matching. As well as this, England is working on legislation which will put the Apprenticeship programme on a statutory basis, aiming at ensuring that an Apprenticeship place is available for all qualified young people by 2013. On the other hand, and as a consequence of the economic recession, the UK's Government has reduced public spending and further/higher education sectors have experienced substantial funding cuts. Several measures have been implemented; for instance, the apprenticeship 'Clearing House' was a rapid response service aimed at finding new employer places for apprentices facing redundancy. As well as this, the 'Small Change, Big Difference' Ten Minute Rule Bill aims at increasing the number of private sector work-based apprenticeships available to young people, placing a duty on companies who receive large public sector contracts to employ additional apprentices. Moreover, in Northern Ireland, the *Skillsafe scheme* assists apprentices who have been placed on short-time working, filling apprentices' downtime with accredited training.

Annex E. Case study countries´ reports

DENMARK

Background information

This chapter provides a general introduction to the Danish Vocational Education and Training (VET) system. To start with, there will be a short introduction to the Danish educational system in general. Afterward, the attention turns towards the Danish VET system. The chapter presents the dual VET system as well as the aim and importance of apprenticeship type schemes in Denmark. Furthermore, the image of apprenticeships will be explored along with the possibility of attracting 'good students' to the vocational training schemes. Lastly, a brief overview of how the VET system is regulated will be provided.

In Denmark compulsory education starts at age 6 or 7 and lasts a minimum of nine years. Education is provided at the basic primarily schools. Afterward, an educational pathway exists which is primarily divided into an academic track and a vocational track. The academic track provides access to tertiary education, while the vocational track provides access to the labour market as a skilled worker. The vocational track however qualifies for higher education at vocational colleges.

For a long time, Denmark has had a stable and well-organised VET system in which practical training in a company is highly integrated. The Danish VET system is an alternating program consisting of a school-based basic course, and a main course. In the main course practical training in a company alternates with instruction at a vocational college. There are 110 vocational educations and training programs in Denmark. Only three of these educations are not a part of this alternating system and are completed without practical training in a company.

The aim of vocational educations and training programs are to motivate students to complete a program of training that can qualify them for employment and at the same time, accommodate the needs of the labour market. Those who complete the VET program can immediately work within the industry, trade or service that was the focus of their program.[144]

The basic course is flexible in duration and depends on the individual student's prior qualifications and ambitions. Typical lengths of basic course are usually between 20 and 40 weeks in the technical basic course and between 38 and 76 weeks in the commercial basic course. The basic course is followed by a main course, which is based on the alternating principle.[145]

The duration of the main courses are typically three to three and a half years, but can be shorter or longer for certain steps and programs (from one and a half up to five years). In the main courses, the students alternate between learning in a company and at a voctional school, according to the principles of a sandwich-type program, as the school-based periods are organised as blocks of between five and ten weeks.[146] Depending on the duration of the education, these blocks are placed 2-5 times during the main course with 1-3 blocks per academic year.

Since August 2008, the 110 programs have been gathered into twelve vocational clusters, leading to a number of related vocational programs. These programs are presented in Table E.1. Furthermore, the vocational programs consist of different specialisations which differ in duration. In almost all the VET programs there are two to three steps, in order to increase

[144] Danish Ministry of Education (2010): *"Initial Vocational Education and Training Programmes"*
[145] Ibid.
[146] Ibid.

the flexibility of the programs. This means that the students can stop at a well-defined step and receive a formal certification for the completed step. Step one has duration of approximately one and a half year, while step two has duration of two and a half to three and a half year. Step one could for instance be wellness assistant which has duration of one year and six months, as step two would be cosmetician and has duration of two years and six months. The students can resume the VET at a later date, without prolonging the overall duration of their educations. However, the structure requires that the students decide whether to suspend their educations at a certain step, before entering the main course. The students attain specialisations when all steps within the main program have been conducted and the final tests are passed.[147]

Table E.1 Programs within vocational clusters

Basic course	Number of programs in the cluster
1. Motor vehicle, aircraft and other means of transport	6 programs
2. Building and construction	15 programs
3. Construction and user service	3 programs
4. Animals, plants and nature	9 programs
5. Body and style	3 programs
6. Human food	11 programs
7. Media production	7 programs
8. Commercial	8 programs
9. Production and development	31 programs
10. Electricity, management and IT	7 programs
11. Health, care and pedagogy	4 programs
12. Transport and logistics	7 programs
Total	**110 programs**

Source: Danish Ministry of Education (2010): "Initial Vocational Education and Training programmes"

The educations in the Danish VET system are classified as 3C on the International Standard Classification of Education (ISCED).[148] This is in spite of the fact that the 110 different educations vary in length and qualifying skills. To illustrate this variation, there is a national classification system within Denmark rating all educations from level one to level eight, where level one is elementary school and a Ph.D. is level eight. The educations in the VET system are classified from level three to five on this scale.[149] Some of the VET qualifies for higher education, and by way of comparison, other upper secondary educations leading to higher education are rated as level four.

However, according to a report produced by Oxford Research for the Danish Ministry of Education, the Danish Employers' Confederation finds VET labelled as low status.[150] Likewise, a general opinion among teachers at the vocational colleges is that the students' academic standards have declined the past years.[151] This might illustrate one of the main challenges in the Danish VET system, that is, in order to obtain a certain youth education quotient, the VET needs to comprise a wide spectrum of students. This means that the VET must be attractive for students with very good technical skills and at the same time, it has to be a realistic offer for those with weaker skills.[152]

On the other hand, concerning the regulation framework, the Danish VET system has a long tradition of involvement with Social Partners. The different apprenticeships' training schemes are put together centrally by a board of representatives for the Danish Employers´

[147] Danish Ministry of Education (2010): "*Initial Vocational Education and Training Programs*"
[148] Danish Agency for International Education (2009): http://www.iu.dk/politiske-rammer/isced
[149] Danish Agency for International Education (2009): http://www.iu.dk/dokumentation/kvalifikationsrammer/typer
[150] Oxford Research (2010): *"International challenges for the VET system".*
[151] Politiken (2011): *"Teachers give up on the young students*". Politiken 9th of May 2011
[152] The Government (2005): *"VET in World Class".* The Government´s debating point for a meeting at the Council for Globalisation 25th and 26th august 2005

Confederation, trade unions, vocational schools and the Ministry of Education. The system is a tripartite system involving the Social Partners in management and development of VET at all levels.

The national law can be considered a legal framework which delegates competence between the Social Partners and the Ministry of Education/the State. The law does not contain adequate directions for the vocational schools, so it is up to the tripartite board (mentioned above) to decide the elaboration of the law. Note that there is no distinct national definition of apprenticeship.

In order to make the companies provide enough apprenticeships, the supply is regulated by a system of reimbursements and subsidies, financed and administrated by the Employers´ Student Reimbursement Fund (Arbejdsgivernes Elevrefusion, often referred to as AER).[153] For example, since December 2010 the employers have had the possibility of receiving 70,000 Danish kroner for appointing a student as a part of the education.[154]

Existing VET apprenticeship type scheme

In the subsequent sections the existing Danish apprenticeship type schemes will be described, followed by a quantitative representation of the importance of these types of schemes. The target group for vocational educations and training programs in Denmark are not only young students who apply directly after obtaining basic school education, but also adults with prior vocational experience can apply for VET.[155] Except for graduating from the primary upper school, there are no prerequisites for entering VET. App. 30 % of students attending VET, are older than 25 years. Students older than 25 years at the time for entering the VET, have the possibility of attending the VET through a special adult education program.[156] However, the focus in this chapter will be on young apprentices and for this reason, data represented only includes students from the age of 15 to 24 years.

Identification of main existing apprenticeship type schemes

In order to be admitted into the main program of the VET, the students must enter a training agreement with an approved company which offers training. The training agreement is a binding contract between both parties and can vary depending on these four following main apprenticeship type schemes[157; 158]:

Ordinær uddannelsesaftale (Regular training agreement)

- Mesterlære (New Apprenticeship)
- Kombinationsaftale (Combination training agreement)
- Kort uddannelsesaftale (Short training agreement)

Furthermore, a school-based practical training is offered under special circumstances described in a separate section below.

The training agreements are identical at several points. The distribution of company based and school based training hours is usually respectively 2/3 and 1/3 irrespective of the apprenticeship type scheme. There are no age limits for students who want to apply for the

[153] Danish Ministry of Education (2011): *"Employers´ Student reimbursement Fund".*

[154] Danish Ministry of Education (2010): *"Establish an apprenticeship and get up to 70.000 kroner", http://www.uvm.dk/~/media/Files/Udd/Erhvervs/PDF10/101214_faa_70.000_kroner_for_hver_ny_praktikplads.ashx*

[155] Danish Ministry of Education (2010): "*Initial Vocational Education and Training Programs*"

[156] Danish Ministry of Education (2010): "*About the vocational education trainings*"

[157] Danish Ministry of Education (2008): *"Training agreements at the companies´ condition"*

[158] The Danish Ministry of Education has not been able to inform the dates, since when the agreements have been available.

different training agreements, nor any division of prerequisites within the agreements. The schemes are not linked to particular VET programs or specialties, but regular training agreement is by far the most common apprenticeship scheme and the remaining agreements are represented differently in the clusters. Additionally, there are no differences in the skills gained within the different agreements.

The training agreements do differ in duration. This is because the regular training agreement and the new apprenticeship include the entire main course, while the remaining agreements only cover a part of the main course. This means that these agreements have to be supplemented by other agreements. This and other differences in the type schemes will be pointed out in the following section.

By end February 2011, 52,891[159] students under the age of 25 years were undergoing a training agreement. The regular training agreement is the most common agreement chosen by almost 84 per cent (44,372[160]) of the students and their training companies[161]. The agreement is formed between the student and one company, and the agreement includes the entire main program.

The new apprenticeship has been available since the 1st of August 2006[162] and was introduced to make allowances for practical orientated students. This agreement includes the entire vocational program. Instead of a basic course, the first year of the VET is carried out through practical training in a company. In some of the technical vocational programs about 40 per cent of the students have chosen this route, but the share is very small in other vocational and training programs.

With a combination agreement, the student enters a training agreement with two or more companies and together these partial agreements constitute the entire VET program. The student can either alternate between the companies with periods of, for example, half a year or the agreements can replace each other in the consecutive training period. All the elements in the agreement must be made before the student starts on the first part of the VET. Very few students formed this agreement in 2010.[163]

The flex-combination was introduced on trial in 2001 but has since 2008 no longer been available. This agreement was a more flexible type of the combination agreement, where the vocational school were an anchor and the student could switch between school-based training agreement and apprenticeship in a company. All the elements in flex combination agreement did not have to be agreed by the start of the flex combination agreement. At the abolishing of the flex-combination agreement the short training agreement was reformed towards giving the student the possibility of returning to the schools-based training agreement after ending the apprenticeship in a company.

The short training agreement is well suited for companies who are not able to undertake an entire training period for example if the company is very specialised. It was introduced in 2003 and finally established in 2008.This agreement is also a way of getting companies with relatively short production horizon to take trainees. The agreement must include at least one school period and one training period. It is possible to extend the agreement at any time or convert it to a regular training agreement.

Once the basic course is completed the students are required to have an educational guarantee to proceed. This means that students who are unable to obtain an agreement with a

[159] This amount includes number of students attending the educations at the "School of Social and Health Care" and "The Pedagogical Assistant Education". These educations will *not* be included in amounts presented in subsequent tables

[160] This amount includes number of students attending the educations at the "School of Social and Health Care" and "The Pedagogical Assistant Education". These educations will *not* be included in amounts presented subsequent tables

[161] Danish Ministry of Education (2011): *"VET statistics".* The databank.

[162] Retsinformation (2006): *"Lov vedtaget: Forslag til ændring af om om erhvervsuddannelser".* www.retsinfo.dk.

[163] It has not been possible to provide information on the date since when the combination scheme has been available

company within two months after completing the basic course can be offered admission to a school-based practical training. School-based training is also utilised in situations where a company which has a student as a practical trainee, is forced to close down. School-based practical training is offered in 40 to 50 per cent of vocational programs. School-based practical training is an offer for students who haven´t got a training agreement and this scheme imitate training in a company as much as possible.

At certain tertiary levels vocational training is also integrated. Since 1st of August 2009 a compulsory three month apprenticeship in an enterprise or a public institution has been integrated in all short further and higher educations (Korte Videregående Uddannelser often referred to as KVU programs) KVU programs are educations at a tertiary level and can be used as further training for skilled workers. The educations haveduration of 1 ½ to 2 ½ years and are classified as 5B on the ISCED scale. Admission requirements are either a relevant VET or general upper secondary education. KVU programs qualify the student for performing practical tasks on an analytical basis. Furthermore the programmes admit the students for further educations within the field, such as professional bachelor programmes.[164] The below listed schemes are examples of ways former students have organised the compulsory three month apprenticeship:

- Workplace apprenticeship
- Project oriented apprenticeship
- Virtual apprenticeship
- Entrepreneur apprenticeship
- International apprenticeship

The apprenticeship does not act as a training agreement but a contract is often drawn between the enterprise and the student in order to set up some guidelines for the apprenticeship. Whether the enterprise pay wages under the apprenticeship depends on the curriculum that vary within the different KVU programmes. Within most of the programmes the enterprises do not pay wages under the apprenticeship, but as an example of other structures, students at the pharmaceutical education get wages during the entire education while students at the trade economist get wages during the eight month apprenticeship.[165]

The workplace apprenticeship is the most common and well known type of scheme. It is similar to apprenticeships in VET, where the student for a period works in an enterprise or institution and takes part of the daily tasks. The project oriented apprenticeship takes form as a process, where the studentcooperate with an enterprise or institution on solving a problem defined by either the student or the enterprise. Virtual apprenticeship is characterised by involving digitised medias. The main goal of entrepreneur apprenticeship is to give the student experience with entrepreneurship and try out innovative ideas. Finally the international apprenticeship simply is the possibility to carry out the apprenticeship in an enterprise located in another country.

The structure of the apprenticeship is flexible and the above listed examples of type of schemes can be combined. The apprenticeship is placed on different semesters according to the different education curricula. The apprenticeship can take place in one or more enterprises and at some educations the apprenticeship is divided and placed on different semesters. The vocational colleges have an apprenticeship coordinator who takes care of the contact to the enterprises.[166]

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[164] Ministry of Education (2011): *"Vocational college educations and professional bachelor programs"*, http://www.uvm.dk/Uddannelse/De%20videregaaende%20uddannelser/Erhvervsakademi-%20og%20professionsbacheloruddannelser.aspx

[165] The Education Guide (2011): *"Vocational training in KVU programs"*, http://www.ug.dk/uddannelser/erhvervsakademiuddannelser.aspx

[166] Ministry of Educatopn (2010): *"Apprenticeship in vocational college educations* and *professional bachelor programs"*, http://www.uvm.dk/service/Publikationer/Publikationer/Videregaaende%20uddannelser/2010/praktikhaandbog.aspx

Table E.2 gives an overview of existing apprenticeship type of schemes on secondary and tertiary level, according to the distribution of company based and school based training hours.

Table E.2 Brief explanation of existing VET types

VET Types (Name in original and in English)	Distribution of school and work-based training (total training hours)	Is this VET type regarded as an apprenticeship training in your country?
VET secondary educations		
▪ Regular training agreement	35/65	Yes
▪ Combination training agreement	35/65	Yes
▪ Short training agreement	35/65	Yes
▪ New apprenticeship	oct-90	Yes
VET tertiary educations		
▪ Workplace apprenticeship	90/10	Yes
▪ Project oriented apprenticeship	90/10	Yes
▪ Virtual apprenticeship	90/10	Yes
▪ Entrepreneur apprenticeship	90/10	Yes
▪ International apprenticeship	90/10	Yes

Quantitative importance of apprenticeship type schemes

In cooperation with the Danish IT-centre for Education and Research (UNI-C), the Danish Ministry of Education publishes updated VET statistics in a database every month. Since 2010, the educations at the School of Social and Health Care and parts of the Pedagogical Assistant Education have been included in the VET statistics. In order to compare the evolution in statistics, these educations are left out in the represented tables, which are based on data from the databank.

Table E.3 shows the evolution of training agreements from 2005 to 2011. The total number of training agreements has fallen since 2008, which is also the case for regular training agreements. In this period, fewer companies have made apprenticeships available. This is reflected in the rise of short training agreements and school-based practical training. This illustrates that the alternate VET system is both influenced by and flexible towards the market trends.

Table E.3 Number of students in Secondary education

VET Types (Name in original and in English)	2005	2006	2007	2008	2009	2010	2011
Total Secondary education (ISCED 3 and 4)	**194.846**	**200.796**	**204.683**	**210.102**	**219.507**	**N/A**	**N/A**
General education*	104.679	108.376	111.198	117.591	124.532	N/A	N/A
VET education*	90.167	92.420	93.485	92.511	94.975	N/A	N/A
▪ VET basic course	39.947	40.354	39.604	37.744	40.447	N/A	N/A
▪ VET main course	50.220	52.066	53.881	54.767	54.528	N/A	N/A
▪ VET training agreements**	49.997	47.998	50.544	51.430	50.622	47.185	46.697
– Regular training agreement**	41.896	44.386	47.548	48.112	45.724	39.690	38.128
– Combination training agreement**	165	150	151	125	118	99	90
– Flex combination training agreement**	61	126	91	54	11[167]	0[168]	0[169]
– Short training agreement**	128	449	598	629	1.121	1.919	2.545
– New apprenticeship**	0	0	476	1.377	2.283	2.685	2.945
– School-based practical training**	4.747	2.887	1.680	1.133	1.365	2.792	2.689

Source: Danish Ministry of Education (2011): *"VET statistics",* The databank. The table only includes students under the age of 25 years. *Amount of students pr. 30th of September the present year. **Amount of students ultimo February the present years.

It is important to be aware of the difference between numbers withdrawn for students attending VET educations and students attending a VET training agreement. Except for the new apprenticeship, the training agreements do not include students following the basic course. Furthermore, the educations of the School of Social and Health Care and the Pedagogical Assistant Education are *not* included in numbers concerning training agreement. However, these are included in the amount of student attending VET educations.

As Table E.4 shows, the regular training agreement is by far the most common agreement, as almost 82 per cent of the students have chosen this type scheme. The new apprenticeship and short training agreement both share about six per cent of the students, while just below six per cent of the students are compelled to take their practical training as a school-based training.

Table E.4 Share of students at the respective training agreements

Apprenticeship type schemes	2011
Regular training agreement	81,7 %
Combination training agreement	0,2 %
Short training agreement	6,0 %
New apprenticeship	6,3 %
School-based practical training	5,8 %
Total	**100,0 %**

Source: Danish Ministry of Education (2011): *"VET statistics",* The databank. Note: Numbers withdrawn are dated February 2011.The educations at the School of Social and Health Care and the Pedagogical Assistant Education are not included in the table The table only includes students under the age of 25 years.

Table E.5 gives an overview of the characteristics of the students at the VET in February 2011, differentiated by training agreements. There is an over abundance of men in the VET. The total share of men is 70 per cent, while the share of women is 30 per cent. This share is approximately represented in the different training agreements, though only 11 per cent of women are in the combination training agreement and 18 per cent of women are in the short training agreement. Most of the students in a training agreement by February 2011 are in the age range of 20 to 24 years old. The table shows the tendency for young students to be more likely to be included in the short training agreement than the students in the age of 20 to 24.

[167] No longer available for new students

[168] No longer available

[169] No longer available

Table E.5 Student characteristics in order of age and gender

Apprenticeship type schemes	Men	Women	15-19 years	20-24 years
Regular training agreement	26.589	11.402	14.583	23.408
Combination training agreement	79	10	46	43
Short training agreement	2.281	511	1.974	818
New apprenticeship	2.023	927	1.406	1.544
School-based practical training agreement	1.883	805	1.355	1.333
Total	**32.855**	**13.655**	**19.364**	**27.146**

Source: Danish Ministry of Education (2011): *"VET statistics",* The databank. Note: Numbers withdrawn are dated February 2011.The educations at the School of Social and Health Care and the Pedagogical Assistant Education are not included in the table The table only includes students under the age of 25 years.

Among the total number of students, the share of students with ethnic origins other than Danish is 5.75 per cent. This ethnic distribution is represented in the regular training agreement, while students with other ethnical backgrounds are highly overrepresented in school-based practical training, with a share of more than 16 per cent (not shown in any table).

Table E.6 gives an overview of students attending the program clusters differentiated by training agreements. Within all clusters, the regular training agreement is the most common agreement. The combination training agreement is only used in a few cases within the three clusters. These are Building and Construction, Business, and Electricity, Management and IT.

Table E.6 Program clusters differentiated by training agreements

Clusters	Regular training agreement	Combination training agreement	Short training agreement	New apprenticeship	School-based training agreement
1. Motor vehicle, aircraft and other means of transport	3.938	0	123	462	375
2. Building and construction	7.777	12	974	212	1.005
3. Construction and user service	134	0	0	0	0
4. Animals, plants and nature	2.037	0	1.344	19	145
5. Body and style	1.247	0	63	503	76
6. Human food	3.133	0	9	984	80
7. Media production	497	0	20	61	114
8. Mercantile	10.915	6	12	314	195
9. Production and development	3.134	0	42	289	384
10. Electricity, management and IT	3.775	61	183	17	175
11. Health, care and pedagogy	591	0	18	39	45
12. Transport and logistics	810	0	0	43	91
Total	**37.988**	**79**	**2.788**	**2.945**	**2.685**

Source: Ministry of Education (2011): *"VET statistics",* The databank. Numbers withdrawn are dated February 2011. The educations at the School of Social and Health Care and the Pedagogical Assistant Education are not included in the table. The table only includes students under the age of 25 years.

Completion rates are the share of students who applied for the education in a specific year and completed the entire education. Since the true completion rate cannot be calculated before a certain period of time, the completion rate is estimated by a model of projection.[170]

The completion rate for all students entering a basic course at a VET in 2008 is 48 per cent. Not all students obtain a training agreement, some students change to another education and some students drop out of other reasons. For comparison, other upper secondary educations leading to higher education is expected to have a completion rate of 80 per cent. Of

[170] The Danish Ministry of Education: *"Numbers that speak"*.
http://www.uvm.dk/~/media/Files/Stat/Tvaergaaende/PDF10/100624_tal_der_taler2009_ny.ashx

all students entering a main course, 77 per cent complete the education. The drop-out rate is regarded as a problem in order to obtain the official goal of the education of the youth population.[171]

Just below 85 per cent of a youth group is expected to gain secondary education as a minimum education level and the official goal is 95 per cent. In 2008, 241,000 students[172] were undergoing a secondary education. Of these, 51 per cent applied for a VET and 14 per cent of those completing a VET, applied for a new education within 27 months. Of all students completing a VET, seven per cent apply for another VET afterwards, while a little more than four per cent apply for a higher education. In addition, a small share apply for general secondary education and non-qualifying educations.[173]

The employment rate[174] within a year for students completing a VET in 2009 was 0.79. Though this is quite a high rate for the newly educated, the rate has declined in past years, for instance, the rate in 2008 was 0.86.[175]

No national or official statistics exist concerning distribution and characteristics for students attending the different type of apprenticeships within the tertiary VET system at vocational colleges. Completion rate of educations at KVU-level was estimated to be 77 per cent in 2009.[176] Table E.7 shows the extent of students attending VET related educations at tertiary level and in relation, the total number of students attending tertiary education.

Table E.7 Number of students in Tertiary education

	2005	2006	2007	2008	2009	2010
Total Tertiary education (ISCED 5)	**85.032**	**87.730**	**92.603**	**95.903**	**103.789**	**N/A**
University education	77.108	79.474	83.734	86.332	92.444	N/A
VET related degrees	7.924	8.256	8.869	9.571	11.345	N/A
Workplace apprenticeship	N/A	N/A	N/A	N/A	N/A	N/A
Project oriented apprenticeship	N/A	N/A	N/A	N/A	N/A	N/A
Virtual apprenticeship	N/A	N/A	N/A	N/A	N/A	N/A
Entrepreneur apprenticeship	N/A	N/A	N/A	N/A	N/A	N/A
International apprenticeship	N/A	N/A	N/A	N/A	N/A	N/A

Source: Ministry of Education (2011): *"VET statistics",* The databank. The table only includes students under the age of 25 years. Numbers withdrawn are amount of students pr. 30th of September the present year.

Operational description the four apprenticeship training agreements

In the following sections, the regulation of the Danish VET system is described in order to show the Social Partners' central role in structuring and adjusting the 110 VET educations on a local as well as central basis. Afterwards, descriptions of the training companies are provided, followed by descriptions of structures, and content of the company based training as well as school-based training. Finally, finance-related information and information on quality assurance mechanisms is provided.

[171] Danish Employer Association (2009): *"Only a dramatic fall in drop-out rates can save the government's education plan"*. Political labour marked analysis.

[172] This data does not correspond with data presented in table 2.2. This is because the data presented here do take into account students older than the age of 25 years and the educations at the School of Social and Health Care and the Pedagogical Assistant Education

[173] The Danish Ministry of Education: "*Numbers that speak*". http://www.uvm.dk/~/media/Files/Stat/Tvaergaaende/PDF10/100624_tal_der_taler2009_ny.ashx

[174] The employment rate is calculated on the basis of students completing a VET the year of concern and these former student´s payments to the obligatory Labor Market Supplementary

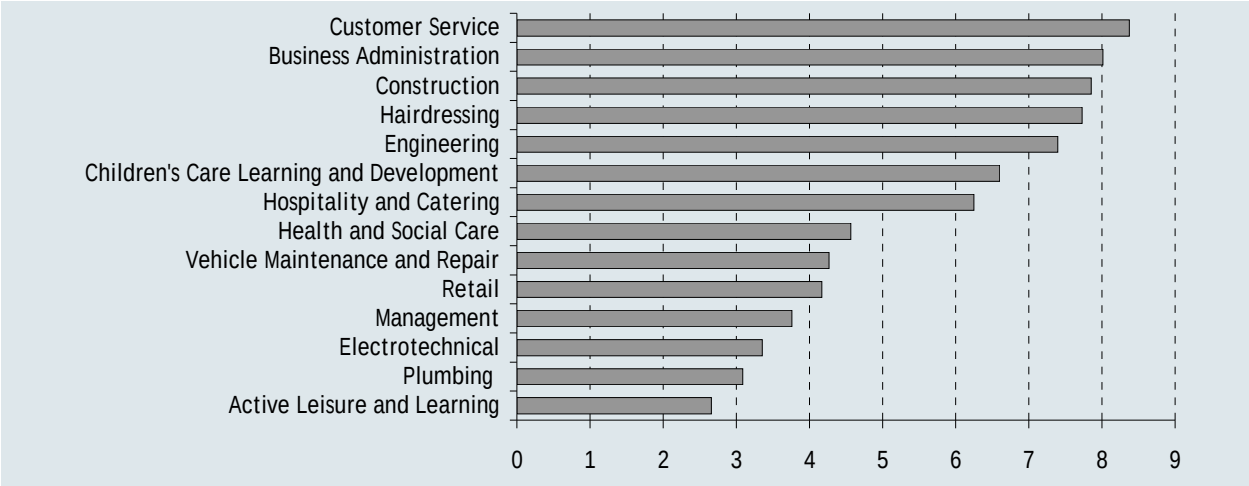
[175] ATP (2010): "Employment frequency of VET-educated workers", http://www.atp.dk/X5/wps/wcm/connect/f50b92804486cf87aed1efc63235e994/AER_Erhverv_Analyse_af_bestkaetigelsesfrekvenser_2010.pdf?MOD=AJPERES&Erhvervsuddannedes%20besk&aelig%3Bftigelsesfrekvens%202010

[176] Ministry of Education (2011):*"VET statistics",* The databank

Training curricula and training/education contents and competence profiles

As mentioned in chapter one, the Social Partners play a central role in managing and developing the VET system, including the apprenticeship type schemes. The structure is shown in Graph E.1 .

Graph E.1 Regulations of the VET system



Source: Danish Employer Association (2009): "Labour market report 2009. Vocational educations – Admission, drop-outs and employment"

At national level, the Social Partners are represented in the Council of the Basic Vocational Educations (REU), which gives the Education Minister advice about the VET educations. The REU is appointed according to the Law of VET and is composed of representatives from the labour markets main organisations[177] as well as regional associations, the National Association of Municipalities, etc.

The structure and contents of each of the 110 VET educations is provided by the Education Minister in corporation with the different trade committees, which are composed of employers and employees within the concerning branches of trade. For each VET education there is a trade committee. The trade committees and the Ministry of Education decide the competency goals of the educations and establish the frames for the educations. These frames are filled out locally by the VET Schools. The Social Partners are represented in the VET school´s local education committees, appointed by the institutions in order to advise the schools about supply and development of the educations in the local area. These representatives are typically committed to the local trade. Furthermore, the Social Partners are represented in the school´s direction boards.[178] Through this system, representatives from various training companies influence the contents of the workplace based training. The individual companies then fill the provided frames.

The local school´s board of directors and the local Social Partners elaborate a local education plan which contains the respective school´s arrangement of all the instructions. This means that all vocational schools have different educational profiles, though the general frames and goals of the educations are similar. This flexibility in the arrangement of the instructions makes it possible to adapt the educations to the local labour market and local companies. This illustrates the Social Partners local involvement in regulating the VET. This influence is regarded as a strength because it ensures that the skilled workers provide com-

[177] The main organizations are Danish Employers´ Confederation (DA) and the Danish Confederation of Trade Unions (LO)
[178] Danish Ministry of Education (2010): *Partners at the labour market".*
http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Styring%20og%20ansvar/Parter%20paa%20arbejdsmarkedet.aspx

petences matching the need of the labour market. This is regarded as an advantage both to the labour market and to the skilled workers, who will more easily get a job.

Role of enterprises in the apprenticeship type schemes and description of company based training

Textbox 1
Main goals at the dental clinic assistant education
The main goal is to "*provide the student with the capability of independently prepare and assist at any type of dental treatment. Through practical training and theoretical education the educated assistant must be able to independently inspect whether the clinic has a hygiene level high enough to minimise infection risk. The assistant must be able to prepare and take radiographs. Also the education must qualify the assistant to undertake preventive tasks as mouth hygiene check, instructions in dental care at home and elementary diet directions as well as polishing teeth".*

As mentioned earlier, two-thirds of the VET education takes place as training in a company. The school-based training is organised into blocks between five and ten weeks in length throughout the main course. Depending on the duration of the education, these blocks takes place 2-5 times during the main course with 1-3 blocks per academic year. The practical training within the VET system takes place in one or more companies approved by a trade committee. It is the companies` responsibility, together with school-based training, to construct an apprenticeship that leads to achievement of the goals of the education. Each of the 110 VET educations has different overall goals framed by the trade committees, approved by the Education Minister and described in legal notices with authority from the Danish law of VET. See the example of overall goal in Textbox 1.[179]

For the company to be approved for apprentices, the company application must sent an application to the trade committee within the respective branch. The trade committee assesses whether the company is able to carry out the practical training in order to obtain the goals within the specific education, and offer satisfying training conditions. Companies with a reasonable quantity of employees and the necessary array of tasks will get an approval without limitations. If the company, however, does not have a wide range of tasks, it might be approved for a combination training agreement. The specific requests for approval within the different educations and steps differ. Within some educations, one guideline for approval is that the owner of the company must either be skilled within the branch or have a driven self-employed company within the main area for at least five years. Besides this, the company must have at least one employee with relevant education, who is responsible for the students' daily training.[180]

The apprenticeship acts as employment, since the training agreement is a binding contract. The students apply to companies for an apprenticeship and the companies are free to choose between the applying students. An electronic database, made by the Danish Ministry of Education, of students looking for an apprenticeship also exists. This gives the companies the opportunity to search for students.[181]

By start May 2011 there were 140,905 approvals distributed between 60,587 companies.[182] No information on the characterisation of the companies with training agreements is avail-

[179] Retsinformation (2005): " "*Guidance to legal notice nr. 355 by 17th of Maj 2005 for the Dental Clinic Assistant Education*", https://www.retsinformation.dk/Forms/R0710.aspx?id=24915

[180]Trade Committee for Landscape Gardening (2006): "*Guidelines for approval as practical training company*", http://www.blivanlaegsgartner.dk/main.php?underside=313&&mparentid=301&id=335 and Trade Committee for Agriculture (2011): "Guidelines – zoo keeper , animals in zoological facilities", http://www.jordbrugetsuddannelser.dk/Dyrepasser/GodkendelsePraktikplads/RetningslinjerZoologiskeDyr.htm

[181] http://www.praktikpladsen.dk/

[182] www.praktikpladsen.dk (2011): "Approved companies", http://www.praktikpladsen.dk/search_godkendelser.do?action=search&indgang=-1&uddannelse=-1&speciale=-1&region=-1&fritekst=

able. Instead, such information is made on production units, defined as an address owned by a company which carries out activities. A company can have more than one production unit and it is the different production units that enter the agreements.[183] Table E.8 shows the 2009 distribution of approved production units according to the amount of employees.

Table E.8 Typical characterisation of participating enterprises

Numbers of employees	Production units	Production units with training agreements
0*	74 %	13,4 %
1-4	15 %	26,3 %
5-19	6,5 %	34,6 %
20-49	1,6 %	12 %
50-99	0,6 %	4,7 %
100-499	0,3 %	4 %
500+	0,0 % (0,32)	0,6 %
N/A	1,9 %	4,3 %
Total	**100 %**	**100 %**

Source: UNI-C (2009): "An eye on education. Analysis of the apprenticeship potential in the VET system". *0 refers to one-man companies.

As shown in the table, the majority of production units in Denmark are constituted as SMEs with less than 50 employees. Likewise, the largest share of training agreements is entered into with SMEs.

Specific role of the company trainer

Textbox 2
Structure of the hair stylist education
"The duration of the education is 4 years including a 20 week basic course. The main course includes 40 weeks of school-based training, which must be divided into a minimum of five periods with intermediate apprenticeships"
Examples of goals obtained at basic course school-based training
"Contributing to customer service including selling, advising and service from a basic understanding of business
-Apply knowledge of the branch of line´s history and development in solving tasks"
Examples of goals obtained through complementary company-based and school-based training at main course
Undertake customer service, including sale
Undertake all kinds of chemical treatments
Undertake cut, cutting out and beard cut
Apply the theories within the branch of line

It is the company that appoints the trainer and takes care of the students' daily training simultaneously as solving their job tasks. According to the guidelines, a trainer would typically be skilled within the specific trade. Besides the requirements for a company to be approved for apprentices, no legal provision regulating the role and characteristics of the trainer exists. However, a non-obligatory apprenticeship trainer education is offered within different areas. The aim is to provide the trainer with knowledge about frames and structure of the students' education, to provide the trainer with competences, to offer guidance on the basis of the students' qualification, etc. Furthermore, the Social Partners have developed a detailed "Trainers Guide"[184] in which rules and procedures are explained. The guide also advises the company about the working environment and training methods in order to obtain a successful apprenticeship.

[183] www.at.dk, The Danish Working Environment Service: http://www.at.dk/TILSYN/Arbejdstilsynets-reaktioner-ved-et-tilsy/Radgivningspabud/Radgivningspabud-ved-gentagne-overtraede/Juridiske-enheder-og-produktionsenheder.aspx?sc_lang=da
[184] http://www.traenerguide.dk/

Description of school-based training

Like apprenticeships, the main goals of school-based training at the basic as well as the main course differ within the different educations and steps as well as within the various vocational schools. As mentioned, the basic course usually takes places as school-based training with a duration of 38-76 weeks. Throughout the main course, the school-based practical training is organised in blocks of between 5 and 10 weeks. As the basic course prepares the students for several education programs, the goals of this school-based training are more general. Moreover the official guidance set up goals for the main course, but it is up to the vocational schools in consultation with the local trade committee, to determine the distribution of subjects and goals for the single periods of school-based and company-based training. This means that no separate official goals for the school-based training is set up. See an example of structure and goals at the basic and main courses in textbox 2.[185]

There are 109 institutions that offer basic vocationally oriented educations programmes. These institutions are technical colleges, commercial colleges, agricultural colleges and combined colleges. In addition, 20 colleges offer social and health care training programmes. Some of the colleges also offer other education programmes, such as vocational upper secondary education.[186] The Danish Ministry of Education supervises the economy and quality of vocational institutions through supervision plans and supervision reports, which lead to adjustments if the ministry finds it necessary.[187]

School-based practical training agreement

The school-based practical training agreement is offered within 40-50 per cent of main programmes and is dedicated to students who don't have a training agreement or students who lost their training agreements. This makes it possible for the students to complete the practical training of the alternating VET system, without having an apprenticeship in a company. There is however quotas on the school-based practical training meaning that not all students intending to apply are admitted.

Students who want to attend school-based practical training must fulfil a certain set of criteria (EMMA-criterias). This implies that the student has completed the basic course, is mobile according to geography, is willing to enter other similar education and is actively searching for an apprenticeship in a company.[188] If the school-based practical training is attended directly after the basic course, a two month waiting period is required. The goals pursued are the same as the school-based training and the practical training must be as realistic as being in apprenticeship in a company, as possible.

Role of students in the apprenticeship type schemes

As mentioned before, it is possible for students looking for an apprenticeship to sign up at an electronic database, which gives the companies an opportunity to search for students. This database also contains a list of companies approved for apprenticeships, through which the students have the opportunity to search and apply for apprenticeships. The main share of students gains access to enterprises on their own, before being registered as "apprenticeship searching" at the institutions and in the Danish Ministry of Education´s official statistics.[189] Whenever the student is registered as searching for apprenticeships, the school is

[185] Retsinformation (2011): *"Guidance of the educations in the VET cluster body and style"*, https://www.retsinformation.dk/Forms/R0710.aspx?id=135647
[186] Danish Ministry of Education (2010): "*Initial Vocational Education and Training Programmes*"
[187] Danish Ministry of Education (2011): "*Supervision*", http://www.uvm.dk/For%20institutioner/Tilsyn%20og%20regnskab/Tilsyn.aspx
[188] Danish Ministry of Education (2009): "*School-based practical training in the VET*", http://pub.uvm.dk/2006/skolepraktik/index.html
[189] Danish Employer Association (2009): *"Labour market report 2009. Vocational educations – Admission, drop-outs and employment"*

committed to communicating with or referring the student to available apprenticeships. Furthermore, they offer guidance on applying for apprenticeships.

The vocational schools communicate with the companies offering apprenticeships and the schools are committed to contact companies and do outreaching work in order to find companies who are willing to offer apprenticeships. An activity could for instance be calling a company not yet offering apprenticeships, and explain the formalities of taking in students.

There is no access requirement for students applying for apprenticeship. However, since the system operates as employment, supply and demand might contribute to the selection of the most skilled students.

The first three months of the apprenticeship is period of probation for both parts and afterwards the training agreement is irrevocable unless the student or the company violate any rule, and this agreement is seen as a protecting mechanism for the student.[190]

After completing the basic course, the student prepares a project that forms the basis of an exam with extern supervision. At the end of the apprenticeships, the company creates a declaration for the student, the school and the Social Partners describing the obtained goals.[191] With the completing of the VET educations, the student is examined in his or her competences in realistic settings. The structures of the exams vary within the different educations, but are typically a combination of practical projects and theoretical tests. During the educations, the students typically have basic languages and mathematical courses, which are completed with an exam. The supervision is typically carried out by represents from the Social Partners.

Existence of contractual relationships between enterprises, students and vocational schools

Whenever the student has received an education agreement, the contractual relationship is between the enterprise and the student. Within the regular training agreement and the new apprenticeship, the enterprise has the legal, economic and educational responsibility for the student throughout the entire agreement period. Within the combination agreement and short training agreement, the enterprises have the same responsibility, but only for each of their periods included in the agreement.[192]

The companies pay wages that makes up a minimum of the wage collectively agreed by the sector collective agreements. The wage is specified in the training agreement, and the companies must pay wages during the school based training included in the training agreement. Wages paid during school based training are reimbursed by the Employers´ Student Reimbursement Fund (Arbejdernes Eleverefusion - AER). This fund is explained further in next sections.

The gross salary is between 8,000 and 13,000 DKK (app. 1066-1733 EUR) per month), which is determined by the collective agreement regulated by the Social Partners within the area of education. The salary increases during the education according to the collective agreement, as the student gets more qualified. For an example, students older than 18 years in the educational program to become hairdressers, are paid approximately 2,726 DKK (363.46 EUR) gross a week during their second year of education. They are paid approximately 3,213 DKK (428.4 EUR) a week the fourth year of education.[193] The collective agreements typically prescribe a 37 hour week.

[190]Danish Ministry of Education (2011): "Apprenticeship", http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Praktik.aspx

[191] Ibid.

[192] Danish Ministry of Education (2008): *"Training agreements at the companies´ condition"*

[193] Frisoerfaget.dk (2011): *"Hair dressers agreement",* http://www.frisorfaget.dk/media(1667,1030)/OK2010-Fris%C3%B8r.pdf

Financed-related information

School-based training in vocational schools is financed by the Danish State on the basis of a taximeter system (pay per student) and is free of charge for the students. Students in the basic course over the age of 18, who do not yet have a training agreement, can receive grants from the Danish State Education Grant and Loan Schemes if they meet the required criteria. As mentioned, the enterprises pay wages to the students, and the Employers´ Student Reimbursement Fund fully reimburses the enterprise for trainees' wages during 100% of the time, that the students attend school. This is the case during both the main course and the basic course, whenever the training agreement covers the basic course. All Danish companies, both public and private, contribute a fixed annual amount to this fund for each of their employees. The students are expected to finance their wages through productive work during their apprenticeship. Through this financing structure, the financial resources are allocated to the enterprises taking in trainees, so that they do not bear the cost of training alone.[194] The VET is considered economically profitably by the State. This is because the enterprises pay the largest share of expenses for students through wages during both school-based training and training in the company. Additionally, the students contribute to production which gives the State revenues through taxes.

In order to regulate the supply of apprenticeships, employers have the possibility of receiving a prize for establishing a new internship, which is also financed through Employers´ Student Reimbursement Fund. Since December 2010, the reward has been 70,000 DKK (app. 9,333 EUR) dispersed over a period of 24 month.[195] Before December 2010, the reward was up to 50,000 DKK (App. 6,666 EUR) which was paid out after three months.

In 2010, the enterprises paid 4.013 million DKK (554.933 million EUR) to AER and received 1.091 million DKK (356,133 million EUR) in reimbursement. Besides reimbursement, the fund finances travelling expenses (DKK 119 millions in 2010, 15,866 million EUR) and distribution of prizes for establishing a new apprenticeship (DKK 2.241 millions in 2010, 298,8 millions EUR).[196]

The State´s expenses for VET has risen from 5.1 billion DKK in 2001 to 5.9 billion in 2008; which is primarily because of the inclusion of the educations at School of Social and Health Care and the Pedagogical Assistant Education in the account.[197]

Quality assurance mechanisms

The Danish Ministry of Education is the superintendent responsible for the 110 VET, to ensure a high quality of the educations across the education institutions. The Social Partners are integrated into the superintendence of the VET regarding contents at a system level and institution level, especially through their involvement in regulating the educations at all levels. At system level, one of the parameters used to assess the relevance of the VET is to look at it in relation to the needs of the labour market. The Ministry of Education engages in a dialogue with the Social Partners concerning the educations that do not fulfil overall goals, with the aim of initiating improvements for the educations. At institution level, it is monitored whether the institutions implement the educations according to both the rules (content monitoring) and the guidelines for the institution´s operation (economic monitoring).

[194] Danish Ministry of Education (2010): *"Initial Vocational Education and Training Programmes"*

[195] Danish Ministry of Education (2010):*"Establish an apprenticeship and get up to 70.000 kroner", http://www.uvm.dk/~/media/Files/Udd/Erhvervs/PDF10/101214_faa_70.000_kroner_for_hver_ny_praktikplads.ashx*

[196] www.atp.dk (2011): " The Employers´ Student Reimbursement Fund (AER). Statistics", http://www.atp.dk/X5/wps/wcm/connect/atp/atp.dk/erhverv/sik/aer/Om-AER/Videnbank/Statistik

[197] The Ministry of Finance (2010): "Account of budget 2010", http://www.fm.dk/Publikationer/2010/2113-Budgetredegoerelse%202010/~/media/Publikationer/Imported/2010/2113-Budgetredegoerelse%202010/978-87-7856-941-7.pdf.ashx

The superintendence focuses on the institutions quality of the implementing of the educations, including carrying out tests and exams and examining the students' completion rates and dropout rates. This is communicated through supervision plans and supervision reports available for the population.[198] Furthermore, external examination ensures a certain standard across the institutions.

The responsibility of the apprenticeship lies on the Social Partners. The process of approving enterprises for apprenticeships ensures sufficient job tasks and a certain educational level of the company trainer. Moreover, the students' projects, which form the basis of an exam at the end of the apprenticeship and the enterprise´s declaration to the school and the Social Partners, serve the purpose of quality assurance.

A unique part of the Danish alternating VET system is that it is a conflict solving system with the trade committees as mediators. The system helps the students and the companies in situations with disagreement about wages, tasks, problems with obtaining goals, etc.; 90 per cent of all disagreements are sorted out this way. Problems that are not solved at these mediating meetings are handled in a special board of disputes (Tvistighedsnævnet), which comes with a decision. If the parts have still not come to agreement, the official legal system will take over.

Changes and perspectives in the Danish apprenticeship schemes

The VET system was introduced in its current form in 1991, when the regular training agreement was established. Subsequently, school-based practical training was introduced in 1996. The most important changes to the existing apprenticeship type schemes in recent years were the introduction of the flex-combination training agreement in 2001, the short training agreement in 2003 (both on trial) and the final merging of these schemes in 2008. Moreover, the new apprenticeship was introduced in 2006.

These changes and a range of initiatives described later in the chapter have mainly been launched in order to regulate the amount of apprenticeships, since the supply of apprenticeships is very sensitive to the state of the market. In addition, the new apprenticeship was an attempt to include academically challenged students in the VET system. This chapter provides a presentation of the rationale for these changes, their impacts and outcomes based on information gained from the following stakeholder interviews:

- Simon Neergaard-Holm, Senior Adviser, Danish Employers´ Confederation
- Jens Juul, Adviser, Danish VET Schools
- John T. Larsen, Senior Adviser, Ministry of Education
- Morten Smistrup, Education Adviser, Danish Confederation of Trade Unions

Recent and planned changes in the national apprenticeship type schemes

Both the flex-combination agreement and short training agreement are apprenticeship schemes introduced in order to solve the decline in apprenticeships and increasing number of students in school-based practical training agreements.

The flex-combination, introduced for trial use in 2001, made it possible for companies not fully approved for apprenticeships to take in trainees. It differed from regular combination agreement in that all parts of the education were not yet appointed in the beginning of the first agreement period. The aim was to guarantee students a complete education through the new training agreements, and periods not covered by agreements could be carried out

[198] Danish Ministry of Education (2011): *"Supervision of VET",* http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Styring%20og%20ansvar/Tilsyn.aspx

in school-based practical training. The flex-combination training agreement was, therefore, only possible within educations that offered school-based practical training.

The aim of the short training agreement was simply to make use of companies that were fully approved for apprenticeships that, for different reasons, could not manage to take in students for their entire education. Moreover, the short training agreement was thought of as a door-opener for extension into the regular training agreement. In 2008, the flex-combination was repealed and the short training agreement was revised to gather elements from the flex-combination training agreement. The difference between the trial short training agreement and the present is that not fully approved companies, such as very specialised companies, are able to take in students.

As mentioned before, the government's official goal is that 95 per cent of a youth cohort gain secondary education as a minimum level. A tendency in recent years has been that, in order to obtain the quotient, the VET system has been thought of as a way of including groups of students who usually do not get a secondary education. The new apprenticeship was an initiative introduced on the 1st of August 2006 in order make allowances for practical orientated students. This scheme was meant to include the groups of students usually not obtaining secondary educations, by enabling students who are academic disadvantaged but are skilled in a practical manner, to complete a VET without having to deal with academic issues in school. However, it turned out, that many of the students interested in this scheme do not belong to this target group, but are adults or very resourceful and academic skilled students. Jens Juul, an adviser at Danish VET Schools, explains:

> *The new apprenticeship was thought to be an option for students with academic disadvantages, but today it is not only used in that group of students. A relative large share of those students using the new apprenticeship is adults. It is difficult for the academically disadvantaged students to find a company who will accept them in the new apprenticeship. The more streamlined and technological the company is, the more difficult it will be for them to have a student who is disadvantaged in reading and writing* (Jens Juul, adviser, Danish VET Schools).

Furthermore, Senior Adviser John T. Larsen from the Ministry of Education points out that companies typically choose students with some life experience and work experience. Adult students have more contacts and a larger network which helps them find a company and enter an agreement. The new apprenticeship might not fully fulfil its original goal by appealing to less academic young skilled students, but it still plays an important role in upgrading qualifications at the labour market. Adults who have previously worked as unskilled, now get the opportunity to become qualified as skilled workers through this scheme.

Education Adviser Morten Smistrup from Danish Confederation of Trade Union also explains that it has turned out that the new apprenticeship appeals to students who have completed the academic track at upper secondary school, because they want to skip the school-based part of the vocational education. With a new apprenticeship, the students can enter directly into the company-based training and skip school-based training which to some extend might be a repetition of what they have already learned at other upper secondary educations. Again, even though this might not be the original goal of the new apprenticeship, this mechanism plays a role in attracting more students as well as resourceful students, which is one of the main advantages in the Danish VET system,

On the other hand, the general debate according to the VET system concerns the challenge of providing enough apprenticeships and the fact that school-based practical training is regarded as low status. Also, the discussion goes on to whether the school-based practical training is good enough or the quality needs to be enhanced. One of the concerns according to the current school-based practical training is the fact that students in school-based practical training do not experience daily work in a company and, therefore, do not get the natural change from training in a company to work as a skilled worker.

Senior Adviser Simon Neergaard-Holm from Danish Employers´ Confederation tells that students discount school-based practical training as an option because it is despised. Students think that the education comes to a stop if they do not have an apprenticeship, but as he says, it will not. The education can easily be completed with school-based training and the Danish Employers' Confederation wants to sell this alternative better.

Different ways of solving this problem have been discussed. The Danish Employers´ Confederation in cooperation with Danish VET Schools has prepared a model that should ensure that the students complete their educations. The School Agreement Model is where the students enter into a contract with the schools instead of companies, and the schools give the students instruction on how to complete their educations. Senior Adviser Simon Neergaard-Holm from the Danish Employers´ Confederation explains:

> *Right now, we are working out a model called School Agreement Model. Students who haven´t received an apprenticeship will be offered an education package from the school, consisting of a combination of a training agreement and a school-based practical training. This means that the student will see from the very first day of the education that the education is to be completed* (Senior Adviser, Simon Neergaard-Holm, Danish Employers´ Confederation)

The Danish Employers´ Confederation has made agreements with several companies which together can take in 12 students a year, with a duration of three months per student. Simon Neergaard-Holm explains that it is an attempt to improving the school-based practical training, give it more structure and make it more convincing; which he thinks is necessary in the strategy of providing enough apprenticeships. The model is being tested at the moment within the Motor Vehicle area of the vocational school and the college EUC Syd.

The Danish Confederation of Trade Unions is working on another solution they call "apprenticeship centres", were all company-related relations are gathered within the school-based practical training. Senior Adviser Morten Smistrup from the Danish Confederation of Trade Unions explains:

> *During the next three years extensive work will be launched in the area. 23 million (DKK) is earmarked for development and experiments within the VET system, which will result in new initiatives concerning the school-based practical training, among others. We think apprenticeship centres are still a relevant concept in this discussion. Today there are places where the quality of school-based practical training is enhanced by adding real production. We use the apprenticeship centres as a very broad concept, gathering all company-related relations within the school-based practical training* (Morten Smistrup, Danish Confederation of Trade Unions*).*

The apprenticeship centres are thought of as a development of the school-based practical training into a centre that contains real production. The idea is to provide a socialising work environment, where the students can develop and get an understanding of the conditions they will meet on the labour market.

Effect of the recent economic crisis on the national apprenticeship type schemes

Experts agree that the financial crisis has had a strong negative effect on the amount of apprenticeships. This is indicated in Table E.2, which shows the decline in the total amount of VET training agreements and the increasing school-based practical training that has occurred in recent years. The statistics about students searching for training agreements after completing their basic course shows that the amount increased from 3,601 students in 2008, to 7,979 in 2011.

The Danish VET system is cyclical to the state of the market; since the students are employed by the enterprises and the enterprises´ production is driven by demand. When the enterprises are not getting enough orders, the enterprises cannot afford to employ students. Jens Juul, adviser at Danish VET Schools, says:

> *The fundamental challenge within the alternating VET system is that supply and demand are never cancelled out. When we have a crisis, like now, the unbalance becomes tremendous* (Jens Juul, adviser, Danish VET Schools).

In order to influence the amount of apprenticeships offered during the recent financial crisis, a range of public initiatives have been launched. In May and June of 2009 the parliament agreed upon two "apprenticeship packages", with the aim of averting the consequences of the financial crisis in the short run. Furthermore, a "youth package" was agreed on in November 2009, aiming broadly at having more young people get an education. In addition to this, a new youth package was introduced in November 2010.The four packages contain the following initiatives that seek to provide more apprenticeships:

Apprenticeship packages as of the 1st of May 2009:

- New system of awarding prizes was started; up to 50,000 DKK was awarded for establishing an apprenticeship
- Enhanced outreach to find apprenticeship opportunities through campaigns, starter kits for the companies and a conversion of the subsidy scheme for the education institutions´ outreach work was initiated

Apprenticeship packages as of the 2nd of June 2009:

- A temporary extension was provided for the admission to school-based practical training
- Students currently attending step 1 at an education, who complete the education through school-based practical training got the opportunity to continue to step 2. This is an extension of the school-based practical training. As explained previously there are quotas on the school-based practical training meaning that not all students intending to apply are admitted. Steps within educations are described previously.

Youth package as of the 1st of November 2009:

- 1.35 billion DKK was earmarked in 2010-2012 for providing 5,000 more apprenticeships
- 1,500 more school-based practical training agreements were offered
- 1,650 more apprenticeships were offered in municipalities and regions
- Other improvements of the conditions within the area of apprenticeships took place

Youth package as of the 2nd of November 2010:

- The system of awarding prizes, which gave enterprises up to 50,000 DKK for establishing a new apprenticeship at the end of 2009, was raised to 70,000 DKK.
- The time period for the payment of prizes of award to the companies was extended from approximately seven months to approximately two years, because the first arrangement was too good a deal for the enterprises. The period of payment on seven month caused too many companies to enter short training agreements without later extensions, because the companies could get the full prize within a very short period of time. If the student only have a short training agreement, with no possibility of extension or having a new in another company, the student is not able to complete the education.

As indicated in the above, the development of training agreements was closely followed by politicians in 2009 and 2010. Through a strengthening of economic incentives and an exten-

sion of school-based practical training, the parliament has endeavoured to provide enough apprenticeships and prevent students from dropping out.

Senior Adviser John T. Larsen from the Ministry of Education is sure that these economic incentives have had an impact on the amount of training agreements, since the amount of agreements have increased, as he says:

> *The Danish Craft´s Council and the Danish Construction Association have conducted an analysis that shows a correlation between growth in training agreements and economic contributions in relation to the awarding of prizes* (Senior Adviser John T. Larsen, Ministry of Education).

John T. Larsen adds that campaigns and outreach work from the VET Schools contributes to this, but that the awarding of prizes is a good argument in "sales talk". However, it was shown in Table E.2 that ongoing training agreements actually decreased from 2008 to 2011, but when students over the age of 25 years are included in the statistics, the amount has increased.

The VET system itself is also somewhat capable of adapting cyclical fluctuation which is partly due to the introduction of the short training agreement. Education Adviser Morten Smistrup from the Danish Confederation of Trade Unions explains:

> *There has been a certain adaption since the regular training agreements have descended and the short training agreements have increased, which is generated by the companies´ short planning horizon during the crisis. That said, the crisis has shown the weakness of the alternate Vet system towards the state of the market. It has not been able to compensate for the challenges an economic crisis give, and that is a big problem* (Morten Smistrup, Danish Confederation of Trade Unions).

In spite of the flexibility of the VET system and the launched initiatives the provided amount of apprenticeships has not been fully able to adapt the state of the market.

Student geographical mobility issues

It is possible for students to get apprenticeships abroad approved as a part of the Danish education through the PIU-scheme (Apprenticeship abroad), which is a Danish mobility program. The students cannot enter into a training agreement with foreign companies. Instead, there are two kinds of schemes where the actors are either a VET school or a Danish company. The students can either enter into a training agreement with a Danish company that stations the students abroad or the students can be sent out by the schools as a trainee in a foreign company after completing the basic course.

The students can do some or all of the company-based training abroad, but the school-based training still takes place at a Danish VET school. The scheme can take place worldwide and around 1,000 students make use of it every year, mainly within the areas of chef and mercantile. Education Adviser Morten Smistrup from the Danish Confederation of Trade Unions believes that language barriers discourage students from going abroad:

> *I think there is a limited demand for interns outside the country. We must acknowledge the role of language barriers. The chefs have tradition for going abroad, otherwise it is mainly within the mercantile but generally it is very few students* (Education adviser, Morten Smistrup, Danish Confederation of Trade Unions).

Economic issues should not discourage students from geographical mobility, since AER covers or subsidises student expenditures in apprenticeships abroad. These include expenditures for travelling for job interviews, moving abroad, coming back and rent. Likewise, companies stationing students can get reimbursed. PIU-coordinators at the VET Schools advise

the student and take care of practical tasks.[199] Other organisations providing grants and subsidies exist, such as the Leonardo Program, the Nordplus Junior Program and the DK-USA Program. For instance Nordplus Junior program isone of the Danish Council of Ministers´ program, that gives grants with the aim of enhance the Nordic and Baltic dimension in educations. The target population is not only students at VET level but also students and teachers at basic primary schools. Additionally, for students within social health or agriculture, some organisations offer special programs, still using the PIU-scheme though.[200] The Danish agency for International Education, who informs students, employers and VET Schools about the PIU-scheme, considers apprenticeships abroad to be a good possibility for students to develop personally and professional.[201]

Future perspectives

No future changes of the four existing apprenticeship schemes are planned. However, as it appears from the above sections, school-based practical training is subject to debate and criticism. The paradoxical question is how to enhance the school-based practical training as a very good alternative to the ordinary training schemes, without making it such a good alternative that students prefer the school-based practical training to the ordinary schemes. The fundamental idea of the alternate VET system is to educate the students within the companies so that the students get trained in realistic settings and learn how to act in the everyday life of a company. No stakeholders are interested in changing this perspective.

Evaluation of existing apprenticeship schemes

In general, different groups of stakeholders appreciate the alternating VET system because of the students´ natural change from trainees to skilled workers. The students are employed by the company and through the education they get prepared to directly enter the labour market. Moreover, alternating between school-based training and an apprenticeship in a company is considered an optimal type of learning. Additionally, the students create their own professional identity early in their education. This chapter provides a summary of the stakeholders´ assessments of different issues according to the VET system and the existing apprenticeship schemes. Afterwards, the stakeholders´ identification of challenges within the VET system will be represented followed by their future recommendations.

Qualitative assessment of the alternating VET system

The stakeholders agree on the importance of keeping the existing alternating VET system. The alternating VET system is considered better than purely school-based schemes, because the students get the training demanded by companies. The fact that competences gained in the companies are well appreciated by the companies is supported by statistics. These show that the possibilities of employment are better for those students ending their education with an apprenticeship in a company, compared to students ending their education in school-based practical training. However, the general employment frequency is quite high within all programs, which is also an obvious advantage of the Danish VET system.

The Danish VET system is very focused on adapting contents and methods to technological, social and economic progress within each sector. This is due to the role of the Social Partners, who consistently regulate the education and each subject through their involvement on local as well as central level. The Social Partners are in close contact with the companies;

[199] Danish Agency for International Education (2011):"*The OIU-scheme*", http://www.iu.dk/programmer-og-tilskud/hele-verden/piu-ordningen

[200] www.udiverden.dk (2011): "Programs and schemes", Danish Agency for International Education

[201] Danish Agency for International Education (2011):"*The OIU-scheme*", http://www.iu.dk/programmer-og-tilskud/hele-verden/piu-ordningen

this is why they are able to update the educations so they match the needs of the labour market. Among other things, the Social Partners make a development statement which ensures the adoption to the labour market once a year.

The involvement of the Social Partners at local level, where the Social Partners compose an individual education curriculum in order to fulfil general frames and goals of the education, means that vocational schools have different education profiles. This is regarded as a strong point in the Danish VET system, since this mechanism ensures an adaption of the educations to the local labour market and local companies. This idea of adaption imbues the structure and regulation of the Danish VET system.

Whether the acquired skills obtained within a concrete workplace are transferable to other enterprises depends on the specialisation of the company. However, areas not dealt with in the company-based training might be learned in the school-based training, as Adviser Jens Juul from Danish VET Schools says:

> *Generally, I think the students get some competences they can make use of in other companies too. Of course it depends on the level of specialisation in the companies. If the companies are not able to offer training within all areas, this is where the schools come in. That is the advantage of the alternating VET system* (Jens Juul, Adviser Danish VET Schools).

Besides the schools´ complementary role, the combination training agreement and short training agreement also contribute to dealing with the issue of very specialised companies. These give the students the opportunity to train within different areas of specialisation in different companies. The problem with the combination training agreement, however, is that one company gets to train a student from the very beginning before a profit is made. Just as the student starts producing and making a profit for the company another company takes over. Short training agreements are far more popular, which might partly be due to the fact that companies are not interested in taking in students as the first company in a combination agreement.

Importance of the VET system in national VET context

As a comment to maintaining the VET system, Education Adviser Morten Smistrup from the Danish Confederation of Trade Unions points out that, in a national VET context, the Danish VET system represents an important alternative for those students not wanting an academic oriented education. At the same time, students not ready for an academic oriented education directly after upper primary school, might find their way to academic colleges after completing a VET. Morten Smistrup adds that in relation to building bridges to vocational colleges, the regular training agreement might be the best at making the transition because it includes schooling.

After completing a VET there are several possibilities for further education at tertiary level. Some educations require a specific VET education, while other educations require an area related VET. In few cases completion of one or two subjects at grammar-school level is required for admission. A little more than four per cent enter a further education at tertiary level within 27 months after completing a VET.[202]

Main benefits for students and the enterprises

The stakeholders agree on the VET system being a mutual benefiting system for both students and enterprises. The main benefit for students derived from their participation in alternating apprenticeships, is the company-based training in realistic settings. The students become a part of an everyday work, get to interact with colleagues and learn how to act in

[202] The Danish Ministry of Education: "*Numbers that speak*". http://www.uvm.dk/~/media/Files/Stat/Tvaergaaende/PDF10/100624_tal_der_taler2009_ny.ashx

a company. This means that the students` competences give them direct access to the labour market and, therefore, the employment rate for the newly educated is quite high. Senior Adviser Simon Neergaard-Holm from Danish Employers´ Confederation explains:

> *The strength with alternating VET systems is that when the students have completed their education and gotten their certification, they can directly enter into the labour market. Their competences are well recognised in the companies, among other reasons, because the competences are partially appropriated in the companies* (Simon Neergaard-Holm, Senior Adviser, Danish Employers´ Confederation).

The high employment rate is further reinforced by the involvement of the Social Partners, who ensure that the skilled labour correspond exactly to the needs of the labour market.

The main benefit for enterprises derived from taking in students in apprenticeships is the opportunity for recruiting and train future employees. The companies' contribution provides the students with the skills needed within the area. Moreover, taking in students is an opportunity to get fresh perspectives into the developments within the area. Adviser Jens Juul from Danish VET Schools says:

> *Many companies regard having a trainee as a good way of recruit future employees. They get to educate their own employees from the beginning. Moreover, the students bring in new knowledge and an acquaintance with new machines, which they obtained from the school* (Jens Juul, Adviser, Danish VET Schools).

The stakeholders agree that the apprenticeship schemes are not being used by the companies as a source of cheap labour. It is a system that mutually benefits both parties. Senior Adviser Simon Neergaard-Holm stresses that the students get a valuable education and the companies get valuable labour:

> *They are not necessarily cheap labour. They are workers who get the agreed wage that corresponds to their activity. As the companies say, "we are not here to educate but to produce." Our motivation is to get new employees* (Simon Neergaard-Holm, Senior Adviser, Danish Employers´ Confederation).

Assessment of the financial mechanisms

The earlier described financing mechanism of the VET system, consisting of a redistribution of resources through the Employers´ Student Reimbursement Fund, is well appreciated by stakeholders. Education Adviser Morten Smistrup from the Danish Confederation of Trade Unions thinks the cost-sharing financing system improves the quality of VET because of the shared responsibility.

> *The basic course and the school-based practical training are financed by state resources, while the rest is financed by the companies. That is to say, there is a combination of state and labour market resources. This means that both parties have a great responsibility in making the VET system work* (Morten Smistrup, Danish Confederation of Trade Unions).

However, the financing of the awarding of prizes for apprenticeships through the AER system is subject to debate among the stakeholders. As mentioned, Adviser Jens Juul from the Danish VET Schools and Senior Adviser John T. Larsen from the Ministry of Education think the reward system has been a source of newly established apprenticeships. Conversely, Jens Juul emphasises that the rewards might have had the negative effect of some companies being too easy on their educational engagement. However, he does not consider this to be a big problem. Education Adviser Morten Smistrup from the Danish Confederation of Trade Unions remarks that the high prizes are too expensive to maintain and must come to an end eventually. Moreover, he thinks there should be a debate on whether apprentice-

ships in public organisations are to be awarded in the same manner as the private enterprises. Finally, Senior Adviser Simon Neergaard-Holm from the Danish Employers´ Confederation thinks that the AER system is misused by the Government to regulate the state of the market:

> *The sad thing is that politicians have thrown themselves into the AER and use it to reward apprenticeships. It distorts the labour market. The AER is not only subject to praise from our side, because it is being used as a political instrument. All companies say they don´t employ because they have nothing to do and they don´t know when they will have. The companies´ don´t get more work to do by receiving 70,000 DKK* (Simon Neergaard-Holm, Senior Adviser, Danish Employers´ Confederation).

He thinks that the enterprises pay the price of this political initiative, and in his point of view the incentive has not had a significant impact on the amount of apprenticeships. Instead, he believes the increase in apprenticeships is assigned to other initiatives such as campaigns and the VET Schools´ outreaching work.

Social considerations

According to the national apprenticeship schemes' capability of taking into account social considerations, the new apprenticeship differs from the remaining schemes by appealing to students not academic skilled. As described before, students interested by this are not only academic low skilled students, but also adults and resourceful students.

In terms of problems with drop-outs, the highest rate is seen during the basic course. One of the factors influencing the drop-out rate is whether the students have a training agreement or not. Students entering a training agreement early in the basic course have lower drop-out rates than students who do not have a training agreement during basic course. Similarly, students entering regular training agreements that include the basic course have very low drop-out rates. The reason for this might be, that those students having a training agreement that covers the entire education do not need to be concerned of searching for a new training agreement with another company. If the student is not able to enter another training agreement, it might not be possible to complete the education. As for the main course, Adviser Jens Juul from the Danish VET Schools says that students in regular agreements are less inclined to drop-out:

> *The drop-out rate is lower among those who have a regular training agreement, where the student has a contract for completing the education. It definitely prevents drop-outs. The drop-out rate at the basic course is also lower among students with training agreements* (Jens Juul, adviser, Danish VET Schools).

When students enter into a regular training agreement, the entire education is planned and the students will not have to worry whether the education can be completed. When entering into a short training agreement, the prospect of completing the education might not always be present. Whenever the short training agreement expires it either has to be extended or complemented with a new short training agreement, which might be a factor influencing drop-out rates. Another reason for low drop-out rates at regular training agreement might also simply be due to the fact, that the most skilled students are the ones able to enter a regular training agreement.

Specific aspects of the national apprenticeship-type scheme

Although Danish stakeholders all agree on the huge benefits associated with the alternating VET system, there are also some challenges pointed out. None of these challenges concern the four apprenticeship type schemes described in this report. At this point, there are no plans to change any of the four schemes. The challenges mentioned in this section concern the Danish VET system as a whole.

Stakeholders stress three main challenges within the Danish VET system:

- First, it is regarded as a challenge to ensure sufficient supply of apprenticeships, especially in times of recession
- Second, it is regarded as a challenge to enhance the quality of the school-based practical training
- Third, stakeholders point out that it is a challenge that the VET system needs to cope with a high number of students with low academic skills

The challenge ensuring sufficient supply of apprenticeships

Stakeholders within the Danish VET system all agree on the challenge ensuring a sufficient supply of apprenticeships. This is regarded especially as a challenge in times of economic crisis, when the enterprises' need for labour decreases. Senior Adviser, Simon Neergaard-Holm from the Danish Employers' Confederation explains:

> *In Denmark, we have the challenge that 10 per cent of students don´t get an apprenticeship, especially at recessions. That is the case right now. The disadvantage is that we constantly will have a group who will be lacking an apprenticeship* (Senior Adviser Simon Neergaard-Holm, Danish Employers´ Confederation).

Simon Neergaard- Holm emphasises further that the VET systems sensitivity to changes in the market has been the main starting point for discussions between the Social Partners during the past 10 years:

> *Our discussion is on volume, to provide balance between those applying for an apprenticeship and the amount supplied. It has been the issue the past 10 years. When things go well we can´t get enough students and we can´t occupy all the apprenticeships. When things don´t go that well, many students search in vain for apprenticeships* (Senior Adviser Simon Neergaard-Holm, Danish Employers´ Confederation)

Moreover, Adviser Jens Juul from the Danish VET Schools points out that there are structural issues concerning the fact that there is a relatively large share of companies who make use of the skilled labour and do not take part in the training of the students.

The standard of the school-based practical training

The problems with ensuring a sufficient supply of apprenticeships to enterprises means that a relatively high number of VET students, especially in times of recession, need to obtain practical training at a VET School.

The Social Partners agree that it is necessary to create a better alternative to the current school-based practical training. They criticise the current practical training at VET Schools for not putting the students in training situations which are similar enough to reality in the companies.

The Social Partners haven't agreed on which alternative to the current school-based practical training that they would like to utilise. As mentioned in previous sections, the Danish Employers´ Confederation suggested a School Agreement Model, whereas the Danish Confederations of Trade Unions suggested apprenticeship centres.

Neither of the alternatives suggested have been authorised by the Danish government.

A relatively high share of students with low academic skills

Besides the two challenges mentioned above, the debate between Social Partners are concerned about the relatively high share of students with low academic skills.

As mentioned in previous sections, a tendency in recent years has been that the VET system has been thought of as a way of including groups of students who usually do not get secondary educations by the government. Stakeholders worry that a system compelled to pick up the students that are least skilled, might be challenged with keeping a high level of excellence. This is supported by a public debate among vocational teachers who have assessed that students´ academic standards have declined the past years.[203]

The Danish Employers Confederation shows specially concern with the tendency towards letting student with low academic skills into the VET-educations:

> *A problem is, that we have a huge group in primarily basic schools that haven´t got the qualifications to take a secondary education and there is a political wish to include these students in the VET system. The result is high drop-out rates because the students can´t meet the academic requirements and also because the companies have certain requirements of trainees. If you can´t conform to the rules of the company and meet on time, you don´t get a job* (Senior Adviser Simon Neergaard-Holm, Danish Employers´ Confederation).

Stakeholders point out that the VET educations actually require a lot from the students. In order to obtain an apprenticeship in an enterprise, students need to go a job interview at the age 16-17 for instance.

Recommendations

The stakeholders´ recommendations for improving the performance of the national apprenticeship type schemes are related to the challenges mentioned in a previous section.

The Danish Confederation of Trade Unions and the Danish Employers' Confederation, both recommend enhancing the quality of the school-based practical training. Education Adviser, Morten Smistrup from the Danish Confederation of Trade Unions explains:

> *We must enhance the quality of the school-based practical training and preferably in the interaction between regular training agreements and the school-based practical training. It is the primary discussion in relation to obtaining a sufficient number of apprenticeships in the future. Moreover, we must be open-minded toward more differentiated models adapted to branches* (Education Adviser, Morten Smistrup, the Danish Confederation of Trade Unions).

In order to keep the VET educations on at a high level, the Danish Employers' Confederation furthermore recommends that students with low academic skills become upgraded before starting at a VET education:

> *The alternating VET system cannot pick up everybody, and especially not the weakest ones. There must be some upgrading of the students with low academic skills* (Simon Neergaard-Holm, Danish Employers´ Confederation).

The Danish VET Schools agree with the Danish Employers' Confederation on recommending the School Agreement Model. They see the model as a way of ensuring sufficient supply of apprenticeships and as an instrument to expand the share of companies taking in apprentices. With the School Agreement Model, the students obtain half of the practical training at a school and the rest in a company. This means that the company only has to provide an apprenticeship for half of the period than in a regular training agreement.

Moreover, the Danish VET Schools recommend removing the quotas on school-based practical training at the largest educations such as mechanic, mercantile and mason:

[203] Politiken (2011): "*Teachers give up on the young students*". Politiken 9th of May 2011

We would like to remove the quotas on school-based practical training at the largest educations such as mechanic, mercantile and mason. The labour market easily absorbs them in as soon as the state of the market changes (Adviser Jens Juul Danish VET Schools).

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ESTONIA

Background information

Compared to many other European countries, Initial Vocational Education and Training (IVET) in Estonia is a significantly less popular choice. VET students constitute only one-third of all the ISCED level 3 students. The main reasons behind the low popularity are the poor image of VET and the current organization of general education in Estonia. According to a recent survey,[204] potential students consider VET to be inferior compared to general secondary and university education. VET students are presumed to be less intelligent and therefore not capable of learning in a general secondary school. Hence, VET is rather often perceived to be a secondary track in education compared to the general secondary schools. There have been some targeted campaigns to raise the image of VET but, at least in terms of recruiting new students, it has not had much effect.

Another problem of the vocational education stems from the national regional policy and the structure of the educational system. While the vast majority of vocational schools are owned by the state, general secondary schools, although financed by the state budget, actually belong to small local municipalities. As the financing of general high schools depends heavily on the number of the pupils, the municipalities tend to hold on to students even when they are more suited to vocational programs. The local general secondary school is also a way of attracting new and retaining current inhabitants in the area, so often, regardless of the number of the pupils or quality of teaching, municipalities try to preserve local schools.

Although the popularity of VET is low and there are problems regarding the structure of the educational system, there is in fact a great need for a qualified workforce in the country. Of Estonia's workforce, 67% have a professional qualification from a vocational school or higher education institution.[205] In other words, about one-third of the people in the labour market have no specific skills or knowledge to compete in the market. At the same time, the percentage of unemployed persons who do not hold a vocational or higher education diploma is 46%.[206] This issue is widely understood by the leaders and experts of VET, but has yet to make an impact at higher policy making levels where general upper secondary and academic university education tend to be a priority.

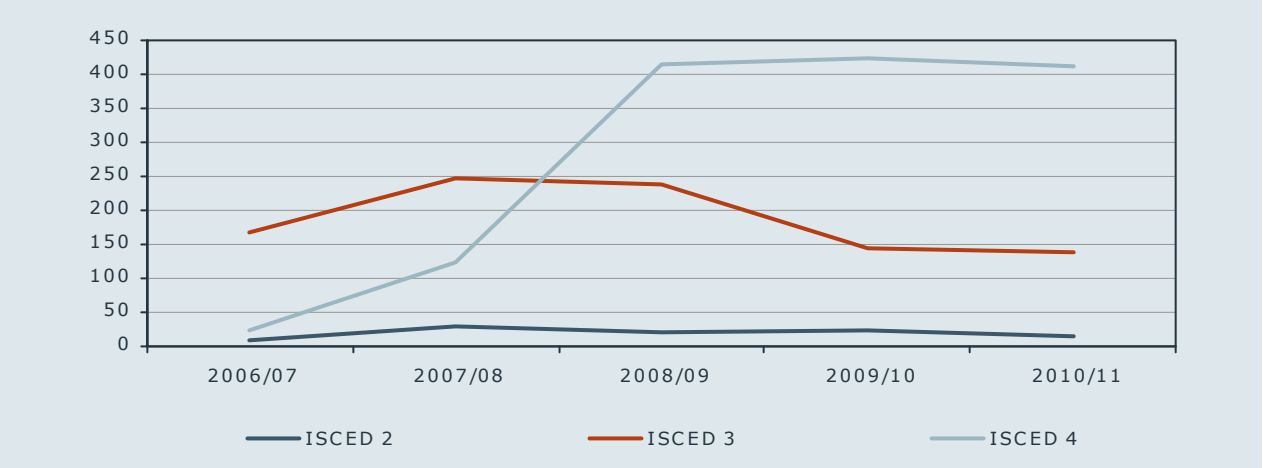
The apprenticeship program is a fairly new addition to the Estonian VET system. It was introduced in 2002 as a Phare pilot project and was followed by a European Social Fund (ESF) financed program which lasted from 2005 to June 2008. The ESF program had a total budget of 1.6 million euros and its main emphasis was on introducing the apprenticeship concept in Estonia. In 2007, the Regulation of Implementing Workplace Based Study was passed by the Ministry of Education and Research and apprenticeships, i.e. workplace based studies, became one of two forms of study beside school-based studies. Since autumn 2008, the promotion of work-based studies has been financed exclusively by the state budget.

While vocational education is not the most popular choice in Estonia, apprenticeship studies are even less common. Most of the VET students in Estonia are enrolled in traditional school based programs, and workplace based study-schemes are not very widely known. In the academic year 2010/11 students enrolled in workplace-based studies made up only 2 percent of total VET students, this is 564 persons from a little over 28,000 students. Today, the main target groups of the apprenticeship programs are older students whose financial situation or family responsibilities do not allow them to stop working or students who are more interested in practical training.

[204] Elanikkonna teadlikkus kutseõppes toimuvast ja kutsehariduse maine aastal 2008 [Public Awareness and Image of VET in 2008], EMOR, 2008.
[205] Statistics Estonia [www.stat.ee], 2010.
[206] Töötukassa [Estonian Unemployment Insurance Fund], 2010.

The definition of apprenticeship in Estonia is the same as defined by Cedefop (European Centre for the Development of Vocational Training) in its *Terminology of European Education and Training Policy*: it is a "systematic, long-term training alternating periods in a school or training centre and at the workplace, where the apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation." In the main legislative act regulating apprenticeship studies "Regulation of Implementing Workplace Based Study" apprenticeships, i.e. workplace-based studies, are defined as a form of learning, which is based on vocational and professional preparation and from what practice in a workplace constitutes at least two-thirds of a total vocational curricula. Most of the students in the apprenticeship program are studying at ISCED levels 3 and 4, although there are also a few at level 2 (see Graph E.2).

Graph E.2 Number of students on apprenticeship studies by ISCED level during the academic years 2006/07–2010/11.



Source: Estonian Education Information System (EHIS) 10.11.2010.

Concerning the governing bodies, there is no special organization responsible for the apprenticeship schemes in Estonia. During the aforementioned ESF-funded project, there was a small project team working in the Estonian Foundation for Lifelong Learning Development, whose tasks besides implementing the project included the development of apprenticeship studies across Estonia. Since the end of the project, workplace-based studies have been formally coordinated by the Ministry of Education and Research and implemented by vocational schools. In practice, it means that the advocacy of apprenticeship studies relies at the moment only on vocational schools themselves.

The social partners were involved in the development of apprenticeship study regulations but during the last years their role has been somewhat limited. At the moment, the organizations representing employers are more involved because their help is essential for creating more jobs for the students. One of the leaders in the field is the Estonian Chamber of Commerce and Industry which has been an active social partner in shaping the current education policy and is also a useful mediator between schools and enterprises. Other non-governmental organizations which are active in the field are the Estonian Qualifications Authority and the Association for Advancement of Vocational Education. The former is a developer of the professional qualifications system in Estonia together with the employers; the latter unites VET schools directors, teachers and other VET enthusiasts.

The legislative basis for apprenticeship studies is the "Vocational Educational Institutions Act" (introduced in 1998) which stipulates the general regulation of the Estonian VET system. The main legislative act concerning only apprenticeship studies, the "Regulation of Im-

plementing Workplace Based Study", was adopted in 2007. It sets the framework on how workplace-based studies should be organized, defines the main legal aspects of the contract between employer, school and student and enacts the way the studies should be financed.

Existing VET apprenticeship scheme in Estonia

Identification of main existing apprenticeship schemes in Estonia

Apprenticeship studies as such were introduced in Estonia in 2002. In March 2007, the Regulation of Implementing Workplace Based Study was issued by the Ministry of Education and Research concerning the procedure of workplace based training. At the moment there is only one apprenticeship scheme available in Estonia. Its formal name in Estonian is "*töökohapõhine õpe*" (workplace based study), although it is often called "*õpipoisiõpe*" (apprenticeship study). Workplace-based studies are available at all of the ISCED levels where vocational education is provided in Estonia, i.e. ISCED levels 2, 3 and 4.[207] The level at which the studies are provided depends on the student's educational background. Level 2 studies are designed to meet the needs of people with a low level of education. The main target groups for level 3 studies are younger people who prefer practical training to school-based studies and also older people who do not hold an upper secondary education certificate. Level 4 studies are meant for people with upper secondary education and are popular among those already working who need to update their professional skills. There is no age or other limits for entering the apprenticeship program. Based on the school curriculum, the school develops an individualized curriculum for the apprentice, but there also has to be an agreement between the school and the enterprise about the structure of study.[208]

The duration of the studies depends on the particular ISCED level and specific program, and can vary between 6 months and 4 years. The academic year consists of at least 40 weeks of study. For students with lower secondary education who study at ISCED level 3, the minimum study duration is at least 40 weeks and for students with upper secondary education studying at ISCED level 4, at least 20 study weeks. A distinctive characteristic of workplace-based studies is that one-third of the curriculum is delivered through theoretical instruction and two-thirds through practical training in an enterprise. The study groups are relatively small (up to 8 apprentices). Apprentices sign a study and work contract and have a four-month probation period. They also receive a salary during enterprise training from the employer and are eligible for study allowances paid by the school. The studies are complete after passing a final or professional examination.[209] After the graduation, apprentices who have passed studies at ISCED level 3B or 4B can continue their studies in higher education.

The school has to carry out an evaluation of the workplace prior to commencing an apprenticeship, to make sure the workplace meets the objectives of the curriculum and can ensure the safety and health of the apprentice. The result of the evaluation is an expert opinion, which is appended to the three party contracts between the school, the apprentice and the workplace. The apprentice has two appointed supervisors, one from the school and the other from the workplace. The apprenticeship program is funded by the state according to the state commissioned study places scheme. State commissioned study places are financed by the state budget and allocated to the VET institutions by ISCED fields of education for the following three years (although this is revised on an annual basis). In that case, the school also pays the salary for the supervisor in the enterprise. There can also be other arrangements to fund the program (e.g. all the costs are covered by the employer).[210]

[207] Regulation of Implementing Workplace Based Study
[208] VET in Europe – Country Report. Estonia, Cedefop, 2009.
[209] Regulation of Implementing Workplace Based Study
[210] VET in Europe – Country Report. Estonia, Cedefop, 2009.

The program has been especially popular among people already working and in need of formal qualifications. Apprenticeship studies have been very successful in the Retailing and Services sectors in recent years.[211]

Also, Estonian school-based studies used to have some enterprise-related elements. Until autumn 2009, the main legislative act regulating the contents of vocational education, The Vocational Education Standard (*Kutseharidusstandard*) required the workplace based training to constitute 25% of the total volume of the studies. This compulsion was dropped during the economic crisis because finding a practice place became increasingly difficult (see further in sections 3.1 and 3.2). Nevertheless, many schools still have cooperation agreements regarding the supply of company training with employers so the vast majority of VET students spend a training period in a workplace. Compulsory practice in a workplace is also required in professional higher education,[212] where it must comprise 15% of the volume of the curricula.

Quantitative importance of apprenticeship schemes

To describe apprenticeship studies in Estonia, it is important to give a short overview of the Estonian education system in general. Vocational education in Estonia tends to be undervalued: of all the students at ISCED level 3, about 34% study on VET tracks which is a very low share compared to many other European countries. The most popular level of VET is secondary vocational education (see Table E.9) which provides both job specific and general skills and enables students to continue in higher education after graduation. People who have obtained an upper secondary education can access vocational training based on secondary education. This level of VET has gained popularity during the recession, when many unskilled workers found out that finding a job without a professional qualification is not that easy anymore. At ISCED level 3 there are also some students on vocational education based on basic education, which provides only job specific skills for students who have difficulties with obtaining the general part of the curricula.

Table E.9 Number of students in Secondary education in 2005-2010

	2005	2006	2007	2008	2009	2010
Total Secondary education (ISCED 3 and 4)	**70,644**	**69,573**	**65,675**	**63,772**	**63,085**	**60,971**
▪ General education*	41,661	41,092	38,601	36,947	35,142	33,313
▪ VET	28,983	28,481	27,074	26,825	27,943	27,658
– Vocational education based on basic education (Kutseõpe põhihariduse baasil) (ISCED 3C)	0	208	424	505	598	581
– Secondary vocational education (Kutsekeskhariduse baasil) (ISCED 3B)	18,882	18,795	18,030	17,648	17,627	16,897
– Vocational training based on secondary education (Kutseõpe keskhariduse baasil) (ISCED 4B)	10,101	9,478	8,620	8,672	9,718	10,180

Source: Estonian Education Information System (EHIS) 10.11.2010.

General or academic skills are preferred to vocational training also at tertiary level. Of Estonian higher education students, 68% study in academic higher education, while only 32% of them are in professional higher education.

[211] *Ibid.*

[212] Professional higher education is first-cycle higher education, the goal of which is the acquisition of the skills necessary for working in a specific profession or for continued studies in a master's program. The standard length of the study is 3–4 years, and the volume is 180–240 EAP. Graduates are awarded a professional higher education diploma. Source: Standard of Higher Education.

Table E.10 Number of students in Terciary education

	2005	2006	2007	2008	2009	2010
Total Tertiary education (ISCED 5)	**68,287**	**68,767**	**68,168**	**68,399**	**68,985**	**69,113**
▪ University education	68,287	68,767	68,168	68,399	68,985	69,113
– Academic higher education (akadeemiline kõrgharidus) (ISCED 5A)	44,871	45,108	45,230	45,380	46,441	47,143
– Professional higher education (rakenduskõrgharidus) (ISCED 5B)	23,416	23,659	22,938	23,019	22,544	21,970

Source: Estonian Education Information System (EHIS) 10.11.2010.

There is no separate type of VET for apprenticeships studies as workplace-based studies exist as one of the two study forms (the other is school-based studies) which is available at all the ISCED levels. Since the compulsory enterprise training was abolished, there is also no formal distribution between workplace-based training and school-based training.

Table E.11 Existing VET types in Estonia

VET Types (Name in original and in English)	Distribution of school and work-based training (total training hours)	Is this VET type regarded as an apprenticeship training in your country?
▪ Vocational education without the requirement of basic education (*Põhihariduse nõudeta kutseõpe*) (ISCED 2C) *	**	No
▪ Vocational education based on basic education (*Kutseõpe põhihariduse baasil*) (ISCED 3C) *	**	No
▪ Secondary vocational education (*Kutsekeskharidusõpe)* (ISCED 3B) *	**	No
▪ Vocational training based on secondary education (*Kutseõpe keskhariduse baasil*) (ISCED 4B) *	**	No

* There's no separate system for apprenticeship in Estonia. Apprenticeship is integrated into regular IVET as a "workplace based study form" (töökohapõhine õppevorm). Thus, apprentices can study on different levels and programmes in the Estonian VET system (mainly ISCED 3C and 4B).

** Since 02.11.2009 there is no obligatory enterprise-based training period for VET students in school-based study form. Only condition is that practical training (in school and enterprise together) should make up at least 50% of the curricula.

Source: The Vocational Education Standard (Kutseharidusstandard)

One of the important characteristics of the Estonian VET system is that vocational schools have a great degree of freedom in deciding on which levels and in which form of study they provide their programs. State-commissioned study places are allocated by ISCED fields of education and schools can determine the specific subjects, forms and levels on which the courses are provided. Consequently, the provision of apprenticeship study places in schools depends largely on vocational schools themselves and on their ability to collaborate with the employers.

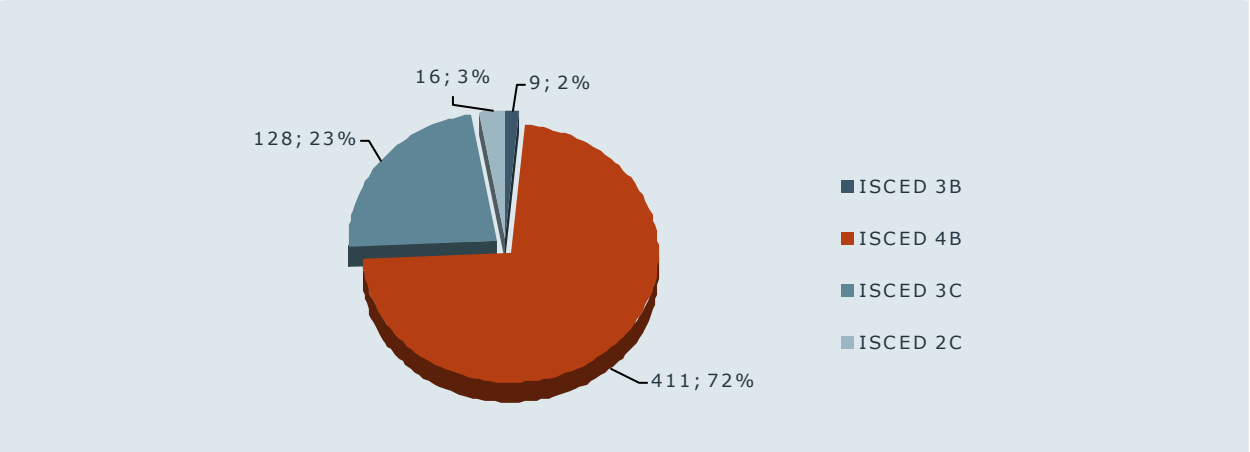
During the last two years the number of students in apprenticeship studies has decreased slightly. The number of students peaked in the academic year 2008/09, when there were 673 apprentices engaged in workplace-based studies. The corresponding numbers for the academic years 2009/10 and 2010/11 were 592 and 564 (see Graph E.3). The change is due to a drop in number of students on vocational secondary education (ISCED 3C). In the academic year 2008/09 there were 214 students on that track, but by 2009/10 the number had dropped to 134. The latter again is probably caused by the end of the ESF-funded apprenticeship program – from the second half of 2008 the central promotion of apprenticeship studies has stopped and finding apprenticeship places for younger and less motivated students has been a real obstacle for schools. Certainly, the economic crisis has also contributed.

Graph E.3 Number of students in apprenticeship studies during the academic years 2006/07–2010/11.

Source: Estonian Education Information System (EHIS) 10.11.2010.

In 2010/11 the majority (73%) of apprenticeship students are enrolled in vocational programs based on upper secondary education, and 23% of the apprentices study on an ISCED 3C track. In contrast, the number of students at ISCED 3B and ISCED 2C levels are very few (see Graph E.4).

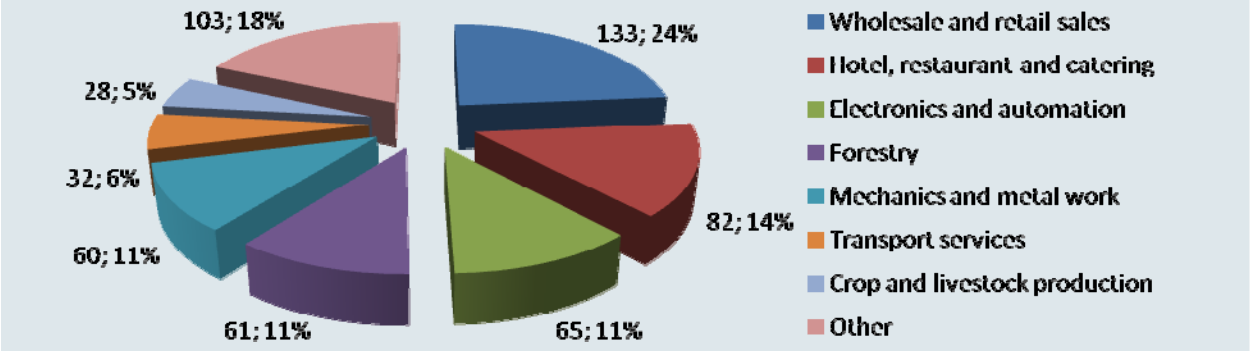
Graph E.4 Number of students on apprenticeship studies by ISCED level in the academic year 2010/11.



Source: Estonian Education Information System (EHIS) 10.11.2010.

By program subject, the most popular field of education by far is wholesale and retail sales studies, in which students constitute 24% of the total number of apprenticeship students (see Graph E.5). The second most popular field of study is hotel, restaurant and catering, where 15% of the students are enrolled. Other popular fields are electronics and automation, forestry and mechanics and metal work in which students each make up around 11-12% of apprentices.

Graph E.5 Number of students on apprenticeship studies by ISCED level in the academic year 2010/11.

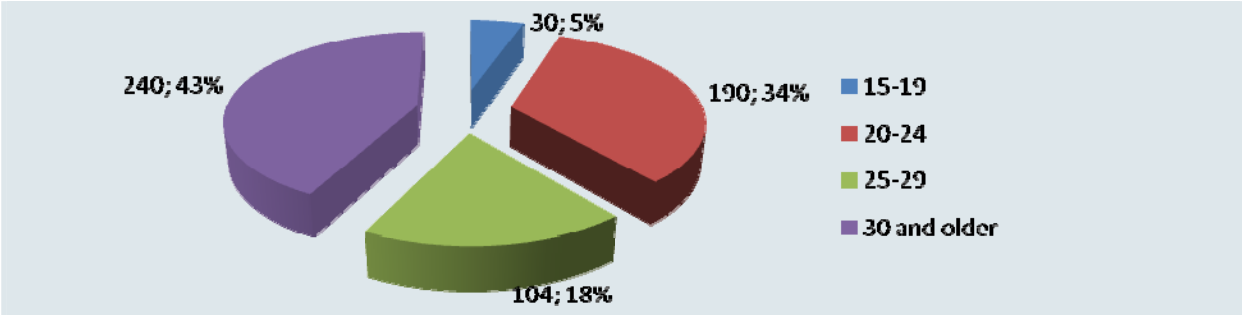


Source: Estonian Education Information System (EHIS) 10.11.2010.

By gender, workplace-based studies are more popular among men, who make up 58% of total apprenticeship students. At the same time, the total share of men in initial vocational education is 57%, so the apprenticeship studies do not differ much from other VET programs. The gender differences are large across the fields of study. The most popular field – wholesale and retail sale – is heavily dominated by female students, in 2010/11 of 133 apprentices only 12 are male. Women also dominate in the field of hotels, restaurants and catering where they make up 65% of the total number of students. The situation is vice versa in the field of mechanics and metal work where all 60 students are male. In the fields of electronics and automation and forestry the share of women is also comparatively low, between 6-13%.

The average age of apprentices is much higher compared to the average of total VET students, at 30 and 22 years respectively. Young VET students between the age of 15 and 19 years constitute only 5% of all the apprentices. One-third of the apprentices are in the 20-24 years age group. Of the apprenticeship students, 18% are 25-29 years old and 43% are older than 30 years (see Graph E.6).

Graph E.6 Number of students on apprenticeship studies by age group in the academic year 2010/11.



Source: Estonian Education Information System (EHIS) 10.11.2010.

School-leavers who drop out of school without obtaining a required qualification are one of the biggest problems in the Estonian VET system. The annual drop-out rate of apprenticeship students is especially high, ranging from 20% in 2007/08 to 36% in 2009/10. A comparable drop-out rate for the whole IVET was 18-19% in the same period. A point worth noting is that while the average drop-out rate has decreased over the last four years, in work-based studies it has increased. One probable cause for the growing numbers of school-leavers is the economic crisis. During the crisis employers needed to downsize their workforce expenditures and the workers were given a choice to work full-time and cancel their studies or to be fired. As most of the apprenticeship students are older and need to

take care of their family, hardly any could refuse this offer. Whereas studies are considered to be a great opportunity for personal development, work is often a necessity. Many schools have also pointed out that one of the main reasons why younger apprentices in particular drop out is their social background. Many of them lack the habit and motivation to learn or work and employers are not ready to take up the role for the social rehabilitation that some of the students need.

It is particularly important that students who have undergone apprenticeship studies find a suitable job for themselves. As mentioned above, the apprenticeship studies in Estonia are designed for people who already work and need to upgrade their skills or obtain a formal qualification, or for younger students who prefer work-based learning to school-based studies. The transition to working life understandably concerns the latter. At the moment there is no quantitative data available about the employment of apprenticeship study graduates. The economic crisis had a strong negative impact on VET as a whole. In 2007 only 2.6% of the graduates had not found a job 6 months after graduating, in 2009 the corresponding figure was 17.0%.[213] The situation in the labour market has been a strong motivator to continue studies. In 2008, only 8% of the graduates of the apprenticeship students continued their studies in VET or higher education, although by 2010 20% of the graduates pursued further studies.[214]

Operational Description of Apprenticeship Studies

Training curricula and training contents

How are they defined?

The curriculum development process is the same at all the levels and programs in Estonian IVET. The basis for all curricula are the **professional standard**. The professional standard is a document which describes professional activities and provides the competency requirements for professional qualifications and their levels. The proposal for the preparation of professional standards can be made by any enterprise, institution or other organization and individual to the Estonian Qualifications Authority (EQA). Together with professional councils,[215] the EQA makes a decision on the proposal and appoints a working group consisting of experts in the given field, whose task is to prepare the standard. Afterwards, an opinion poll is conducted in enterprises and institutions of the corresponding area of activity in order to introduce a draft of the professional standard. In the end, professional standards have to be approved by professional councils.[216]

The **national curriculum** is a document which determines the purposes and functions of vocational training, the requirements for admission and graduating from the studies, the modules of curricula and the volumes thereof together with short descriptions, the possibilities of and conditions for electing modules and possibilities of specialization. The national curricula are reviewed and if necessary, a new version is approved if the professional standard which constitutes the basis for the national curriculum is repealed, a new professional standard is established, or the name of the professional standard or the requirements for professional skills provided in the standard are amended.[217] National curricula are developed in the National Examinations and Qualifications Centre (NEQC).

[213] 2008/2009. õppeaastal kutseõppe lõpetanute rakendatus kuus kuud pärast kooli lõpetamist [Employment of the 2008/09 academic year VET graduates], Ministry of Education and Research, 2010.

[214] Estonian Education Information System, 10.11.2010.

[215] Professional councils are co-operative bodies between confederations of employers/employees of the respective field of economy, professional and vocational associations and the authorized representatives of the Ministry of Education and Research.

[216] Estonian Qualifications Authority [http://www.kutsekoda.ee/en]

[217] VET in Europe – Country Report. Estonia, Cedefop, 2009.

The **school curriculum** is the source document of vocational training. Schools prepare a curriculum for each profession or specialty being taught and for every type of vocational training, basing it on the Vocational Education Standard[218] and the national curriculum, and taking into account the different forms of study. The school curricula consist of a general part, modules of general and basic skills determined by the national curriculum and modules of elective subjects. The general part of a school curriculum sets forth: the purpose and functions of the school curriculum; the requirements for the commencement and completion of studies; the structure of the school curriculum; a list of general, basic and elective study modules, and their volumes. If necessary, the school may amend the school curriculum once a year concerning the elective study modules. The revised version of the school curriculum is approved by the head of the school after coordinating it with the teachers' council and school board. The content of vocational training established by a school curriculum is set forth in the form of modules. A module is a comprehensive content unit within a curriculum which is directed towards study results and determines the knowledge, skills and attitudes conforming to the professional requirements. A module is made up of one or several subjects or topics. The volume of a module depends on its purpose and content. Modules are divided into general, basic and elective study parts. General study modules define sets of knowledge and skills which run through broad groups of studies and are common to several areas of specialization. Basic study modules define sets of knowledge and skills necessary for operation in a profession, specialty or occupation. Subjects of general education are included in general and basic study modules in the volume and selection which are necessary for acquiring the corresponding profession or area of specialization. Elective study modules define the knowledge and skills which support and extend professional skills or are related to additional qualifications. Elective modules may make up 5-30% of the volume of a curriculum.[219]

In the case of apprenticeship studies, the school needs to prepare an **individual curriculum** for a student which is an adaption of the school curriculum. The obligation to prepare an individual curriculum is stipulated in the Regulation of Implementing Workplace Based Study. The main reason behind it is the need to take into account the needs of a specific student and also available training possibilities in the enterprise. What remains the same for all students, whether they study in workplace-based or school-based studies in the same specialty, are the learning outcomes, which are provided in the school curriculum, and the nominal study period. The school and enterprise are both heavily involved in preparing the curriculum to ensure that these outcomes can be achieved in the company and agree how it can be assessed. Individual curricula can be prepared also for students in school based studies who need a more personal approach.

Graph E.7 The Estonian curriculum system

How are enterprises involved in curriculum development?

The private sector and other stakeholders are involved in the development of curricula in several ways. Firstly, every entrepreneur in need of a qualified workforce can always turn to

[218] The Vocational Education Standard (*Kutseharidusstandard*) is a set of uniform requirements for vocational and professional training at the level of basic and secondary education. It applies to all vocational education institutions which organize vocational training.

[219] VET in Europe – Country Report. Estonia, Cedefop, 2009.

the regional vocational training centre and agree with the school on the current and future skills need. On this basis the school can change its existing curricula. The national curricula on which school curricula are based are often sufficiently broad that there is no need to develop a new national curriculum. If the needed specialty is completely different from a previous one, a new national curriculum needs to be prepared. If there already exists a suitable professional standard on which a national curriculum can be based, the school can turn to the NEQC, which prepares a new national curriculum. If a new professional standard also needs to be developed then a proposal for the preparation of professional standard is made to EQA, usually in collaboration with the school and the enterprise. Consequently, enterprises can influence the curriculum development by proposing new professional standards, developing them through professional councils or giving an opinion about them in a subsequent poll. In the case of apprenticeship studies, the involvement of enterprises is inevitable. Together with the school, employers have to determine which skills can be obtained in their enterprise, how best to adapt the school curriculum and how to assess the learning outcomes.

The role of enterprises in apprenticeship schemes

Who are the participating companies?

To give an overview about apprenticeship training in Estonian enterprises, one must start with a short characterization of Estonian companies.

Table E.12 Operating enterprises in 2008 and 2010 by number of employees

Type of enterprise (number of employees)	2008		2010	
	Number	Share	Number	Share
Micro-enterprises (1-9)	36.250	80,8%	39.217	87,0%
Small enterprises (10-49)	7.088	15,8%	4.708	10,4%
Medium enterprises (50-249)	1.327	3,0%	1.001	2,2%
Large enterprises (+250)	188	0,4%	162	0,4%
Total	**44.853**	**100,0%**	**45.088**	**100,0%**

Source: Estonian Chamber of Commerce and Industry, 2011.

As can be seen from Table E.12, the majority of Estonian enterprises have less than 10 employees and the share of micro-enterprises has significantly grown during the economic recession. It is obvious that the size of the enterprises sets limitations on the training capabilities. On the one hand, the enterprises lack manpower which could be engaged in supervising activities, on the other hand small enterprises generally use a quite narrow set of technological solutions, which do not cover all the topics given in the curriculum. Nevertheless, the managers of the former ESF-funded apprenticeship project and representatives of the vocational training centres say that small and medium sized enterprises (SMEs) have been one of the main providers of apprenticeship training places. In some specialties, the technological gap between SMEs and large enterprises is not so wide and all the topics in the curriculum can be covered. If not, there has been a good practice that smaller companies share their apprentices so that students pass part of the training in one company and the other part in a second one.

> *During the ESF-funded apprenticeship program, many participating companies were rather small. However, many small businesses committed to the program and did very well. For example, there was a small gourmet restaurant located in the remote countryside, in an old manor house, where one master chef took the obligation to supervise a young apprentice and I am sure that he learnt there more than he could ever do in a big city restaurant. (Representative of the employers)*

Possibilities for training are always better in larger enterprises but when choosing partners in apprenticeship studies, the schools often do not have much choice. In each of Estonia's 15 counties there is a vocational training centre, but not all counties have large enterprises operating there. At the same time, regional remoteness can also be a positive factor because the rural enterprises have a greater need for a qualified workforce and SMEs are more willing to contribute to the training of students.

What are the goals and main activities of workplace based training?

Understandably, the main goal of workplace based training for the student is to give a chance to see theoretical knowledge put into practice. Although many school-based students also spend a part of their studies as a trainee at the workplace, the apprentices are far more engaged in everyday operations of the company and also bear more responsibility for their work.

Since there are two main target groups for apprenticeship based studies, one must distinguish the aims for their involvement. For the younger students who did not do well in school-based studies, the goal of workplace-based training is to give them a better understanding how theory and practice are connected and what the practical outcomes of learning are. In that way, the school and policymakers try to reduce the probability of the student from dropping out of the education system.

> *Apprenticeship studies were meant to be a measure to avoid youngster, who are at risk of dropping out to "go to sit in the bus station", i.e. to not do anything reasonable. The purpose was to give them basic professional skills so that they could go on with their lives. (An apprenticeship expert)*

The other and more numerous target group has been older students who are already working but lack a theoretical knowledge and formal diploma. The goal of apprenticeship studies is to give them a chance to obtain a vocational education diploma and to broaden their knowledge in the field while they can continue their work and thereby retain their standard of living.

Due to their different background and motivation, it is not unusual that the activities at the workplace also differ between those two groups. Older students whose apprenticeship training often takes place in their last workplace need less attention from their supervisors and can spend more time learning new craftsmanship skills. Younger and less motivated students do not always possess all social skills and work ethics needed in the workplace, so the employer needs to start the training by educating the apprentice on the basic principles of work.

> *It is not unheard that the training starts from the point that the supervisor needs to stress that when working day starts at 8 a.m. the apprentice should be there at that time, not 3 hours later or not at all, or that "forgetting" tools in your pockets is not considered to be absent-mindedness. (Representative of the employers)*

How are the studies scheduled?

The only condition in the scheduling of apprenticeship studies is given by the Regulation of Implementing Workplace Based Study, which states that one-third of the curriculum is delivered through theoretical instruction and two-thirds through practical training in an enterprise. In other aspects, the arrangement of studies is agreed between the enterprise, the school and the student (see subsection 2.3.6 for further details), and differs greatly. For instance, in the seasonal specialties like gardening, the studies could be all school-based in the winter time, but in spring the learning takes place only in the workplace. By contrast, in the service sector the school-based studies can take place on one day of the week and the rest of the time is spent on practice in the workplace.

How are the participating companies found?

Between 2005-2008 when apprenticeship studies were centrally coordinated and funded by the ESF, finding interested employers to offer their enterprises as training bases was easy. The central coordination helped to communicate the program to wider circles, and in every regional vocational training centre participating in the project there were part-time project managers, one of whose area of responsibility was to recruit new companies and students. What is even more important is that during that time, the Estonian economy was characterized by very high economic growth and very low unemployment. Therefore, the companies were very interested in recruiting a new workforce and the apprenticeship program was a suitable mechanism to train new staff with relatively low costs. Plenty of companies themselves contacted their regional vocational training centres during that period and took an interest in finding new workers from the schools.

The employers also benefited from the chance to send their existing staff to receive formal training. As one of the main target groups of the apprenticeship project were adults already in the labour market, who had not obtained a formal qualification in a vocational or higher education institution, many companies found it to be a useful way to enhance their employees' general skills and work motivation and partnered with vocational training centres to participate in the apprenticeship program.

At the end of 2008 the Estonian economy started to recede and a large-scale lay-off of employees began. Unemployment rose from 5.5% in 2008 to 16.9% in 2010. The financial difficulties and abundance of an available qualified workforce significantly reduced the willingness of employers to take part in the apprenticeship program. In 2008, 372 new apprentices started their studies, although the corresponding number in 2010 was only 267.

At the moment, the main providers of apprenticeship places are longstanding partners of the vocational schools, which are generally larger than average enterprises and which withstood the economic crisis better. Still, many of them have cut the number of apprentices and trainees they are willing to take annually.

How are the students selected?

During the apprenticeship project in 2005-2008, finding new students was not easy. Labour shortages raised salaries and even people without proper education could easily get a remunerative job. According to the representatives of the vocational training centres, the hardest target group to find were the younger students interested in workplace-based studies because people with the aspiration to start working as soon as possible had already left the school and did not see an incentive to return.

As the level of unemployment has rocketed, many unskilled workers have found their way back to school. Few schools tend to offer the workplace-based studies because of the high flexibility and therefore costly price of the apprenticeship studies. Nowadays, apprenticeship students are more often selected among people who are already working in a company and came to school to obtain a formal qualification. For instance, a typical access route to the apprenticeship studies is that employers' associations in a certain field or a larger company send their workers who do not hold a professional qualification to receive formal training in a VET institution to upskill their workers.

There is no general policy if the employer selects the student or not and it depends on the agreement between the vocational training centre and the enterprise. If the apprenticeship place is offered to a younger student in a company where he or she has not worked before, the employer generally has the right to select the student, though often they do not use that option and instead rely on the schools' decision. Generally, smaller enterprises tend to

be more selective because the apprentice's role in the everyday operation of the enterprise is usually more important.

What are the main obligations for participating enterprises and which internal means are required?

Undoubtedly, the larger the enterprise is, the easier it is to find human and financial resources for training. It is said that the minimum size from which companies can start to contribute to training activities is 50 employees.

> *One important point which cannot be overlooked in the case of apprenticeships is the number of large and medium-sized enterprises or rather the lack of them, especially as their numbers shrank even more during the recession. When we talk about organizational culture, and the number of workers from which the development activities will be imaginable... theorists say that the company must employ at least 50 employees. From that size it is believable that someone can begin to deal with the apprentices. In this sense, the prospective number of employers with whom to start collaboration in the field of apprenticeship and workplace practice so that it meets the objectives of the curriculum has been hit hard in recent years. (Representative of the employers)*

Regardless of the size of the company, the employer has to bear the responsibility that all the topics in the curriculum can and will be covered during the workplace-based training. The means achieving those goals are not prescribed by any regulation, but are agreed between the school and the company.

Some financial burden falls on the companies because they have the obligation to remunerate the apprentices at least with the minimum wage. Although in general the school pays a company supervisor compensation for the training, employers sometimes add an extra compensation to motivate the trainers better.

Specific role of the company trainer

Are there legal provisions regulating the role and characteristics of the trainer?

No, at the moment there are none. During the ESF-funded apprenticeship project in 2005-2008, the companies enrolled in apprenticeship training were bound to send their company trainers on specific supervisory training. Since the end of the project, this centralized training program has stopped and if, or to what extent, the company trainer is educated on pedagogical nuances depends on the collaborating vocational school.

Who is a typical company trainer?

A typical company trainer is a senior craftsman who generally has a lengthy work experience in the company. He may have been working in different positions and posts in the company, but he still tends to be more often a blue-collar than white-collar worker. The educational background does not make any difference in most of the cases, but many of the senior craftsmen have a vocational education or secondary specialized education which used to be a (now obsolete) higher level of vocational education.

As mentioned above, there is no centralized training for the company trainers at the moment, but that does not rule out that schools themselves provide some basic pedagogical coaching. The trainer should have an excellent knowledge of the enterprises' work processes, good communication skills and what is even more important – he or she should apply for the job voluntarily. If the curriculum is too broad to be covered by only one trainer, the students change supervisors by subject or work process.

The trainer is always appointed by the management of the company but the vocational school has a right to assess whether the person is suitable for the supervising duties. In a

few large enterprises there are also persons who are specifically assigned to the training activities and who organize the company based training, but this is quite rare. As most of the training providers tend to be SMEs, bureaucratic activities are covered by the human resources manager or CEO of the company, while one of the senior craftsmen takes care of the practical training.

Description of school-based training

What are the main goals of school-based training?

As jobs get more difficult in time, there is an increasing need for theoretical knowledge even in very practical professions. For instance, even a cleaner needs to know the basics of chemistry in order to know which detergent to use on which surface and therefore successfully perform his or her job. As school-based training constitutes only one-third of the total curricula, the time spent acquiring the theory is actually very limited and not all of the specialties can be taught using apprenticeship studies. For instance, in some early stage of the ESF-funded apprenticeship project, the workplace-based study was tried out in the restorer's program, but did not work out very well because of the lack in theory of art and history.

When and how often does the school-based training take place?

There is no general policy on how often or when the school-based training takes place, so the arrangements of the studies are very flexible. This allows taking account of the specifics of the given subject or field of study. For instance, the gardening students have a very tight time schedule in the springtime so they spend a long period at work and engage in school-based studies in wintertime. At the same time, shop assistant apprentices may go to school every day. The only condition stipulated in the Regulation of Implementing Workplace Based Study is that workplace-based training must constitute two-thirds of the total curriculum.

Who are the school-based training providers?

School based training of apprenticeship studies takes place in vocational education institutions. In the 2010/11 academic year there are 43 vocational education institutions in Estonia, 30 of which are administered by the state, 10 are private vocational education institutions and 3 belong to the municipalities (although they are financed by the state). There are also 8 professional higher education institutions where vocational education on VET study programs can be obtained. There are students in workplace-based studies in the 2010/11 academic year in 13 institutions, 2 of which are professional higher education institutions.

The role of students in the apprenticeship schemes

How do students get access to enterprises?

As apprenticeship studies are very loosely regulated in Estonia, there is no certain way how students access the companies and several paths are possible. If a vocational school decides to open a workplace-based study in a program, it already has an agreement with a company about how many and what background students they are willing to accept. Therefore, the students first have to apply for the apprenticeship studies, the school selects the students best suitable for this form of study and the company has a last word on the matter.

Especially before the economic recession, one of the common ways students accessed a company was that a company in a need of labour contacted its regional vocational training centre and asked if there were suitable candidates for the apprenticeship studies. If there were enough apprenticeship places and interested people, the company had to be assessed if all the learning outcomes of the school curriculum could be covered and high quality train-

ing provided. If the decision was positive again, the school together with the company selected suitable students.

Sometimes larger enterprises or representative bodies of some industries have used apprenticeship studies as a way to educate their workforce. In that case, the company or their representative body makes an arrangement with the school and then selects the students who will start workplace-based training. Those students are the target group with whom the schools and enterprises both have been very content, because they are usually highly motivated and take great interest in their studies.

While finding an internship place on your own is a very common way in school-based studies, in apprenticeship studies it is a bit more complicated. Finding an interested company may be trickier because the employer bears a lot of responsibility for the studies. Still, there have been cases when the student himself finds the training place.

Are there any access requirements for the students?

No, generally there are not. The exact regulation for student admission is established by the decree of the principal of the vocational education institution. As workplace-based studies tend to be more expensive than school-based studies, there generally has to be a good reason why the student should be enrolled in the former. Usually, it is related to the academic progress of the student – people with a lack of interest in the theoretical part of the studies are one of the main target groups. Also, students who are older than average or are already working are more often offered the chance to engage in workplace-based studies.

What are the main rights and obligations for students derived from their participation in apprenticeship schemes?

Students enrolled in workplace-based studies have all the same rights and obligations as students in school-based studies. The eligibility for a certain support or benefit is defined by the type (level) of studies and weather he/she is a full-time student. For example, the students on curricula based on lower secondary education who are studying full-time have the right to a school lunch allowance, study allowance and transportation allowance. Students on curricula based on upper secondary education are eligible for a study allowance, a supplementary allowance (which is similar to the transportation allowance) and can take on a low-interest study-loan which has to be paid back after graduating and is guaranteed by the state.[220]

There are some additional rights and obligations for workplace based students. Firstly, they have a right to be remunerated for their time spent at work. The salary is agreed in the contract between the school, the employer and the student. The hourly wage must be as high as state's hourly minimum wage (in 2011, €1.73). Secondly, they are also responsible for their work tasks and obligations. Workplace based students are, in that respect, equal to regular employees. This is not the case for traditional VET students.

How is the knowledge of students assessed?

Apprenticeship students are assessed both by the school and the employer. In the company, an apprentice is given a number of tasks he or she must fulfil, which will be assessed by the company supervisor. In the end, the supervisor gives a total mark for the company training period as a whole. In the school-based part of the apprenticeship studies, the student is assessed by different subjects in the same way as all the other IVET students.

Also, the examination system is the same for school-based and workplace-based students. Depending on the curriculum, the studies can be completed with a professional exam or schools exam. The professional exam is a part of the Estonian eight-level system of profes-

[220] Ministry of Education and Research [http://www.hm.ee/index.php?1510045]

sional qualifications corresponding to the European Qualifications Framework (EQF). After successfully passing a professional exam, a person is given a professional certificate which shows that the person's skills and knowledge conform to the set professional standard. The certificate is issued by the awarding body, which is usually the employer or a professional association.[221] School examinations are still widely used because not all of the current vocational programs have corresponding professional examinations.

Contractual relationships between enterprises/students/VET schools

For every apprentice, the school, the enterprise and the student are required to sign a study contract. The obligation to sign the contract is stipulated in the Regulation of Implementing Workplace Based Study which the Ministry of Education and Research also draws up. The main rationale of the contract is to agree on the conditions of workplace-based learning between the three parties. Among other things, the contract determines the remuneration conditions for the apprentice and the supervisor, size of the payment from the school to the company for covering the costs related to the training, the rights, duties and responsibilities of the parties, etc. Mandatory annexes to the contract are the individual curriculum and an expert assessment of the provider of workplace training.

As the apprentices contribute to the everyday operation of the company they are also remunerated for their services. Their wage is paid by the employer and has to be at least equivalent to the national minimum hourly wage, although it can be significantly higher because many of the current apprentices already used to work in the company or were sent to the apprenticeship studies just after hiring.

Financing of the IVET and apprenticeship studies

Estonian vocational education is funded by the state budget under the jurisdiction of the Ministry of Education and Research according to state-commissioned education needs. Funding is based on the base cost of a student place and the coefficients of curriculum groups. The multiplication of the base cost by the relevant coefficient gives the cost of a student place in the given specialty. State, municipal and private vocational institutions are all funded through state-commissioned study places.

As workplace-based studies are only one of the two forms of study, there is no differentiation in financing. The schools get funding for an ISCED curriculum group and can determine themselves at which level or form of studies new study places are established. Some vocational schools perceive it as a problem because the apprenticeship studies require more flexibility and therefore extra time from the teachers which raises the labour costs.

Remuneration of the companies and company supervisors depends on the agreement between the vocational education institution and the enterprise. If the training of the students is in the interest of the employer, the company may take on the entire financial burden related to the company based training. If the apprentice is sent to the company by the school, the latter usually pays the supervisor a modest fee. During the interviews we did not encounter a case where other fees would have been paid to the employer. In most of the cases the employers themselves are interested in having the apprentices, in order to train a qualified workforce for them, therefore additional financial support has not been necessary. There are no tax incentives for the companies participating in the apprenticeship program and considering the negative attitude of the government towards any tax exemptions it is highly unlikely that there will be any in the near future.

As the apprenticeship studies do not have a centralized budget, there is no data about the financing of the workplace-based studies. The total expenditures on IVET in 2010 were 96 million euros, which is 3,534 euros per student.

[221] Estonian Qualifications Authority [http://kutsekoda.ee/en/kutsesysteem/tunnistusesaamine]

Quality assurance in apprenticeship studies

There are many instruments which ensure the quality of the studies. Firstly, all the individual curricula have to correspond to the national curricula and therefore include certain learning outcomes that must be achieved. Secondly, if a student has to pass the professional examination, his/her skills and knowledge are assessed by an independent body and universal quality is therefore assured.

In 2005-2008 when apprenticeship studies were financed from ESF resources, training in the enterprises was monitored by an independent committee of assessors which consisted of experts in the field. Altogether, there were 14 specialist committees. The assessment is based on the assessment guideline developed during the ESF project, which has four key criteria: the company's willingness to engage apprentices, the existence of the necessary machinery and equipment, abilities and motivation of the pedagogical supervisor, and workplace safety. After the end of the project, schools were supposed to take over the assessment of the workplace-based training providers. Currently, enterprises are monitored only by the schools themselves. As many of the companies which provide workplace-based training places are long-term partners of the vocational education institutions, they may not be continuously monitored. However, new enterprises are always assessed by the schools to determine if all the learning outcomes of the curriculum can be achieved and if the workplace complies with all of the safety regulations.

During the apprenticeship project the enterprises had the obligation to write a self-assessment and afterwards a short report about the outcomes of the training period. Currently, the need for documentation is agreed between the school and the company and in general the bureaucratic administrative burden to the company is minimal.

The main problem with the quality of apprenticeship studies stems from the small size of Estonian enterprises. As most of the fields of study are dominated by SMEs which cannot take in too many apprentices, students must be divided between many different enterprises with different production technologies. Although the workplace based training period may be beneficial to the student in the context of employability, the school has to take the responsibility that the student is able to pass the professional examination. To do so, multiple skills are needed which can be unobtainable in just one small enterprise. To overcome this problem, some of the SMEs providing company training have cooperated and exchanged their apprentices in different training periods. As many of the VET institutions have modern and very well equipped practice bases, some of the practical training can also be conducted within the school.

Changes and perspectives in the national apprenticeship schemes and geographical mobility issues

Recent and planned changes in the national apprenticeship schemes

The formal regulation concerning the procedure of workplace-based training as a form of study was issued in March 2007 by the Ministry of Education and Research, so apprenticeship studies are a quite new addition to the Estonian vocational education system. In 2005-2008, the apprenticeship studies were financed by the ESF and a special project was enacted to promote it in Estonia. Since the end of the project in autumn 2008, there has been no central coordination of workplace-based studies and it exists as one of two forms of study. The end of the centralized leadership also led to the termination of many activities and bodies as the committees of the assessors of the workplace-based training and centralized training of the company supervisors.

One important change in the legislation, which relates to the apprenticeship studies, is the abrogation of the compulsory company training period for students in school-based studies. Until autumn 2009, the main legislative act regulating the contents of vocational education, The Vocational Education Standard (*Kutsehariduss tandard*), required the workplace based training to constitute 25% of the total volume of the studies. This compulsion was dropped during the economic crisis because finding a practice place became increasingly difficult, and at the moment there has been no discussion about reintroducing it.

As most of the Estonian VET students are enrolled in the other school-based studies, it is not perceived as a very important part of the VET system and there have not been any recent changes in legislation. However, the Ministry of Education and Research is planning an important policy change by issuing a new Vocational Education Institutions Act. The main changes to the current act regard the introduction of new types of study which are related to the Estonian Qualifications Framework, implementation of the principle of outcome based learning throughout the entire VET system, and performance-based funding. However, there are no planned changes in the field of forms of study, including workplace-based studies.

The effect of the recent economic crisis on the national apprenticeship schemes

The Estonian economy was hit hard by the economic crisis. GDP fell 11.2% between 2008 and 2010 and unemployment rose from 5.5% to 16.9%. For the vocational education institutions the main impacts of the crisis was an 8% cut in the funding but also raising the popularity of VET because many people who could not find work decided to continue their studies. Between the 2008/09 and 2009/10 academic years the admission of students in IVET rose more than 10%, which was a large burden for the school budgets.

As apprenticeship studies rely heavily on the enterprises willingness to accept students, the recession had an important effect on the supply of available training places. Many of the enterprises had to close down or lay off their workers, which resulted in decreased demand for apprentices. In some programs the provision of workplace-based studies ended. However, this does not apply to all the programs.

As mentioned in the previous point, one impact of the crisis on VET was the abrogation of a compulsory company training period for students in school-based studies in autumn 2009. Finding a practice place during the recession was very difficult and the vocational education institutions could not comply with this obligation. The main reason for this is the size of Estonia's enterprises: small companies which employ less than 10 people just did not had enough resources to continue the provision of workplace-based training. The shortage of training places was somehow soothed by the VET institutions themselves: many Estonian vocational schools have made large investments to their infrastructure, thanks to which some schools have even better practice bases and a broader range of machinery than the enterprises, which enables students to pass the practical training period in the school. Although the compulsion has been abolished, most of the VET students still benefit from company training periods.

Student geographical mobility issues

The main instrument for the geographical mobility of students in Estonia is the Leonardo da Vinci program, which is dedicated to the promotion of vocational education and training in Europe. The program has offered opportunities for international cooperation in the field of vocational education since 1998 in Estonia. The program aims to enhance the quality of cooperation between training institutions and the social partners, increase the mobility of students in IVET and continuing vocational training (CVET) and to encourage the spread of innovative experiences in the field of vocational education.[222] The Leonardo program is coordinated in Estonia by the Centre for Educational Programmes, which is a unit within the Ar-

[222] http://archimedes.ee/hkk/index.php?leht=61

chimedes Foundation - an independent body whose main task is to coordinate and implement different EU programmes and projects in the field of training, education, research, technological development and innovation. There is no national program or measures to enhance the international mobility of the students.

The number of students benefiting from the geographical mobility measures is quite low. In 2009 there were 294 participants in IVET who benefited from the Leonardo program.[223] There is no separated statistics about the participation of apprenticeship students, but according to the interviewees there have been few people who have had a chance to spend a short training period abroad.

Compared to the higher education students, IVET students tend to be less mobile. One of the reasons may be that there is no program as universal as Erasmus in higher education in VET. Higher education is also more harmonized than vocational education, which hinders the growth of mobility. If one is to identify particular problems for the apprenticeship students, it will probably be related to the age of the students. Estonian workplace-based students tend to be older than students in the school-based studies. They are more likely to have started a family and therefore have more responsibilities to bear. As the larger part of the studies is workplace-based, the apprentice has to take a break from work to spend a training period abroad, which is not always possible.

From the vocational education institutions perspective, there are both benefits and problems related to the student mobility. The international mobility is believed to be a very effective way to motivate students in their studies and also broaden their horizon and competence. On the other hand, VET students are not always very experienced in organizing study visits or student exchanges themselves so often the schools need to carry out all the organizational tasks, which requires time and effort. Often the mobility of the teachers and trainers is more valued than the mobility of students.

Generally, student mobility tends not to be a priority in the Estonian VET system. It is a time and money consuming activity and at the moment there is no instrument as simple as the Erasmus program in higher education to take part in the training activities abroad or arrange a student exchange. There is also a view that student mobility in VET may enhance the brain-drain phenomena, because of the lower wage level in Estonia compared to many other European countries.

Future perspectives and other possible relevant issues

The future perspectives of the apprenticeship studies do not seem to be very bright. After the ending of the centralized coordination, the number of students has started to decrease, which is partly a result of the economic crisis but also a lack of leadership. At the moment, a third of Estonia's workforce does not hold a vocational or higher education diploma, which means that there is an excessive need for the training of adult education. All of the interviewees considered apprenticeship studies to be best suited to the latter target group. Therefore, it would be feasible to further promote apprenticeship studies among the adult population and employers. Unfortunately, without central leadership the rise of the popularity apprenticeship studies does not seem likely.

[223] **Kirss, L.** Interim Evaluation of the European Lifelong Learning Programme 2007-2009: The National Report of Estonia. PRAXIS Working Paper 3/2010.

Evaluation of existing apprenticeship schemes

Qualitative assessment of the apprenticeship studies

Role of work based studies in Estonian VET system and its impact on employment

Today, one must admit that the apprenticeship studies are not considered to be a very important policy issue in the context of IVET. In the academic year 2010/11, students enrolled in workplace-based studies made up only 2 percent of total VET students, which in absolute numbers is 564 persons from just over 28,000 students. If speaking about the workplace based training in a broader context, the training period in the enterprise has more importance. Many Estonian school based VET students spend a certain training period in companies. Until the autumn 2009 this used to be obligatory but was then abolished because finding a practice place during the recession was very difficult and the vocational education institutions could not comply with this obligation. Thanks to the large investments in the infrastructure of the vocational education institutions, many schools have better practice bases and a broader range of machinery than most of the enterprises, which enables students to pass the practical training period in their school.

Although students have the best ever opportunity to obtain the needed practical skills in their vocational education institution, company-based training is still highly valued. Something which cannot so easily be learned in the school is knowledge about the practical organization of work, proper work attitudes and social skills needed to be a valued employee and co-worker. It is much more common that the employers complain about those shortcomings than about the absence of certain technical skills. Cooperation between vocational education institutions and the enterprises in the field of training fosters the bilateral learning and reduces miscommunication between the suppliers and consumers of skilled labour.

A practical training period in an enterprise is very valued also because it facilitates access to the labour market. Many companies which are willing to take students on company-based training are actually looking for future employees and if a student proves him/herself, he or she may be offered a job after graduation. For the students who have managed to spend a training period in a company it is a real competitive advantage. According to the VET institutions, the further employment of students is strongly related to their motivation, and having work experience from a company usually has a positive effect on it.

When comparing the employability of the students in school-based studies and workplace-based studies, the latter have a greater probability to be employed. Most likely, it is not caused by the fact that the apprenticeship studies would be somehow more valued by the employers than school-based studies, but by other characteristics such as the age and time spent in a company. Not all school-based students have access to company training and if they do it is usually a short period, which means that they have less time to show their skills than the workplace-based students. Apprenticeship students are usually much older than the graduates of school-based studies and therefore more experienced and trustworthy in the eyes of the potential employers. Also, younger students benefit from the workplace based studies, because thanks to the longer company training period they have better possibilities to prove their trustworthiness to the employer. One must also bear in mind that a large proportion of Estonian apprenticeship students are sent on training by their employer, which means that they already have a guaranteed job waiting for them.

Are apprenticeship schemes capable of adapting contents and methods to technological, social and economic progress within each sector?

One of the most positive effects of the introduction of apprenticeship studies has been its effect on the cooperation between the companies and the vocational education institutions. The provision of workplace-based training and joint development of individual curricula enhance the bilateral flow of information and mutual learning process. Therefore, it is sure

that in the fields where companies and schools collaborate more in providing apprenticeship or practice places, the curricula respond better to the needs of the labour market and are more up to date in the context of technological change.

To what extent are the acquired skills in workplace training transferable to other enterprises?

As apprentices in the same program are often distributed between different companies, ensuring that all the students have obtained the same competences by the end of the training is a large challenge for the vocational education institutions. Different companies have different production technologies, which mean that the graduates of workplace-based training may not have identical experience and knowledge at the end of the training. To help apprentices obtain all the required skills, students may have different supervisors in a company who introduce them to different work processes and there have even been cases when companies exchange their apprentices with each other during the training period. To assure the equal competence of the graduates, outcome-based curricula have been introduced and many of the students pass a universal professional examination at the end of the studies.

Do apprenticeship studies facilitate progression within the context of further education and training?

All interviewees indentified apprenticeship studies as an effective tool for re- and further training. The main benefit of workplace-based studies is that they let people continue working and therefore maintain their income, which is essential for older students who have already started a family. The schools have pointed out that apprenticeship studies are a very effective way to raise the motivation of employees and many of the graduates have had a career in the company afterwards.

The effectiveness of existing financing mechanisms

At the moment, apprenticeship studies tend to be underfinanced to some extent. There is no differentiation between financing school- or workplace-based students, although the latter is a slightly more costly. The elements which raise the cost of apprenticeship studies are the need to develop individual curricula, high flexibility which means that the teachers need to spend more time for the students, the need to pay the company supervisor a motivating fee, and transaction costs related to the extra communication between the school and the company. To raise the proportion of workplace-based studies in Estonian VET an additional financing coefficient should be introduced, but due to the austerity measures and general attitude towards apprenticeships it does not seem likely at the moment.

To what extent do the existing apprenticeship schemes favour student geographical mobility issues?

Both school-based and workplace-based students have the same opportunities to spend part of their studies abroad, using the Leonardo program, although but it is slightly more complicated for the apprentices because they are usually older and have to take care of their family obligations. What is even more important is they must have permission from their employer which cannot be always easily done.

Are apprenticeship schemes used by enterprises as a source of cheap labour?

This is probably not the case in Estonia. Indeed, to the contrary, apprentices are an expensive source of labour, because the company has to pay them at least the minimum wage, cannot immediately employ them fully and often has to pay the company supervisor extra compensation. Indeed, they have been a valuable source of labour in the period of high employment, when there was shortfall of qualified workers. Currently, in the state of high unemployment, apprenticeship studies continue to be a useful tool to raise qualification levels.

To what extent do apprenticeship schemes take into account social considerations like drop-out problems or inclusion of prospective students with low academic levels?

When the apprenticeship studies in Estonia first commenced, one of the main target groups of the program were the drop-outs or students, with low academic levels in a risk of dropping out. Currently, few providers of such training remain. The main reason is that the work environment did not suit low motivated students any better than the school-based studies. There were numerous problems with students, including work discipline, which resulted in deteriorated relations with providers of company training. It is a widely held view that although low motivated students need special attention, workplace-based studies are not the best solution for that target group. Instead, apprenticeship studies are increasingly targeted at people who have not obtained a formal qualification or who need update their skills. Considering that about a third of Estonia's workforce does not have higher or vocational education, there is lot to do.

To what extent are the existing apprenticeship schemes responsive to the challenges imposed by the current economic crisis?

The impact of the economic crisis on apprenticeship studies has been twofold. The demand for apprentices has rapidly decreased, as the unemployment rate rocketed. There were few enterprises that needed extra labour during the crisis, which decreased their motivation to accept apprentices and offer company-based training. On the other hand, apprenticeship training benefited those who were already learning, because being more involved in everyday operations of the company they probably stayed at the same company after the graduation, while the graduates of school-based studies without long working experience had more difficulties finding a job.

The main benefits/problems for students derived from their participation in apprenticeship schemes

If one has to identify the main benefit for students derived from their participation in apprenticeship studies, it probably is the fact that a student does not have to postpone his or her life while studying. Apprentices have a guaranteed income which enables them to be financially independent. Besides, workplace-based students do not usually have to worry about the future employment because the providers of company training tend to offer their apprentices a job after graduation. An additional advantage is the practical orientation of the studies which enables students to see the tangible outcome of their studies immediately.

The main problem for the apprentices is the difficult task of combining study and work. Additionally, for the required workplace-based training, apprentices tend to work extra hours in the company to earn more, which results in little spare time outside work and school.

Main benefits/problems for enterprises/enterprise associations derived from their participation in apprenticeship schemes (e.g. bureaucratic/red tape issues for enterprises, participation of SMEs, etc.)

The main benefits for enterprises from participation in apprenticeship studies are the recruitment of newly qualified employees, but also raised qualification and motivation of workers. Apprenticeship studies are especially beneficial to the enterprise if it cannot find employees with suitable qualifications from the labour market. The apprenticeship program then serves as a free tool to develop the workforce with exactly the same skills a company needs. It is also very useful for raising the qualification of current workers which enables them to make vertical or horizontal career choices.

From the negative side, offering workplace-based studies requires commitment. Younger students especially need a lot of attention and often social guidance, which is something that not all employers are willing to do. The financial capability of schools to pay for the services of the company supervisor is often very limited so it is not unusual that the enterprise itself must bear not only the wage costs of the apprentice but also motivate the supervisor.

For SMEs it is especially burdensome, because it is more complicated for them to fulfil all the requirements of the curriculum.

Main elements for discussion / agreement amongst social partners about apprenticeship schemes

As apprenticeship studies in Estonia are not that popular, there has not been any significant discussion among social partners about apprenticeship studies. An important matter that should be discussed is how to increase the number of enterprises who offer their employees a chance to obtain formal qualifications through the combination of work and training.

Specific aspects at the national apprenticeship type schemes. Good and bad practices

One of the best practices we encountered during the study concerns the SMEs and their ability to conduct workplace-based training. In western Estonia, a group of small woodwork companies were interested in providing company-based training for apprentices to raise the qualification of local workforce and therefore increase the pool of labour in the field from which to draw new employees. The requirements in the curriculum of a joiner were quite strict and a broad range of subjects had to be covered during the company-based training period. As the choice of different machinery in the companies was limited, it would have been complicated for an individual company to cover all subjects in the curriculum. To overcome this issue, local enterprises decided to collaborate in providing workplace-based training. If a company did not have the needed machinery, the apprentice was sent to another, where those technical solutions were available and skills could be obtained.

This is a good example of overcoming difficulties resulting from the size of the enterprise. Joint action of competitors resulted in a mutual benefit in terms of better educated workforce. Understandably, this kind of cooperation is hard to achieve and needs centralized coordination from employers associations or similar organisations.

Another important contribution of apprenticeship studies to the Estonian VET system is the increased communication between employers and the vocational education institutions. The necessity to develop individual curricula brought schools and enterprises together and enhanced mutual understanding, after which enterprises have a better overview of what schools can provide, and VET institutions are more aware of the expectations companies have towards the students.

A part of the ESF-funded apprenticeship project which did not work out that well was the involvement of school drop-outs and students with low academic skills. The workplace based-studies did not motivate many of them more than school-based studies, which resulted in an absence from work and inappropriate work behaviour. Many of the enterprises were not ready to take on the role of social worker or custody officer and were unsatisfied with the direction of the project and threatened to end providing such training.

Training with strong practical elements is still the best tool to motivate students with low academic skills to continue studying, but it should be conducted in vocational education institutions. The enterprises do not have to carry the role of social rehabilitator voluntarily and helping those students back on track should be the role of the government, i.e. educational institutions.

An important development which most of the interviewees identified is the decline of provision of apprenticeship studies after the end of the ESF-funded project. As there is no central coordination and additional funding, many VET institutions have stopped providing workplace-based studies or, considering the decline in number of students, are planning to do so. Previous experience shows that apprenticeship studies are an excellent form of study for adult learners. Regarding the number of workers who have not obtained vocational or

higher education and the growing trend of adult learning, workplace-based studies have a high potential if they would be further enforced.

Recommendations

The main conclusion which can be drawn from the experience with apprenticeship studies in Estonia is that it is not sufficiently acknowledged as a tool for training the adult population without formal knowledge. Although all the interviewees recognized workplace-based training to be most effective on working students, only 2% of Estonian VET students learn in this form of study. In the meantime, many adult students have to struggle to combine their everyday work and school-based studies.

A possible reason why apprenticeship studies are not acknowledged is the lack of central promotion. Many enterprises that today spend great amounts of money on different training programs could send their employees to a vocational school and provide the workplace-based part of the apprenticeship studies themselves. Students who currently work and study in the same field could influence their employers to become official training providers which would resolve the conflict between the two activities. The schools would gain from an increasing number of partners among enterprises and society would gain from a decreasing number of people without specialized education.

To change the current situation, apprenticeship studies should be promoted at a higher policy making level. At the moment, only vocational education institutions must bear the responsibility for advancing the studies. Although many of them have a wide range of private sector partners, they cannot reach all the companies which would be interested in providing such training and central coordination would be more effective.

Another question is whether apprenticeship studies should be additionally funded. From the experience we gained from the desk research and interviews, we would say no. Schools currently providing an apprenticeship program pay company supervisors as much they would pay their own teachers. As the apprenticeship program is highly beneficial to the employer in terms of a qualified workforce, there is no need to further remunerate the enterprise for the provision of workplace-based training. Instead, a rational entrepreneur should see a chance to gain from the program by getting a free training program for the employees whereby costs related to the possible extra costs for the supervisor seem insignificant.

If the Ministry of Education and Research is determined to tackle the problem of unqualified labour, apprenticeship studies would be a good place to start.

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FRANCE

Background information on apprenticeship supply in France

Vocational training has long been a choice by default more than a positive choice. for students considered less skilled or with school problems.

Studies have shown that, at an equal grade, students from lower social class were more oriented towards vocational training than students from middle and upper class, sometimes oriented to general education despite their problems at school[224].

The perception of apprenticeship in secondary education is generally negative among students as well as among their parents, who still consider it as a "side track", despite the fact that students in apprenticeship have a fairly good image of their training[225]. Apprenticeship retains an image of training for occupations described as mainly "manual".

However, since 2005, the French Government has intended to position apprenticeship as a remedy for massive youth unemployment and early school dropouts without diploma. Among the most frequently used arguments are that young people who have experienced professional training are indeed more successful on the labour market that young people with a general baccalaureate. Multiple references to the German system, relying more heavily than in France on a vocational training, are also frequently made.

The image of apprenticeship is also changing due to its extension to higher education in certain disciplines. If in the 1980 students in apprenticeship only prepared a level V diploma, their share has declined compared to apprentices in higher levels of education: the growth of the latter is 4.6% between 2008-2009 and 2009-2010 while a decline of 1.8% for high school apprentices is observed. Though still rare (4%), the fact that higher University education can be based on vocational training creates a more positive appreciation of the system.

On the other hand, there are 4 categories of actors involved in apprenticeship in France:

- The State builds the curriculum and develops the legal framework for apprenticeship schemes through Labour Law definition and control.
- Employers' Organizations fund and manage a large majority of the centres providing training for students in apprenticeship (Centres de Formation Professionnelle, CFA), although under State control. Their representatives sit in the boards of administration.
- Since 1982 and the decentralization process, the Regional Authorities (Conseils régionaux) are responsible for local training policy. They promote regional balance in the offer of apprenticeship schemes and co-finance training projects.
- The joint body collectors ("organismes paritaires collecteurs": equally controlled by employers and employees representatives, they collect and manage the tax for vocational training) design and finance training projects for people in a "professional contract" ("contrat de professionnalisation", see 2.1. for more details).

Finally, the laws regarding apprenticeship are in the sixth part of the French Labour Code entitled "long-life vocational training" in Book II "Learning" and can be found in the following articles: L. 6221-1 to L. 6225-8 and D. 6222-1 to R. 6226-10.

[224] Isabelle Paulin, « Evolution et disparités d'orientation en fin de troisième », Education et Formation n°77, Ministère de l'Education Nationale, november 2008.

[225] Isa Aldghi, Valérie Cohen-Scali « l'apprentissage : une image et des conditions de travail à améliorer », Consommation et Modes de Vie n°199, CREDOC, 2007.

The "contrats d'apprentissage" are governed by the following articles of the Labour Code: Article L. 6325-1 to L. 6325-24, L. 6314-1, D. 6325-1 to D. 6325-28 contained in Part VI, Book III "Continuing professional education".

The last statutory change occurred on 24th November 2010.

Existing VET apprenticeship type schemes at national level

Identification of main existing apprenticeship type schemes in the country

There are two main existing apprenticeship schemes in France: "contrat de professionnalisation" and "contrat d'apprentissage", both signed between an employer and an employee.

Contrat d'apprentissage

The «contrat d'apprentissage» is an employment contract available in France since 1971. Its duration ranks from 1 to 3 years, depending on the degree or diploma prepared and the initial level of the employee.

Its objective is to enable young people aged 16 to 25 years to follow a general education curriculum, both theoretical and practical, in order to acquire a professional qualification based on a diploma or a professional title. This contract alternates learning phases in training centres (CFA) and working phases to develop the "know-how".

The working time of the apprentice is identical to that of other employees of the company, including the time spent in the training centre. Part-time work is excluded (see table in next section for details of school / company time share).

Who can apply for an apprenticeship contract?

The apprenticeship contract is generally designed for youth aged 16 to 25 years. However, some students may still be under apprenticeship contracts beyond 25: apprentices preparing a higher degree than the one obtained, workers with disabilities, people with business takeover or creation projects. Before 16, young people who completed the first cycle of secondary education can become apprentices.

Apprenticeship can be implemented in all sectors.

Contrat de professionalization

The «contrat de professionnalisation» is available in France since 2004. Before however, there was a rather similar scheme called « contrat de qualification ».

The objective of the "contrat de professionalisation" is to give access to employment through the acquisition a professional qualification (certificate, diploma, professional qualification ...) recognized by the State and / or a professional sector. The contract alternates periods of general and technological training and working periods in an activity related to the qualification.

Typical time duration of apprenticeship type schemes

The contract duration is 6 to 12 months. This period may be of 24 months for those without qualifications or beneficiaries of minimum wages or State social benefits (minimum solidarity income or "revenu de solidarité active", benefits for disabled people). Apart from these

cases, the criteria for exemption from the legal duration of the contract are specified in collective labour agreements. At the end of the contract, no indemnity is payable.

The contract may also be permanent. In this case, the rules of maximum duration mentioned above relate to the first phase of the contract, with alternative training and working periods.

General, business and technological courses are given in specific training centres, or the company itself if it has an internal training unit.

These courses have a duration of between 15% and 25% of the total duration of the contract.
A sector-wide agreement, however, can extend this duration beyond 25% for specific profiles (social aid beneficiaries) or certain qualifications.

Who can apply for a "contrat de professionnalisation"

The "contrat de professionnalisation" is designed for:

- Youth aged 16 to 25 years
- Jobseekers aged 26 and over
- Beneficiaries of Income of Active Solidarity (RSA), the specific solidarity allowance (ASS) or allowance for disabled adults (AAH)

Quantitative importance of apprenticeship type schemes

Two categories of IVET students can be differentiated:

- Students under the statue of scholars who spend a majority of their training time in school, although a minimum is set for the time spent in companies. The periods spent in companies as interns ("stagiaires") are generally spent at the end of each year, or in the case of tertiary students, at the end of the last year of training.
- On the contrary, apprentices spend most of their time within the company. They usually alternate 2 or 3 weeks in a row in the company and 1 week in the training centres.

Table E.13 Brief explanation of existing VET types

VET Types (Name in original and in English)	Distribution of school and work-based training (total training hours)	Is this VET type regarded as an apprenticeship training in France?
▪ **Scholars** preparing – Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - ISCED 3C level – Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level – Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level	**85/15** For CAP, may vary according to the speciality	No
▪ **Scholars** preparing Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level	**83/17**	No
▪ Apprentices preparing – Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - ISCED 3C level – Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level – Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level	**33/67** May vary according to the speciality and the training center	Yes
▪ **Scholars** preparing Diplôme Universitaire de Technologie-DUT / University technological Diploma – ISCED 5B level	**83/17** (the % in company is a minimum of 17% - may be more)	No
▪ **Scholars** preparing Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate ISCED 5B level	**90/10 to 80/20** according to specialities	No
▪ Apprentices preparing – Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate – Diplôme Universitaire de Technologie-DUT / University technological Diploma – ISCED 5B level	**33/67 to 40/60** according to specialities and schools	Yes

Source: Ministère Education Nationale / ONISEP

General statistics concerning the number of people involved in apprenticeship schemes are only available for the "contrat d'apprentissage" statute leading to State diplomas followed by the Ministry of Education. Concerning the "Contrat de professionnalisation", the training is most often aimed to prepare a certificate which is not certified by the State, thus not followed in national statistics.

In 2010 the number of young people in apprenticeship in secondary and tertiary education is 433,000. In 30 years this number increased by 78% while at the same time the number of people in Initial Vocational Education Training (IVET), all statuses combined, increased by only 4%[226].

In 2010, among 2,449,900 students in upper secondary education in France (equivalent to level 3 upper secondary education in the ISCED classification), 42% are in vocational training. Among these students in vocational education, 32% are in apprenticeship.

In 1980, among 2,157,700 students enrolled in upper secondary, 48% were in vocational training. Among them, 22% were in apprenticeship.

In thirty years overall, the share of professional learning in upper secondary education has decreased, while the share of apprenticeship has progressed.

[226] Michel Quéré (dir.), repères et références statistiques 2010, Direction de l'évaluation, de la prospective et de la performance, Ministère de l'Education nationale, de la Jeunesse et de la Vie Associative, Ministère de l'Enseignement supérieur et de la Recherche.

At the tertiary level (levels 4-6 ISCED of post-secondary education) in 2010, among 2,418,000 students, 4% are in apprenticeship. In 1980, no student in post-secondary education was in apprenticeship.

Table E.14 Upper Secondary Education

Education secondaire deuxième cycle / Secondary Education	2005	2006	2007	2008	2009
General education	1.512.900	1.491.200	1.470.000	1.446.900	1 431 300
Professionnal Education (VET)	1.039.175	1.047.008	1.048.428	1.033.219	Not available
Total Secondary Education	**2.552.075**	**2.538.208**	**2.518.428**	**2.480.119**	**Not available**
Part of VET amongst Upper Secondary Education	40.7%	41.2%	41.6%	41.7%	Not available
Amongst VET					
Scholars	723.953	719.666	713.381	703.090	694.282
Apprenticeships	315.222	327.342	335.047	330.129	Not available
% of apprenticeships in VET	30.3%	31.3%	32.0%	32.0%	Not available
Professional diplomas prepared in upper secondary education :					
Scholars preparing Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level	90.094	91.960	93.538	96.503	109.276
Apprentices preparing Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – **ISCED 3C level**	177.140	182.417	185.734	180.916	Not available
Scholars preparing Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - **ISCED 3C level**	423.678	415.757	403.459	325.551	151.651
Apprentices preparing Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - **ISCED 3C level**	46.554	48.254	48.604	45.600	Not available
Scholars preparing Baccalauréat Professionnel / Vocational Baccalaureate – **ISCED 3B level**	190.894	192.631	196.106	261.373	416.457
Apprentices preparing Baccalauréat Professionnel / Vocational Baccalaureate – **ISCED 3B level**	86.017	91.951	95.753	98.470	Not available
Scholars preparing Mention Complémentaire	6.413	6.284	6.346	6.444	6.757
Apprentices preparing Mention Complémentaire	5.511	4.720	4.956	5.143	Not available

Source: Ministère de l'Education Nationale – Repères et références statistiques

Table E.15 Tertiary Education

Number of students in Tertiary education	2005	2006	2007	2008	2009
Total Tertiary education (ISCED 5 & 6)*	**2.283.267**	**2.253.832**	**2.231.495**	**2.243.162**	**2.316.103**
Apprenticeship in Tertiary Education	70.637	80.467	90.115	97.521	Not available
% apprenticeship amongst tertiary education students	3,1%	3,6%	4,0%	4,3%	Not available
VET in tertiary education :					
Preparing Diplôme Universitaire de Technologie-DUT / University technological Diploma – ISCED 5B level all statutes	112.597	113.769	116.223	118.115	118 139
Apprentices preparing Diplôme Universitaire de Technologie-DUT / University technological Diploma – ISCED 5B level hip	4.717	5.157	5.552	5.795	Not available
% apprenticeship amongst students preparing Diplôme Universitaire de Technologie-DUT / University technological Diploma – ISCED 5B level	4,2%	4,5%	4,8%	4,9%	Not available
Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate all statutes ISCED 5B level	230.403	228.329	230.877	234.164	240.322
Apprentices preparing Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate ISCED 5B level	35.345	40.611	45.000	47.249	Not available
% apprenticeship amongst BTS students ISCED 5B level	15,3%	17,8%	19,5%	20,2%	Not available
Engineer students	108.057	108.846	108.773	114.086	118.341
Engineer Apprenticeship	7.153	7.891	9.147	10.279	Not available
% apprenticeship amongst engineer students	6,6%	7,2%	8,4%	9,0%	Not available

Source: Ministère de l'Education Nationale – Repères et références statistiques

Profile of people in contrat d'apprentissage

Statistics on "Contrats d'Apprentissage" show that they mainly concern men, the increase of the proportion of women being a recent trend.

Almost two thirds of them were previously in Education, and one quarter were already in apprenticeship before signing their contract.

Table E.16 Profile of people in contrat d'apprentissage

	2007	2008	2009
Number of contracts	**277.691**	**298.645**	**288.008**
Gender %			
▪ Men	60,1	69,3	67,8
▪ Women	30,9	30,7	32,2
Age %			
▪ 15	12,1	11,9	10,7
▪ 16	19,8	19,5	17,0
▪ 17	16,6	16,0	15,2
▪ 18	15,9	15,4	15,2
▪ 19	11,4	11,4	11,7
▪ 20	8,7	9,0	9,8
▪ 21	6,3	6,5	7,5
Level of training entering the scheme %			
ISCED 4 to 6	9,9	11,0	14,1
ISCED 3	90,1	89,0	85,9
Previous situation %			
Education	63,1	65,2	62,8
Apprenticeship	27,3	25,5	26,3
Jobseeker	2,8	2,5	3,4
Other	6,8	6,8	7,6
Secteur d'activité %			
Agriculture	4,1	2,6	2,6
Industry	21,2	20,9	20,1
Building	23,7	24,6	21,8
Trade	21,9	21,3	20,4
Business services	5,7	7,0	9,1
Services to individuals	18,8	17,6	18,6
Other tertiary sector	4,5	5,9	7,4

The future of apprentice students

In February 2009, 64.2% of the population having finished an apprenticeship was in employment. This proportion varies from 33% to 80% according to the related diploma. There are limited variations of the employment rate between women (62.7%) and men (65%), and between the secondary (63.2%) and the tertiary sector (65.6%).

The drop-out issue in apprenticeship

The high drop-out rate in apprenticeship is a major issue. National figures are not very reliable: some figures are available on the number of apprenticeship contract stopped before the end (termination rate), but it is difficult to know whether the end of a contract is due to a simple change of employer or if the young person has given up preparing his diploma. Nevertheless, it can be used as an estimate of the drop-out rate.

No regular national monitoring of apprenticeship contract termination exists. There are no numbers available regarding professional contract terminations.
However, the « Generation 2004 » survey made by CEREQ research Centre, based on 65 000 interviews with young people three years after the end of their studies, estimates the apprenticeship contract termination rate to be 17%. Half of terminations were at the apprentice's initiative.

Terminations are caused by multiple factors.

- The working environment represents 40% of termination motives, 17% are caused by a career change and 12% by disagreements.
- Working conditions are pointed at by 9% of young people (productivity requirements, unadapted working hours). 8% of apprentices complain of a lack of respect toward them.
- 6% of terminations are justified be financial problems and a further 6%, by demotivation. Deterioration in the relationship with the master trainer is a trigger for terminations.

- They can be a result of apprenticeship contents: insufficiently formative for 7% of respondents, or inadequate with school based training (6%).
- The result of bad career guidance, transportation and/or housing problems must also be pointed out.

The termination rate also varies depending on various criteria:

- The termination rate is higher when the certification level is lower: the proportion reaches 22% for level IV diplomas (two first years of upper secondary education in the French system), and is only 8% for apprentices in post-secondary education.
- The termination rate also depends on the economic sector: it varies threefold between the industrial sector (11%) and the hospitality industry (30%).
- Smaller companies (less than 10 employees) experience a higher termination rate than medium-sized companies (10 to fewer than 250 employees).

Contrat de Professionnalisation

The number of "Contrats de Professionnalisation" signed every year represents almost half of the number of "Contrats d'apprentissage", but the duration of the contract is usually shorter (in average one year for Contrat de professionnalisation and two years for Contrat d'apprentissage).

Signatories of "Contrats de Professionnalisation" are older than those of "Contrat de Professionnalisation", but only 16% of them are over 25. Even if the majority of them were outside school before signing their contract, almost a third of them were scholars and one sixth were previously in apprenticeship.

No data is available concerning the future of people involved in "contrat de professionalisation" at the end of their contracts.

Table E.17 Contrat de Professionnalisation

	2008	2009	2010
Number of contracts	**179.043**	**145.950**	**147.990**
Gender %			
▪ Men	52,5	50,0	51,4
▪ Women	47,5	50,0	48,6
Age %			
▪ 16	0,4	0,9	0,8
▪ 17	2,1	3,3	2,8
▪ 18	6,1	7,5	7,0
▪ 19	10,4	11,5	11,3
▪ 20	14,2	14,7	14,2
▪ 21	14,1	14,1	14,1
▪ 22	12,5	12,0	12,1
▪ 23	9,8	9,4	9,7
▪ 24	6,6	6,6	6,9
▪ 25	4,3	4,3	4,5
▪ 26-44	15,7	13,9	14,4
▪ Over 45	1,9	1,9	2,1
Level of training entering the scheme %			
ISCED 4 to 6	28,3	32,8	33,5
ISCED 3	71,7	67,2	66,5
Previous situation %			
End of education	30,8	32,5	31,4
Apprenticeship	12,5	15,9	15,3
In labour	18,5	15,7	15,4
Jobseeker	31,6	29,6	31,8
Inactive	3,5	3,3	3,6
Other	3,1	2,9	2,6
Secteur d'activité %			
Agriculture	0,7	0,8	0,8
Industry	12,1	11,5	11,5
Building	8,4	8,4	8,4
Trade	23,4	24,1	24,1
Business services	23,3	21,6	21,6
Services to individuals	9,1	11,2	11,2
Other tertiary sector	22,9	22,5	22,5

Operational Description of Apprenticeship Type Schemes

Sections 2.3.1 to 2.3.8 are focused on the main French scheme of dual Initial Vocational Training (IVET): apprenticeship ("Contrat d'apprentissage"). As already said, the number of apprenticeship contracts signed every year is two times higher than the number of professional contract ("Contrat de Professionnalisation"), and 18 people out of 20 entering in apprenticeship in France were previously in initial training (education or other apprenticeship contract) while only 9 out of 20 where in this situation amongst people signing a professional contract "Contrat de Professionnalisation".

Training curricula and training contents

A national framework, a regional management

Apprenticeship is the fruit of a national framework: the system is created by law. The framework aims to standardise the system in the entire country regarding teacher recruitment, diploma validation, skill frameworks, apprenticeship contract contents, and to allocate rights and duties between apprentices and employers.

On a national level

The 17 January 2002 social modernisation law (law n° 2002-73) renovated the legal system for collecting the apprenticeship tax and defined requirements for joint body collectors ("organismes paritaires collecteurs"). Subsequently, the 18 January 2005 programming for social cohesion law planned a certain number of new regulations to develop and modernise the system, increase its appeal and improve apprentices' conditions. Most apprentices prepare a national diploma; the content of apprenticeships is determined by relevant Ministries for each diploma (the Education Ministry for the main part, the Ministry for Agriculture for agricultural courses, the Ministry for Youth and Sports for training in this area).

On a regional level

Following 1982 and 1983 decentralisation laws, Regional Authorities (Conseils régionaux): must implement apprenticeship and continuing professional development schemes. Training providers which co-train apprentices with employers are, for the most part, Apprentice Training Centres (CFAs). A few sections train young people under a professional high school status, where most pupils have student status. In post-secondary education, apprenticeship courses take place in universities, "grandes écoles" (élite universities) as well as high schools ("lycées") which dispense post-secondary education courses. As far as apprenticeships are concerned, the Regional Authorities (Conseil régional): is a signatory to CFA creation conventions and controls the financial functioning of CFAs located within its region yearly.

Regional Authorities (Conseils régionaux): must approve of the creation of new apprenticeship sections.

Regional Authorities (Conseils régionaux): have a regional fund for apprenticeships and continuing professional development (FRAFP). These funds are mainly financed by Government credit transfers, resources allocated by the Regional Authorities (Conseils régionaux): themselves to continuing professional development, and co financing from the European Social Fund.

The committee for the coordination of regional apprenticeship and continuing professional development is responsible for overseeing the nationwide coherence of apprenticeship and continuing professional development programs by the Government and Regional Authorities (Conseils régionaux):. Furthermore, the committee has been in charge, since 1993, of rating regional apprenticeship and continuing professional development policies.

The adaptation of the training schemes to modernisation

CFAs, as training centres, have strict specifications defined by their convention with the Regional Authorities (Conseils régionaux) and by the demands of the diploma as determined by the Government, regarding their apprentices' training. In the course of training, apprentices must become familiar with all aspects of the profession and with all the techniques. Master trainers' experience must cover all aspects of the profession. Every CFA has to train their apprentices to the branch's new techniques within their budgetary frame. Regional Authorities (Conseils régionaux) may step in to finance the replacement of obsolete equipment or the modernisation of technical supplies.

Role of enterprises in the apprenticeship type schemes and description of company based training

Main goals pursued by the training within the company

The company employing an apprentice is assigned the following objectives:

- Assigning tasks which are in direct relation with the certification mentioned in the contract to the apprentice.
- Providing satisfactory working conditions and satisfying health and safety requirements.
- Being actively involved in organising the apprentice's training and providing a tutor to supervise the training.
- Ensuring the apprentice is able to follow the training provided by the training centre (CFA).
- Taking part in activities destined to coordinate vocational training from the training centre and practical training provided by the company.

The share of time between company and school

Each training organisation (CFA, University, School), in coordination with the employer representatives, decides how time is spent between work and vocational training. This distribution depends on the economic sector, the certification prepared and the profession the apprentice is training for.

Generally, the apprentice spends several weeks (from one to three, most often two) in a row within the company followed by a whole week within the school. The alternation concerns the whole period of apprenticeship.

Working hours and paid leave for the holidays

Working time, by law, may not exceed 35 hours per week, except in the case of exemptions granted by the Ministry of Labour. Night work, between 10pm and 6am is illegal for minors, although there are dispensations (for apprentices in the catering industry, such as bakers).

Paid leave is the same for apprentices as it is for other employees of the private sector (a minimum of 5 weeks per year).

Who can hire apprentices?

All structures, be they public or private, and regardless of size, can hire apprentices. They must, however, necessarily have someone who fulfils the criteria to be a master trainer at their disposal. (See 2.3.3). It is on a voluntary basis that companies take part in training apprentices. Apprenticeship developers, who may work for professional associations, cham-

bers of trade or chambers of commerce and industry, or for various employer associations, seek out companies and encourage them to take on apprentices.

To hire an apprentice, the company must fill-in a form which is obtained from the Consular Chambers (chambers of agriculture, chambers of commerce and industry, chambers of trade). In this form the company states that:

- It is offering a job which corresponds to a training course sanctioned by the national Education Ministry, the Education and Research Ministry or the Ministry for Agriculture.
- It commits to taking necessary measures to organise the apprenticeship within the company.
- It guarantees the equipment, the techniques employed, working conditions, hygiene and health and safety.
- It guarantees the professional and pedagogical skills of the establishment's master trainers (tutors).
- It will allow the apprentice to take their exams.

The selection of students in apprenticeship by companies

Companies are free to recruit whoever they want as long as the student is accepted by a training centre (CFA) for the diploma he/she wants to prepare. Recruitment by companies follows the typical process of interviews.

The main selection criterion is age. The apprenticeship contract is for youths aged 16-25 who wish to be trained in the workplace at any point during their education and whose level is sufficient to validate the diploma. The other criteria is availability of places.

Thus, training centres select candidates on the basis of motivation and make them go through an application process.

Small companies highly involved

If all businesses and public organisations may hire apprentices, we must take note of SME's, whose role is central and who are largely represented: in 2009, amongst the employees in companies with 1 to 9 employees, 6.2% were apprentices, versus 1.6% apprentices amongst the employees in companies with 10 or more employees,
Large companies tend to recruit apprentices of a higher education level than small companies.

Possible obstacles to hiring an apprentice

If all companies are legally able to hire an apprentice, in practice, it is not possible for all of them. Beyond those who don't need apprentices, some businesses cannot afford to pay an apprentice despite funding and tax exemptions intended to fund the apprentice’s wages.

On the contrary, in some sectors which are regularly confronted to a workforce shortage, it is difficult to find motivated apprentices, for example:

- industrial sectors where the workforce is shrinking and which are considered, sometimes wrongly, by apprentices and their families as unpromising for future employment,
- uncompetitive sectors such as arts and crafts,
- sectors where workers are exposed to the weather, such as roofers.
- sectors where work is especially arduous

Specific role of the company trainer

The trainer's goals

The master trainer, in the apprentice's training, is the person who:

- welcomes the apprentice to the company,
- introduces the company's staff and activities to the apprentice,
- informs the apprentice of the rules and practices within the company,
- accompanies the apprentice along his/ her discovery of the trade,
- organises and plans the apprentice’s work,
- enables the apprentice to acquire the necessary skills in the profession,
- is informed of the progression of the apprentice's vocational training and results at the CFA,
- receives the CFA trainer responsible for apprentice follow-up in the workplace,
- rates the apprentices' acquisition of professional skills.

Thus, the trainer must, over the course of the apprentice's contract, allow his/her apprentice to develop their own professional abilities and follow his/ her professional and educational progress. He/she is also in contact with the CFA. The master trainer must be familiar with the legal environment of the apprenticeship contract and comprehend his/ her professionalising and training role. The trainer also continues to pursue his/ her own professional activity within the business.

Master trainers are sometimes invited by CFAs or chambers of trade to take part in training sessions focussed on their role as tutors. These sessions are optional. A link exists with CFAs thru the apprentices' booklets (see 2.3.8) and thru contacts at least twice during the contract with members of the staff of the CFA.

The Master Trainer's qualification

The master trainer must have a diploma of an at least equal level to that which is prepared by the apprentice, and possess professional experience in relation with the qualifications aimed for by the diploma or course of three years of more.

If he/she fails to fulfil the former criteria, the trainer may be accredited by a commission which takes an experience of a minimum of five years in the trade aimed for by the diploma or the certification the apprentice is working toward. The ministry responsible for the national certification must give an opinion regarding the professional skills of the applicant master trainer who is without the required qualifications.

The Master trainer's profile

Profiles vary and respond more on the general characteristics of the sector.

Description of school based training

Main goals pursued by the training within the Apprentice Training Centre (CFA- Centre de Formation des Apprentis)

The Apprentice Training Centre provides the young worker who has an apprenticeship contract with:

- A general education

- Technical and practical training which must complement and be coordinated with training dispensed in the work place
- Apprenticeship monitoring.

The length of the course may be adapted to take the apprentice's initial skills and educational level.

However, it may not be under 400 hours per year and depends on the course. For example:

- 800 hours split between two years for CAPs- Certificat d'Aptitude Professionnelle / Professional Skills Certificate (ISCED 3C level), Brevet d'études Professionnelles - BEP) / Professional Studies Certificate (ISCED 3C level)
- (first two years of upper secondary education level)
- 1 500 hours divided between two years for Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level, Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate...

If the course is prolonged for a year as a result of the apprentice's failure to pass the exam, training time in the CFA is of at least 240 hours for the year.

School based training is divided in two parts:

- 2/3 of hours are devoted to general classes (mathematics, French, law, economics and management...) and technical classed (technology, technical drawing...)
- 1/3 of hours are devoted to technical and practical training in the school.

As already said, the periods spent within the training centre are spread all over the duration of the apprenticeship contract, generally with the following rhythm: from one to three weeks in a row in the company followed by one week in the training centre.

The different statuses of Apprentice Training Centres

Apprentice Training Centres (CFAs), apprenticeship sections and training units are managed by organisations which are either private (associations, companies), semi-private (chambers of commerce and industry, chambers of trade), or public (local public teaching establishments, local authorities).

On 31 December 2008:

- private organisations trained 56% of 427 650 apprentices
- compared with 28% for semi-public organisations
- and 16% for public organisations.

Role of students in the apprenticeship type schemes

How students find the company where they do the work period training

Students mainly find the company by themselves or through personal network. CFAs or chambers of trades may guide them to companies which contacted them or were part of their network from previous years. Job centres ("Pôle Emploi" agencies) may collect addresses of companies looking for apprenticeship. Some websites are specialised in putting in relation young people looking for an apprenticeship contract and companies.

What are the pre-requisites for being recruited?

Apprentices are generally admitted and hired after an interview with the head of the school and with the manager of the company where they are going to work. There are no pre-requisites, beyond age limits, aside from motivation, a sufficient level to pass the certification and the ability to project themselves into the course.

In theory, apprentices have chosen their educational course; a minimum of motivation is required to embark on an apprenticeship. However, the French educational system creates a division between general and technological pathways. In upper secondary education, it not uncommon to encounter apprentices who have been urged to follow this path at the end of the lower secondary education years (in the French system "classe de troisième") because they were not deemed to fulfil requirements to pursue in the general or technological curriculum.

Rights and obligations for apprentices

An apprentice's main duty is to fulfil their training. As they are under contract, they are obligated to attend the training centre and work for certain number of hours, and to pass exams. They also have the same obligations as other employees: work performance, respecting people, equipment, schedules, tasks given to them, professional confidentiality...
Their rights are those of any employees, as their contract is a work contract. This work contract is subject to Labour laws (the French "code du travail") and collective conventions specific to the sector of the company they are working for.

The assessment of the students in apprenticeship

Diplomas are obtained based on results of theoretical exams and practical exams (defined on a national level) and on the master trainer's assessment regarding their practical experience. Each certification is approved by the relevant ministry (mainly by the Ministry for Education, for a few diplomas by the Ministry of Youth and Sports or the Ministry of Agriculture).

Contractual relationships between enterprises, students and VET schools

An apprenticeship contract is created between the employer and the apprentice.

A specific work contract between the employer and the apprentice

This contract is established on a standard form, signed by the employer, and the apprentice (or his/ her legal guardian if the apprentice is a minor). By law, it must mention certain elements, such as the first date of the contract, the length, the prepared certification, the salary, working hours, payment...

The contract specifies the name(s) of the master trainer(s), the diplomas and certifications they hold, and the length of their experience in the field in relation to certification sought by the apprentice.

The content of the contract between the company and the apprentice

The apprenticeship contract is a fixed term contract for the length of training. The contract may be freely ended during the try out period (2 months), by either party. Therefore, termination may be unilateral or from a joint agreement between the apprentice and the employer. This termination must be put in writing and notified to the head of the Centre for Apprentice Training.

This work contract is subject to Labour laws (the "code du travail") and collective conventions. The employer must pay the apprentice's wages (explanation about how these wages

are calculated in subsequent section). Possible sanctions in the event of a breach of contract will be decided by industrial tribunal ("tribunal des prud'hommes", a court specialised in work conflicts in the market sector).

The length of the contract may vary between one to three years depending on the type of trade and the qualification being prepared. This length may be adapted to take the apprentice's initial skills into account; the maximum length may be taken up to four years in the case of an apprentice recognised as handicapped.

The apprenticeship contract, as an employment contract entitles the apprentice to the same social protection and benefits as any other employee of the company (sick leave, occupational injury, family allowance, unemployment benefits, etc...).

The apprenticeship contract must be registered either with the chamber of commerce and industry, the chamber of trade or the chamber of agriculture.

Termination of the contract

At the expiration of the trial period, the apprenticeship contract may only be terminated in the following cases:

- The apprentice may terminate the contract having obtained the certification he/she was preparing. He/she must have informed the employer in the written form two months ahead.
- Then, termination may be instantaneous if it is derived from the mutual will of both parties.
- The contract may be terminated in the event of misconduct or repeated breaches by one of the parties. In this case, termination will be decreed by the employment tribunal.
- The contract may also be ended if the apprentice is found to be inept to practice the chosen trade.

Finally, if the apprentice is endangered, the contract may be suspended or terminated by the territorial representative or the Ministry of Labour.

The wage calculation for apprentices

The wage is paid by the employer, who may receive some help from local authorities to cover part of the cost (those funds being variable depending on the region in France).

Minimum wage for apprentices is defined by a pay scale built on criteria of age, years of apprenticeship and depending on the gross wage decided collectively by professional branches, which cannot be below the legal minimum wage. Thus we obtain the following scale :

Table E.18 Minimum wage for the apprentices

(In percentages of the minimum wage as decided by the professional branch)

Age group	1st year	2nd year	3rd year	4th year*
Under 18	25 %	37 %	53 %	68 %
18-20	41 %	49 %	65 %	80 %
21 and more	53 %	61 %	78 %	93 %

* For handicapped people who have extended, by exemption, the length of their apprenticeship.

N.B: On 01/01/2011, the legal gross minimum wage was 1365 € per month.

Apprentices in the public sector earn 10 to 20% more depending on the level of the certification they are preparing.

Apprentices' wages are exonerated from wage costs and income tax. This means that, besides provisions created by trade unions for professional branches regarding possible additional costs, gross wages are equal to net wages.

The company pays the apprentice's wages. Companies may benefit from funding granted by the Regional Authorities (Conseils régionaux). The amount of those bonuses is variable from one Region to another.

Financing-related information

Apprenticeships are funded by several participants: the Government, local authorities, companies, training centres products (CFA), households.

In 2008, 7 billion € were devoted to apprenticeship funding:

- 43% were from companies (companies' contributions to the apprenticeship tax and wages paid by employers to apprentices)
- 26% from Regional Authorities (Conseils régionaux),
- 24% from the Government
- 1% from apprentices and their families
- 6% from other sources: local authorities other than Regional Authorities (Conseils régionaux), investments, sales of products produced at the CFAs and service delivery by CFAs.

Out of the 7 billion €, 2 billion € represent the amount employers pay out to apprentices. Some Regional Authorities (Conseils régionaux) provide apprentices with extra funding: bonuses, transportation, housing and catering benefits, European mobility benefits, grants for young people's first professional equipment purchases, etc...

Types of expenditures

We can distinguish between three types of expenditures for continuing professional training and apprenticeships:

- Operation expenses or training costs in a strict sense: pedagogical trainers' wages, equipment purchases, structural costs, administrative costs (record keeping, managing payment), information, advice or engineering costs during training. Training costs may occur on or off the competitive market,
- Payment of trainees in a global sense : wages earned by employees over the course of their training period, benefits received by unemployed interns, social or corporate contribution exonerations compensated for by the Government... This excludes work related benefits (for transportation, housing and food), which are indirect operation expenses ;
- Investment costs: equipment and goods purchases which are directly related to the training process.

The apprentice tax mechanism

Any company with at least one employee is subjected to corporate and apprenticeship taxes, which add up to 0.50% of total payroll. Only companies training at least one apprentice and whose total payroll does not amount to 6 times the minimum annual wage are exempt from the apprenticeship tax.

This apprentice tax only brings a minority of funds to the total budget of apprenticeship. It amounts to 1,78 billion € in 2008. Funding for technological and technical education and for apprenticeships relies, in part, on collection agencies collecting and redistributing the ap-

prenticeship tax, which amounts to 1,78 billion € in 2008. Out of this amount, 691 million € went directly into Centres for Apprentice Training (CFA)'s coffers; a similar amount went to professional and technical training establishments other than CFA, and 454 million € to Regional Authorities (Conseils régionaux) toward their apprenticeship and continuing professional development budgets.

The apprenticeship tax is divided into 3 budgetary aspects:

- 22 % go to the National Apprenticeship Development and Modernisation Fund, which oversees interregional balancing-out between CFAs and funding for regional framework contracts.
- 30 % are for CFAs and other training centres. This amount is divided between a compulsory and a free share.
- 48 % are destined to schools, for the theoretical part of training. 40% of this sum is devoted to French level V (CAP, BEP, ISCED 3C level) and IV (Baccalauréat professionnel, ISCED 3B) certifications, 40% to French level III and II certifications (BTS, DUT,Professional Degree, ISCED 5B level) and 20% to level I (ISCED level 6) certifications.

The financing of Apprentice Training Centres / Centres de Formation des Apprentis (CFA)

CFAs are funded by

- the apprenticeship tax
- contributions from professional branches
- contributions from the managing organisation,
- Government or regional subsidies if provided for by the CFA creation convention
- CFA revenues.

Beneficiaries of apprenticeship funding

In 2008, 39% of revenues were allocated to training centres, 41% were for apprentices (mostly in the form of wages) and 20% were for companies which employ apprentices (tax deductions and exonerations as well as diverse hiring bonuses).

Regional Authorities (Conseils régionaux) grant bonuses to employers of apprentices and subsidize master trainers' training.

The Government's contribution comes in the shape of fiscal and social expenditures by means of social contribution exonerations and tax credits.

The exonerations for employers concern sickness, maternity, retirement and family contributions. Apprentices are exonerated of all social contributions as well as income tax on the salary he/she receives.

The « tax credit » amounts to 1600€ for each apprentice but only concerns companies located in tax-free areas and young innovative companies.

Large companies which fail to contribute significantly to apprenticeship training pay a specific tax: this penalty, under the title of Supplementary Contribution to apprenticeship is owed by companies which employ at least 250 people on a yearly basis and whose workforce contains fewer than 3% of people dividing their time between work and school (apprenticeship or professional contracts).

Recent trends in the financing of apprenticeship

Funding has been increasing steadily since 2004. In five years, apprenticeship saw its funding increase by 35%.

The Government's share in apprenticeship funding increased significantly, from 1,254 millions in 2004 to 1,639 millions in 2008 (+31%).

Regional Authorities (Conseils régionaux) and the Government are important financiers of apprenticeships beside companies.

In 2008, 7 billion Euros were dedicated to apprenticeships; 3 billion (43%) of which comes from companies (subjected companies and employers), 1,8 billion from Regional Authorities (Conseils régionaux) (26%) and 1,6 billion from the Government (24%).

If you don't take apprentices' wages into account, apprenticeship funding amounts to 5 billion Euros is 2008.

So-called « subjected » companies pay the apprenticeship tax and also extra branch contributions. Companies which employ apprentices pay them wages.

Overall, companies' participation increases by 9% per year and 45% in 5 years.
Regional Authorities (Conseils régionaux) subsidise CFAs, they also hand out bonuses to employers of apprentices. Their participation remains stable since 2007, after a 37% increase between 2004 and 2007.

Finally, Government participation increases in the shape of fiscal and social spending of 9% between 2007 and 2008 and 31% over 5 years.

Table E.19 Apprenticeship funding per contributor between 2004 and 2008

In millions of Euros

Final Contributors	2004	2006	2007	2008	2004/2008 Evolution
Subjected companies	735	812	927	1.006	+37%
Employer companies (1)	1.350	1.557	1.852	2.026	+50%
Regional Authorities	1.321	1.748	1.807	1.799	+36%
Gov	1.254	1.242	1.507	1.639	+31%
Managing Organisations	73	77	77	70	-4%
Apprentices and their family	43	61	71	67	+56%
Other ressources	388	435	381	371	-4%
Contributor total:	**5.164**	**5.932**	**6.622**	**6.978**	**+35%**

(1) Net (without regional funding of employers)

Source : CNFPTLV Le financement et les effectifs de l'apprentissage en France – (Apprenticeship funding and workforce in France), 2008 data

Apprentices' wages have increased faster than CFA funding or direct employer subsidies in the last 5 years for which figures are available.

Table E.20 Apprenticeship funding depending on the destination of funds between 2004 and 2008

In millions of Euros

Final Beneficiaries	2004	2006	2007	2008	2004/2008 Evolution
Training providers (CFA)	2.135	2.443	2.578	2.730	+28%
Apprentices	1.950	2.385	2.690	2.858	+47%
Apprentice employers (1)	1.078	1.041	1.270	1.370	+27%
Others		62	84	21	
Beneficiaries Total	**5.163**	**5.931**	**6.622**	**6.979**	**35%**

(1) Net (without regional bonuses)

Source : CNFPTLV Le financement et les effectifs de l'apprentissage en France – (Apprenticeship funding and workforce in France), 2008 data

Quality assurance mechanisms

Coordination between the company and the apprentice training centre

An « apprentice's booklet » has been created. It is a logbook in which different stages reached and accomplished by the apprentice over the course of the apprenticeship are recorded during training in CFAs and at work. This logbook creates a link between work and school.

Regular contacts are put in place between the CFA and the company when the apprentice is at work. At least twice per year, a CFA trainer visits the company in order to discuss training with the apprentice and the master trainer. In case of trouble, the CFA is more frequently in touch.

Control of CFAs by Regional authorities and Apprenticeship Inspectors

CFAs must show their financial balance to the Regional Authorities (Conseils régionaux) at the end of each year. Training contents and conditions are controlled on a regular basis by Apprenticeship Inspectors, who are a part for the relevant ministries depending on the diplomas being prepared. They are specialised by trade These Inspectors visit CFAs several times each year.

Self-control inside companies

Apprenticeship Inspectors also inspect companies. But they don't go in each of the companies involved in apprenticeship every year.

Labour Inspectors also investigate apprentices' working conditions.

It is in a company's best interest to adequately supervise apprentices, who are employees in the workplace, as it is in training centres' best interest to provide apprentices with a solid theoretical education, and it obviously benefits apprentices to be committed to their training.

Thus, apprenticeship monitoring is not perceived as a burden; the apprentice's status is, in many respects, similar to that of another employee. Monitoring is the key to a successful apprenticeship: all partners must ensure it is effective.

Changes and perspectives in the national apprenticeship-type schemes, geographical mobility issues

Recent and planned changes in the national apprenticeship type schemes

The recent opening of apprenticeship to Tertiary education

One of the first changes is the recent availability of apprenticeships to post-secondary education (see part 2.2) and its regular development. The opening of apprenticeships to post-secondary education was seen as beneficial to the general view of apprenticeships; this view had been weakened by the low consideration in which manual professions are held in France. These professions had been the historic target of apprenticeships.

A strong will of the Government to develop dual education

The stated goal is to increase the number of people in the dual education system (professional and apprenticeship contracts) from 600,000 in 2011 to 800,000 in 2015, including at least 600,000 apprentices. It is therefore being considered to take the current proportion of two third of apprentices for one third of professional contracts to a proportion of three quarters of apprentices for one quarter of professional contracts by 2015. The French President recently mentioned a goal of one million people in dual education by 2017.

Several measures have been taken or are being studied to promote an increase of the number of people in dual education:

- Reinforcing exoneration measures for the costs paid by employers of apprentices.
- 2 000 € bonuses for hiring a job seeker ager 45+ with a professional contract to favour seniors' return to employment.
- Numbered goals for the increase of the workforce concerned by Goals and Means Contracts signed between the Government and Regional Authorities (Conseils régionaux) regarding apprenticeships, in order to achieve the workforce increase wanted by the Government. The Government will pump 1,5 billion Euros over fiver years toward this goal, and has asked Regional Authorities (Conseils régionaux) to match the amount.
- Decree project to authorise professionals to be master trainers after 2 years of experience instead of 3 years now in the case they hold the certification being prepared by the apprentice, and after 3 years of experience instead of 5 if they don't have the certification. This measure could increase the number of potential trainers by 10%.
- Simplifying the administrative treatment of apprenticeship contracts by Consular Chambers.
- Creation of an internet portal to receive employers' offers and potential candidates' CVs, to give legal information, to provide a « calculator » to allow employers to calculate costs depending on the type of contract, age and the year easily. This website will be available for some aspects from September 2011 and fully functional by late 2011-early 2012.
- Creation of a trade student card: apprentices will have a similar card to a student card which will entitle them to access university restaurants, student housing, social benefits from the CROUS and various budgetary advantages (student discounts).

Existence of pilot projects regarding new apprenticeship type schemes

Beyond micro-projects on a regional scale which are not part of a national project, we can mention two pilot projects for apprenticeships:

- Within the framework of the 300 projects financed by the Experimenting Funds for Youth since 2009, 13 projects focussed specifically on dual education. Most of the projects aim

to create a reinforced support system and to prevent apprenticeship terminations. For example, the dual education plan in Champagne (Champagne Alternance) seeks to develop access to dual education for young people followed by a Mission Locale (Missions Locales are a network of job centres dedicated to people under 26 who left school). One of the projects aims to improve apprentices' writing skills to allow them to succeed at exams. Other projects cover young people in dual education's access to housing, to allow those who live in rural areas to have access to training.

- Within the framework of the Great Loan (Grand Emprunt) put in place to allocate funds to high priority projects for economic growth in France, 500 million € are allocated to measures in favour apprenticeships. Half of this sum is intended to finance housing for young people in dual education, and the other half to improve CFAs' technical equipment and to develop training programs in innovative professions.
- Regional Authorities (Conseils régionaux)support CFAs locally in their innovative projects. Decentralisation means that there is insufficient transparency to make a national appraisal of these projects.

Effect of the recent economic crisis on the national apprenticeship type schemes

The measures mentioned in point 3.1 strive to develop dual education to limit the recession's strong impact on youth employment.

The recent recession has caused a lowering of the number of people entering apprenticeships, due to companies' difficulties in sustaining a sufficient activity level to enable them to pay apprentices.

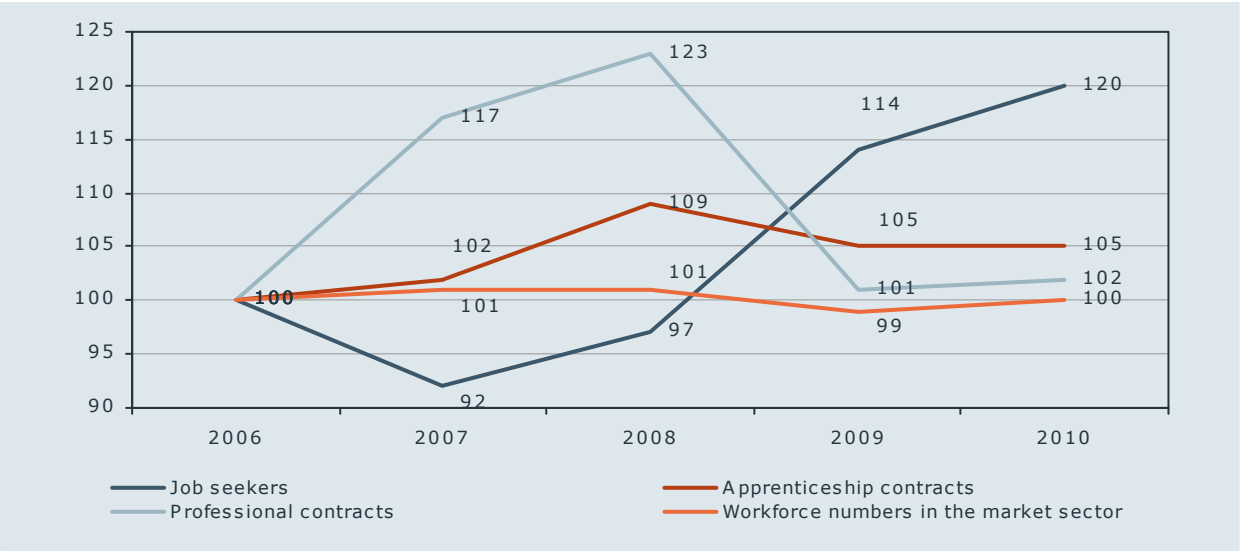
The number of apprenticeship and professional contracts signed per year between 2005 and 2010 has been compared. There was an important increase for professional contracts between 2006 and 2008 (+23%), numbers then returned to 2006 levels in 2009 and have remained stable between 2009 and 2010 2011. At the beginning of the period, the number of apprenticeship contracts also went up, although less significantly than for professional contracts (+9% between 2006 and 2008). The number of people entering apprenticeship contracts has noticeably declined because of the recession, but not to the extent of returning to 2006 numbers (in 2009 and 2010, the numbers of apprenticeship contracts signed are 5% higher than in 2006).

Over the same period of time, the number of job seekers at the end of the year was decreasing at the beginning of the period, only to sharply increase later on (+14% in 2009 compared to 2006); the trend continued in 2010(+20% between 2006 and 2010). Over the course of this period, the number of job seekers in the market sector (which corresponds to where a great majority of employees in dual education are positioned) has remained stable.

Thus, we can state the recession has interrupted the increase in apprenticeships trend; however, a strong political will to develop apprenticeships has prevented the collapse of apprenticeship numbers. Professional contracts have taken a more direct hit as a result of the economic context.

Graph E.8 Evolution of apprenticeship contracts and professional contracts per year compared to market sector employees and job seekers numbers

Base 100 in 2006



Sources : Graphic design by CRÉDOC, based on DARES statistical data – Ministry of Labour (Job seekers in classes A, B and C in late December, apprenticeship contracts and professional contracts signed within a year) and INSEE (Workforce numbers in the market sector in the 4th trimester of the year)

Student geographical mobility issues

Mobility program in dual education are seldom

Although there is no reliable statistical apparatus on a national scale on the topic, all parties agree that apprentices'transnational mobility remains at an embryonic state in France.

Locally, Regional Authorities (Conseils régionaux) can support specific CFA projects which aim to allow a few of their apprentices to spend a short period of time in another country, but these projects reach a very minimal number of the CFAs' pupils. The permanent Assembly for chambers of trade and craft (l''Assemblée permanente des chambres de métiers et de l'artisanat, or APCMA), which represents the national network of Departments' Chambers for trade and crafts is in charge of international exchanges. The APCMA has created a website to encourage young people doing an apprenticeship to travel abroad to Germany, Poland, Italy, England or Spain, to complete an internship lasting between one and four weeks. Young graduates after an apprenticeship can be subsidised to visit one of these countries for six months to complete their training. The number of young people actually involved in this scheme is unknown.

Obstacles to apprentices'transnational mobility are multiple. As apprentices are employees, they are legally under their employer's responsibility. Their employment in a company abroad creates legal employment issues. Moreover, apprentices sometimes play an essential part in their company's organisation, and their absence could penalise productivity in very small companies. Besides, apprentices often have a very low linguistic level, which is an obstacle to international mobility. Persons under professional contracts are not supported by any public policy for international mobility.

According to the documents collected and the interviews carried-out, the international mobility policy is seldom a priority; the permanent Assembly for chambers of trade and craft (APCMA) seems to be the only one to really put this element forward.

The number of young people affected is unknown. A 2008 publication by the Budget Ministry estimates that the share of pupils and students (with student or apprentice status) in

professional training who have access to transnational mobility during the course of their training is 0.2.%.

Evaluation of existing apprenticeship schemes

Qualitative Assessment of the National Apprenticeship Type Schemes

A consensus for promoting dual education

The general trend is a consensus between employer representatives, employees and the Government on the necessity to promote the combination of work based and school based training.

The dual education policy has received a lot of attention from the French Government in the last few years. This attention has been in the context of a re-negociation of the goals and forms of professional training between the Government and the social partners (trade unions and employer organisations). It led to the 24 November 2009 career planning and professional training throughout life law ("Loi n° 2009-1437 relative à l'orientation et à la formation professionnelle tout au long de la vie ").

According to some specialists, while becoming appealing to higher skill levels, apprenticeships have simultaneously become less accessible to the most troubled youths. This is one of the possible interpretations of the important increase in the success rate to Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level type exams for apprentices, from about 45% in the 80s to about 70% today. However, since 2010, the Government has emphasised the use of apprenticeships as a solution to the unemployment crisis affecting unqualified young people without professional experience.

For secondary education level in VET: a better integration in the workforce for ex-dual education students

Paths for those holding an industrial Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level or Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - ISCED 3C leveldiffer depending on whether these certifications have been prepared in dual education or in school based training only. Apprentices find that they have improved employability on the job market. Thus, 72% of apprentices find long term employment easily and quickly, versus only 53% of pupils who prepared their diploma in school only (source: CEREQ Generation 2004 study, which takes in consideration the integration of students three years after they finished school).

Dual education involves finding both a section in a school or a training centre where theoretical training is dispensed and a company where to practice the corresponding job. The apprentice, like the employee with a professional contract, is in direct contact with the reality of the company and the technological tools used in the professional environment.

The issue of taking modern techniques in account in the training in dual education

A CFA offering obsolete training courses would not find companies to employ its young people.

One of the problems yet is large companies' limited involvement in the training effort. We've seen that small businesses (fewer than 10 employees) are those which concentrate apprentice-training effort. However they probably have fewer financial means than large companies to upgrade their equipment and adopt the latest technological improvements in their sector.

The mobility issue between companies after dual education

If we emphasise things, we can distinguish between two kinds of companies which use dual education: For those where a part of the skills that need to be accomplished are easily attained, it is more tempting to replace an apprentice at the end of his/ her contract by an employee with the same status. For those where the acquisition of skills is a lengthier process, training an apprentice or hiring someone with a professional contract is a long-term investment, in this case, if the trainee leaves for another company or changes careers, it is perceived as a failure for the company.

The progression in training after apprenticeship

It is quite common that after apprenticeship at a specific level (for example level Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level) the apprentice after passing his/her exam looks for another apprenticeship contract to take a higher diploma level. This was established for example by several CREDOC studies on apprentices in the catering and building sectors.

The funding issue in dual education

The funding system is far from optimal: one of the problems is that the apprenticeship tax is paid at company headquarters and not at an establishment's address, yet in large companies, headquarters tend to be located in Ile-de-France (the Paris Region), whereas production units -when they have not been relocated abroad- tend be in more peripheral regions. Some Regional Authorities (Conseils régionaux) have far more limited means and cannot afford innovative projects as much. Apprenticeship deserts, where the national mesh does not supply the same working conditions for all these apprentices, remain. However, the apprenticeship tax is equalised between regions but as seen previously, this tax represents only a minority of the funds dedicated to dual education.

Another problem is caused by territorial inequalities between regions. Not all Regional Authorities (Conseils régionaux) have the same priorities regarding apprenticeships. The territorial inequality can be measured by the share that apprenticeships take up in a region's budget: It varies three to one (15% for the Pays-de-la-Loire Region versus 5 % in the Nord-Pas-de-Calais Region, where professional high schools historically represented a very important share of initial professional training, to CFAs' detriment).

Regional Authorities (Conseils régionaux)' bonuses to companies for hiring an apprentice are also very diverse: for example, they are worth 4000 € per apprentice per year in Ile de France versus 6500 € in Lorraine.

Moreover, in Regions where the urban fabric is less dense, many young people find themselves far from urban poles where CFAs are located, which creates accessibility issues (transportation, housing) to follow a course.

The development of apprenticeship type schemes in post-secondary education had had the unfortunate consequence of reducing the budget available for level 3 courses (Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level ,Brevet d'études Professionnelles (BEP) / Professional Studies Certificate - ISCED 3C level, and Baccalauréats Professionnel / Vocational Baccalaureates – ISCED 3B level –last year of upper secondary education-), which is a concern for CFA directors. Since 2009, the matter of young people who have left education without qualifications' difficult employability had led to the development of specific policies, particularly within the Ministry for National Education. Since 2010, the Government has altered apprenticeship development policies toward the lowest skill level; the Government has put forward the goal for dual education of helping young people who have left school without qualifications, who are hit the hardest by unemployment, to improve their skills and allow them the find employment.

Employers commend apprenticeships but the project of creating a financial penalty for companies with a workforce of 50 to 250 people who employ fewer than 3% of employees was vastly opposed and will not be put in place shortly.

Is dual education seen by companies as a way of providing cheap labour?

This risk has already been mentioned when part of the job to be done does not need high standard of training. Some apprentices may be used only for unskilled tasks, learning very little in their job experience. Another risk exists for post-secondary education. Apprenticeships in post-secondary education involve no new costs compared to training students only in the universities. Universities send out their students as apprentices in companies (often in the tertiary sector) who use them as qualified staff members but pay them much less. Dual education for lower qualification levels, more oriented toward manual trades, requires training facilities and so much higher investment costs (workshops, machines...). Public partners, including Regional Authorities (Conseils régionaux), are increasingly supporting apprenticeship in post-secondary education.

Apprenticeship as a solution for better integration of poorly qualified young people

Since its creation, apprenticeships have traditionally been assigned as a qualifying course for young people for whom it is difficult to remain in general education. The development of the Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level and of post-secondary education levels has changed things, enabling young people of higher initial educational levels to enter these schemes. The process of diversifying the diploma level which can be prepared in dual education can also allow young people who have limited financial means to consider a long course (a Certificat d'Aptitude Professionnelle (CAP) / Professional Skills Certificate – ISCED 3C level might be followed by a Baccalauréat Professionnel / Vocational Baccalaureate – ISCED 3B level in an identical or similar sector, then a Brevet de techniciens supérieurs – BTS / Higher Technicians's Certificate and perhaps even a an engineering degree).

As explained above, since 2010, dual education is put forward as on of the solutions to the problem of the high unemployment rate of young people who have left school without qualifications.

Advantages of dual education for those being trained

Dual education offers a valuable professional experience in terms of employability, and confers improved self-esteem, especially for young people formerly confronted to serious difficulties in general education. Self-esteem is strengthened by acquiring useful skills which are put to use rapidly. It also makes the apprentice an agent of his/her training.

A direct relation with a company, earning wages, integrating a network which proves useful in finding a job (within the same company or not); all these are positive aspects which develop an organisational culture favourable to high employability. The employee status in an important benefit: treated like a permanent member of staff, the trainee develops adaptability and responsiveness, which are assets.

Disadvantages to dual education for those being trained

Disadvantages are mostly related to the necessary availability required from people in dual education, to the contents of training and to working conditions.

The availability issue surfaces on different levels. Housing problems and a lack of transportation autonomy can prevent some from choosing dual education. Some CFAs in rural areas are not easily accessible, which can put people off starting these courses. The scarcity of some courses (animal care, book-binding, framing, watch making, leatherwork, art restoration) sometimes involves moving away from the family home which is not always easy for

young people and their families. We must take note of the fact that for some apprentices, their youth goes with a lack of maturity to respect working hours, time constraints and orders.

A risk of not learning what needs to be learned in the company or discovering only some aspects of a trade exists. Apprentices may be only given lowly tasks which are not suited to acquiring skills. Furthermore, some companies are not in possession of all the equipment which enables apprentices to become familiar with all aspects of a trade ; they may have specialised in one aspect of the trade (as is the case of apprentices in pizzerias, for examples, who risk not discovering some of the skills required to be a cook). Tutors may have developed an overly specialised, and thus too narrow as far as training goals are concerned, knowledge of their trade. Moreover, master trainers receive very little training on pedagogy and are hardly monitored in this respect.

Finally, working conditions make the apprentice a genuine employee who performs the same tasks while being paid less than a fully qualified permanent employee. Therefore, there is a risk that companies will accumulate contracts by replacing an apprentice or a professional contract instead of creating permanent jobs for qualified workers.

Advantages of dual education for companies

The apprentice provides affordable labour. The company can view the apprentice or the person with a professional contract as an investment in the future. Training to the company's own working methods induces an immediate profitability of the trainee, who, at the end of the course, can join permanent staff while being immediately operational.

Beyond economic factors, companies may look to the training function as the attractive opportunity to transmit skills which are essential to a trade's identity.

Disadvantages to dual education for companies

Going into dual education does involve some extra functioning costs as far as creating or adapting a work station, as well as a risk toward customers. Possible mistakes by the trainee in their work for the company, due to their inexperience, can cause a prejudice in the company's relationship with its customer base.

The rhythms of dual education are imposed and do not necessarily match companies' requirements. In sectors where seasonal constraints exist, CFAs adapt the training rhythm for these sectors to these predictable constraints. For example, the Christmas and New Year periods require that pastry apprentices should be available, whereas difficult weather conditions slow down the building sector in the winter. Attendance periods in CFAs take these rhythms into account. However, in the event of an increase in orders or of a non-seasonal downturn, the employer must make the apprentice available at the dates planned for CFA training. Flexibility is usually greater for apprenticeship contracts, where the training schedule is sometimes custom designed.

Moreover, creating a dual education job involves costs to be put in place: paying for the hours of tuition given by a master trainer, extra wages that not all companies, especially not all small one can afford, administrative paperwork, which, despite a marked simplification process, nevertheless remains complex.

Agreements and disagreements amongst social partners on apprenticeship type schemes

The goal introduced by the Government of taking the apprentice and professional contract workforce from the current 600 000 to one million in 2017 has been questioned by some researchers and some social partners. Increasing the workforce is only of interest if courses

are foremost adapted to the needs of the professional world, if employability in companies is real, and if international competition is not too strong.

On 27 June, the National Assembly and the Senate passed a law bringing down the legal apprenticeship starting age from 16 to 14. It is hoped that this measure will curb the number of young people leaving education with neither education nor professional experience. This measure is objected to by teacher and parent representatives. This course had already been experimented in 2007 and abandoned, due to a lack of interest on companies' behalf. The Labour laws («Code du Travail») already included the possibility of beginning an apprenticeship at the age of 14 or 15 in exceptional cases.

Companies show little enthusiasm for hiring excessively young apprentices who lack sufficient skills to approach a trade, are not old enough to have a driving licence and are insufficiently mature. It must also be said the Labour laws («Code du Travail») contain numerous constraints regarding the employment of young people.

Identification of good practices and elements to improve in the apprenticeship schemes in France

The specificities of the French dual education training system

The specifics of the French dual education training system are being based on two main schemes. The first, the older and better-known one, is the apprenticeship contract ("contrat d'apprentissage"). It is intended for young people who are for the most part coming out of school (they have finished lower secondary education) and for the main part, prepares them to a government sanctioned diploma. The contract is usually signed for two years. Funding is provided by the company (for wages), the government and the Regional Authorities (Conseils régionaux) (for CFA training). The second principle is more recent: the professional contract ("Contrat de professionnalisation") is rather geared toward job seekers, be they young or not so much. The course is tailored to fit each participant, associating training centres of various statuses. It is the joint body collectors ("organismes paritaires collecteurs")' responsibility to approve the training project. The person with a professional contract as well is employed by the company, the vocational training costs are borne by structures which are financed by professional branches.

Provisions in the Labour laws («Code du Travail») apply to all employees in dual education.

The current dual education political context is affirmation of a development policy with ambitious goals in terms of workforce numbers.

Good practices

Amongst good practices already in place on different levels (Regional Authorities, Consular Chambers or CFAs), we can mention:

- **Apprenticeship developers** these project managers can be attached to a CFA, a Mission Locale, a consular chamber, a general or branch employer association, a collection agency... they are in charge of engaging with businesses to find new opportunities to create dual education jobs. They inform employers and can also provide technical support to help them define their needs, complete administrative paperwork or help them recruit a candidate for dual education training.
- **Geographic mobility and housing benefits**. Funding is usually provided by Regional Authorities (Conseils régionaux), sometimes Town Councils. For example in rural Counties ("Départements"), some young people can attend school based training by going with motorcycles loaned by the Regional Authorities (Conseils régionaux). There are also local benefits to fund the cost of driving licences. Some agreements allow people in dual apprenticeships to be housed in school dormitories during CFA training periods.

- **Dual education mediators** are generally funded by Regional Authorities (Conseils régionaux), and work in CFAs, Consular Chambers Missions Locales. Their mission is to intervene in the event of difficulties between the trainee and the company to prevent termination, or, if termination cannot be avoided, to help find another company to finish the course.
- **Training days for master trainers** (current of potential trainers) are organised by some trade chambers or some CFAs.

Improvements needed

Some elements need to be improved:

- **Some sectors remain undiscovered**, especially in the innovative sectors or in production. Promising sectors, according to one of the experts we spoke to, would be in the field of security and maintenance. A **preliminary diagnosis** of needs in qualified personnel for businesses of a given region should be the foundation of creating new dual education course offers.
- **The image of professional training** remains to be developed, particularly for the first certification levels. The general educational course is often favoured by families even when some young people have lost all motivation to study.
- **Vocational guidance is a crucial element to improve** so that young people who embark on a dual education course choose their area while being truly informed. Crédoc studies have shown that school guidance where the young person is passive often leads to difficulties within the company and plans to change careers after graduation. Observation periods or company visits can help choose their future sector in an enlightened manner.
- To begin dual education and remain there, the people in question must have solved their **geographic mobility** issues to be able to attend the business and the CFA. The **housing question** in the case of a move away from home is also fundamental and students for whom it is a problem risk dropping out. The solutions put in place are often either the result of private initiatives (the family lends a vehicle, some employers offer housing solutions, a minority of CFA can offer housing during school periods...), or of local authorities initiatives (a few Regional Authorities fund some solutions). These local solutions do not cover all people concerned in the country.
- **Apprenticeship mediators** can be precious auxiliaries to decrease termination rates, whose real numbers are unknown (15% to 25% of contracts depending on sources). At this day, they are few and the renewal of their funding is haphazard.
- **Monitoring of the pedagogical contents of the time spent in the company** is very limited. It is only in the case of important wrongdoing that the Labour Inspection Department is mobilised. Master trainers receive only little support in the case of a dispute. They seldom have access to training, and when they do training, the costs of their time spent are supported entirely by businesses.
- Large companies and the public sector only play a limited role so far in the dual education training effort.
- **Currently, bridges between different sectors remain too limited** to encourage recent graduates to opt for another job which is sufficiently close to their training so that all the acquired skills are not wasted. Career changes after a few weeks or months of training are difficult and they often involve stating over at the beginning of the following school year.
- To this day, apprenticeships are mostly available to young people who have finished lower secondary education. **Access to dual education for young people who have already left school without qualifications** and who have low employability needs to be developed.

- By being employed by a specific company, **people in dual education can hardly spend time working in other companies (in France or abroad)** during their contract. However it could sometimes be beneficial to spend a few weeks in other companies working with different techniques or with equipment which is more innovative or which completes the original company's equipment.

Future challenges

Challenges lie in developing not only quantity but also quality in the dual education offer, taking into account different sectors, needs of companies and future perspectives.

One fundamental issue at stake is to offer an alternative to young people who have left education with no qualifications, and whose employability is very low in France nowadays, as jobs accessible to low skill levels become scarce.

It is also important to develop retraining options and to provide links, be they vertical (toward higher qualification levels) or horizontal (toward other sectors), to ensure that people who have had dual education training are not stuck in the sector and the level of their original training for life.

Recommendations

A detailed local diagnosis stage is the necessary condition to knowing companies' needs and to remove obstacles.

Operations to promote dual education must be sustained to continue to involve diverse business and young people with different profiles. Attaining a greater involvement from companies which employ more than 10 people would probably require information campaigns but also more significant reward/penalty measures (financial incentives for companies who take part in the dual education training effort and more serious financial penalties for those whose involvement is minimal than they are now – limited to companies with at least 250 employees and of a hardly prohibitive amount).

Regional experiments would benefit from being generalised after rating the most efficient schemes, in the area of **transportation and housing** benefits for apprentices and professional contracts, of equipment funding as well as information of companies (dual education developers) and mediation in case of difficulties.

A regular monitoring of professional and apprenticeship contracts termination rate, including the analysis of termination causes, would be a useful tool to support the drop-out prevention policy.

The professionalization of tutoring guarantees quality in dual education training. Today, monitoring is mostly tracked by the more or less close ties between companies and training centres. Creating measures to ensure that apprenticeships are not diverted to create cheap labour bound to lowly tasks without the opportunity to acquire skills is to be encouraged, as these negative experiences create a negative view of dual education of young people who are subjected to them, and can lead to them failing to obtain their certification.

To this day, employers prefer to recruit young people who have completed lower secondary education, seen as more easily adaptable to the constraints of working life. **Young people who have left education with no qualifications' access to dual education could gain from being developed**, first because these young people are on the outskirts of the job market on the long term, which creates situations of exclusion which are damaging to society as a whole, and secondly because these young people, after becoming motivated following a more or less long period of unemployment and short term jobs, can then sometimes follow a course of excellence.

Strong regional inequalities implied by decentralisation are a problem. Indeed, it is not necessarily where needs are greatest that the available means are the most significant. The issue of equalising means between regions remains to be seen.

To gain in efficiency and promote mobility (between companies and internationally) during the course of dual education**, it would be useful for young people in dual education to have a contract that doesn't only bind them to the company where, for now, they spend all their time doing work based training**. Solutions should be developed, such as contracts to which an organisation representing an economic branch is a party, or the creation of groups of companies in close sectors which pool training people in dual education in relation with a CFA, on the model of Employers Groupings (GEIQ- Groupements d'Employeurs pour l'Insertion et la Qualification, Groupings of employers for Employability and Certifications).

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GERMANY

Background information

The German system of Initial Vocational Education and Training (IVET) offers young people a wide choice of different paths leading to vocational qualifications (cp. below chapter 2.1). The internationally acclaimed dual system of vocational training forms the core of the German IVET-system and is also by far its most important single component in quantitative terms (i.e. with regard to the number of participating students). Indeed, some 86% of upper secondary students in vocational pathways enrol in the dual system, the rest mainly in full-time vocational schools.

The highly skilled labour force is a fundamental strength of the German economy and a major reason for its positive performance on international markets. An important basis for this skilled labour force is provided by the extensive German apprenticeship and training system. Thus, the German vocational training system is commonly viewed as a key institutional ingredient sustaining the competitive strength of the German economy. High-quality vocational training according to commonly agreed national (quality) standards is provided in a wide range of training occupations in all economic sectors (and their sub-branches). This large spectrum of training occupations can also be regarded as an important factor why the German economy has a broad basis and is competitive in quite a large number of economic sectors and therefore has avoided a more unbalanced concentration on just a few sectors.

Unlike in the so-called "liberal" market economies, e.g. in Anglo-Saxon countries (characterised by a strong focus on pure market-co-ordination), the German system traditionally supports very high levels of company-sponsored (and company-funded) training. At the same time, and unlike other enterprise-based (segmentalist) training systems such as those found in Japan, the German model embodies strong collectivist elements that guarantee that this training conforms to standards, in both quality and content, which are established and enforced at the national level (cp. Thelen/Busemeyer (2008), p. 5).

As discussed by Thelen/Busemeyer (2008, p. 7), three features set a collectivist system like the German one clearly apart from more segmentalist alternatives. One is the overall higher level of company firm participation in training. In a segmentalist system like Japan, training is mostly undertaken by large firms for their own recruitment and retention purposes. By contrast, collectivist systems typically train "above need" and rely on the participation of a wider range of firms, including small and medium-sized enterprises (SMEs). Second, occupational labour markets feature more prominently in collectivist training regimes, whereas internal labour markets are more important in segmentalist systems. Third, and related to this, firm-based training in collectivist systems is subject to monitoring and oversight to ensure a degree of standardisation in the content and quality of skills – something that is completely absent from the alternative segmentalist model. Collectivist training regimes based on the production of occupational skills therefore require much more encompassing organisation and co-ordination on both the employer and labour sides than segmentalist systems based more on the production of company-specific skills.

The German version of a collectivist training regime has three main characteristics (cp. Thelen/Busemeyer (2008), p. 8f.). First, a large share of enterprises engage in vocational training and, as a consequence, a large share of the youth population in a given age cohort opts for vocational training (mostly in the dual training system) in preference to a general or academic (tertiary) education. As companies participate in training above and beyond their immediate needs, graduate trainees can and do move between companies via occupational labour markets. Second, the content of in-company vocational training is strictly regulated in the form of nationally defined training directives ("Ausbildungsordnungen"). Semi-public competent bodies (mostly the business chambers) and works councils closely monitor the content and quality of training in order to ensure the comparability of vocational

qualifications on the national labour market. Third, these training directives are developed jointly by representatives of enterprises and trade unions in an institutionalised framework under the guidance of state actors. A co-operative climate prevails and the role of the state is relegated to that of a supportive arbiter.

The origins of the German system of training can be traced back to the 19th century. One of its key defining features is a surprising durability of many of its core elements through the up- and downturns of Germany's political and economic development over the course of the 20th century. However, the IVET-system has not survived because of an inherent "stickiness" but instead through its ongoing, active adaptation to new problems thrown up by shifts in the political and economic context. Continuous reform efforts reflect a strong will to adapt the system to new challenges. Indeed, it is hard to think of another political-economic institution in Germany that all the relevant parties - the business economy, trade unions, government institutions, all major political parties - are as committed to support as the vocational education and training system (cp. Thelen (2007), p. 248).

CEDEFOP (2010, p. 16) underlines that vocational training under the dual system is a key element of innovative strength, competitiveness and social cohesion in Germany. Its relevance to practical work and its closeness to the labour market enable high transfer rates from vocational training to working life and thus ensure that the economy's demand for skilled labour is being met. Moreover, vocational training provides young people with medium- and long-term employability and therefore good job and career prospects. It is also the best preventive measure against youth unemployment. These factors are a prerequisite for people's self-determination and participation in society.

Also the OECD (2010, p. 5) acknowledges that the vocational education and training system is deeply embedded and widely respected in German society. According to the OECD, the system offers qualifications in a broad spectrum of professions and flexibly adapts to the changing needs of the labour market. The dual system is especially well-developed in Germany, integrating company-based and school-based learning to prepare apprentices for a successful transition to full-time employment.

The dual training system does not only have a good image in Germany and abroad, it also attracts a large number of students with high educational achievements. In fact, approx. every fifth trainee in the dual system holds a university entrance qualification and thus would be allowed to attend university as well. Indeed, the existence of a well-organised and successfully performing training system (which also attracts many highly qualified students) is one key explanation for the internationally below-average share of young people who attend university in Germany. Nevertheless, a sizable share of these highly-skilled youths go on to university after completing their apprenticeship and return later to their training enterprise with a tertiary degree; a career path often to be found, for example, in banking.

An official definition of initial vocational education and training ("Berufsausbildung") is given by Section 1 (3) of the Vocational Training Act (BBiG). According to this, IVET has to provide trainees - within the context of a structured and officially approved training course - with the professional skills, knowledge and general skills (professional competence/ability to act) which are necessary for the execution of a qualified professional activity in a changing work environment. Furthermore the law states that IVET has to allow for the acquisition of the necessary practical/professional work experience.

The definition does not refer to specific ISCED levels.

According to the Federal Statistical Office (cp. Statistisches Bundesamt (2010), p. 129) the term "apprentices" ("Auszubildende") is defined as follows: Persons who - on the basis of a training contract according to the Vocational Training Act (BBiG) - undergo in-company training in an officially approved training occupation. This includes also youths whose training is fully or partly financed by public programmes. Those persons are *not* considered ap-

prentices whose vocational training takes place exclusively in (full-time) vocational schools (e.g. students at "Berufsfachschulen") or who are trained in public administration as civil servants.

Thus, only trainees undergoing in-company training and studying at part-time vocational schools ("Berufsschulen") should be considered as apprentices. To this group of trainees three different ISCED-levels are attached (depending on the level of educational and training achievements attained by the trainees before starting vocational training):

- ISCED 3A: for those trainees/students at part-time vocational schools who do not hold university entrance qualification,
- ISCED 4A: for those trainees/students at part-time vocational schools who already hold university entrance qualification,
- ISCED 4B: for those trainees/students at part-time vocational schools who have already completed dual training in one training occupation,
- ISCED 4B: for those (formerly unemployed) trainees/students at part-time vocational schools who have completed the dual system years ago and are currently being re-trained in another occupation.

It should be noted, however, that due to the complexity of the German school system many other school types belong to ISCED levels 3A, 4A and 4B that are not involved in apprenticeship training. Thus, ISCED levels 3A, 4A and 4B do not exclusively focus on apprenticeship training according to the definition used by the Federal Statistical Office.

BIBB's definition of "Vocational Training" includes the following six components (cp. Bundesinstitut für Berufsbildung (BIBB) (2010), p. 235f.):

- (1) Vocational training within the dual system (on the basis of the Vocational Training Act (BBiG)),
- (2) Full occupational qualification acquired at full-time specialised vocational schools ("Berufsfachschulen") according to BBiG and HwO (Crafts Code),
- (3) Full occupational qualification acquired at full-time specialised vocational schools ("Berufsfachschulen") outside BBiG and HwO (i.e. in specific economic sectors such as non-academic health and caring professions),
- (4) Training courses at specialised vocational schools and at specialised grammar schools that provide both a vocational qualification and a university entrance qualification at the same time,
- (5) Vocational training according to Federal or "Land"-regulation in health, educational and social professions,
- (6) Vocational training of civil servants in public administration (medium level).

Apart from the above mentioned Sector 1 "vocational training" three other sectors (each with several sub-components) have been built by BIBB to cover the entire training landscape in Germany:

- Sector 2: Integration in Vocational Training (transition system from general school education to vocational training),
- Sector 3: Acquisition of university entrance qualification,
- Sector 4: University courses (tertiary education).

On the other hand, concerning governing bodies, the *Federal Ministry of Education and Research* ("Bundesministerium für Bildung und Forschung", BMBF) has overall responsibility for the strategy in vocational education and training. It is responsible for the Vocational

Training Act ("Berufsbildungsgesetz", BBiG), last reformed in 2005, publishes an annual VET report ("Bundesbildungsbericht"), funds and steers the Federal Institute for Vocational Education and Training (BIBB) and is responsible for programmes to improve VET. It also has responsibility for the in-company training part of the dual system.

Training directives ("Ausbildungsordungen") for specific training occupations are endorsed by *specialised ministries*, often the *Federal Ministry of Economic Affairs and Technology* ("Bundesministerium für Wirtschaft und Technologie", BMWi), but need the agreement of the BMBF.

The *16 Federal States* ("Länder") have sole responsibility for the part-time VET schools of the dual system and the full-time VET schools. They design the school curricula, train and pay the teachers and are responsible for legal supervision of the competent bodies (business chambers). Due to this primary responsibility of the Länder for cultural and educational matters, there is substantial variation across states with regard to the organisation and content of teaching in the school part of the dual system.

The *social partners* are closely engaged in the design and provision of VET. They are involved in the development and updating of the training directives (formally issued by the Ministry of Economic Affairs and Technology) and determine apprenticeship salaries through collective wage negotiations.

The *business chambers* are responsible for providing advisory services to participating companies. An important role of business chambers is their capacity as "competent body" ("Zuständige Stelle"). By way of the Vocational Training Act, the state has assigned business chambers with public/sovereign tasks in the dual system. The chambers supervise company-based training, register apprenticeship contracts, assess the suitability of training firms and monitor their training. Furthermore, they also assess the aptitude of VET trainers, provide advice to training firms and apprentices and organise and carry out the final exams (cp. for the above: OECD (2010), p. 10f.). The chambers also have an arbitration board that can be called in when a dispute arises between the partners in the traineeship; e.g. between the training company and the trainee.

The *Federal Institute for Vocational Education and Training* ("Bundesinstitut für Berufsbildung", BIBB) prepares the training directives in co-operation with other involved institutions. It also carries out research projects and helps in the further development of in-company VET by means of development, promotional and advisory work.

The *Standing Conference of Ministers for Education and Cultural Affairs* ("Ständige Konferenz der Kultusminister der Länder", KMK) issues framework curricula for vocational education at vocational schools. These framework curricula are harmonised with the Federal Government's training directives (cp. CEDEFOP (2010), p. 29).

With regard to the legislative framework, the system of VET in Germany is founded on a legal system with differing levels and specifications of regulations.

(1) Initial training *in enterprises* is regulated by a series of federal laws and regulations:

- Vocational Training Act ("Berufsbildungsgesetz", BBiG):

  Of crucial importance for the organisation of in-company vocational training is the Vocational Training Act ("Berufsbildungsgesetz", BBiG). It entitles enterprises to conduct vocational training on their own responsibility, i.e. to recruit and train trainees. This federal law lays down the requirements and conditions for vocational training that is provided on an in-company basis. The Vocational Training Act applies to firms in industry and services, the public sector, to training in the liberal professions and in the skilled crafts (unless otherwise provided for in the Crafts Code ("HwO")).

All areas of vocational training that are carried out under the responsibility of a training company are regulated by the Vocational Training Act. The most important provisions in the BBiG concern:

- The content of the training contract,
- Requirements regarding the suitability of the enterprise providing in-house vocational training and of the trainers,
- The firm's obligation to pay trainees,
- The rights and duties of companies providing in-house vocational training and of the persons receiving training,
- The firm's obligation to carry out the training in accordance with the provisions specified in the official training directive. For each recognised training occupation a detailed training directive has to be enacted by the Federal Ministry of Economic Affairs and Technology (BMWi) or the otherwise competent Federal Ministry, both in agreement with the Federal Ministry of Education and Research (BMBF).
- The process of conducting examinations,
- The trainee's right to receive a certificate of employment/reference from the company providing his training upon completion of the training,
- The specification of competent bodies (i.e. in most cases business chambers) which are in charge of organising and monitoring in-company vocational training.

- Crafts Code ("Handwerksordnung", HwO)

  Vocational training in the skilled crafts generally falls under the Crafts Code ("Handwerksordnung", HwO). The provisions of this law are very similar to the provisions of the Vocational Training Act.

- Training directives ("Ausbildungsordnungen"):

  For each of the currently 348 officially recognised training occupations, a specific training directive has been enacted that details the content of the vocational training for that particular occupation (cp. below chapter 2.3.1).

- Works Constitution Act ("Betriebsverfassungsgesetz", BetrVG):

  It prescribes the participation rights of works councils in promoting and implementing training measures.

- Youth Employment Protection Act ("Jugendarbeitsschutzgesetz", JarbSchG):

  It contains particular protective regulations for trainees and young employees.

- Trainer Aptitude Regulation ("Ausbilder-Eignungsverordnung", AEVO):

  It prescribes standards for the occupational and work-related teaching abilities of trainers and requires them to pass a special trainer aptitude examination before being authorised to act as a trainer in vocational training.

(2) Instruction provided at *vocational schools* is governed by the school legislation of the respective Federal State ("Land"). Indeed, the German Constitution has conferred legislative competence in the entire area of school education (including vocational schools) on the Länder. In order to avoid a situation in which these different laws lead to inconsistency in the training provided, legislation is co-ordinated by the Federal (national) and State (Land) governments in various bodies (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 28f. and CEDEFOP (2010), p. 28-31).

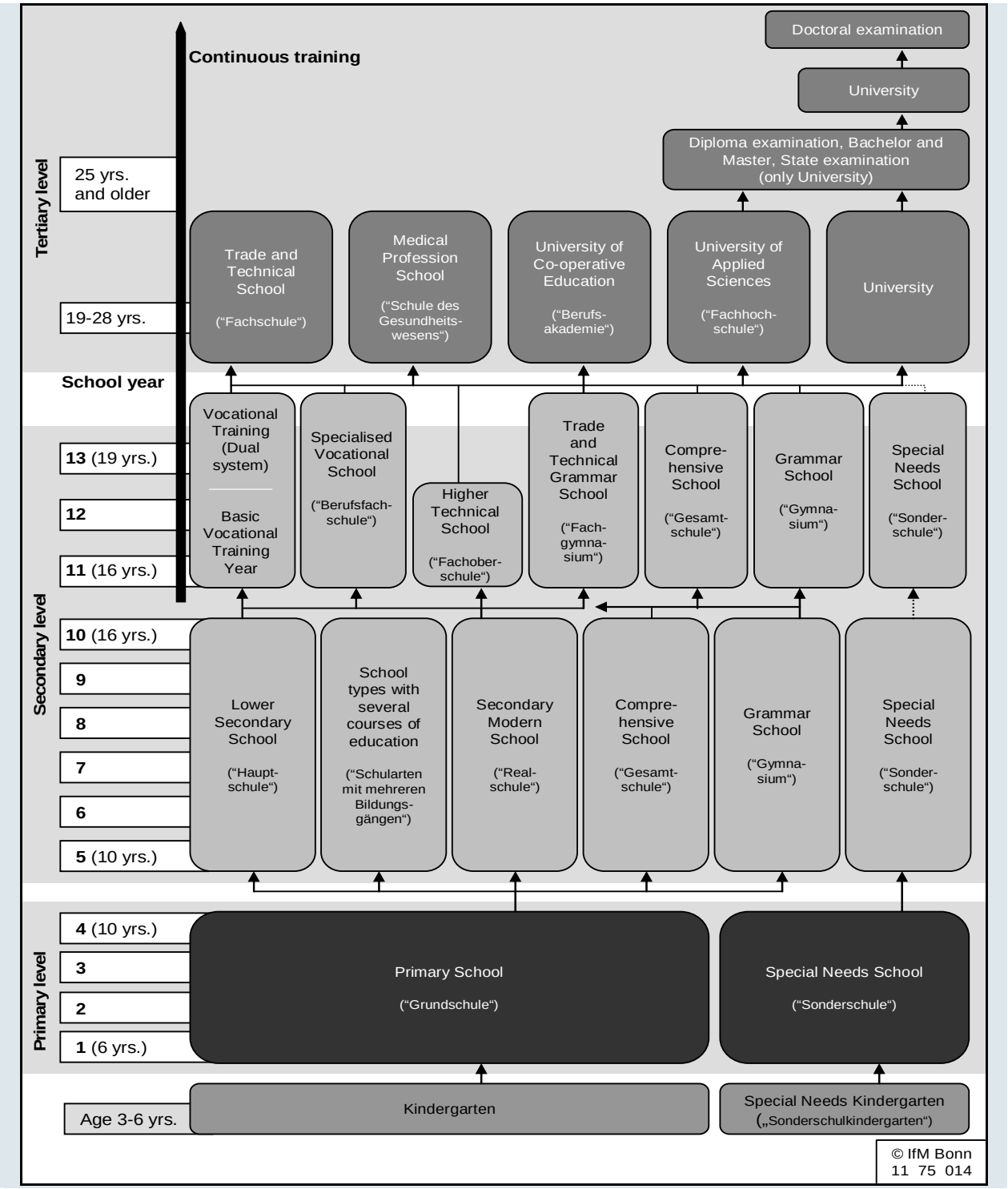
Brief overview of the German educational system

In Germany, compulsory schooling starts at the age of 6 and generally lasts for 9-10 years. After four years of primary school, students typically get tracked into three different education pathways (Graph E.9): "Gymnasium", with a demanding academic programme culminating in a university entrance qualification; "Realschule", with a less demanding academic programme leading to a lower secondary diploma signifying solid academic skills; and "Hauptschule", with a programme designed for those deemed to have limited academic ability or interests and culminating in a standard school-leaving certificate. Graduates from "Realschule" and "Hauptschule" typically enrol in a vocational pathway (including the transition system) at the age of 15 or 16. Due to the high quality of (dual) vocational training, also a sizable share of students who acquired university entrance qualification start VET.

According to data provided by the Federal Statistical Office, approx. 86% of students in VET-schemes on ISCED-levels 3 and 4 enrol in the dual training system (cp. below chapter 2.2), the rest mostly in full-time VET schools ("Berufsfachschulen", health sector programmes) that might include an internship. In addition to VET qualifications, some of these schools also offer the option to obtain (general) school leaving certificates. A majority of students in these full-time VET schools are female (reflecting the fields of study), while in the dual training system the gender balance is the opposite. "Fachschulen" offer programmes at ISCED 5B-level that last for two to four years, while "Fachhochschulen" provide vocationally orientated programmes at ISCED 5A-level. Some Länder offer additional VET programmes at ISCED 5B-level such as the "Berufsakademien" which combine teaching in institutions of higher education and practical training in companies.

The "Übergangssystem" (transition system) encompasses various programmes designed to facilitate transition from general school education into vocational training (for those who have specific difficulties, for example in coping with the requirements of an apprenticeship). During a basic vocational or pre-vocational year students receive career guidance and acquire the basic vocational skills designed to help them either to obtain a dual apprenticeship or to enter a full-time school-based VET programme or to start working but without receiving a full qualification (cp. for the above: OECD (2010), p. 9).

Graph E.9 Structure of the German educational system



Source: Statistisches Bundesamt (2008), p. 52.

Relative importance of various sectors of the German educational system

According to BIBB's Integrated Monitoring of Education and Training (iABE; cp. above), in 2010 some 726.073 young people newly started a broadly defined vocational training. 323.687 youths newly entered the so-called "transition system" which intends to help (disadvantaged) young people who need extra (public) support with the transition from general school into initial vocational training. These are mostly unplaced/repeat applicants for voca-

tional training places from earlier years, young people with migration background and youths with social disadvantages or learning difficulties. Another 554.068 pupils newly started upper secondary education to acquire a university entrance qualification. Finally, 446.184 young people started their tertiary studies at universities and similar institutions of higher education.

Strikingly, the number of pupils who intend to acquire a university entrance qualification and the number of actual university starters have increased significantly from 2005 until 2010, while at the same time the number of new entrants into vocational training (after an increase until 2007) has decreased (especially in the years of the economic crisis 2009 and 2010). Moreover, also the number of new entrants into the transition system has declined significantly and steadily since 2005.

Table E.21 Annual new entrants into the different sectors of BIBB's Integrated Monitoring of Education and Training (iABE), 2005-2010

Training sector	2005	2006	2007	2008	2009	2010
Vocational Training	739.149	751.563	788.893	774.684	728.484	726.073
Transition system from general school education to vocational training	417.647	412.083	390.552	362.058	348.235	323.687
Acquisition of university entrance qualification	454.423	466.700	463.464	514.434	526.684	554.068
University courses (tertiary education)	366.242	355.472	373.510	400.600	428.000	446.184

Source: Bundesministerium für Bildung und Forschung (2011), p. 55.

Existing vet apprenticeship type schemes at national level

Identification of main existing apprenticeship type schemes in the country (information to be provided for all existing apprenticeship type schemes)

The following tables 2 and 3 are mainly based on information and data provided by the Federal Statistical Office (destatis); among others on the ISCED-Mapping of National Educational Programmes which is applied by destatis for transmitting German VET-related statistical data to international organisations such as Eurostat, the OECD and the UNESCO.

Table E.22 Brief characterisation of existing VET-type schemes in Germany, ISCED levels 3 and 4 according to new classification used since 2009

VET-types (name in German)	VET-types (name in English)	ISCED-Level	Availability of VET-scheme since...	Typical time duration of VET-scheme	Distribution of company- and school-based training in %	VET-type regarded as apprenticeship training in Germany?
1) Berufsschulen (Duales System) Erstausbildung	Dual System (regular first cycle)	3B	dual system: early forerunner in the Middle Ages, more recent origin in the late 19th century	typically 2-3 years	60/40	Yes
2) Berufsschulen (Duales System) (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Dual System (second cycle) for students who already acquired university entrance qualification	4A	dual system: early forerunner in the Middle Ages, more recent origin in the late 19th century	typically 2-3 years (often shortened by up to 12 months)	60/40	Yes
3) Berufsschulen (Duales System) (Zweitausbildung, beruflich)	Dual System (second cycle) for students who already completed dual training in one training occupation	4B	dual system: early forerunner in the Middle Ages, more recent origin in the late 19th century	typically 2-3 years	60/40	Yes
4) Berufsschulen (Duales System) - Umschüler	Occupational retraining programmes Dual System (second cycle)	4B	dual system: early forerunner in the Middle Ages, more recent origin in the late 19th century	typically 2-3 years	60/40	Yes
5) Beamtenausbildung (mittlerer Dienst)	Training for civil servants (medium level)	3C	at least early 20th century	2-2,5 years	50/50	No
6) Berufsgrundbildende Programme mit Anrechnung auf das erste Lehrjahr	Basic vocational training programmes replacing first year in the dual system	3B	-		0/100	No
7) Einjährige Programme in Gesundheitsberufen	Health sector programmes, 1 year	3B	-	1 year	mainly school-based, less than 20% company-based training	No
8) Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	3B	-	2-3 years	0/100	No
9) Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung nach vorherigem Erwerb eine	Specialised vocational schools: occupational qualification (second cycle) for students who already acquired university entrance qualification	4A	-	2-3 years	0/100	No
10) Berufliche Programme, die sowohl einen Berufsabschluss wie auch eine Studienberechtigung vermitteln	Vocational programmes offering both an occupational qualification and a university entrance qualification (simultaneously or one after the other)	4A	-	3 years	0/100	No

Source: Own compilation based on information from various sources (mainly from the Federal Statistical Office).

According to destatis, there is no distinction made in Germany between general education programmes and VET-related schemes on ISCED 5-level. In fact, all schemes on this level are considered to provide professional qualifications ("berufsqualifizierend").

Table E.23 Brief characterisation of existing training schemes in Germany, ISCED level 5 according to new classification used since 2009

Scheme-types (name in German)	Scheme-types (name in English)	ISCED-Level	Availability of scheme since…	Typical time duration of scheme	Distribution of company- and school-based training in %	Scheme-type regarded as apprenticeship training in Germany?
11) Fachhochschulen	University of Applied Sciences	5A	1969/1972	Bachelor: 6 - 8 semesters, Master: 2 - 4 semesters	often 1 or 2 semesters with practical work experience (internships)	No
12) Universitäten	University studies	5A	1386 (University of Heidelberg…)	Bachelor: 6-8 semesters, Master: 2 - 4 semesters	mostly school-based	No
13) Fachschulen	Trade and technical schools	5B	at the end of the 19th century	2 years in full-time, 3 to 4 years in part-time	mainly school-based, less than 20 % company-based training	No
14) Berufsakademien	Vocational academies	5B	1974	Bachelor: 6 semesters	50/50	No
15) Verwaltungsfachhochschulen	Colleges of public administration	5B	e.g. in Northrhine-Westphalia: 1976	3 years	50/50	No
16) Fachakademien (Bayern)	Specialised academies (Bavaria)	5B	forerunner since 1843	2-3 years	0/100	No
17) Zwei- und dreijährige Programme in Gesundheits- und Sozialberufen bzw. Erzieherausbildung	Health sector and social programmes, Kindergarten teacher training (2 and 3 years)	5B	-	2-3 years	mainly school-based, less than 20 % company-based training	No

Source: Own compilation based on information from various sources (mainly from the Federal Statistical Office)

Tables 4 and 5 provide some additional data and information which characterise German VET- and training schemes on ISCD-levels 3 and 4 as well as 5.

Table E.24 Further characterisation of existing VET-type schemes in Germany, ISCED levels 3 and 4 according to new classification used since 2009

VET-types (name in German)	VET-types (name in English)	Brief description of contents (based on the ISCED Mapping by the Federal Statistical Office)	Minimum entrance require-ment (ISCED)	(theo-retical) Starting age	Links to particular sectors
1) Berufsschulen (Duales System) Erstausbildung	Dual System (regular first cycle)	Special form of apprenticeship which comprises education and training both at a vocational school and in an enter-prise. Graduates qualify for Fachober-schulen (4A), Fachschulen (5B) or for entry into the labour market.	2	16-18	No, but bias to services
2) Berufsschulen (Duales System) (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Dual System (second cycle) for students who have already acquired university entrance qualifi-cation	Special form of apprenticeship (second cycle) which comprises education and training both at a vocational school and in an enterprise. Additionally, graduates qualify for Fachschulen (5B) or for entry into the labour market.	3A	19-21	No, but bias to services
3) Berufsschulen (Duales System) (Zweitausbildung, beruflich)	Dual System (second cycle) for students who have already com-pleted dual training in one training occupation	Special form of apprenticeship (second cycle) which comprises education and training both at a vocational school and in an enterprise. Graduates qualify for Fachoberschulen (4A), Fachschulen (5B) or for entry into the labour mar-ket.	3B	19-21	No, but bias to services
4) Berufsschulen (Duales System) - Umschüler	Occupational re-training programmes Dual System (second cycle)	Special programme for unemployed persons (who have completed the dual system years ago) to re-train them in another field of training. Re-training might be due to personal reasons (physical health/ability) or to changing demands of the labour market.	3B	25-55	No, but bias to services
5) Beamtenausbildung (mittlerer Dienst)	Training for civil servants (medium level)	This programme provides training for the future civil servants on the me-dium level. It requires the intermedi-ate school certificate or a recognised equivalent. The future civil servants on the medium level are trained both in institutions of public administration at all regional levels (Bund, Länder, Regierungsbezirke, Kreise, Gemein-den) and in special schools for public administration.	2	16-18	Yes, civil service only
6) Berufsgrundbildende Programme mit Anrechnung auf das erste Lehrjahr	Basic vocational training programmes replacing first year in the dual system.	1-year programme with both general and occupational field-related basic education. This programme substitutes the first year of the Dual System (ISCED 3B).	2	16-18	-
7) Einjährige Programme in Gesundheitsberufen	Health sector programmes, 1 year	School-based vocational education (1 year) for auxiliary medical occupa-tions. Often these schools are associ-ated with hospitals where training is provided in theory and practice. De-signed for direct labour market entry.	2	19-20	Yes, health sector only
8) Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	School-based vocational programme for special occupations which awards a qualification equivalent to the Dual System. Graduates qualify for Fachoberschulen (ISCED 4A), Fachschulen (ISCED 5B) and for entry into the labour market.	2	16-17	-
9) Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung nach vorherigem Erwerb eine	Specialised vocational schools: occupational qualification (second cycle) for students who have already acquired university entrance qualifi-cation	School-based vocational programme (second cycle) for special occupations which awards a qualification according to the Dual System. Graduates qualify for Fachschulen (ISCED 5B) and for entry into the labour market.	3A	19-20	-
10) Berufliche Programme, die sowohl einen Berufsabschluss wie auch eine Studienberechtigung vermitteln	Vocational programmes offering both an occupa-tional qualification and a university entrance qualifi-cation (simultaneously or one after the other)	Both an occupational qualification and a university entrance qualification can be obtained in one and the same programme.	2A	19-20	-

Source: ISCED-Mapping 2010 by the Federal Statistical Office

Table E.25 Further characterisation of existing training schemes in Germany, ISCED level 5 according to new classification used since 2009

Scheme-types (name in German)	Scheme-types (name in English)	Brief description of contents (based on the ISCED Mapping by the Federal Statistical Office)	Minimum entrance requirement (ISCED)	(theoretical) Starting age	Links to particular sectors
11) Fachhochschulen	University of Applied Sciences	Programme at the university level which prepares for occupations which require the application of scientific findings and methods.	3A	19-24	No link to particular sectors
12) Universitäten	University studies	Programme of universities (i.e. in academic disciplines) which prepares for occupations which require the application of scientific knowledge and methods. Graduates may enter ISCED 6.	3A	19-24	No link to particular sectors
13) Fachschulen	Trade and technical schools	Advanced vocational programme. Attended after completion of the Dual System and several years of work experience to obtain craft master's/technician's qualifications or to qualify for occupations in the social sector. Aims at direct labour market entry.	both 2 and 3B	21-23	Yes, craft sector, technology, business administration, health and social sector
14) Berufsakademien	Vocational academies	Tertiary dual programme (2 to 3 years) which comprises both science-oriented and practice-related vocational education at academies and training enterprises. Students must already hold a qualification allowing entry to an ISCED 5A programme. Designed for direct labour market entry.	3A	19-20	Yes, business administration and engineering
15) Verwaltungsfachhochschulen	Colleges of public administration	Special type of "Fachhochschulen" run by the public administration to provide training for the advanced-level non-technical career ("gehobener Dienst") within the public sector. Students must already hold a qualification allowing entry to an ISCED 5A programme. Designed for direct entry into civil service.	3A	19-20	Yes, civil service only
16) Fachakademien (Bayern)	Specialised academies (Bavaria)	Tertiary dual programme which prepares for entry into an advanced vocational career. Requires both the intermediate school certificate and completion of the Dual System or practical experience which served the occupation. Designed for direct labour market entry.	both 2 and 3B	19-20	Yes, 14 different economic sub-sectors/ branches
17) Zwei- und dreijährige Programme in Gesundheits- und Sozialberufen bzw. Erzieherausbildung	Health sector and social programmes, Kindergarten teacher training (2 and 3 years)	School-based vocational education for medical assistants, nurses, midwives, Kindergarten teachers or social assistants. The health sector programmes are often associated with hospitals where training is provided in theory and practice. Designed for direct labour market entry.	2A plus vocational experience	19-20	Yes Health and social sector, Kindergarten teacher training

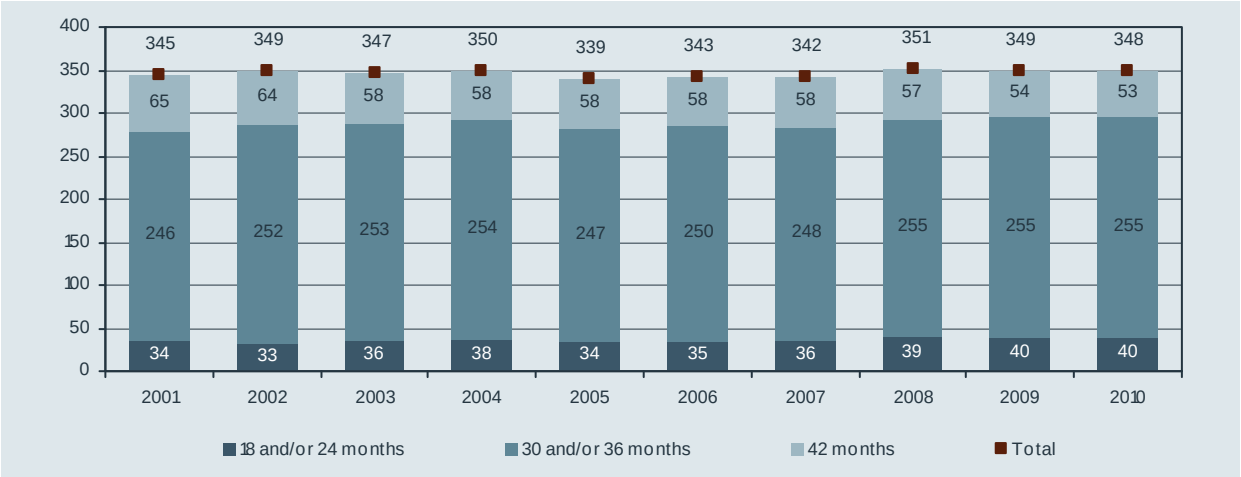
Source: ISCED-Mapping 2010 by the Federal Statistical Office.

According to Section 5 (I) 2 Vocational Training Act (BBiG), the time duration of apprenticeship training within the dual system should not - in principle - exceed three years and should not be less than two years. Deviations from this general rule are possible.

In 2010, almost three quarters (73,3% or in absolute terms: 255) of all 348 officially recognised training professions featured a time duration of 30 or 36 months. 53 (15,2%) apprenticeship trainings lasted for 42 months, while another 40 (11,5%) for 18 or 24 months.

Especially, since 2005 a slight trend can be observed towards shorter apprenticeship durations.

Graph E.10 Total number of apprenticeship professions by time duration, 2001-2010



Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 108.

The duration of the training is stipulated in the training directives for the particular occupation. The duration set forth can be shortened in the training contract at the time it is signed. For example, the duration of training for school-leavers with qualification to enter a university of applied sciences or with university entrance qualification may be shortened by twelve months. Training may be shortened by six months if the trainee has earned qualification to attend a specialised upper secondary school ("Fachoberschulreife") or an intermediate secondary school leaving certificate.

When an applicant has successfully completed a Basic Vocational Training Year or a one-year fulltime vocational school, the contracting parties can agree to have a year's credit for this prior training applied to the individual's in-company vocational training.

Each in-company vocational training programme starts with a probation period that lasts at least one month and a maximum of four months. During this time, the trainer and other responsible persons in the firm are to closely examine whether the individual trainee is a good match for the company. The trainee should also consider one more time whether he has made the right choice. Once the probation period is over, a company can terminate a training contract only on serious grounds.

When a trainee performs particularly well in his company and at vocational school, the competent body can admit him to the final examination ahead of the scheduled date and thus shorten the duration of his training (even further). Before a decision can be made, the trainee's company and part-time vocational school must submit their views in this regard.

On the other hand, training can also be extended - when, for example, the trainee was frequently ill or did not pass the final examination. In the event that a trainee must repeat the final examination, he can apply for this at the competent body. His training then continues until the next examination date. The training company is required to continue providing training for a maximum of one year.

There is also the option of undergoing initial vocational training on a part-time basis. Part-time initial vocational training represents an opportunity - particularly for young mothers,

fathers and care-givers - to undergo vocational training and still fulfil one's family responsibilities. Trainees who undergo part-time initial vocational training have to work at least 25 hours per week. The trainee and the training company have to agree on when these hours are to be worked. The trainee and the trainer have to submit a joint application to the competent body. Part-time initial vocational training does not invariably lead to a longer overall duration of the individual's training.

Finally, concerning the prerequisites for taking up dual vocational, it can be said that the German dual system offers young people the opportunity to start vocational training in one of currently 348 officially approved dual training occupations (based on BBiG/HwO). There is no formal prerequisite for taking up an apprenticeship but young people without any school leaving degree or with poor grades have problems in accessing the IVET system.

Quantitative importance of apprenticeship type schemes (information to be provided for all existing apprenticeship type schemes)

Based on official data from the Federal Statistical Office, the table shows the distribution of trainees across different VET-types on ISCED levels 3 and 4 for the year 2009. The overwhelming qualitative and quantitative importance of the dual training system is underlined by the fact that it caters for more than 85% of all trainees undergoing vocational training (on ISCED-levels 3 and 4).

Table E.26 Number of students in existing VET-type schemes in Germany, ISCED levels 3 and 4, 2009

VET-types (name in German)	VET-types (name in English)	absolute	in %
1) Berufsschulen (Duales System) Erstausbildung	Dual System (regular first cycle)	1.269.227	65,4
2) Berufsschulen (Duales System) (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Dual System (second cycle) for students who already acquired university entrance qualification	303.549	15,7
3) Berufsschulen (Duales System) (Zweitausbildung, beruflich)	Dual System (second cycle) for students who already completed dual training in one training occupation	85.137	4,4
4) Berufsschulen (Duales System) - Umschüler	Occupational re-training programmes Dual System (second cycle)	1.346	0,1
Sub-Total "Dual system"		***1.659.259***	***85,6***
5) Beamtenausbildung (mittlerer Dienst)	Training for civil servants (medium level)	11.259	0,6
6) Berufsgrundbildende Programme mit Anrechnung auf das erste Lehrjahr	Basic vocational training programmes replacing first year in the dual system.	102.420	5,3
7) Einjährige Programme in Gesundheitsberufen	Health sector programmes, 1 year	14.145	0,7
8) Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	64.139	3,3
9) Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung nach vorherigem Erwerb eine	Specialised vocational schools: occupational qualification (second cycle) for students who already acquired university entrance qualification	79.432	4,1
10) Berufliche Programme, die sowohl einen Berufsabschluss wie auch eine Studienberechtigung vermitteln	Vocational programmes offering both an occupational qualification and a university entrance qualification (simultaneously or one after the other)	8.694	0,4
Total		**1.939.348**	**100,0**

Source: Compilation by the Federal Statistical Office on behalf of IfM Bonn

Table E.27 presents official data on the distribution of students across various training schemes on ISCED 5 level. Almost 82% of these students attend university or a university of applied sciences. Since 2009, the latter also include approx. 20.000 students from "dual universities" ("Duale Hochschule") in the Federal State of Baden-Württemberg, which formerly had been classified as vocational academies ("Berufsakademien").

Table E.27 Number of students in existing training schemes in Germany, ISCED level 5, 2009

Scheme-types (name in German)	Scheme-types (name in English)	absolute	in %
11) Fachhochschulen	University of Applied Sciences	600.568	24,6
12) Universitäten	University studies	1.397.492	57,3
13) Fachschulen	Trade and technical schools	152.268	6,2
14) Berufsakademien	Vocational academies	10.316	0,4
15) Verwaltungsfachhochschulen	Colleges of public administration	27.682	1,1
16) Fachakademien (Bayern)	Specialised academies (Bavaria)	7.199	0,3
17) Zwei- und dreijährige Programme in Gesundheits- und Sozialberufen bzw. Erzieherausbildung	Health sector and social programmes, Kindergarten teacher training (2 and 3 years)	243.075	10,0
Total		**2.348.000**	**100,0**

Source: Compilation by the Federal Statistical Office on behalf of IfM Bonn

From 2008 to 2009, some methodological changes have been undertaken with regard to the classification and assignments of certain VET-types and training schemes. For this reason, data until 2008 are not fully comparable with the ones presented in Table E.26. and Table E.27. Other relevant information

Table E.69 in the annex presents time series data from 2005 until 2009 and highlights the corresponding methodological changes.

When analysing the German apprenticeship system and (future) labour market developments one has to consider the underlying demographic development which is already changing the relative positions of demand for and supply of training positions (and will increasingly do so in the future).

Table E.28 Impact of demographic developments on the pool of (future) trainees in the dual system, 2005-2010

Year	School-leavers from general education schools	School-leavers from not-fully qualifying vocational schools	Unplaced applicants from previous years
Germany			
2005	939.279	409.362	342.060
2006	946.766	420.486	385.248
2007	942.129	422.009	384.878
2008	907.083	413.017	320.393
2009	870.745	395.122	256.174
2010	847.726	381.778	256.007
Western Germany			
2005	731.621	342.558	242.671
2006	746.100	355.824	274.933
2007	757.174	361.697	280.888
2008	749.947	358.662	242.558
2009	738.878	347.234	198.896
2010	733.627	340.527	204.568
Eastern Germany			
2005	207.658	66.804	99.192
2006	200.666	64.662	110.135
2007	184.955	60.312	103.893
2008	157.136	54.355	77.720
2009	131.867	47.888	57.214
2010	114.099	41.251	51.364

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 16.

In fact, within a few years the demographic change has already led to a strong decrease of the number of school leavers. Thus, the pool of young people from which (potential) trainees are to be recruited has already been shrinking significantly. While in 2005, still 939.279 school-leavers were counted from general education schools, the number has decreased by 91.561 (-9,7%) to 847.726 in 2010 (cp. Table E.28). The number is expected to decline further to only approx. 663.200 in 2020.

At the same time, the number of school-leavers from not-fully qualifying vocational schools (i.e. from schools that provide occupational knowledge and skills but do not award a recognised training certificate) and the number of unplaced applicants from the dual training system from earlier years has been decreasing as well. Taken together, these trends lead to a substantial reduction of the pool of young people who might start vocational training (and become skilled employees later on). Shortage of skilled labour is therefore a major issue for enterprises and policy makers who are concerned that current production levels and growth opportunities might be difficult to maintain in the future (ceteris paribus). This is also a key reason why German enterprises tried very hard to keep their skilled employees as long as possible during the last economic crisis and did not significantly reduce the number of jobs and training places.

The demographic change (and migration to Federal States in Western Germany) is especially pronounced in the Eastern German Federal States that featured particularly low birth rates after the unification of Germany in 1990. For example, while the number of school leavers from general education schools remained more or less unchanged in the West, the Eastern States experienced an almost "dramatic" reduction. Here, the number of school-leavers declined by 93.559 (-45,1%) from 207.658 in 2005 to 114.099 in 2010.

The demographic "slump" in the East was indeed so strong that it provoked some paradoxical effects. Although the supply of training places decreased by -6,2% in the East and increased by +0,9% in the West, the relative market position of Eastern German youths improved more strongly than the one of their Western counterparts. Hence, in 2010, 68,9% of Eastern interested young people were able to start vocational training (2009: 67,1%), while this held true only for 65,8% of Western young people (2009: 65,0%).

In the reporting period from 1 October 2009 until 30 September 2010 (in official tables referred to as year "2010") a total of 560.073 training contracts have been newly concluded in overall Germany (cp. Table E.29). These are 4.234 (-0,8%) less than in the preceding year. This phenomenon, however, is almost entirely due to demographic developments in Eastern Germany where the number of newly concluded contracts decreased by 7.335 (-7,4%). By contrast, in the Western Federal States 3.101 (+0,7%) more apprenticeships were started than in 2009.

Table E.29 Newly concluded training contracts in the dual system (BBiG/HwO) in Germany, 1992-2010

Year	New training contracts	Unfilled training places	Unplaced applicants	"Supply" of training places	"Demand" for training places	"Supply/Demand"-relation
1992	595.215	126.610	12.975	721.825	608.190	118,7
1993	570.120	85.737	17.759	655.857	587.879	111,6
1994	568.082	54.152	18.970	622.234	587.052	106,0
1995	572.774	44.214	24.962	616.988	597.736	103,2
1996	574.327	34.947	38.458	609.274	612.785	99,4
1997	587.517	25.864	47.421	613.381	634.938	96,6
1998	612.529	23.404	35.675	635.933	648.204	98,1
1999	631.015	23.439	29.365	654.454	660.380	99,1
2000	621.693	25.690	23.642	647.383	645.335	100,3
2001	614.236	24.535	20.462	638.771	634.698	100,6
2002	572.323	18.005	23.383	590.328	595.706	99,1
2003	557.634	14.840	35.015	572.474	592.649	96,6
2004	572.980	13.378	44.084	586.358	617.064	95,0
2005	550.180	12.636	40.504	562.816	590.684	95,3
2006	576.153	15.401	49.487	591.554	625.640	94,6
2007	625.885	18.359	32.660	644.244	658.545	97,8
2008	616.342	19.507	14.515	635.849	630.857	100,8
2009	564.307	17.255	15.679	581.562	579.986	100,3
2010	560.073	19.605	12.255	579.678	572.328	101,3

Source: Bundesministerium für Bildung und Forschung (2011), p. 22.

As of 30 September 2010, the Federal Employment Agency registered 19.605 training places that have not been filled and 12.255 applicants (young people) who have not found a training position. Adding these numbers to the total number of newly concluded training contracts, one arrives at a total supply of training positions of 579.678 and total demand of 572.328. This represents a (standard) supply/demand-relation of 101,3%.

In addition, BIBB also calculates an "enlarged" supply/demand-relation as the standard rate does not fully cover the number of young people in search of a training position. This new rate (enlarged on the demand side) also takes those training applicants into consideration who maintain their placement mandate with the Federal Employment Agency although they have found a (second-best) alternative to pursue (in the meantime). When considering these 72.342 young people (cp. Below Table E.30) as an additional component on the demand side, the enlarged supply/demand-relation in 2010 amounts to 89,9% only (after 88,5% in 2009, 89,2% in 2008 and 85,1% in 2007; cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 12).

For 2009, Institut der deutschen Wirtschaft (IW) Köln (2010, p. 25-28) has calculated another supply/demand-relation which is enlarged both on the demand side (cp. above) and on the supply side. IW Köln's survey among 1.238 training enterprises showed that the share of vacancies in all offered training places amounted to 13,2%. Related to the total number of concluded training contracts in 2009, this would result in some 75.000 vacant training positions. This number is obviously much higher than the number of vacancies officially registered with the Federal Employment Agency (17.255). As a consequence, a newly calculated supply/demand-relation (enlarged both on demand and supply side) would amount to 101,4% in 2009 which is close to the original standard value of 100,3%.

There is no obligation for young people in search of a training position to register with the Federal Employment Agency ("Bundesagentur für Arbeit", BA), just like enterprises are not obliged to register vacant training positions with the BA. During the reporting year 2010, a total of 552.168 young people had registered with the BA and asked the BA for assistance in acquiring a training place (cp. Table E.30).

Table E.30 Ways chosen by those young people who were looking for a dual training position and who were registered with the Federal Employment Agency, 30 September 2010

Type of way chosen by those young people who were looking for a training position and who were registered with the Federal Employment Agency (BA)	TOTAL		Status of placement mandate with the BA							
			Placement mandate terminated				Placement mandate ongoing			
			Start of VET		with other or not known alternative		with other chosen alter-native		without (known) al-ternative	
	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %
I. Placement in vocational training	**267.789**	**-**	**267.789**							
II. Alternative ways taken:	**176.216**	**100,0**			**103.874**	**100,0**	**72.342**	**100,0**		
thereof:										
School education	64.243	36,5			45.746	44,0	18.497	25,6		
University studies	6.812	3,9			6.154	5,9	658	0,9		
Vocational Preparation Year	1.845	1,0			1.045	1,0	800	1,1		
Basic Vocational Training Year	5.103	2,9			3.055	2,9	2.048	2,8		
Internship	9.304	5,3			2.868	2,8	6.436	8,9		
Remaining in present training position	15.847	9,0			9.358	9,0	6.489	9,0		
Employment	28.927	16,4			19.918	19,2	9.009	12,5		
Military/civil service	4.006	2,3			2.890	2,8	1.116	1,5		
Voluntary social/ecological year	4.513	2,6			2.928	2,8	1.585	2,2		
Public measure for vocational prepara-tion (including rehabilitation)	23.049	13,1			4.273	4,1	18.776	25,8		
Introductory training for young people	5.763	3,3			1.395	1,3	4.368	0,1		
Other public support measure	6.736	3,8			4.191	4,0	2.545	6,0		
Other rehabilitation support	68	<0,1			53	0,1	15	3,5		
III. Alternative ways of registered applicant not known or unclear	**108.163**	**-**			**95.908**	**-**		**<0,1**	**12.255**	**-**
Total	**552.168**	**100,0**	**267.789**	**48,5**	**199.782**	**36,2**	**72.342**	**13,1**	**12.255**	**2,2**

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 56.

As of 30 September 2010, 267.789 of them (48,5%) had been able to conclude a training contract. Of the remaining 284.379 young people, some 103.874 pursued alternative ways; most of them continued school education (45.746) or started employment (without previous training, 19.918). A relatively large number of 95.908 young people who were not able to start vocational training terminated their placement mandate with the BA and nonetheless did not have any (clear) alternative way to follow. Another 73.342 young people (who did not find a training place) pursued an alternative way (mostly "participation in a public measure for vocational preparation" or "continued school education") but still remained registered with the BA as they are still hoping to secure a training place in the future with the assistance of the BA. A final group of 12.255 young people are still registered with the BA, though they have not a (clear) alternative way to follow in the meantime.

As shown above, a relatively large share of trainees is not able to secure a training position (at first try) and thus follows alternative paths in the meantime. This is also illustrated by Table E.31 which shows that almost half of all current BA-registered training applicants have already graduated from school at least one year earlier. One should bear in mind, however, that not all school-leavers intend to start vocational training immediately after leaving school.

Table E.31 Share of BA-registered applicants who left school at least one year ago in the total number of BA-registered training applicants, 2005-2010

Year	BA-registered training appli-cants	No. of applicants who left school at least one year ago			Share of applicants who left school at least one year ago in the total number of BA-registered training applicants in %
		Total	thereof:		
			with school-leaving year in the directly preceding year	with school-leaving year in earlier years	
2005	740.961	342.060	156.876	185.184	46,2
2006	763.097	385.248	171.789	213.459	50,5
2007	733.971	384.878	161.856	223.022	52,4
2008	620.037	320.393	128.539	191.854	51,7
2009	555.463	256.174	115.169	141.005	46,1
2010	552.168	256.007	108.452	147.555	46,4

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 12 and p. 16.

As there is no obligation to register with the Federal Employment Agency (neither for training applicants nor for enterprises offering training positions), a larger share of young people secures an apprenticeship in the dual system without the assistance of the BA. Their number can be specified only indirectly (cp. Table E.32).

Table E.32 Share of directly or indirectly registered training applicants who start dual vocational training, 2001-2010

Year	No. of newly concluded training contracts	BA-regis-tered (offered) training positions	BA-registered training applicants			Statistically recorded total number of training applicants	%-share of these applicants who start vocational training
			total	thereof:			
				successful trainees placed by BA	unsuccessful applicants not placed in dual training by BA		
	col. 1	col. 2	col. 3	col. 4	col. 5	col. 6 (=col.1+3-4)	col. 7 (=col.1/6)
2001	614.238	631.048	737.797	385.524	352.273	966.511	63,6
2002	572.323	586.144	711.393	347.569	363.824	936.147	61,1
2003	557.634	546.660	719.571	338.524	381.047	938.681	59,4
2004	572.980	519.899	736.109	363.558	372.551	945.531	60,6
2005	550.180	471.516	740.961	361.893	379.068	929.248	59,2
2006	576.153	459.202	763.097	365.603	397.494	973.647	59,2
2007	625.885	510.377	733.971	321.193	412.778	1.038.663	60,3
2008	616.342	511.582	620.037	282.028	338.009	954.351	64,6
2009	564.307	475.391	555.463	255.704	299.759	864.066	65,3
2010	560.073	483.519	552.168	267.789	284.379	844.452	66,3

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 12.

In 2010, 560.073 training contracts were newly concluded (either with or without assistance by the BA). In the same year, 552.168 training applicants were registered with the BA, of whom 267.789 (= 48,5%) were successfully placed by the BA in an apprenticeship relationship. Therefore, the difference between 560.073 and 267.789 alludes to the number of applicants who secured a training position without the assistance of the Federal Employment Agency (= 292.284). Adding this number to the number of newly concluded training contracts (560.073), shows the total number of training applicants who were directly or indirectly statistically recorded in 2010; their number amounted to 844.452 (obviously, this number still does not include those training applicants who were searching for an apprenticeship without BA-assistance but were not successful). Relating the total number of statis-

tically recorded training applicants (844.452) to the number of newly concluded training contracts (560.073) shows that approx. two thirds (66,3%) of (directly or indirectly recorded) training applicants were able to secure a training position.

The above table highlights that despite of the decreasing number of newly concluded training contracts (and the declining number of BA-registered offered training positions), the chances for young people to secure a training place have never been better in the whole first decade of the new century than in 2010 (66,3%). However, even in 2010 a sizable number of young people did not succeed in acquiring a training place (in 2010: at least 284.379 plus any unsuccessful training applicants not registered with the BA). Nonetheless, the training chances/opportunities were better in 2010 than in any of the preceding nine years (with 2009 the year of the grave economic crisis as a close second!), in spite of the third lowest supply of training places (579.678, cp. Table E.29 above) in the last 18 years. The fact that training chances for young people improved nevertheless, is mainly due to the demographic change taking place.

On the other hand, Dual study programmes combine in-company vocational training with theoretical studies at a university of applied sciences ("Fachhochschule"), vocational academy ("Berufsakademie"), university, administration and business academy ("Verwaltungs- und Wirtschaftsakademie") or since 2009 at a dual university.

Table E.33 Providers of dual study programmes, 2004-2010

Year	Universities of applied sciences (Fach-hochschulen)	Vocational academies (Berufsa-kademien)	Universities	Administration and business academies (Verwaltungs- und Wirtschaftsakademien)	Dual university (Duale Hochschule)	Total
2004	278	184	13	37	-	512
2005	213	279	15	38	-	545
2006	280	279	15	34	-	608
2007	292	322	23	29	-	666
2008	311	324	23	29	-	687
2009	328	333	24	27	-	712
2010	389	*164*	29	5	*189*	776

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 228.

In contrast to regular university studies, dual study programmes are marked by an especially high practical work relevance. A co-operation contract between the institution of higher education (or academy) and the training enterprise closely co-ordinates and synchronises the specific learning contents. Also between the student and the training enterprise a contractual relationship is concluded, either in the form of a training contract, a work contract or an internship agreement.

Dual courses of study are an especially innovative, attractive and practical way of studying that has enjoyed increasing popularity for years with companies and young people. By combining practical in-company training with theoretical instruction, students have the chance to acquire two qualifications at once in a large number of study programmes: a vocational training qualification and an academic degree (in almost all cases a bachelor's degree). Therefore, students obtain high-quality training that benefits them both financially and in terms of (saved) time and improves their labour market and career prospects. Graduates from the Baden-Württemberg Co-operative-State University ("Duale Hochschule"), for example, enjoy excellent employment opportunities. In the last few years, more than 85% of their students have graduated with a fixed employment contract under their belt (cp. Duale Hochschule Baden-Württemberg (2011), p. 5). Since 2009, the Baden-Württemberg Co-operative-State University has the same status as a regular university; before it was organised as a vocational academy ("Berufsakademie"). Vocational academies also have formally university status but their bachelor degrees are not always recognised by regular universities and accepted as a basis for further master's and doctoral studies.

Enterprises obtain highly qualified and motivated young employees and institutions of higher education benefit from the extensive contact with the world of work and create a distinctive image for themselves by offering demand-based courses of study.

Dual study programmes integrated with vocational training have the following general characteristics:

- They alternate between theory phases in the institution of higher education/academy and practical phases in the training enterprise,
- regulate the practical training in a training contract, student-employee contract or unpaid-trainee contract,
- are characterised by close connection of the content of vocational activity in the training enterprise and the acquisition of theoretical knowledge in the institution of higher education/academy,
- involve close co-ordination of and co-operation between the institution of higher education/academy and the training enterprise (cp. Bundesinstitut für Berufsbildung (BIBB) (2008), p. 20f.).

The most common combination is a course of business management plus commercial (vocational) training. A course in mechanical engineering or information technology is often combined with technical training. Overall, there is a wide range of possible subject areas. In 2010, the total number of dual study programmes amounted to 776.

Table E.34 Main subjects of dual study programmes, 2010

Main subjects	absolute	in %
Business management	317	40,9
Mechanical engineering, process engineering	122	15,7
Information technologies (IT)	113	14,6
Electrical engineering	77	9,9
Engineering	41	5,3
Construction engineering	29	3,7
Industrial engineering	29	3,7
Social services	23	3,0
Economic and social studies	12	1,5
Traffic engineering, nautics	11	1,4
Architecture	1	0,1
Mathematics	1	0,1
Total	**776**	**100,0**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 232.

Dual study programmes are becoming increasingly popular in Germany. In recent years there has been a steady increase in provision of such programmes. In 2010, the number of dual study programmes increased by 9,0%. The increase has been especially pronounced in business management and mechanical engineering. The number of enterprises involved also increased strongly by 8,5%, while the number of students increased by 4%. Dual study programmes are especially prevalent in the Federal States of Baden-Württemberg (27,6%) and Northrhine-Westphalia (20,1%).

Table E.35 Dual study programmes, 2004-2010

Year	No. of dual study programmes	Change to preceding year in %	No. of participating enterprises	Change to preceding year in %	No. of participating students	Change to preceding year in %
2004	512	-	18.168	-	40.982	-
2005	545	6,4	18.911	4,1	42.467	3,6
2006	608	11,6	22.003	16,4	43.536	2,5
2007	666	9,5	24.246	10,2	43.220	-0,7
2008	687	3,2	24.572	1,3	43.991	1,8
2009	712	3,6	26.121	6,3	48.796	10,9
2010	776	9,0	28.336	8,5	50.732	4,0

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 226.

Dual study programmes often involve international aspects. Approx. every fifth programme comprises a study phase or an internship abroad or teaches foreign languages. Almost every seventh dual study programme awards not only a German but also a foreign academic degree to successful graduates.

Table E.36 International aspects of dual study programmes, April 2010

International aspects	Absolute number (multiple answers)	Share in the total number of all dual study programes in %
Study phase aboad	162	20,3
Internship abroad	160	20,1
Foreign languages	153	19,2
International academic degree	108	13,5
Total	583	73,1

Source: Bundesinstitut für Berufsbildung (BiBB) (2010a), p. 29.

At the core of the project "Ausbildung plus" (vocational training plus) is an online database (http://www.ausbildungplus.de) which currently contains information on approx. 900 dual study programmes. Interested young people can search the database for suitable programmes free of charge. Providers - such as companies, institutions of higher educations - can present the academic and vocational courses they are offering, also free of charge. The project is managed by the Bundesinstitut für Berufsbildung (BIBB) and is supported by the Federal Ministry of Education and Research (BMBF).

The following quantitative information presented in this chapter focuses on the dual system of vocational training since the required statistical information is not easily available for other VET-types and as dual training is by far the most important pillar of the German VET-system on ISCED-levels 3 and 4.

Characteristics of students (sex, age groups, previous work experience…)

In 2009, male apprentices had a 60,1%-share (females: 39,9%) in the total number of all concluded training contracts within the dual system. The distribution by sex does not change very much over time. Indeed, the female share in the total number of apprentices has varied only slightly between 39% and 41% since 1992. Therefore, all in all, young women are underrepresented in the dual system compared to their share in the total population. This can be explained by the fact that female trainees have a (strongly overproportional) large share in training courses which are executed in full-time vocational schools (i.e. outside the dual system, e.g. non-academical health and caring professions).

Table E.37 Distribution of all apprentices by economic sector and sex, 2009, in %

Economic sector	Males	Females
Industry and trade	60,1	39,9
Crafts	76,0	24,0
Public services	35,2	64,8
Agriculture	77,1	22,9
Liberal professions	5,1	94,9
Domestic services/housekeeping	7,5	92,5
Maritime navigation	-	-
Total	**60,1**	**39,9**

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 36f.

Even within the dual system pronounced sex-specific differences ("segregation") can be observed. Females are strongly over-represented in the service occupations, while their share in production and technology-oriented occupations as well as in newly introduced training occupations is strongly under-proportional. These structural differences between young men and women have remained almost unchanged since the mid 1980s, i.e. in spite of various awareness-raising initiatives such as "Girls' Days" etc.

Table E.38 Share of female apprentices in the total number of newly concluded training contracts, by occupational groups, 1993, 2000-2009, in %

Year	All training occupations	Production occupations	Service occupations			Technology-oriented occupations	Newly introduced occupations	Two-year training occupations
			Total	Primary services	Secondary services			
1993	40,4	11,6	71,7	71,5	72,0	12,4	-	62,8
2000	40,9	12,2	68,8	69,1	68,1	12,3	23,5	50,0
2001	41,0	12,1	67,9	68,2	67,3	12,2	23,7	48,7
2002	41,0	11,7	67,8	67,3	69,0	11,3	24,9	47,2
2003	40,6	11,5	66,1	65,4	67,8	10,7	24,3	44,3
2004	40,1	11,4	64,98	64,4	66,2	10,6	23,4	42,4
2005	39,7	11,3	64,5	63,9	66,0	10,1	23,0	41,4
2006	39,5	11,4	63,6	63,1	65,2	10,2	24,7	40,4
2007	39,3	11,8	63,5	63,7	62,9	10,3	24,6	41,0
2008	39,6	12,3	63,7	64,1	62,6	11,1	26,3	42,2
2009	39,9	12,7	63,6	63,7	63,5	11,8	26,4	42,2

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 152.

The share of apprentices with foreign nationality has been strongly decreasing since the early 1990s (at the time varying between 7% and 8%). Since 2006 (4,2%), the percentage share is slightly increasing again and has reached 4,8% in 2009 (in absolute terms: 75.780). To a large extent the reduction is due to a reform in the citizenship law which came into effect in 2000. According to the so-called "option rule", children of parents with foreign citizenship who have been born in Germany obtain the German citizenship in addition to their parents' one (dual citizenship), if their parents have (legally) spent at least eight years in Germany. Until the age of 18 (at latest by the age of 23), these children have to opt for one of the two citizenships. In case they do not use this option, they automatically lose the German citizenship.

The average age of apprentices in the dual system who have newly concluded a training contract ("new entrants") has risen to 19,8 years in 2009. 17 year olds still form the largest age group (17,1%), though in the early 1990s they had a total share of approx. 28%. This development has been caused (among other things) by extended minimum schooling in (general) secondary schools, a tendency of higher (i.e. longer lasting) school leaving qualifi-

cation before starting vocational education and difficulties in accessing the dual system at first try.

Table E.39 Age distribution of apprentices with newly concluded training contract, 2009

Age in years	share in %	Age in years	share in %
16 and younger	11,1	21	9,2
17	17,1	22	5,9
18	16,1	23	3,9
19	15,9	24 until less than 40	7,4
20	13,2	40 and older	0,2

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 149.

In 2010, more than three quarters (77%) of all trainees were able to conclude a training contract in their preferred training occupation. For 17% the training profession only partly corresponded with their preferences, while another 6% indicate that their training occupation did not meet their original intentions.

Differentiated by highest attained school leaving certificate, 43,0% of all apprentices who newly concluded a training contract in the dual system in 2009 had a "Realschul"-diploma, 33,1% a "Hauptschul"-diploma and 20,4% a university entrance certificate ("Abitur" or "Fachhochschulreife"). A minority of 3,5% of all apprentices did not have any school leaving certificate at all. The relatively high share of "Hauptschul"-leavers among all "new entrants" does not mean that transition into vocational training goes smoothly. The unfavourable relation between supply of and demand for training places in the last years has made transition much harder and long-lasting, especially for "Hauptschul"-leavers who have the lowest formal qualifications of all school forms in Germany.

The level of formal education exerts some influence on the occupational groups, trainees are working in. "Hauptschul"-leavers are represented over-proportionally in production occupations, "Realschul"-leavers in technology-oriented occupations and school leavers with university entrance qualification in secondary services ("brain"- or knowledge-based work).

Table E.40 Apprentices with newly concluded training contracts, by highest attained school leaving certificate and occupational group, 2009, in %

Occupational group	Total	Highest attained school leaving certificate									
		without any		Hauptschule		Realschule		University entrance qualification		No indication	
	abs.	abs.	in %	abs.	in %	abs.	in %	abs.	in %	abs.	in %
Production occupations	232.134	11.412	5,0	99.090	43,3	96.390	42,1	21.885	9,6	3.354	-
Services occupations:	329.028	8.025	2,5	83.196	25,9	140.373	43,6	90.147	28,0	7.290	-
- Primary service occupations	234.780	7.266	3,2	74.916	32,7	98.730	43,1	48.273	21,1	5.595	-
- Secondary service occupations	94.248	759	0,8	8.280	8,9	41.640	45,0	41.874	45,2	1.695	-
Technology-oriented occupations	135.282	2.349	1,8	36.057	27,1	69.915	52,5	24.777	18,6	2.181	-
All training occupations	561.171	19.443	3,5	182.286	33,1	236.763	43,0	112.032	20,4	10.644	-

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 161.

Typical exit route for an apprenticeship-type student

Vocational education and training makes a significant contribution to integrating young people into permanent (regular) employment and thus to opening up professional and life perspectives. This "second transition" from IVET to regular employment marks a very impor-

tant threshold in a young person's life with decisive impacts on the future career development. This transition phase, however, does not work out smoothly for all training graduates. It can be accompanied by interruptions, breaks and imponderabilities.

Table E.41 Retention rate of apprentices after concluded training by establishment size, in %, 2000-2009

No. of employees	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1-9	46	44	45	47	39	45	44	48	47	42
10-49	57	50	51	52	51	50	54	56	58	55
50-499	60	61	58	54	55	52	54	62	65	59
500 and more	69	70	68	64	61	62	68	69	70	73
Total	**58**	**56**	**55**	**53**	**52**	**52**	**55**	**59**	**61**	**57**

Source: Institut für Arbeitsmarkt- und Berufsforschung (IAB) (2010), p. 35.

In the economic crisis year 2009, establishments (local units) retained some 57% of their apprentices and concluded regular employment contracts with them. Retention rates, however, partly underestimate training companies' willingness to employ their apprentices as regular employees. In fact, some training graduates voluntarily conclude employment contracts with other establishments or enterprises or pursue other educational or career pathways (e.g. by starting university studies).

Over the years, a steady pattern can be detected which shows that retention rates increase with establishment size. While, for example, in 2009 only 42% of apprentices in micro-establishments with 1-9 employees stayed with their training firm, this held true for 73% of training graduates in large establishments with 500 and more employees. With the exception of the crisis year 2009, retention rates seemed to have been increasing steadily since 2005. This trend can be explained - inter alia - with the demographic trend (i.e. decreasing number of training graduates), increasing shortage of skilled labour and the improving situation on the labour market and in the general economy.

Table E.42 shows the number of successful training graduates who *immediately* after completing training in the dual system register as unemployed with the local employment authorities (independent of how long the unemployment phase lasts). In 2009, 161.926 young people out of the entirety of 468.851 successful training graduates were unemployed immediately after successfully terminating training. This corresponds to a 34,5% share. In 2008, i.e. the year before the economic crisis broke out, the share of unemployed training graduates was 3 percentage points lower at 31,5%.

Table E.42 Number of newly unemployed immediately after successful completion of training in the dual system, 2008-2009

		Men			Women			Total		
		West	East	GER	West	East	GER	West	East	GER
Number of newly unemployed after successfully completing training in the dual system	2008	53.631	26.520	80.151	45.222	18.003	63.225	98.853	44.523	143.376
	2009	66.195	27.432	93.627	50.514	17.785	68.299	116.709	45.217	161.926
Total number of successful training graduates in the dual system	2008	207.157	57.126	264.283	153.461	37.108	190.569	360.618	94.234	454.852
	2009	214.634	55.953	270.587	160.771	37.493	198.264	375.405	93.446	468.851
Percentage of unemployed people who successfully completed training in the dual system	2008	25,9%	46,4%	30,3%	29,5%	48,5%	33,2%	27,4%	47,2%	31,5%
	2009	30,8%	49,0%	34,6%	31,4%	47,4%	34,4%	31,1%	48,4%	34,5%

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 263.

Furthermore, the "unemployment rate" (which includes "search unemployment") of training graduates differs strongly between Western and Eastern Germany. In the West, the unemployment rate amounted to 31,1% in 2009. By contrast, in Eastern Germany almost half of all trainees (48,4%) were registered as unemployed after completing their training. All in all, the economic crisis seemed to have affected female trainees and trainees in Eastern Germany less because their unemployment rates increased less than the ones of male trainees and trainees in Western Germany. The main reason is that (export-oriented) manufacturing enterprises were most strongly hit by the global economic crisis. These firms are to an over-average extent located in the Western Federal States and employ a strongly above-average proportion of male trainees.

Micro census data provide some information on labour market insertion of trainees at a later stage, i.e. several years after completing training. Table E.43 illustrates that the professional situation of many training graduates in the first three years after completing training is not yet very stable. In 2008, only 49,1% of male trainees (females: 47,1%) were employed in a normal/standard employment relationship. Another 17,3% (females: 16,5%) had a non-standard employment relationship which showed (only) a relatively low "precarity potential" (i.e. full-time job with temporary employment contract or full- or part-time job with unlimited employment contract but low income).

From 2005 onwards, the improving labour market conditions (following far-reaching reforms between 2003 and 2005) and the improving overall economic conditions have contributed to a relatively strong rise in the share of trainees who were able to enter into a standard employment relationship in the first three years after successful graduation (e.g. the corresponding percentage share increased for male trainees from 39,7% in 2005 to 49,1% in 2008). Moreover, the development of unemployment rates of training graduates also showed a strong correlation with the development of the business cycle.

Table E.43 Labour market insertion in the first three years after successfully completing training in the dual system, 2000-2008, in %

Employment type	Sex	Year									
		2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Integrated (standard) employment	Male	49,5	49,8	47,1	42,5	40,7	39,7	43,6	47,4	49,1	45,4
	Female	56,5	56,4	55,5	52,8	48,5	42,5	42,8	45,6	47,1	48,7
Employment with low "precarity potential"	Male	16,6	15,8	15,4	16,1	15,9	17,9	18,5	18,7	18,5	17,3
	Female	16,6	15,4	16,2	14,4	15,5	16,2	17,3	17,5	17,7	16,5
Employment with medium "precarity potential"	Male	11,8	10,1	10,8	8,6	7,3	5,4	6	6	4,8	7,5
	Female	2,2	2,8	2,7	2,6	2,9	4,5	4,9	4,1	3,8	3,6
Employment with high "precarity potential"	Male	0,3	0,2	0,2	0,3	0,3	0,4	0,4	0,3	0,6	0,4
	Female	1,3	1	1,1	0,9	1,8	1,5	1,9	1,6	1,8	1,5
Unemployed (according to ILO-definition)	Male	8,5	9,1	11	15	17,1	15,8	12,4	9,1	8,6	11,8
	Female	6,2	5,5	6,6	9	11,2	12,2	10,8	8,7	8	8,9
Self-employed	Male	1,8	1,7	1,2	1,7	2,4	2,5	2,5	2,2	1,9	2
	Female	0,7	0,8	0,8	0,8	0,7	1,4	1,2	1,4	1,3	1,1
Additional training	Male	4,7	5,7	5,4	6,6	6,4	8,9	7,3	7,6	7,7	6,9
	Female	5,8	6,6	5,8	8,4	7,2	8,8	8,9	9,5	8,7	8
Economically inactive	Male	6,7	7,7	8,9	9,3	10	9,4	9,2	8,7	8,8	8,8
	Female	10,9	11,7	11,4	11,2	12,3	13	12,1	11,5	11,6	11,8
Total	Male	100	100	100	100	100	100	100	100	100	100
	Female	100	100	100	100	100	100	100	100	100	100

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 267.

At later stages of their professional career, the employment situation becomes more stable as depicted by Table E.44. For example, in 2008, 58,1% of male trainees (females: 53,0%) who successfully finished training four to six years ago were employed in a standard employment relationship. As a consequence, employment relationships with low and medium "precarity potential" as well as unemployment have decreased significantly (especially for males).

Table E.44 Labour market insertion four to six years after successfully completing training in the dual system, 2000-2008, in %

Employment type	Sex	Year									
		2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Integrated (standard) employment	Male	64,0	60,8	60,9	58,1	56,3	55,7	54,9	56,6	58,5	58,1
	Female	56,4	56,3	57,0	52,8	54,4	51,1	51,7	51,0	50,8	53,0
Employment with low "precarity potential"	Male	10,6	10,7	10,5	10,4	9,4	10,5	12,9	13,6	12,6	11,4
	Female	13,8	14,9	12,8	13,4	11,4	9,9	11,2	11,9	13,6	12,4
Employment with medium "precarity potential"	Male	3,0	3,2	2,6	2,2	1,6	2,1	2,4	2,5	2,7	2,5
	Female	1,8	2,3	2,1	1,8	2,3	2,7	3,3	3,0	3,6	2,6
Employment with high "precarity potential"	Male	0,3	0,1	0,2	0,4	0,2	0,4	0,5	0,5	0,4	0,3
	Female	3,0	2,4	3,0	2,8	2,9	3,2	3,2	3,3	2,9	3,0
Unemployed	Male	6,2	7,2	9,5	10,4	12,6	11,2	9,5	7,1	6,7	8,9
	Female	4,6	5,0	4,9	6,5	7,6	7,5	6,3	6,4	5,2	6,1
Self-employed	Male	2,5	3,8	3,4	3,1	3,6	3,8	4,1	3,5	3,8	3,6
	Female	1,6	1,3	1,1	1,3	1,5	1,7	2,3	2,3	2,1	1,8
Additional training	Male	5,9	6,1	5,1	6,9	6,6	7,1	7,0	7,6	7,3	6,7
	Female	4,2	3,5	4,0	5,2	5,1	6,1	6,4	6,5	6,2	5,4
Economically inactive	Male	7,5	8,2	7,9	8,5	9,7	9,2	8,7	8,7	8,0	8,5
	Female	14,5	14,4	15,1	16,1	15,0	17,8	15,5	15,7	15,5	15,6
Total	Male	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
	Female	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 268.

Furthermore, in the later years of transition from training to the world of employment, the influence of the business cycle on the relevance of different employment types is less pronounced. This becomes particularly obvious when looking at the development of standard employment relationships (which varies much less over time).

Drop-out related information.

In 2009, a total of 141.360 training contracts were dissolved early - before the planned end of the training; 61,8% of them were terminated within the first twelve months after the start of the dual vocational training.

Table E.45 Early dissolution of training contracts, 2009

Time of dissolution of training contract	absolute	in %
during the probation period	42.645	30,2
after 5 - 12 months	44.676	31,6
after 13 - 24 months	38.196	27,0
after 25 - 36 months	13.569	9,6
after more than 36 months	2.277	1,6
Total	**141.360**	**100,0**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 181.

Related to the total stock of relevant training contracts (concluded in 2007, 2008 or 2009), these figures indicate that in 2009 approx. 22,1% of valid training contracts were dissolved prematurely. For comparison, the university drop out rate in 2008 amounted to 24%. The termination rate is highest in the crafts sector (28,4%) and lowest in civil service/public administration (5,0%). In general, the termination rate increases with decreasing level of (highest attained) general school education. Thus, "Hauptschul"-graduates feature the highest termination rate (30,8%).

Differences between economic sectors in this regard are also due to differences in enterprise size: in smaller firms, tension between training personnel and trainees cannot easily be resolved by moving trainees within the company. In some cases, trainees find that the occu-

pation they are training for does not live up to their expectations. In other cases, trainees' performance during the probation period is not up to their companies' standards. In still other cases, trainees suffer health problems - such as allergies, for example.

Early termination of training contracts cannot be generally regarded (in all cases) as a substantial problem. Some terminations are due to changes of ownership or legal form in the company offering the training: in these cases, a new training contract has to be signed, even though the training itself has not changed. Furthermore, contract termination cannot be equated with total discontinuation of training. Many trainees terminate their contract because they decide to switch to another company or another training occupation. About half of all those whose contracts are terminated continue training in the dual system, under different conditions and terms. Over time, one can observe that the percentages of contracts that are terminated decrease as training places become scarce, and they grow as more training places become available: in the latter situation, trainees can more easily correct their choices of company or occupation (cp. Bundesministerium für Bildung und Forschung (2003), p. 15).

Operational Description of Apprenticeship Type Schemes (information to be focused on the most important apprenticeship type scheme existing in the country[227])

As already highlighted above, dual vocational training is by far the most important VET-scheme in Germany. For this reason, the following operational description focuses on the German dual system of apprenticeship training.

Training curricula and training/education contents/competence profiles

Germany has some 350 training occupations that require completion of formal vocational training and are state-recognised nationwide. For each training occupation a detailed training directive has to be enacted by the Federal Ministry of Economic Affairs and Technology (BMWi) or by the otherwise competent Federal Ministry, both in agreement with the Federal Ministry of Education and Research (BMBF). The training directives stipulate in binding terms what has to be learned for the particular occupation. These directives give trainers an overview of the content they have to teach their trainees during the course of their vocational training. Employers can obtain training directives from the local business chamber.

Training directives are intended to ensure that all trainees receive high-quality training that covers comparable content - regardless of where they undergo their training. Therefore, when a trainee later applies for a regular job in his training profession anywhere in Germany, the prospective employer will know exactly what the applicant learned during his training.

Training directives provide a general structure for training in recognised occupations. During training, each trainee is supposed to learn as much of the technical fundamentals of the targeted occupation as possible, then acquire relevant specialised knowledge and gather first occupational experience.

Training directives contain in particular:

- The correct designation of the recognised occupation,
- Duration of the training,
- Skills and knowledge - i.e., everything a trainee should learn as a minimum (training occupation profile),

[227] In principle defined as the one that gathers the largest share of students.

- General syllabus and timetable for the training (general/framework training plan) and
- Basic requirements that the (final) examination must satisfy.

The general training plan (as specified in the respective training directive) provides the basis for the formulation of the (in-company) initial vocational training plan which training employers are required to draw up for their trainees and which they submit to the competent body together with the individual trainee's training contract (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 19f.).

The requirements that training directives prescribe for learning content are minimum requirements which are binding on national level. In their own interest, enterprises can teach their trainees more - such as company-specific know-how or special skills. As it is not always possible to plan for three years in advance, firms that provide in-company vocational training may change their training plan for operational reasons in the course of a vocational training programme.

Role of enterprises in the apprenticeship type schemes and description of company based training

In general, it is up to each individual company to decide whether to train apprentices and provide in in-house vocational training or not. The owner of a firm also decides about the occupations he wants to provide training in and about the number of trainees he intends to recruit. The company owner signs a training contract with each trainee and ensures that the initial vocational training is conducted in accordance with government regulations and legislation. The contracting party can also be a legal entity such as a limited liability company or a stock company.

The party who signs the contract with the trainee is called the "training employer" ("Ausbildender"). The owner of the firm can assign the task of training to an employee - a trainer ("Ausbilder") - who is qualified to provide training. In small firms, the training employer and the trainer are usually the same person: the owner himself.

When providing training, training employers must observe a number of duties and rules. The most important of these are (cp. Section 14 (I) BBiG):

- They must ensure that their trainees achieve their training goals within the specified period of initial vocational training. In other words, they must ensure that their trainees acquire the vocational skills needed to pass the required examinations.
- They must provide free of charge all tools, materials and specialised literature as well as all other equipment and materials needed for the training.
- They must give trainees time off to attend class at part-time vocational school.
- They provide their trainees with record books and assist them in keeping them up to date. They inspect the record books on a regular basis and thus confirm that the individual learning steps have been carried out.
- They must ensure that trainees are not put at moral or physical risk.
- They may assign trainees only those tasks and work that belong to the particular initial vocational training programme. For example, it is not allowed to deploy trainees as general cleaning personnel. However, trainees must take care of their tools and keep their workplace clean (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 11f.).

As specified in Section 1 (III) BBiG, initial vocational training shall, through a systematic training programme, impart the vocational skills, knowledge and qualifications (vocational

competence) necessary to engage in skilled occupational activity in a changing world of work. Initial training shall also enable trainees to acquire the necessary occupational experience.

In this regard, competence is generally understood as the ability to act and make decisions on one's own. Trainees learn this during their training when they take on new tasks and solve them in a responsible way. Competence also applies to working in a team. More specifically, trainees should acquire vocational/occupational competence in the course of their apprenticeship. This includes technical/subject-specific competence, methodological competence and social competence. Trainers in the training company and teachers at part-time vocational school must teach and foster these types of competence:

- Technical competence: Trainees learn how to solve technical or subject-specific tasks and understand how processes are connected with one another. In other words, it is not enough to memorise technical information. Trainees must, first and foremost, be able to understand theory and apply it during their training.
- Methodological competence: Trainees learn within the framework provided by the company structure and existing work processes to plan, conduct and monitor activities on their own.
- Social competence: Trainees learn how to conduct themselves properly with co-workers, superiors and customers (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 38).

In today's world of work, employees are often confronted with technical innovations and rapid economic and societal change. For this reason, employees in most occupations must continue learning ("life-long learning"). It is important to acquire and refresh specialised knowledge - during one's vocational training and afterwards in one's working life. It is equally important to learn self-reliance, the ability to communicate, the ability to solve problems and effective methods for learning on one's own. As a consequence, "learning how to learn" is a very important goal during vocational training.

During their vocational training, young people should learn knowledge, skills and behaviour:

- They must be able to acquire, understand and relate *knowledge*. For example, after accident prevention rules have been explained to a trainee, he should be able to explain them to others (cognitive learning).
- *Skills* such as using a computer keyboard or operating a machine also have to be learned.
- *Behaviour* - in other words, how to work well with others or how to answer a customer's question in a friendly way - must also be learned through practice.

Skills, knowledge and behaviour are taught during vocational training with the help of training methods. Well-known methods are:

- The *Four-Step Method*: This method consists of the learning steps: (1) The trainee is prepared/instructed (theoretically). (2) The trainer demonstrates and explains. (3) The trainee repeats and explains what the trainer has demonstrated. (4) The trainee practises on his own (and is then assessed by the trainer).
- *Teaching dialogues* take place in all areas of vocational training. The trainer starts the dialogue and explains the topic he considers important for the trainee's training. The trainee can then ask questions to help him understand things that he has had problems with to date. Following this, the trainer summarises what has been learned and the trainee can supplement the trainer's summary.
- In the case of *project work*, the individual trainee has to solve a complex assignment on his own. Examples of this are making an anvil or generating a computer file for a cus-

tomer. Here, the trainer simply gives an assignment. The trainee is free to choose how he will solve it. Project work is often conducted in groups.

- The *guidance-text method*. When this method is used, the individual trainee has to solve a work assignment with the help of information - a so-called guidance text - he has received. The idea behind guidance texts is to prompt the learner through so-called guidance questions to act autonomously. This method encompasses six steps: inform - plan - decide - perform - check - assess. It is well-suited to group work.

Trainers can deepen their knowledge about teaching, learning and learning methods in trainer courses that Chambers of Industry and Commerce, Chambers of Skilled Crafts and other educational institutions offer (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 48f.).

Four objectives should be accomplished upon completing vocational training in the dual system:

- The trainee has acquired a comprehensive (professional) basic education. In other words, the trainee knows all the fundamentals of the chosen occupation.
- The trainee has a good command of the technical knowledge and skills that are needed in order to practise the particular occupation.
- The trainee has acquired occupational experience during his training.
- The trainee is able to work as a skilled employee in his chosen occupation.

In the dual system, the vocational school is an autonomous place of learning. Its task is to provide basic and specialised vocational training and to extend previously acquired general education. According to a decision by the Standing Conference of Ministers for Education and Cultural Affairs (KMK), vocational schools must provide at least twelve hours teaching a week, normally eight hours for vocational subjects and four hours to general subjects such as German, social studies/business studies, religious education and sport. Appropriate account is also to be taken of foreign language teaching, depending on its importance to the training occupation concerned. Vocational schools decide on how to allocate teaching in consultation with training enterprises, the schools inspectorate and the competent bodies. The aim of the various organisational forms is to ensure that trainees spend as much time in the enterprise as possible while, at the same time, allocating teaching in a way that is tenable in terms of both pedagogy and the psychology of learning (cp. CEDEFOP (2010), p. 41).

Concerning the selection of companies, in principle, companies are free to offer vocational education. However, in order to actually recruit and train apprentices within the dual system, enterprises and trainers must have been examined and authorised by the competent bodies.

Sections 27 until 33 BBiG regulate the suitability of training premises and training staff. According to Section 27 (I) BBiG, trainees may only be recruited and given initial training if (1) the nature and equipment of the training premises are suitable for initial training; and (2) the ratio between the number of trainees and the number of training work places or the number of skilled regular employees is appropriate (unless such other ratio is not detrimental to initial training).

Training premises where the necessary vocational skills, knowledge and qualifications cannot be imparted in their entirety shall be deemed to be suitable if these can be imparted through initial training measures taking place outside the training premises (e.g. by way of co-operation with other enterprises or with training centres/schools --> joint authorisation).

According to Section 28 (I) BBIG, trainees may only be *recruited* by training employers who have the necessary personal qualifications. Trainees may only be *trained* by persons who have the necessary personal and technical qualifications.

The competent body (as specified in Sections 71 until 75 BBiG; e.g. the local craft chamber, chamber of commerce and industry, other business chamber) is in charge of examining that training premises are suitable and that trainers have the necessary personal and technical qualifications.
For the period 2000 until 2009, Table E.46 shows that between 52 % and 57 % of all establishments (local units) are authorised to recruit and train apprentices. Only a relatively small share of establishments (2% to 4%) is entitled to train apprentices jointly with other enterprises or training centres/schools.

Table E.46 Establishments' (local units') authorisation to train apprentices within the dual system, 2000-2009, in %

Employment size	IVET authorisation	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1-9 employees	no authorisation	47	52	49	46	50	48	48	49	49	49
	joint authorisation	1	3	3	4	3	3	3	3	3	3
	authorisation	52	46	48	51	47	49	50	48	49	49
10-49 employees	no authorisation	30	30	29	27	27	28	29	28	25	28
	joint authorisation	4	5	5	6	5	6	5	5	5	4
	authorisation	68	66	67	68	69	68	68	69	71	70
50-499 employees	no authorisation	18	16	16	14	14	14	14	14	13	13
	joint authorisation	8	8	8	8	7	8	9	9	8	8
	authorisation	77	79	78	81	81	81	80	80	82	82
>= 500 employees	no authorisation	6	4	5	4	3	3	3	3	4	3
	joint authorisation	11	11	11	10	10	11	13	11	11	9
	authorisation	88	91	88	90	91	92	91	93	92	93
Total	no authorisation	41	45	43	40	43	42	42	42	41	42
	joint authorisation	2	4	4	5	3	4	4	4	4	3
	authorisation	57	52	54	56	54	55	55	55	56	56

Source: Institut für Arbeitsmarkt- und Berufsforschung (IAB) (2010), p. 19.

An analysis by employment size reveals that the share of authorised establishments strongly increases with establishment size. While in 2009 only 49% of micro-establishments with 1-9 employees were authorised to engage in apprenticeship training, this held true for almost all large establishments with 500 and more employees (93%).

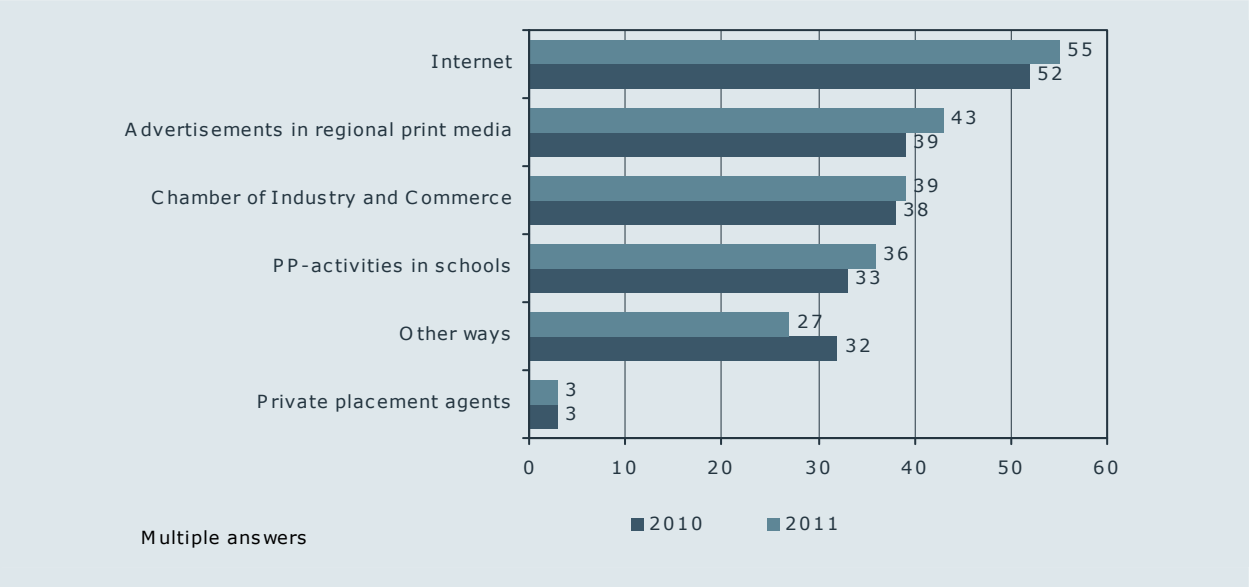
Authorised firms are free to use different ways to recruit apprentices and conclude a training contract with them. The most frequently used way is to inform the employment offices about vacant training positions and to ask the employment office to find interested and qualified applicants.

An online survey carried out in February 2011 among 14.299 German manufacturing and service enterprises showed that 61% of the interviewed firms always inform the employment offices of vacant training positions. Compared to 2007, this represents a significant increase of nine percentage points. This development can be explained by the fact that training companies try to make a more comprehensive use of all available measures to recruit new apprentices as the number of school leavers is strongly decreasing and as a consequence competition among enterprises to recruit trainees becomes more fierce.

Another 20% of interviewed enterprises inform the employment offices only from time to time (but not regularly), while 19% never co-operate with the employment offices in order to find suitable new apprentices for their vacancies (cp. Deutscher Industrie- und Handelskammertag (2011), p. 26).

The following graph shows which other ways - besides co-operation with the employment offices - enterprises use to recruit new apprentices.

Graph E.11 Total number of apprenticeship professions by time duration, 2001-2010

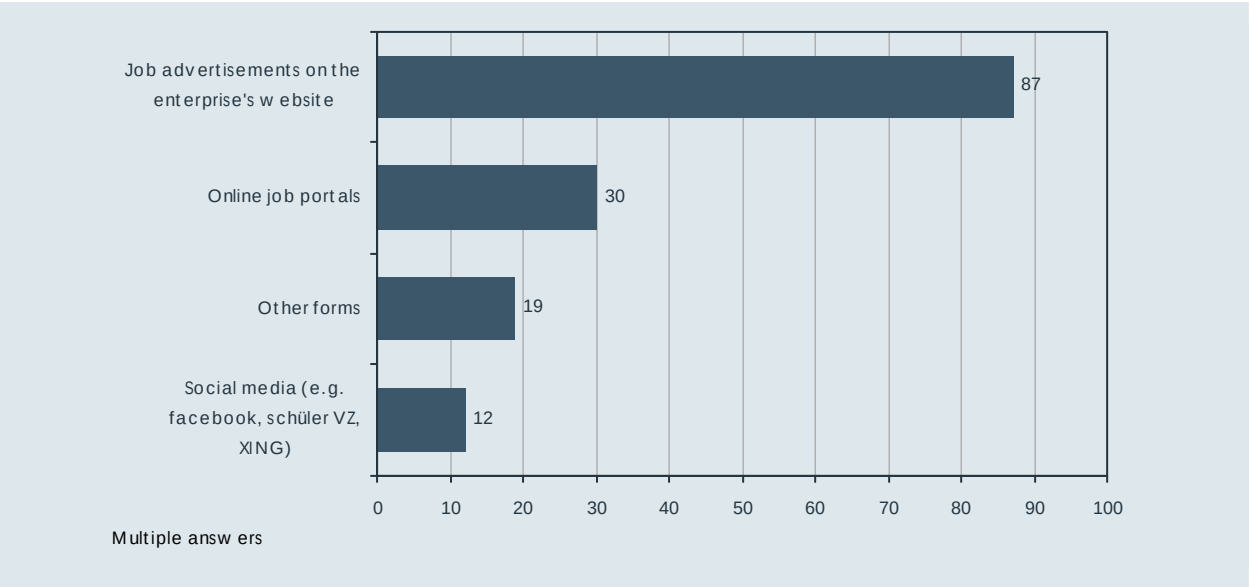


Source: Deutscher Industrie- und Handelskammertag (DIHK) (2011), p. 27.

More than half of all enterprises use the internet to fill vacant training positions. Graph E.12 shows more in detail how the internet is used.

Graph E.12 Forms of internet use to recruit new apprentices, 2011

in %



Source: Deutscher Industrie- und Handelskammertag (DIHK) (2011), p. 28.

A representative survey carried out in spring 2009 by Institut der deutschen Wirtschaft Köln Consult GmbH (2009) among 1.700 answering enterprises revealed a slightly lower use of employment offices in the recruitment process of new apprentices. According to this survey, 48% of enterprises register vacant training positions with the employment office. Enterprises in manufacturing and construction co-operate with employment offices in an above-

average extent while companies in transport and communication in a below-average extent. This partly reflects the different use of new media (such as IVET-platforms and portals on the internet) by different economic sectors.

Furthermore, it is shown that medium-sized enterprises with an annual turnover between 1 and 50 million EUR make the highest use of employment offices. For small enterprises, personal contacts (such as personal recommendations made by already employed staff members) are more important. Moreover, sophisticated formal application procedures (for only a small number of vacant training positions) are usually too costly and time-consuming for small firms. Large enterprises, on the other hand, have often established highly professional application and recruitment procedures. These firms are not only well known among the target groups but they also make professional use of the new media (e.g. application platforms on their company website). For these reasons, registering open training positions with employment offices is often neither necessary nor useful for large enterprises.

As on the regular labour market, enterprises are free to select and recruit apprentices in the dual system of vocational training.

With regard to main obligations derived for participating enterprises, first of all it must be stressed that the training employer must draw up an in-company training plan. This plan outlines what the trainee has to learn and the period of time in which the trainee should learn it. This allows the owner of the firm and the trainer to plan when they can incorporate the individual learning steps into the company's operations.

The company providing the training then forwards the training plan together with the training contract to the competent body, usually the Chamber of Industry and Commerce or the Chamber of Skilled Crafts. This body supervises the training and ensures that the requirements are fulfilled. It also conducts the examinations that trainees have to pass during and at the end of their training (cp. for the above mentioned: Bundesinstitut für Berufsbildung (2010), p. 20f.).

A company that provides in-house initial vocational training must satisfy certain requirements regarding the suitability of the training premises (cp. above). These requirements revolve primarily around the company's equipment. For each recognised training occupation, there is a minimum requirement with regard to equipment and furnishings that must be available for training purposes: in other words, rooms, machines, equipment and tools. Trainees should be able to learn in their training company everything that they will need for their future working life. It is important that trainees are able to work with up-to-date technical equipment and aids. However, it does not have to be state-of-the-art technology.

When a training company is not able to teach a few segments of the required content (set forth in the particular training directives), it can nonetheless provide in-house vocational training - with the help of an inter-company vocational training centre or in co-operation with other companies.

Furthermore, a training company must have a sufficient number of qualified personnel if the success of the training it provides is to be ensured.

The competent body - in most cases the business chamber that is (locally) responsible for the particular company (as a rule, the local Chamber of Industry and Commerce or the Chamber of Skilled Crafts) - determines whether a firm is qualified to provide in-company vocational training (cp. for the above mentioned: Bundesinstitut für Berufsbildung (2010), p. 18.).

With regard to the characterisation of participating enterprises, as shown in Table E.47 Participation of establishments in dual training, 2000-2009, in %, 31% of all establishments (local units) were participating in dual training in 2009. Another 27% was offi-

cially authorised to train but (at least in that particular year) did not make use of this right. Some 41% of establishments were not authorised to engage in training and thus did not participate either. There is a clear positive relation between the establishments' employment size and their involvement in training. While only 21% of micro-establishments with 1-9 employees were training apprentices in 2009, this held true for almost all large establishments with 500 and more employees (95%).

Table E.47 Participation of establishments in dual training, 2000-2009, in %

Nº of employees	IVET authorisation	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1-9 employees	Active participation	20	21	22	20	21	22	21	21	22	21
	No participation in spite of authorisation	33	28	29	34	29	30	31	30	30	30
	No authorisation	47	52	49	46	50	48	48	49	49	49
10-49 employees	Active participation	49	52	50	49	52	51	50	50	53	52
	No participation in spite of authorisation	21	18	21	24	21	21	21	22	22	20
	No authorisation	30	30	29	27	27	28	29	28	25	28
50-499 employees	Active participation	69	73	74	73	75	75	75	75	75	76
	No participation in spite of authorisation	13	11	11	12	10	11	11	11	11	11
	No authorisation	18	16	16	14	14	14	14	14	13	13
>= 500 employees	Active participation	87	91	92	92	92	92	91	91	92	95
	No participation in spite of authorisation	7	5	4	4	5	5	6	5	4	3
	No authorisation	6	4	5	4	3	3	3	4	4	3
Total	Active participation	29	30	30	29	30	31	30	31	32	31
	No participation in spite of authorisation	30	25	27	31	26	27	28	27	27	27
	No authorisation	41	46	43	40	43	42	42	43	41	41

Source: Institut für Arbeitsmarkt- und Berufsforschung (IAB) (2010), p. 24.

Specific role of the company trainer

Section 28 (I) BBiG specifies that trainers must have the necessary personal and technical qualifications.

Every individual is in principle assumed to possess the required personal qualifications unless they have shown to lack them. Consequently, according to Section 29 BBiG it is not allowed for a trainer to have come into conflict with the law as a result of certain offences or to have repeatedly and/or seriously violated the Vocational Training Act (BBiG) or related provisions.

According to Section 30 BBiG, trainers must be professionally qualified and must have appropriate work experience in their occupation (cp. Bundesinstitut für Berufsbildung (BIBB) (2010), p. 13f.). They must have a good command of the occupational skills that they want to teach to young people. It is normally assumed that a trainer who has earned a corresponding recognised vocational qualification or a degree from a university or university of applied sciences is professionally qualified. Furthermore, an individual can be deemed to be professionally qualified even when he has no recognised vocational qualification. As a rule, the individual in such cases has to prove that he has at least six years of relevant occupational experience.

In addition, Section 30 BBiG stipulates further that a trainer must understand something about planning and conducting vocational training and dealing with young people. This area is called educational/socio-pedagogical qualification for vocational training. A trainer can earn this qualification at a trainer seminar and, after passing an exam, receive a corre-

sponding certificate from the Chamber of Industry and Commerce or Chamber of Skilled Crafts.

A special rule applies to all those people who want to provide vocational training for a skilled craft or trade that is listed in Annex A of the Crafts Code ("Handwerksordnung", HwO): In general, they must have earned a qualification as a master craftsman. The trainer aptitude exam is part of the master craftsman examination. Consequently, a master craftsman in a skilled craft may provide vocational training without having to sit any further examination.

Large companies often employ full-time trainers who fully concentrate on providing vocational training in their firm. They are often responsible for larger groups of trainees. In the majority of cases (and especially in smaller enterprises), however, employees have mostly training duties in addition to their primary job tasks. These employees are called part-time trainers. Regardless of their professional duties, trainers are always a reference person for trainees. In other words, a trainer is the point of contact for a trainee's technical questions and for problems big and small. In this sense, trainers can be said to be experts for technical teaching and personal coaching.

Much of the training content is taught by other (additional) specialists in the particular company. These persons are called assistant trainers ("Ausbildungsbeauftragte"). They too must have the requisite knowledge and expertise and know-how to teach the profession to young people. Even though many people may share responsibility for providing vocational training, the trainer has the overall responsibility.

As specified in Sections 71 until 75 BBiG, there is a competent body/authority for every vocational training programme within the dual system. For most recognised occupations, this is the relevant (local) Chamber of Industry and Commerce or Chamber of Skilled Crafts. These bodies examine and guarantee that only those persons provide in-company vocational training who are properly qualified - in other words, who have earned the abovementioned qualifications (cp. Bundesinstitut für Berufsbildung (BIBB) (2010), p. 14).

It is the Trainer Aptitude Regulation ("Ausbilder-Eignungsverordnung", AEVO) which requires trainers to pass a special trainer aptitude examination (conducted by a competent body). The examination assesses the most important skills and competences, individuals must have to be authorised to act as a trainer. The required competences are outlined in four areas of activity which follow the structure of the apprenticeship training:

1. Assessment of vocational training requirements and planning of training,
2. Preparing training and participating in trainee recruitment,
3. Conducting training and
4. Concluding training.

The trainer aptitude examination must include assignments from day-to-day practice in all four areas of activity. The examination comprises a written and a practical test. The practical test consists of either a presentation or the practical demonstration of a training situation. Furthermore, the individual is also examined in a technical discussion. Trainers who pass the examination receive a certificate.

Trainer seminars (also known as "training for trainers") are offered to teach the most important skills and competences that trainers need and to prepare them for the trainer aptitude examination. The content of the trainer seminars and the examinations are detailed in a "framework plan" that is appended to the AEVO. The seminars are usually conducted by the competent local business chambers. A trainer seminar generally encompasses 115 hours of instruction, while the exact time schedule often varies from region to region. Seminars might be offered as all-day, weekend or evening courses.

The Trainer Aptitude Regulation was suspended on a test basis from 2003 until 2009. The main aim was to evaluate if the suspension would induce more companies (especially start-ups and small enterprises) to start and engage in vocational training. As the suspension failed to bring about a substantial positive impact, it was reinstated on 1 August 2009 (even with the backing of the business community).

Under the current AEVO-regulation all those individuals who worked as a trainer during the time period 2003-2009 remain exempt from the requirement to submit a certificate which confirms that they had passed a trainer aptitude examination (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 15f.).

In 2009, though the AEVO was only reinstated on 1 August 2009, a total of 30.164 persons (66,6% male, 33,4% female) participated in trainer aptitude examinations. 27.929 persons (66,4% male, 33,6% female) passed the exam which equals a success rate of 92,6%. 54,9% of all newly approved trainers work in industry and trade, 40,3% in the crafts sector and 4,8% in agriculture, public services or domestic services/housekeeping. In 2009, some further 30.232 persons successfully passed their master craftsman examination which also includes a trainer aptitude exam and a therefore also authorised to train apprentices (cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 199f.).

According to data provided by the German Association of Chambers of Industry and Commerce (DIHK), in the period from 1 January until 31 July 2009 some 36.239 persons had been registered as trainers in the training fields of industry and trade without passing a trainer aptitude exam (due to the suspended AEVO-legislation).

In 2009, a total number of 676.428 persons (76,6% male, 23,4% female) were registered as approved trainers with the competent bodies.

Table E.48 Number of trainers by training fields, 2009

Training field	Number of approved trainers	
	absolute	in %
Industry and trade	288.083	42,6
Crafts	245.426	36,3
Agriculture	22.016	3,3
Public services	17.730	2,6
Liberal professions	100.123	14,8
Domestic services/housekeeping	3.050	0,5
Total	**676.428**	**100,0**

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 200.

The age group distribution was as follows:

Table E.49 Age distribution of approved trainers, 2009

Age group	Number of approved trainers	
	absolute	in %
29 years and younger	31.349	4,6
30-39 years	128.277	19,0
40-49 years	267.107	39,5
50 years and older	249.695	36,9
Total	**676.428**	**100,0**

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 201.

Description of school based training

In Germany's dual vocational training system, part-time vocational schools are the partners to the firms providing in-company training. The company providing the vocational training is required to register its trainees at a part-time vocational school, to give them time off for school and to monitor that they attend class. Trainees learn the theoretical knowledge required for their occupation at a part-time vocational school. These schools can also provide practical training that supplements in-company vocational training. For example, a trainee can be shown how machines work in a training workshop at school. In addition, part-time vocational schools provide general education by teaching subjects such as German, politics, religion and physical education. English is also taught for some occupations.

When a vocational school has enough trainees learning the same occupation, it puts them together into a specialised class. If this is not possible, schools try to put trainees who learn similar recognised occupations together in one class. Trainees with entirely different occupations are placed in the same class only when there is no other choice. To avoid such cases - especially involving less common occupations - classes are often created at regional (Land) or even at national level and the trainees have to travel to another city for block instruction. Classes can also be set up especially for large enterprises that have a large number of trainees at a single location (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 30f.).

As a general rule, trainees attend part-time vocational school on average one or two days per week. Some vocational schools, however, offer a block of instruction that lasts several weeks and encompasses the entire period of schooling to be completed at vocational school. During the period of instruction at part-time vocational school, trainees must do their homework outside their daily training and classroom hours.

Role of students in the apprenticeship type schemes

Students can get access to the enterprises on their own or by making use of various support services such as local employment offices, web portals, advertisements in newspapers etc.
Youths under the age of 18 may undergo company-based vocational training only for those approx. 350 training occupations that are state-recognised under the Vocational Training Act (BBiG) or the Crafts Code (HwO).

As a rule, pupils apply for a training place during their last year in secondary school. These applicants are therefore generally between 16 and 19 years of age. Some youths need longer to reach a decision or to develop the abilities required for in-company vocational training. For this reason, there are always a number of young people in their early 20s who apply for a training place.

As agreed by all participating parties in the National Pact for Training and Junior Skilled Workers, every youth willing and capable to undergo vocational training should be given a chance. So, although school-leaving certificates and marks are an important basis for making a decision, employers are also asked to see for themselves whether an applicant has the necessary motivation and abilities (despite weaker formal qualifications).

When providing vocational training, enterprises must comply with the Youth Employment Protection Act ("Jugendarbeitsschutzgesetz", JArbSchG). This law prescribes, for example, the maximum number of working hours and the time that work may start and end. It also contains special provisions for the protection of minors below the age of 18.

Further important rights of students are specified in the training contract concluded with the training employer (cp. below chapter 2.3.6.).

Besides being taught knowledge, young people who are undergoing vocational training need flanking support. Trainers foster not only their trainees' vocational progress but also their personal development.

If a company has at least five employees who are under the age of 18 or who are trainees under the age of 25, these young people may form a youth and trainee delegation and represent their interests in the enterprise through this delegation. These provisions are only valid for enterprises where a works council has been established.

Trainees are expected to play an active role in their own training. This means they should strive to acquire all the skills and knowledge which are needed to successfully complete their training. Trainees do not however have to perform any tasks that do not serve the purpose of their training or exceed their physical abilities. For example, it is permissible that trainee office workers operate a photocopier but they shouldn't spend the entire day making photocopies.

As learners, trainees have a number of obligations and rules they must observe. These include:

- Following the instructions of the training employer and the trainer in so far as the instructions were issued in connection with the trainee's vocational training,
- Attending class at part-time vocational school (and - if applicable - attending courses held at inter-company vocational training centres),
- Maintaining a record book which contains details about what the individual has learned and accomplished,
- Not talking about trade or business secrets with enterprise-external persons.

During their training, trainees must pass an interim examination as specified in the respective training directive. The interim examination is held by the competent body (business chamber) which also invites trainees to the examination. The interim examination allows the training company and the part-time vocational school to evaluate the individual trainee's level of knowledge and understanding. The results are taken into consideration for the training that is yet to come.

The final examination comes at the end of the vocational training. It is also conducted by the competent body. Those trainees can participate in the final examination who have completed their period of training, passed the interim examination and kept their record book up to date.

The final examination usually consists of a written exam as well as of a practical and/or an oral section. The examination is intended to determine whether the candidate has the necessary skills and knowledge and also whether he knows the content of the instruction he received at the part-time vocational school well enough so that he can actually practise the occupation he has learned. When the trainee passes the exam, the chamber issues him a certificate which officially approves that the apprentice has successfully terminated the vocational training in his training occupation. In case he does not pass the exam, he may sit it two more times. The period of training is then extended upon application from the trainee until the next exam date, but only for a maximum of one additional year (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 24f. and 52f.).

Some stakeholders advocate the introduction of extended final examinations (EFE, "gestreckte Abschlussprüfung"). Part 1 of this examination would replace the current interim examination which is not taken into consideration when calculating the results of the final examination. By contrast, part 1 of the EFE might account for 20% to 40% of the overall grade of the final exam.

Existence/non existence of contractual relationships between enterprises/students/VET schools

As specified in Sections 10 to 12 of the Vocational Training Act (BBiG), the training employer and the future trainee must conclude a training contract before training begins. The in-company vocational training contract is a fixed-term contract. The training contract ends when training is completed. There is no additional contractual relationship between the apprenticeship student and the part-time vocational school.

The rationale of these contractual relationships is comparable to similar agreements on the regular labour market. In addition, the training contract provides the trainee with the right to receive training according to the nationally defined standards (training directives).

According to Section 11 (I) BBiG, the contract document shall at least specify the following items:

- the nature, syllabus, timetable and purpose of the initial vocational training, and in particular the form of occupational activity for which training is to be provided,
- the start and duration of training,
- any training measures taking place outside the training premises,
- the length of the normal daily hours of training,
- the length of the probation period,
- the payment and amount of a training allowance (remuneration),
- the amount of holiday leave, the trainee is entitled to,
- the conditions under which the training contract may be terminated,
- a general reference to collective agreements, company agreements or service agreements applicable to the training relationship.

The document shall be signed by the training employers, the trainees and the trainees' statutory representatives. Training employers shall provide the trainees and their statutory representatives with a copy of the signed document without delay.

As mentioned above, Sections 10 to 12 of the Vocational Training Act (BBiG) contain some specific legal regulations with regard to the type and contents of the contractual relationship between training employer and trainee.

In addition, the other legal provisions and principles governing employment contracts in general (i.e. besides BBiG) shall also apply to initial training contracts, insofar as they are not incompatible with the nature and purpose of the training contract or with the specific provisions of the BBiG.

Concerning remuneration, and according to Section 17 BBiG, training employers must pay trainees an appropriate training allowance. The amount has to be assessed in accordance with the trainees' age and must increase at least once a year as the initial vocational training progresses. The training allowance should noticeably contribute to cover the costs of living of the trainee and should represent a remuneration for the productive work undertaken by the trainee for the enterprise.

For most economic sectors/branches the actual amount of training allowances is fixed by the social partners (employer associations and trade unions) in collective wage agreements. Thereby, training allowances differ considerably by economic sectors.

Enterprises that are bound by collective bargaining have to observe the agreed training allowances. Thus, they are not able to pay lower training allowances, while the payment of

higher allowances is still possible. Firms which do not participate in collective wage bargaining can undercut the collectively agreed training wages by a maximum of currently 20%. Nonetheless, most of these unbound firms voluntarily pay the standard allowances.

In 2010, the average monthly *gross* training allowances (i.e. before the deduction of taxes and social security contributions) amounted to 678 EUR; in Western Germany to 688 EUR and in Eastern Germany to 612 EUR. Thereby, the highest allowances are paid to trainees in inland navigation/shipping (nationwide: 978 EUR), construction industry (West: 916 EUR, East: 725 EUR), mechatronics (West: 843 EUR, East: 823 EUR) and in the insurance industry (nationwide: 837 EUR). On the other end, trainees learning the occupation of a painter (West: 421 EUR, East: 388 EUR), hairdresser (West: 451 EUR, East: 269 EUR) and florist (West: 460 EUR, East: 312 EUR) receive the lowest training allowances.

The size distribution of training allowances shows that in 2009, 27% of all trainees in Western Germany received a training allowance of more than 800 EUR, approx. two thirds (67%) of 500 EUR to 799 EUR and 6% of less than 500 EUR (cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 250-252).

Financing-related information

In Germany, financing of vocational training is based on a system of mixed financing with a variety of different backers, both private and public.

In general, *company-based* training is completely financed by the training enterprises themselves. For many companies dual vocational training is a cost-effective instrument for ensuring a reservoir of young skilled labour. The fundamental rule is: The more practical and task-oriented the training is, the greater the direct benefits will be to the enterprise and the trainee.

According to a representative study conducted by the Federal Institute for Vocational Education and Training in 2007, the gross costs for a training place averaged 15.288 EUR per year in Germany. This figure contains all costs, such as the training allowance, statutory and collectively-agreed social benefits, voluntary benefits, the costs for the trainer and the training place and examination fees. At 9.490 EUR, labour costs for the trainee account for the largest portion of total gross costs (62,1%). The actual level of the training allowance varies from occupation to occupation and is frequently set by collective wage agreements (cp. above chapter 2.3.6) (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 260).

Table E.50 Training enterprises' gross costs per training place, annual average, 2007

Cost type	in EUR	in %
Labour costs for the trainee	9.490	62,1
Labour costs for the trainer(s)	3.292	21,5
Equipment and material costs	691	4,5
Other costs	1.814	11,9
Total gross costs	**15.288**	**100,0**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 260.

Inter-company vocational training centres (cp. below chapter 4.2), in which supplementary instruction of trainees takes place outside of and on behalf of SMEs, are funded by mixed financing - subsidies from the Federal Employment Agency, central government (capital grants from BMBF resources) and the Länder are added to the resources of the body responsible.

The financing of collaborative training structures (cp. below chapter 4.2) depends on their organisational form, but usually training costs are distributed among the participating companies.

The Federal Employment Agency (BA) provides trainees under certain preconditions with non-repayable monthly grants in the form of vocational training assistance ("Berufsausbildungsbeihilfe", BAB; cp. below chapter 4.2).

The *school-based* element of dual vocational training is financed by the respective Federal State ("Land") and by public funds of local authorities. The "Länder" bear the costs of *internal* school affairs (e.g. supervision of schools, implementing curricula, teacher training, teachers' pay), while local authorities are responsible for financing *external* school affairs (e.g. construction, maintenance and renovation of school buildings, ongoing management, procurement of teaching and learning resources).

Training in a full-time vocational school outside the dual system and special measures to promote VET, such as Land programmes to create additional training places, are completely financed out of Land budgets.

There is very large variety of support measures and programmes in the field of vocational education and training in Germany, designed and implemented both by public institutions on national, Land- and municipal level. An overview (in German language) can be found in an annex to BIBB's data report 2011 (cp.: http://datenreport.bibb.de/Tabellle_D1-1_Internet_Zusammenfassende_Darstellung.pdf and http://datenreport.bibb.de/Dokumentation_der_Bundes-_und_Laenderprogramme.pdf).

Among the large number of support measures only relatively few directly provide financial support and incentives for employers to take students in company-based training periods. The following ones rank among the most important:

- In 2006, the Federal Ministry of Education and Research (BMBF) launched the programme "JOBSTARTER - Für die Zukunft ausbilden" ("Training for the future") which promotes innovation and structural development in vocational education and training. The programme already supplies funding for more than 280 innovative projects which help to create additional training places in the regions and support companies which either have no previous experience with training or which have grown weary of providing training (cp. below chapter 4.2).

The Federal Employment Agency (BA) assists companies which recruit apprentices with special needs. Among others they can benefit from the following measures:

- Training Bonus ("Ausbildungsbonus"): The bonus applies to companies which take on apprentices of other companies which became insolvent or had to be closed. The (total) bonus generally amounts to 4.000 EUR, 5.000 EUR or 6.000 EUR depending on the individual training allowance and is reduced proportionately for any training time already completed. Until the end of 2010, a bonus was also paid if enterprises recruited young people who had been searching for a training place for longer than one year ("Altbewerber"). In 2011, the BA decides whether this programme component will be offered again.
- Training Grant ("Ausbildungszuschuss"): the BA subsidises vocational training and rehabilitation of disabled persons.
- Assistance for young people (with learning difficulties, social disadvantages etc.) in danger of dropping out of training ("Ausbildungsbegleitende Hilfen", abH, cp. below chapter 4.2): The local employment agency decides whether to grant training assistance in the individual case. It also bears the costs of the particular measure.

- Training management and socio-pedagogical coaching ("Ausbildungsmanagement und sozialpädagogische Begleitung"): Companies can receive assistance if they decide to train young people with learning disabilities or social disadvantages. Assistance is given by a specialised educational service provider and comprises administrative and organisational assistance as well as accompanying coaching.

The Bundesinstitut für Berufsbildung ((BIBB) (2011), p. 256-261) calculates the total costs of vocational education borne by enterprises and public institutions in Germany. The calculations are partly based on estimations.

Based on a representative study conducted in 2007, total expenditures on vocational training by training enterprises (both within the private business sector and in the public sector) were estimated to amount to approx. 23,8 billion EUR (gross amount). Adjusting for training revenues brought about by the productive work of the trainees, net training costs total approx. 5,6 billion EUR. Compared to the last survey (carried out in 2000), net training costs in the dual system have strongly decreased because trainees are employed more productively by the training enterprises.

In 2009, (preliminary) actual public spending of Federal Ministries, the "Länder" and the Federal Employment Agency for vocational education amounted to 7,7 billion EUR (2008: 7,5 billion EUR). For the year 2010, an expected amount of 7,8 billion EUR was budgeted (--> actual (preliminary) spending not yet specified). Between 2001 and 2009 public expenditure rose by nominally 12,2% (nominally per capita approx. 8%). In real terms (adjusted by the consumer price index), total public spending decreased slightly by -0,9% (per capita: -4,6%). The single most important component in all years is spending by the Länder on part-time vocational schools; amounting to 3,13 billion EUR in 2009, followed by spending on full-time vocational schools ("Berufsfachschulen", approx. 2,25 billion EUR) and on other schools in VET (1,35 billion EUR). The remaining approx. 1 billion EUR is mostly spent on various public support measures in the area of vocational education and training.

Quality assurance mechanisms

Training companies sign contracts with apprentices under private law and train them in line with the binding provisions of the training directives which guarantee a high national standard. For each of the currently 348 officially recognised training occupations, a specific nationally-defined training directive has been enacted that strictly regulates the (minimum) content of the vocational training for that particular occupation (cp. above chapter 2.3.1). Training directives are thus intended to ensure that all trainees receive high-quality training that covers comparable content - regardless of where they undergo their training. This is indeed a key asset of the German IVET-system. In addition, the Steering Committee of the Federal Institute for Vocational Education and Training (BIBB) - which is composed by an equal representation of all relevant stakeholders - issues specific recommendations for the implementation of the training directives.

The competent bodies (mostly the business chambers) monitor the content and quality of training in order to ensure the comparability of vocational qualifications on the national labour market. Training directives are developed jointly by representatives of enterprises and trade unions in an institutional framework under the guidance of state actors. A co-operative climate prevails and the role of the state is relegated to that of a supportive arbiter.

In general, the dual system is characterised by an intricate web of checks and balances at the national, Land, municipal, and company levels that ensures that the more short-term and firm-specific needs of employers are aligned with broader educational and economic goals.

As specified in Section 76 of the Vocational Training Act (BBiG), the competent bodies are responsible for supervising the vocational training process and validating the examinations.

The chambers must provide support in the form of advice to the persons involved in vocational training. To this end, they have to appoint training advisors (cp. Section 76 BBiG). Therefore, one important task of the chambers is advising training employers on all problems connected with vocational training, e.g. the training occupations to be considered, how training should be structured, the use of training aids and educational, psychological and legal questions. The chambers also give advice to trainees.

As stated above in chapter 2.3.2, any employer wishing to engage in vocational training must fulfil certain preconditions as regards his suitability for this task. In addition, the training employer and any training officers must have specific personal, professional and teaching qualifications. The chambers ascertain before the start of training whether these qualifications are being held. In addition, the competent bodies also analyse all concluded training contracts (together with the company-specific training plan) and enter them into their vocational training register. The training advisors must ensure that firms comply with the training regulations. In the event that a company does not carry out the training according to the core curriculum prescribed in the training directives, it is the advisor's task to request that the firm corrects the situation. In an extreme case where the problem persists, the chamber would be obliged to cancel the existing contracts and stop the firm from signing new apprenticeship contracts (cp. Tremblay/Le Bot (2003), p. 16).

Section 77 BBiG prescribes that the competent bodies are required to set up special vocational training committees ("Berufsbildungsausschüsse") composed by six delegates from employers and six from employees (trade union members). In addition, also six teachers representing vocational schools are members of the vocational training committees, though only in an advisory capacity (without voting rights). The members of the vocational training committee serve in an honorary capacity. Insofar as they receive no compensation from any other source, they shall be paid appropriate compensation for out-of-pocket expenses and loss of time, at a rate to be fixed by the competent body with the approval of the supreme Land authority. The committees are responsible for assessing a firm's ability to provide training, that is, whether or not it has the required equipment and trainers. In general, according to Section 79 BBiG, the vocational training committee shall be informed of and consulted on all important matters connected with vocational training. Within the scope of its tasks, it shall endeavour to steadily improve the quality of vocational training (e.g. by analysing the results of final examinations, drop-out rates etc.).

Similarly, the competent body establishes boards of examiners ("Prüfungsausschüsse") to administer the final examinations of trainees (Section 39 BBiG). Each board of examiners must consist of at least three members. The members must be experts in the fields covered by the examination and must be suitable persons to act as examiners. The membership of the board of examiners must include equal numbers of employers' and employees' representatives and at least one vocational school teacher. At least two thirds of the total membership must consist of employers' and employees' representatives. Members of the board of examiners also serve in an honorary capacity.

Also co-determination- and participation-rights exerted by works councils on enterprise level (where they are existing) contribute to guaranteeing a high training quality and to monitoring the training enterprises. The Confederation of German Trade Unions (DGB) proposes the introduction of an institutionalised feedback-system on enterprise-level in order to take the views, suggestions and complaints of apprentices into account more effectively; some larger enterprises have already installed such a system.

For the large majority of training enterprises these quality assurance mechanisms are a natural component of the IVET-system and are not felt as a bureaucratic administrative burden. The enterprises themselves have an interest in training their future skilled employ-

ees on a high quality level (with the possible exception of firms that are more interested in apprentices as a source of cheap labour).

Changes and perspectives in the national apprenticeship-type schemes, geographical mobility issues (information referred to all of them)

Recent (last 1-5 years) or planned changes in the national apprenticeship type schemes

(1) Improving transition from general school education into vocational training:

In this field, a very large number of measures have been implemented (the budget adding up to more than 700 million EUR), among others the following ones:

- Educational chains (cp. below chapter 4.2),
- Regional transition management,
- Assistance for re-qualification of low-skilled apprentices,
- Job-Starter programme,
- VerA-Programme to prevent early termination of vocational training,
- KAUSA-Programme (Co-ordination agency for vocational training in enterprises owned by people with migration background).

(2) Modularisation and increased flexibility of vocational training:

- Increased offer of training modules,
- Facilitating part-time vocational training, e.g. for single parents,
- Increasing attractiveness of the dual training system for highly-skilled school-leavers,
- Better linkage between vocational and continuous training,
- Tapping of previously unexploited potentials, e.g. official recognition of migrants' qualifications acquired abroad,
- Quality assurance of vocational training,
- Reduction of the number of training occupations, formation of occupational groups.

(3) Increasing permeability between vocational training and higher/tertiary education:

- BMBF-Contest "Advancement by Education: Open Universities"
- Resolution of the Standing Conference of Ministers for Education and Cultural Affairs (KMK) to increase permeability between the different levels and types of (vocational and tertiary) education,
- Accreditation of Prior Learning from Vocational Education and Training and Work for Higher Education Programmes (ANKOM),
- Scholarships for people with professional experience (highly-motivated and especially talented in vocational training and regular employment) who want to start university studies (Advancement Scholarships-Programme).

(4) European and international opening of the vocational training system:

- Doubling international mobility of apprentices,
- Creation of a European Education Area, European Qualification Framework,
- International comparison of performance (OECD-studies),
- Technology-based Assessment of Skills and Competencies in VET (ASCOT).

(5) Changes in other policy areas:

- Reform of the Vocational Training Act (BBiG),
- Suspension and reinstatement of the Trainer Aptitude Regulation (AEVO),
- Pilot project "Extended Final Examinations" (EFE),
- Competence-orientation in training directives and examinations.

Pilot projects regarding new apprenticeship type schemes

The extracurricular pilot projects which the German government supports on the basis of Section 90 (III) No. 1d) of the Vocational Training Act are an instrument for the qualitative development of and research into initial and continuing vocational training. Pilot projects shape societal and company trends, address relevant topics and function as experimental laboratories for technical and occupational development and the acquisition of knowledge and information for use as examples in the design of overarching education policy initiatives. Pilot projects involve interaction between practitioners, the research community and the political sector. Having societal actors participate in research and development processes fosters the development of realistic and transferable solutions and boosts acceptance of new models and findings. The systems that play a part in pilot projects function as participants, target groups and recipients.

The following three new pilot project funding priorities have been set up since the end of 2010:

- Vocational Education for Sustainable Development

  As part of the second half of the UN Decade of Education for Sustainable Development (2005 - 2014), BIBB is supporting seven projects involving Vocational Education for Sustainable Development with funds from the Federal Ministry of Education and Research (BMBF). The projects are based in the metal-working and electrical sectors (focus on renewable energy), housing and construction, chemicals and food. In the area of renewable energy, the spectrum of topics ranges from "Fortbildungsgang zum geprüften technischen Fachwirt - Erneuerbare Energien" (advanced vocational training programme for the occupation "Certified Technical Management Specialist - Renewable Energies"), skills and competences needed for offshore wind energy plants, possible training needs in the skilled crafts with respect to renewable energies and electro-mobility all the way to training instruction personnel to serve as multipliers for the guiding principle of sustainable development in connection with production in the photovoltaic sector. Outstanding vocational training skill centres in the construction industry develop and test learning modules that foster sustainable development in vocational education and training in the construction sector. Focus is placed on sustainable education careers in the chemical industry. In addition, a modular framework curriculum is being developed for systematic training for sustainable development in vocational education and training in the area of food/nutrition.

- New Pathways to Dual Vocational Training - Heterogeneity as an Opportunity for Securing Skilled Labour

  Many young people have substantial difficulties in the vocational training market. The chances of finding a training place for in-company vocational training are determined by a wide range of factors that are related to the individual's personal (educational) biography and that overlap or interact such as a migration background, age, personal problems, a more favourable or less favourable educational background, educational requirements for vocational training, and training measures that the individual has already completed. At the same time, however, small and medium-sized enterprises in particular bemoan the declining number of training place applicants and, in the enterprises' opinion, trainees who are not sufficiently qualified. Some enterprises already notice a short-

age of skilled labour; an even larger number of enterprises expect a shortage of skilled labour in the future. This is where the funding priority "New Pathways to Dual Vocational Training - Heterogeneity as an Opportunity for Securing Skilled Labour" comes in. Its aim is to point out innovative pathways to vocational training and foster them as models. In this connection, the increasing heterogeneity of today's youth is understood as a challenge and an opportunity. Transferable concepts, instruments and methods are to be developed and implemented with the aim of expanding the number of potential trainees and ensuring enough skilled workers to meet trade and industry's needs for skilled labour. Following the public announcement of this funding priority, BIBB and the Federal Ministry of Education and Research selected 18 pilot projects from throughout the country which began their work in the spring of 2011 (funding period: 36 months). The projects focus on different questions and issues that pertain to the common theme. BIBB co-ordinates and links the pilot projects in co-operation with the flanking scientific evaluation and research being done and supports them in the achievement of their objectives.

- Quality Development and Assurance in Initial and Continuing Vocational Training

  It is vital that the quality of vocational training be continually developed and ensured, particularly in small and medium-sized enterprises. This task is the focus of ten pilot projects from throughout Germany which the Federal Institute for Vocational Education and Training (BIBB) has assisted since the end of 2010. A total of 5 million EUR in funding from the Federal Ministry of Education and Research will be made available for these projects in the coming years. The aim of these pilot projects is to develop and test practicable instruments and procedures which enterprises, regional alliances and networks can use to ensure, evaluate and improve the quality of their vocational training processes. At the same time, this work will tie in with existing structures, processes and instruments and foster the transfer of tested solutions for their broad use. Special priority areas for action and research are the development of instruments, communications and co-operation structures, and concepts for training instruction personnel. As a result of the participation of various sectors and actors such as the skilled crafts, care facilities for the elderly, educational institutions and industrial firms, this pilot project funding priority has a broad basis and will ensure that the findings and results are transferred extensively. Flanking external scientific research and evaluation will be conducted to support the work of the project management organisation and the funding priority (cp. for the above: Schemme/Westhoff/Winzier (2011)).

Effect of the recent economic crisis on the national apprenticeship type schemes

During the reporting period from 1 October 2008 until 30 September 2009, 566.004 training contracts were newly concluded in Germany. This represented a decrease of 50.338 or -8,2% compared to the previous year. In the Western Federal States, the number fell by 35.598 or -7,1% to 467.006. In the East, there was a decrease of 14.740 or -13,0% to 98.998. The main causes for the strong decline in the number of training contracts in 2009 are the financial and economic crisis and the significant demographic change.

The effect of the economic crisis was that 52.623 fewer training places were offered in Germany compared to the previous year. At the same time, however, there was also a significant decrease in the number of pupils leaving general schooling or party qualifying vocational schools and in the number of unplaced applicants from previous years registered with the Federal Employment Agency (BA).

As a consequence, overall training opportunities for young people in Germany were at approximately the same level in 2009 as in 2008 despite the strong decrease in the number of offered training positions. This means that at a national level demographic developments

have largely been able to compensate for the negative impacts exerted on the training market by the financial and economic crisis. Within this process, the level of provision in Eastern Germany has even continued to improve compared to the position in the West despite the significantly larger decrease in supply (-12,8% in the East as opposed to -7,3% in the West). The situation in Western Germany has turned out to be somewhat less favourable than in 2008 (cp. Bundesinstitut für Berufsbildung (BIBB) (2011a), p. 9f. and also above chapter 2.2).

In a survey on current developments in IVET (conducted in February 2009 by the German Association of Chambers of Industry and Commerce (DIHK)) three quarters (74,4%) of the participating 13.784 companies planned to either maintain their level of training commitment in 2009 (59,2%) or even to increase the number of training places they offer (12,2%). 26,6% of companies planned to react to the crisis by reducing the amount of training positions on offer. Maintaining a skilled labour force was a primary motive for German companies even in the economic crisis. Accordingly, even in the crisis year 2009, 71% of the inquired firms stated that the need for skilled labour had a decisive or at least noticeable influence on the number of offered training positions (cp. Deutscher Industrie- und Handelskammertag (DIHK) (2009), p. 6 and p. 8).

While (especially) larger-sized and export-oriented enterprises in the manufacturing sector had to reduce some of their employment (as an ultimate measure), more domestic-oriented and smaller enterprises in other sectors of the economy were able to maintain or even increase their level of employment. As a consequence, overall employment in the German economy remained almost unchanged.

In addition to enterprise-internal measures such as working time- and wage-flexibility, the public short-time work programme played an important part in widely reducing the impact of the economic crisis on the German labour market. Alongside this short-time work initiative, the government also helped to fund continuous training courses and encouraged employers to support their employees in pursuing such continuous training. Applications could also be submitted for short-time work for trainees. However, in order to protect the interests of such trainees, all other possibilities had to be explored beforehand. Before apprentices were permitted to start short-time work, attempts had to be undertaken to transfer them to other departments not affected by short-time work or to transfer them to the training workshop. Adjusting the curriculum or staging special training events were further ways of guaranteeing training during the economic crisis. If all these possibilities failed and training could not be continued, the Vocational Training Act granted trainees a right to remuneration for a period of up to six weeks and further required the training company to undertake timely endeavours to find another enterprise to continue training of the apprentice (cp. CEDEFOP (2010), p. 25).

Moreover, the Federal Employment Agency granted a training bonus ("Ausbildungsbonus"; a still ongoing programme) to those enterprises that took on apprentices of other companies which became insolvent or had to be closed (cp. above chapter 2.3.7).

In June 2009, the German Association of Chambers of Industry and Commerce and the German Confederation of Skilled Crafts (ZDH) presented a 5-point action plan to improve the situation on the training market during the economic crisis. The main aims were: (1) to encourage young people (by highlighting the large number of still vacant training positions in many regions), (2) to demonstrate the chambers' willingness and ability to act in the crisis (by implementing the action plan and thus by securing the training chances of young people) and (3) to support the member enterprises (e.g. by improving transparency and communication with regard to vacant training places). The action plan contained the following main measures (cp. Deutscher Industrie- und Handelskammertag (DIHK); Zentralverband des Deutschen Handwerks (ZDH) (2009)):

- Local Chambers of Industry and Commerce organised a "Day of Vocational Training Opportunities", while Craft Chambers organised a "Federal Action Day for Vocational Education and Training",
- Chambers offered support for apprentices from insolvent firms to find a new training company,
- Chambers supported enterprises in finding new apprentices for training places which had already been filled but where trainees did not step up (e.g. due to other preferred alternatives),
- Chambers increasingly informed enterprises about the availability of assistance for apprentices in danger of dropping out of training ("Ausbildungsbegleitende Hilfen", abH),
- Chambers supported enterprises on short-time work to continue their training activities (e.g. by collaborative training; cp. below chapter 4.2).

Student geographical mobility issues

Geographical mobility issues are not only relevant with regard to spending part of the apprenticeship learning period abroad (and thus benefitting from some specific cross-cultural experiences and practical insight into other ways of organising work and training) but also with regard to securing a training place in Germany in the first place.

In the light of the scarcity of training places and regional imbalances on the training market, today's school leavers need to display a willingness to be regionally mobile in order to secure a training place of their choice or even to find a training place at all. The 2008 survey of applicants conducted by the Federal Employment Agency (BA) and the Federal Institute for Vocational Education and Training (BIBB) showed that a fifth (21%) of all training place applicants registered with the BA in the reporting 2007/08 applied for training places located more than 100 km from their home. A total of 12% of the young people entering in-company training have relocated their domicile when commencing training, while another 23% commute more than 20 km per day. Regional mobility frequently results in high relocation expenses and considerable costs for running a home and car or for bus and rail tickets. These costs are often met by the trainees themselves or by their parents (cp. Beicht/Krewerth (2010), p. 2).

Geographic mobility in training was first regulated by law in 2005 with the reform of the Vocational Training Act (BBiG). Section 2 (III) BBiG, dealing with learning venues in vocational education, states that parts of initial training may be completed abroad if this serves the purpose of the training. The total duration of such training abroad shall not exceed one fourth of the duration of training specified in the relevant training directives.

The National Agency "Education for Europe" at BIBB (http://www.na-BIBB.de) acts on behalf of the Federal Ministry of Education and Research (BMBF) in managing and initiating European educational programmes and initiatives in Germany. It offers qualified information and advisory services, conducts expert project management, is engaged in networking of European and national projects/initiatives and regularly publishes the results of its activities.

The Chambers of Skilled Crafts and the Chambers of Industry and Commerce have established a Germany-wide network "Training without Borders". In total 57, "mobility coaches", i.e. specialised staff of the chambers, provide information, guidance and motivation for businesses, trainees and young skilled workers to participate in transnational mobility measures in vocational educational training (http://www.mobilitaetscoach.de/). The mobility coaches co-operate with organisations and companies which are specialised in international mobility and assist German companies in finding suitable project partners abroad. They co-operate in planning, carrying out and evaluating transnational mobility projects and organise preparatory measures such as language courses and intercultural trainings. A central co-ordination unit at federal level supports and co-ordinates the regional mobility coaches.

80% of financing is provided through resources of the European Social Fund and national co-financing resources of the Federal Ministry of Labour and Social Affairs (BMAS). The remaining 20% are covered by the capital resources of the Association of German Chambers of Industry and Commerce (DIHK) and the German Confederation of Skilled Crafts (ZDH).

Problems/advantages detected for students, enterprises and training centres

(1) The view of the students:

An online-survey - conducted by Körbel/Friedrich (2011) - of 502 trainees who have participated in transnational mobility projects in the period 2007-2009 showed the following results:

- 88% of internships abroad last for less than 4 weeks.
- Almost two thirds (62%) of all participants hold a higher school leaving certificates (i.e. qualification for university ("Abitur") or university of applied sciences ("Fachhochschulreife")), although their share in all apprentices amounts to only 13%. Hence, apprentices with lower achievements in general school education show much lower participation rates in transnational mobility projects.
- 32% of all mobile apprentices assess the total overall benefit of the transnational mobility project they have participated in as "very high", another 47% as "high".
- The overall benefit of Leonardo da Vinci projects and of bilateral exchange programmes of the Federal Ministry of Education and Research is assessed higher ("very high" or "high" benefit: 87%) than the one of other mobility projects (("very high" or "high" benefit: 73%).
- Main effects from the students' perspective:

Table E.51 shows that mobility projects do not only improve language skills and (social and cultural) key qualifications but also significantly enhance the students' professional skills and competences.

Table E.51 Effects of transnational mobility projects as seen by the participating students, 2007-2009

Effect	Evaluation on a scale from 100 (very high effect) to 0 (no effect) points
Acquisition of knowledge about other cultures and people	77
Increased self-confidence	76
Better understanding for foreign cultures	76
Improved capabilities to get along with other people	75
Motivation to work abroad in later career stages	71
Inmproved chances for future job application procedures	71
Improved language skills	71
Improved capability to take on new job tasks	69
Improved capability to work independently/self-reliantly	68
Increased tolerance for foreigners/migrants	67
Getting to know new working techniques	61
Acquisition of new professional skills	58

Source: Körbel/Friedrich (2011), p. 26f.

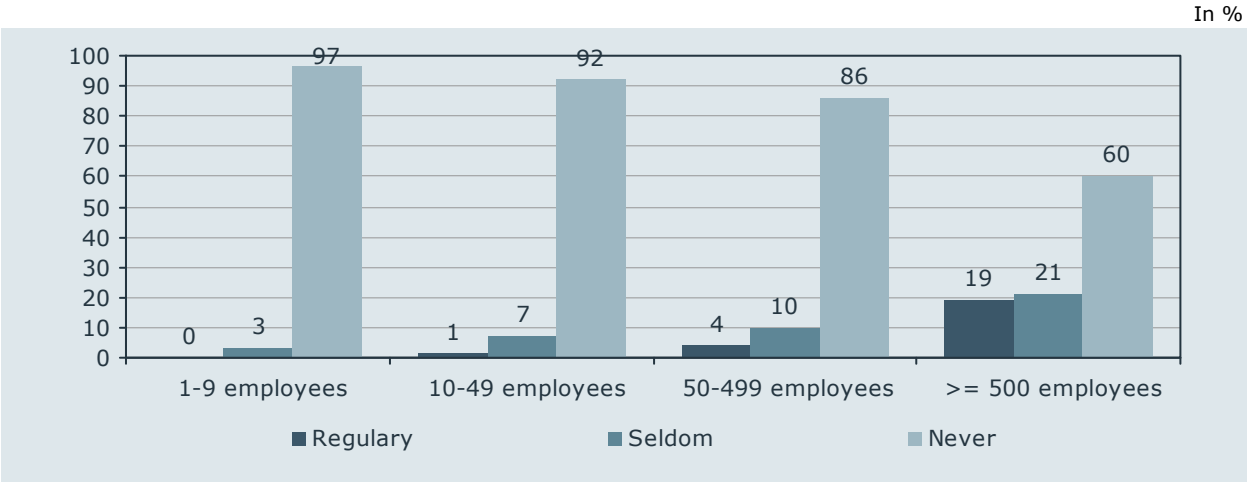
(2) The view of the enterprises:

The study by Körbel/Friedrich (2011) has also analysed the views of 785 (answering) enterprises on transnational mobility. Mentioned below are some of the main results:

- Of all enterprises that are currently training apprentices or have done so in the last five years, only 1% regularly send their trainees abroad on internships, another 5% do so only from time to time. Concentrating only on those companies that are *currently* engaged in vocational training, the afore-mentioned percentage shares amount to 2% and 6% respectively.
- Participation in transnational mobility by enterprise size:

As illustrated by Graph E.13, large enterprises with 500 and more employees participate significantly more often in mobility projects than smaller ones.

Graph E.13 Participation in transnational mobility by enterprise size, 2010



Source: Körbel/Friedrich (2011), p. 30.

- Factors hampering participation in mobility measures:

  The enterprises that are currently training apprentices or have done so in the last five years mention the following reasons which hamper their participation in mobility projects or render it even impossible.

Table E.52 Reasons why enterprises do not send apprentices abroad on mobility measures as seen by training enterprises, 2007-2009

Reason	Share of companies answering "applies totally" or "applies", in %
No project offer received	82
Too costly for the enterprise	60
Vocational school does not take care of organising mobility	57
Too much time is lost for our in-company training	53
Mobility projects are not beneficial for us	51
Apprentices are absent in the vocational school	50
Business chamber does not take care of organising mobility	50
In general, no interest that apprentices participate in mobility projects	45
Stays abroad do not have a positive influence on our apprentices	16

Source: Körbel/Friedrich (2011), p. 32f.

- Recommended actions:

  The inquired enterprises put forward the following recommendations to increase their willingness to send their apprentices abroad. The answers demonstrate that enterprises are often not well informed about the legal regulations for mobility projects and about the already existing support measures. For example, the Vocational Training Act already recognises and credits training skills acquired abroad. All in all, the results suggest that participation in transnational mobility projects could be considerably increased by raising the level of information among the training enterprises.

Table E.53 Enterprises' recommendations to increase their willingness to engage in transnational mobility projects, 2010

Recommendation	Share of companies answering "very important" or "important", in %
Recognising and crediting training abroad as part of (domestic) training leading to the final examination	79
Business chambers should offer financial support	75
Business chambers should offer assistance in organisation	75
Vocational schools should offer assistance in organisation	64
Business chambers should offer preparatory measures for the apprentices	73
Vocational schools should offer preparatory measures for the apprentices	53
Mobility measure should take place during vocational school holidays	50
Length of stay abroad should (at least partly) be subtracted from the apprentice's total number of vacation days	50

Source: Körbel/Friedrich (2011), p. 34.

- Enterprises that have already participated in mobility measures indicate that only 9% have organised the internships abroad themselves, but half of them take over part of the costs: 24% of these companies take over less than 50% of total costs, 27% take over between 50% and 75% and 49% even bear more than 75% of total costs.
- In 57% of cases, the main impulse to engage in mobility projects has come form the local business chamber, in 37% of cases from within the enterprise itself and in 36% of cases from the local vocational school. This underlines how important the role of external actors is for increasing the participation in mobility projects.
- Main advantages of transnational mobility projects:

Table E.54 Main advantages of transnational mobility projects as seen by participating enterprises, 2010

Advantage	in %
Increased self-reliance of trainees	79
Higher commitment of trainees	78
Better work performance of trainees	62
Better interaction with foreign customers	26
Increased competitiveness through acquired international competences	15
Better integration of "troublesome/difficult" trainees	9
More/better applicants for offered training positions	7

Source: Körbel/Friedrich (2011), p. 37.

Existing support measures to geographical mobility issues and number of students benefiting

Mobility in vocational education and training is promoted through a large variety of public programmes and support measures (financing approx. 54% of all mobility cases; cp. Table E.55 based on results from a representative survey). Furthermore, a major part of mobility

in training is also financed outside/independent of regular public programmes. Approx. 38% of all mobility is sponsored by private financial means (enterprises, participants, sponsoring associations). Another 8% of mobility cases is financed by other institutions such as business chambers, foundations etc.

Table E.55 Geographical mobility of trainees in initial vocational training, annual average numbers for the period 2007-2009

Financing type	Average number of annual mobility cases	
	absolute	in %
Leonardo da Vinci	8.800	37,4
Bilateral exchange programmes of the Federal Ministry of Education and Research with France, the Netherlands, Norway and the UK	1.900	8,1
European Social Fund (ESF)	1.500	6,4
EQUAL/INTEREG	300	1,3
German-French Youth Office	200	0,9
Privately financed mobility	8.900	37,9
Business chambers, foundations, other institutions	1.900	8,1
Total	**23.500**	**100,0**

Source: Körbel/Friedrich (2011), p. 41.

The involvement of apprentices in initial vocational training (that is to say trainees within the dual system and students in full-time vocational schools) is larger than originally expected. For the period 2007 until 2009, 3% of all apprentices have participated (at least once during their training) in transnational mobility measures (cp. Körbel/Friedrich (2011), p. 19).

The Leonardo da Vinci programme is clearly the single most important programme in Germany that supports geographical mobility of young people in initial vocational training. The number of annual participants in initial vocational training has risen steadily from approx. 2.000 in 1995 to almost 11.573 in 2010.[228] Within a five year span from 2005 until 2010, the number of participants has doubled. This strong increase is also due to national co-financing of Leonardo-mobility projects provided by the Federal Ministry of Education and Research (BMBF) within its additional programme "LEO plus". In 2010, the European budget for Leonardo-measures in Germany was supplemented with another 3 million EUR by the BMBF, spent on particularly successful measures within Leonardo. Thus, some additional 2.000 trainees were able to spend part of their vocational training abroad.

This way, the BMBF complies with recommendations put forward in 2007 by the Committee on Innovation in Vocational Education and Training ("Innovationskreis Berufliche Bildung", IKBB). The IKBB recommended to open the German vocational education and training to Europe, particularly by promoting mobility. As a target, the number of participants should be doubled until 2015. Moreover, the committee also suggested to extend the duration of supported training abroad.

[228] In addition, in 2010 the Leonardo da Vinci-programme financed mobility projects for 3.227 additional persons outside initial vocational training.

Table E.56 Leonardo da Vinci - Support for geographical mobility in initial vocational training, 2010

Number of...	absolute
Applied projects	484
Approved projects	458
Applicants	12.190
Participants (approved applicants)	11.573
Applied budget (financial support for mobility projects), in EUR	19.075.618
Approved budget, in EUR	17.669.486

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 399.

To supplement the regular Leonardo da Vinci mobility projects, innovative project types have been developed in Germany that are tailored to individual training situations and the needs of the enterprises and institutions providing training:

- So-called "small projects" are directed in particular towards training enterprises and vocational education and training centres that are participating in European programmes for the first time. Small projects provide support for three trainees per company at the most. The projects are not subject to the European application deadlines and can be applied for consecutively and with reduced administrative effort.
- In order to enable individual trainees to spend some training time abroad, even if the training employer does not want to get involved in organising an internship abroad, the so-called "pool-projects" have been developed. These are offered, for example, by competent bodies (chambers) or by education providers. Individual grants are given to trainees; and also to youths who have already completed their training. In 2010, approx. 2.500 of these "scholarships" were available.
- Qualification measures abroad lasting four or more months are supported with the transnational grid training concept. The project partners co-operate with one another throughout the training period and consult with one another on the content of training.
- Since their introduction in 2009, more than 100 mobility certificates have been issued by the National Agency. The Leonardo da Vinci Certificate in Mobility is a recognition of the capacity of an institution to implement a Leonardo-mobility project of excellent quality. The certificates are delivered for a period of four years (maximum until 2013) and allow a simplified grant application procedure in the following calls.

Future perspectives and other possible relevant issues

The policy development in the main VET-policy areas features the following priorities for the future:

Table E.57 Policy priorities in VET in Germany, 2010

POLICY PRIORITY	POLICY APPROACH / MEASURES
1. Training places for all	▪ Continuation of the National Pact for Training and Junior Skilled Workers in Germany ("Nationaler Pakt für Ausbildung und Fachkräftenachwuchs in Deutschland"), originally concluded in June 2004 between the Federal Government and the top-level organisations of German industry. ▪ Improvement of regional IVET structures: BMBF "JOBSTARTER" and "JOBSTARTER CONNECT" and "VerA" programmes ▪ Introduction of a training bonus ("Ausbildungsbonus") ▪ Training module programme ▪ Use of extra- and inter-company training capacities for unplaced applicants ("Altbewerber") ▪ Expansion of practical classes ▪ Programme "Vocational qualification prospects" ("Perspektive Berufabschluss") ▪ Activation of companies in innovative and research-based sectors and in growth sectors for IVET, e.g. by way of targeted sector campaigns
2. Chains of educational progression up to initial vocational qualification	▪ Reassessment of the "Transition System" (intended to help young people needing extra support with the transition from school into initial vocational training). ▪ Expansion of early, practice-based vocational orientation and individual mentoring of educationally vulnerable young people, from the 7th grade until they gain an initial vocational qualification. ▪ Initiative for the training of young people with migration background
3. Improving permeability and integration between education sectors, especially smoothing the transition from school to university	▪ Award of an advancement scholarship to talented graduates of dual-system apprenticeships wishing to proceed directly into higher education study ▪ Raised level of grant support for upgrading training ▪ Higher Education Pact 2020 ▪ Stepping up information campaigns, e.g. through the German international schools and the "Routes into study" ("Wege ins Studium") network in which the Federal and Länder governments support academic counselling jointly with other partners ▪ Stepping up promotion of study at German universities via the German international schools ▪ Development of additional qualifications at the interfaces between initial and continuing vocational education and training ▪ Creation of additional, differentiated options for crediting prior qualifications towards a higher education degree
4. Recognition of qualifications acquired in other countries	▪ The goal is to establish a right to a procedure for validating and assessing the degree of equivalency between foreign qualifications and German initial vocational training programmes.
5. Quality assurance and modernisation of vocational education	▪ Development and strengthening of VET research ▪ Development of occupational groups with occupations exhibiting a significant overlap of common specialist qualifications ▪ Internationalisation, e.g. implementation of European instruments like EQF, development of a NQF, quantitative and qualitative and development of cross-border mobility
6. Significant increase in participation in continuing education, particularly the participation rate of low-qualified workers, by 2015	▪ Strengthening the motivation and responsibility of individuals for their lifelong learning ▪ Enhancing recognition and acceptance of lifelong learning ▪ Improving permeability and integration between education sectors ▪ Ensuring transparency and high quality vocational guidance, development of guidance opportunities ▪ Improving integration of migrants into the education system ▪ Boosting the appeal of continuing education opportunities for older people, e.g. the Federal Employment Agency's special programme ""Continuing vocational education and training for low-qualified and older workers in companies" ("Weiterbildung Geringqualifizierter und beschäftigter Älterer in Unternehmen – WeGebAU") ▪ Promotion by a learning subsidy ("Bildungsprämie") and saving for continuing education and training ("Bildungsgutschein")

Source: CEDEFOP (2010), p. 17f.

Evaluation of existing apprenticeship type schemes (information to be provided for all existing apprenticeship type schemes)

Qualitative Assessment of the National Apprenticeship Type Schemes (Please differentiate your answer (if applicable) by different types of schemes and groups of stakeholders)

The following qualitative assessments of various aspects of the apprenticeship type schemes (with a particular focus on the dual system) are mainly based on the results of five expert interviews which have been conducted with important stakeholders of the German IVET-system: the Confederation of German Trade Unions (DGB), the Federal Institute for Voca-

tional Education and Training (BIBB), the Federal Ministry of Education and Research (BMBF), the German Association of Chambers of Industry and Commerce (DIHK) and the Chamber of Skilled Crafts Koblenz which - inter alia - acts as an inter-company training centre. Additional information has been gathered by way of literature research.

The interviewees have been asked to answer questions of the type "To what extent…?" by applying a five-point scale with the following ratings: "1": very large extent, "2": large extent, "3": average/medium extent, "4": small extent and "5": very small or no extent.

All interviewed experts agree that the combination of work-based and school-based training is very important in the national IVET-context (average rating: 1,0). Indeed, it is regarded as a constitutive element of the apprenticeship system and as a key asset of the German educational and economic system as a whole. This principle has also been transferred successfully to newly created models of tertiary vocational education and training, such as the dual study programmes (cp. above chapter 2.2). The high importance of combined work- and school-based training is also underlined by the fact that this well-established principle has been integrated into the Agenda 2020 of the European Commission.

Though the quality of purely school-based full-time vocational training is also widely regarded as high, most stakeholders prefer a combination of work- and school-based training. One of the main reasons is that company-based training provides effective training on the job and also facilitates the transition from vocational training into regular employment. Therefore, the substantial integration of enterprises into vocational education and training is clearly an important strongpoint of the German system. On the other hand, however, it is also inherently connected with the disadvantage of a market-based system. Hence, the supply of training positions is often influenced by the overall economic conditions, i.e. the number of offered training places tends to decrease in recessions and might not be sufficient to offer every youth access to combined company- and school-based training. In this sense, a successful overall economic policy can be regarded as an important ingredient for a successful IVET-policy.

Due to the demographic development, the market-based design of the dual system will increasingly be a less restrictive factor. In fact, the relative positions of supply and demand on the IVET-market are already changing considerably. In the past, however, public authorities had to increase the supply of purely school-based training places in order to compensate for the insufficient supply of training positions in the dual system. Most stakeholders, especially the DIHK, point out that dual training should be the rule and that purely school-based training (in similar occupations and work fields) should only be offered when there is sufficient demand for it on the labour market.

According to the interviewed experts, access to the regular labour market is facilitated to a (very) large extent by the combination of work- and school-based training (average rating: 1,4). In this context, almost all refer to the low level of unemployment among young people in Germany which is largely influenced and supported by the dual training system. In fact, after the Netherlands (6,9%) Germany featured the second lowest unemployment rate (7,7%) of young people under the age of 25 in the European Union in May 2011 (cp. Eurostat (2011), p.4).

As explained below in this chapter, enterprises have several advantages when training young people and retaining them as regular employees after the apprenticeship is terminated ("adhesive effect"). Training graduates are already familiar with the firm-specific work tasks and are integrated into the work processes of the company. In this sense, an apprenticeship can also be regarded as the best possible assessment centre for the recruitment of skilled employees. Also in view of the increasing shortage of skilled labour, enterprises have an interest in retaining their apprentices.

In general, apprentices do not have a legal right to be employed after training is completed. This is because the training contract has been concluded for a specific purpose and for a specific time span only. In some economic sectors, however, collective wage agreements exist which, for example, guarantee a right to continued employment for at least twelve months after training is completed or even on an unlimited basis. In these cases, a legal right exists only for those apprentices who are a member of the respective trade union, though in practice it is mostly extended to all trainees regardless of membership in a particular trade union.

As briefly mentioned above, purely school-based schemes (administered centrally by government institutions) seem to have an advantage with regard to the (first) transition from general school education to vocational education. The main reason is that they do not dependent on a sufficient (market-based) supply of training places offered by enterprises. However, though not already empirically analysed, there seems to be very good reason to assume that the second transition from the IVET-system into regular employment is considerably easier for graduates of the dual training system (if similar occupations are compared).

With an average rating of 1,6, all interviewed experts consider the German dual training system well placed when it comes to adapting contents and methods to technological, social and economic progress. A significant strongpoint is that enterprises and their business associations are the main initiators and impulse generators for the modification of existing training directives or for the introduction of new ones. It is the enterprises that either initiate change themselves or are confronted with changing technological, social and economic framework conditions. Hence, they have a strong interest that their apprentices are trained in a way that allows them to cope and deal with the change taking place. Therefore, if adaption of contents and/or methods is imminent, enterprises and their associations will press for the development of modified or completely new training directives. The fact that the dual system is market-based gives it a clear edge over schemes that are (centrally) administered by public authorities (which are not in a position to assess developments and necessities for change as effectively as companies themselves).

For the modification or new development of training directives a special institutionalised procedure has to be gone though which requires the participation of all stakeholders. In earlier times, the length of these procedures has often been criticised as a factor which would hamper the quick adaption to change. The Federal Ministry of Education and Research (BMBF) indicates that on average procedures have been streamlined and shortened (in some cases from three to just one year). In general, the time requirement for these procedures strongly dependent on the ease with which a compromise can be reached by all involved stakeholders.

Table E.58 Number of new and modernised training occupations, 2001-2010

Year	New	Modernised	Total
2001	3	8	11
2002	8	16	24
2003	8	22	30
2004	5	27	32
2005	5	18	23
2006	4	17	21
2007	3	20	23
2008	7	12	19
2009	2	12	1
2010	0	11	11
Total	**45**	**163**	**208**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 110.

In the period 2001-2010, some 208 training occupations were newly structured. This amounts to almost 60% of the currently existing 348 training professions. Thereof, 45 were newly created altogether and another 163 were modernised.

Since 1996, the modernisation of the dual training system was intensified through the creation of new training occupations. This occurred against the background of discussions about skill-related consequences of developments in strategically important technologies, the leap from a manufacturing to an information and knowledge society, the globalisation of the economy and the entailed reorganisation of business and management processes. From 1996 until 2009, 81 training occupations were newly created. In these professions some 60.771 training contracts were newly concluded in 2009 which amounts to a 10,8%-share in the entirety of all new contracts (cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 141). All in all, even several years after their introduction a large share of new training occupations show a relatively low take-up. However, a concentration on a relatively small number of training occupations is not only characteristic for the new professions but for the entirety of all training occupations as well. This general observation could be interpreted as an incentive to intensify efforts of the involved players to raise awareness more strongly among young people about the broad spectrum of training occupations which are generally available.

Again with an average rating of 1,6 all experts agree that skills acquired in company-based training are easily transferable to other enterprises, sectors or occupations. Training directives set quality-standards which have to be observed by all training enterprises in the whole country. They are commonly agreed by all involved stakeholders, in particular by the social partners. The trade unions represent the interests of the apprentices and thus attach much importance to the development of training directives which provide broad skills that can be transferred to other enterprises and sectors/occupations. Smaller companies (which often train more apprentices than they retain and which often employ apprentices in broader defined work fields) also tend to favour the provision of more broadly defined and more easily transferrable skills. By contrast, larger enterprises which are often characterised by more specialised working tasks and more widespread use of technology tend to opt for the provision of skills that are more closely related to the enterprise-specific needs. However, as the training directives define (only) minimum standards which have to be observed by all training companies, enterprises are free to teach their apprentices skills and techniques beyond the required national standard.

Furthermore, for the large majority of training occupations final examinations are centrally organised and confront every apprentice with the same test questions and examination tasks. This principle helps to guarantee that trainees learn the same or similar skills and know-how during their apprenticeship which can be easily transferred to other enterprises. Indeed, it is often mentioned that due to nationwide quality standards within the dual training system, a (prospective) employer, e.g. in Munich knows exactly what a trainee in Hamburg has learned during his apprenticeship, thus strongly facilitating inter-enterprise and inter-regional mobility. This stands in clear contrast to tertiary education within the university system. Here, an employer does not know in detail which knowledge and skills have been acquired by university graduates as curricula differ from university to university. BIBB therefore suggests to transfer the principle of nationally recognised standards to other VET-schemes as well, such as to dual study programmes.

In addition, one should also consider that training periods tend to last longer in Germany than in many other European countries as a focus is laid on teaching broad skills. Furthermore, half of apprentices who terminate their training ahead of schedule continue it in another enterprise which also underlines the transferability of acquired skills. Especially in the skilled crafts, chambers run IVET-training centres which centrally teach certain practical skills and working techniques "on the job" (which often cannot be covered by smaller specialised craft firms). This form of training as well as collaborative training in company networks (cp. below chapter 4.2) also guarantees a high level of workplace mobility between

different enterprises. Moreover, as far as sector mobility is concerned, problem-solving skills and soft skills are an integral part of the training curricula and thus also facilitate the transfer of skills across different sectors.

Based on micro-census data for the year 2008, the Bundesinstitut für Berufsbildung (BIBB) ((2011), p. 276-283) has analysed the occupational flexibility of employees in the 20 most often chosen training occupations. These occupations are of large economic importance. In 2010, more than half (53,9%) of all new training contracts were concluded in these professions. The analysis demonstrates that at the time of the micro-census survey, approx. one third (33,8%) of all employees (trained in the 20 most often chosen training occupations in the dual system) were currently working in their learned training profession (so-called "stayers"). As a consequence, approx. two thirds (66,2%) have left their training occupation and were employed in another occupation ("movers"). Thus, the comparison between "learned profession" and "executed profession" illustrates that a large share of persons with a training certificate in one of the 20 most often chosen training occupations are working in other professions. This result suggests that the qualifications acquired during the dual training can be flexibly applied in other professions as well.

On average, experts reckon that the dual system facilitates progression within the context of further education and training to a large extent (rating: 2,0 though with greater variance). Although some progress has already been achieved in this respect and some model projects are currently underway, there is still room for improvements. The German qualification framework (DQR) now treats a completed dual training on the same level as an acquired university entrance qualification. Furthermore, the Standing Conference of Ministers for Education and Cultural Affairs (KMK) has passed a resolution which is intended to increase permeability between the different levels and types of (vocational and tertiary) education. A master craftsman, for example, is allowed to directly start university studies.

The Federal Ministry of Education and Research (BMBF) has launched the Initiative "Accreditation of Prior Learning from Vocational Education and Training and Work for Higher Education Programmes ("Anrechnung beruflicher Kompetenzen auf Hochschulstudiengänge", ANKOM). The BMBF has funded twelve development projects and a scientific monitoring project. They are co-financed by the European Social Fund (ESF). ANKOM aims at developing accreditation of prior learning achievements, identifying operational good practice and at enhancing the implementation of accreditation of prior learning procedures, policies and infrastructure in the German higher education system. The overall goal is to foster learning pathways from VET to higher education. This is achieved, for example, by crediting modulised qualifications acquired during vocational training for university studies.

Policy makers and stakeholders attach much importance to a better linkage between initial vocational and continuous training also because the IVET-system faces growing competition from tertiary higher education. As shown in chapter 1, a growing number of young people has opted for university studies (at the expense of dual training) over the last years. Therefore, the goal is to make the dual training system more attractive for highly talented school-leavers who have acquired university entrance qualification. One way is to credit "additional qualifications" acquired during vocational education (in addition to the regular training contents) for continuous training, e.g. for the advanced qualification of a "Fachwirt" (business administrator) in the service and business sector. With such an advanced qualification young training graduates are able to progress in their career and take over senior positions more quickly (without the need of going through long-lasting and unpaid university studies). An additional possibility is to offer more dual study programmes and regular university studies which can be attended while working as a skilled employee.

In their function as competent bodies, business chambers play an important role in the dual training system in Germany. As chambers are also one of the main suppliers of continuous training schemes, it is relatively easy for a training graduate to continue training. Trade unions stress that a better linkage between vocational and continuous training is hindered by

insufficient (public) financial support for the participation in continuous training. In view of the fast changing economic and technological framework conditions, all stakeholders stress the high importance of life-learning learning after an apprenticeship is completed.

As an outcome of the National Pact for Training and Junior Skilled Workers, a special campaign will be carried out in autumn 2011 which targets high-performance pupils in general school education and informs them about the large variety of attractive training opportunities and the related career and income perspectives. It will be highlighted, e.g., that training graduates who accomplished additional qualifications and/or continuous training degrees have at least the same income opportunities as university bachelors.

Additional qualifications ("Zusatzqualifikationen") to supplement initial vocational training open up the possibility of acquiring additional competences, such as foreign-language classes or particular engineering courses. As of 2009, there is a new option to fully integrate them as an integral part into the training contract. Additional qualifications can be directly related to the training contents as laid down in the official training directives for the specific training occupations. They allow training companies to react at short notice to changing qualification requirements. Not only the enterprises benefit, but also the trainees. Additional qualifications open up new professional and career prospects; in fact vocational training enriched by (formal) additional qualifications represents an attractive alternative to (longer-lasting, unpaid) (regular) university studies. They also allow young people to integrate personal skills and preferences more strongly into the training process. By earning additional qualifications, trainees can acquire additional skills, knowledge and competences that go beyond their regular training. This option not only renders vocational training more attractive, it also makes it possible to mesh initial and continuing vocational training more tightly with one another.

According to Section 5 of the Vocational Training Act, additional qualifications provide additional vocational skills, knowledge and qualifications over and above the training occupation profile to supplement or broaden vocational competence. According to a definition by the Bundesinstitut für Berufsbildung (2011, p. 230) they usually encompass measures that

- exceed the compulsory contents of the relevant training directives,
- take place in parallel with or immediately after terminating a vocational training,
- do not fall short of a certain minimum time requirement (40 hours),
- can be certified.

Additional qualifications are primarily offered (and certified) by vocational schools, training enterprises and business chambers.

Table E.59 Providers of additional qualifications, 2004-2010

Year	Vocational school	Training enterprise	Craft Chamber	Chamber of Industry & Commerce	University/ University of applied sciences	Producer/ Supplier	Association/ Educational provider	Other	Total
2004	780	343	227	292	0	27	43	405	2.107
2005	880	332	220	269	0	13	44	402	2.160
2006	906	332	208	200	0	13	50	415	2.124
2007	1.036	317	207	192	0	8	49	368	2.177
2008	1.116	316	208	195	1	6	52	363	2.257
2009	1.085	312	208	195	1	6	54	392	2.253
2010	1.090	310	209	189	2	6	56	400	2.262

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 228.

In 2010 (i.e. in the period from 30 April 2009 to 30 April 2010), 80.040 trainees were engaged in acquiring additional qualifications. This represents about 5% of all trainees in Germany (reference figure: total number of trainees in Germany in 2009: 1.571.457).

Table E.60 Additional qualifications, 2004-2010

Year	No. of different types of addit. qualifications	Change to preceding year in %	No. of enterprises offering addit. qualific.	Change to preceding year in %	No. of participating trainees	Change to preceding year in %
2004	2.107	-	9.996	-	65.097	-
2005	2.160	2,5	11.772	17,8	72.945	12,1
2006	2.124	-1,7	11.860	0,7	67.811	-7,0
2007	2.177	2,5	13.292	12,1	76.125	12,3
2008	2.257	3,7	14.292	7,5	77.724	2,1
2009	2.253	-0,2	15.108	5,7	81.102	4,3
2010	2.262	0,4	16.902	11,9	80.040	-1,3

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 231.

The main topics of additional qualifications have not changed much since 2004. Most popular are additional competences in the field of international qualifications (31,3%), followed by technology (13,6%), IT (11,9%) and commercial/business qualifications (11,5%).

Table E.61 Main topics of additional qualifications, 2010

Main topics	absolute	in %
International qualifications	708	31,3
Technology	307	13,6
IT	270	11,9
Commercial/business qualifications	261	11,5
Entrance qualification for universities of applied sciences	181	8,0
Multidisciplinary qualifications	166	7,3
Construction	129	5,7
Body, health	88	3,9
Other	67	3,0
Tourism, catering	54	2,4
Media, telecommunications	20	0,9
Gardening, agriculture, forestry, animal care	11	0,5
Total	**2.262**	**100,0**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 232.

A survey among enterprises that already use additional qualifications during their training shows that 62,9% of participating firms expect that additional qualifications will increase in importance in the future, another 35,5% expect a stable importance. The Bundesinstitut für Berufsbildung (BIBB) (2009, p. 9) assumes that training enterprises use additional qualifications to qualify (future) skilled employees at an early stage of their career for sophisticated professional activities. This special training package makes vocational training in the dual system more attractive for highly-talented (general) school-leavers. This way, training enterprises try to get access to and bind talented young people to the company; especially in view of an (expected) increasing shortage of skilled labour in the future.

As mentioned in chapter 2.3.7, the business community financed the dual training system with approx. 23,8 billion EUR in 2009 which is equal to approx. three quarters of total (gross) costs. Adjusted for the productive work undertaken by apprentices, enterprises' net costs were significantly smaller but still amounted to 5,6 billion EUR. Several stakeholders point out that it is in the interest of the companies themselves to get involved in vocational training and that they would not train young people if they did not have sufficient economic and immaterial benefits. In fact, in a recent survey conducted in 2011 among 14.299 enter-

prises, only 5% of the firms indicated that involvement in vocational training was too costly and would thus represent a serious obstacle (cp. DIHK (2011), p. 32). All in all, the active participation of the enterprise sector in vocational training does not only guarantee the provision of "real-life" training on the job but also relieves the state from substantial costs.

An obvious weak point of the market-based dual system is the decrease of offered training positions during cyclical economic downturns, as acknowledged by all experts. The DGB further criticises that only approx. 30% of all establishments (local units) actively participate in vocational training. Those enterprises that do not offer company-based training would nonetheless benefit from the supply of skilled employees trained by other companies. Moreover, training enterprises could not be sure that trainees stay with them after they have finished their apprenticeship. Therefore, the DGB points out that not all enterprises participate in the costs of dual training while all benefit from its outcome. As a remedy, the DGB suggests the introduction of a training levy on all enterprises with more than ten employees if the number of trainees is less than 7% of the entire workforce. However, business associations and all federal governments have so far rejected this proposal.

With regard to international mobility issues, most of the interviewed experts make a distinction. It is assessed positively that the German IVET-system has already created the legal framework for spending part of the training abroad (and receive accreditation for it) and also assists enterprises with several support measures such as the Leonardo da Vinci programme or the nationwide network of mobility coaches. Assessed more negatively is the still relatively low participation of enterprises and their apprentices in international mobility projects; though in European comparison the German participation rate seems to be clearly above average. Most stakeholders agree that many enterprises are not sufficiently convinced of the benefits of international mobility projects and/or not aware enough of the available support mechanisms. In the context of international mobility, it is also suggested to increase the integration of foreign languages into the curricula of vocational schools.

Generally speaking, the interviewees believe that only to a relatively small extent apprentices are used as a source of cheap labour by training enterprises (average rating: 3,75). However, all experts point out that the frequency of this practice would differ from sector to sector. In general, it would be more frequent in production-oriented sectors which are relatively labour-intensive, pay relatively low wages and where apprentices are already strongly integrated in normal work processes and generate substantial value added. Often mentioned examples are hairdressers and the catering sector (hotels and restaurants). By contrast, apprentices would be significantly less often employed as cheap labour in investment-oriented sectors which are relatively capital-intensive, pay high wages and which are characterised by relatively complex work processes that cannot be learned quickly (e.g. machine and plant building, electro-technical industry). Moreover, in view of the shortage of skilled employees, enterprises will increasingly have to present themselves as attractive employers. This does not match with using apprentices as cheap labour. Otherwise, a negative image is built up which would deter potential training applicants. Furthermore, surveys among young apprentices show that it is of high importance for them to be integrated into the work processes of the training company. However, they don't want to feel exploited and thus ask for the necessary respect and recognition of their work performance.

The apprenticeship training in Germany is generally considered to be an investment of companies into the human capital of their apprentices. This common belief is mainly based on the results of German cost-benefit studies which testify training enterprises still relatively high net costs for their apprenticeships. Enterprises with a substitution strategy employ trainees because of their lower unit labour costs and, thus, they react strongly to relative wages of apprentices. Their decisions may be in sharp contrast to the decisions taken by companies that train apprentices according to an investment strategy because the latter care more about future returns and training quality rather than lowering apprenticeship wages.

Mohrenweiser and Backes-Gellner (2008) show that motivations for apprenticeship training are not homogeneous. Some companies follow an investment strategy (investing into the human capital of apprentices) and others follow a substitution strategy (using trainees as a cheap substitute for unskilled or semiskilled workers). Applying an empirical method to identify different training strategies with publicly available company data, the authors find that in Germany 43,8% of all enterprises pursue an investment strategy and 18,5% follow a substitution strategy; the rest is mixed or undetermined. With regard to the determinants for a substitution strategy, sizeable differences are found between sectors with different skill requirements and between firms' participation in collective agreements (industrial relations).

The probability of a company following a substitution strategy increases with lower capital equipment, with the absence of a works council and with a higher share of white collar workers as well as in smaller firms. Furthermore, service sector firms have a significantly higher probability to follow a substitution strategy than manufacturing firms. In addition, complementarities between firms' investments in initial training and firm sponsored continuing training were detected.

According to the interviewed experts, the German IVET-system takes social considerations to a large extent into account (average rating: 2,2). On the one hand, a large number of effective support measures exist which directly target young people who have social or other disadvantages. On the other hand, an extensive so-called transition system with a large number of rather intransparent support measures ("Übergangssystem") has been established for youths who do not yet have full training maturity or who did not succeed in acquiring a training place. In the past, in some years more than 400.000 young people newly entered the transition system whose efficiency is viewed critical by most stakeholders (cp. Bundesinstitut für Berufsbildung (BIBB)/Bertelsmann Stiftung (2011), p. 18). In many cases the transition system did not manage to actually bring about transition into regular vocational training as youths were often moved from one measure to another. However, due to demographic change the transition system is becoming less relevant as enterprises are increasingly prepared to recruit young people with lower school achievements. Some (larger) companies show special corporate social responsibility and explicitly recruit young people with social disadvantages or lower school achievements.

As mentioned above, social considerations play an important role in the German IVET-system. Consequently, there is a large number of support measures in this field; among them are the following ones:

- Extra-company training places:

  According to a recent BIBB-survey, some 41.043 or 7,3% of all newly concluded training contracts (560.073) in 2010 were so-called extra-company training places ("außerbetriebliche Ausbildungsplätze"). Their importance in Eastern Germany is much higher (20,3%) than in the West (4,8%). These are training places that are mainly publicly financed and provide a full qualification in a dual training occupation recognised under the Vocational Training Act (BBiG) or the Crafts Code (HwO). Target groups are youths with social disadvantages, learning difficulties and/or disabilities. Decisive for classification of extra-company training is the main public financing share and not the learning venue.

- Introduction of two-year training occupations (with reduced theoretical learning requirements):

  In the last years, the aim is increasingly pursued to create two-year training occupations (with reduced theoretical learning requirements), especially for youths with social disadvantages and low academic levels (cp. Bundesinstitut für Berufsbildung (BIBB), p. 145). Since 2003, 12 such professions have been newly designed. In 2009, some 51.786 training contracts were newly concluded in all 40 occupations with a 1,5 or 2-year duration. This amounted to a noticeable 9,5%-share in all training contracts. Though the

percentage has been growing steadily from 3,7% in 1993, it had already been much higher in the 1980s (1980: 13,7%). A major factor for the sharp reduction was the abolition of so-called modulised/stepped trainings ("gestufte Ausbildungen") in the electronic training professions in 1987. 95% of all young people who have concluded a two year training contract are working in professions whose certificates and qualifications can be credited when continuing dual training in a related (more "sophisticated") 3- or 3,5-year training occupation. Due to lack of corresponding official statistical data, one cannot exactly specify the share of trainees who actually continue vocational training after having completed their 2-year training. BIBB-estimations show that a maximum of approx. 26% of all trainees with a 2-year training conclude a follow-up contract. Trade unions and the DGB, however, are often critical of 2-year training occupations and rather prefer longer lasting apprenticeships which provide broader skills in a more comprehensive way.

- JOBSTARTER - VerA Initiative:

  Honorary training tutors (of the Senior Experts Service (SES)) support young people in reaching their training goals and prevent them from dropping out of training. In 2011, the VerA training initiative has been extended throughout the country.

- Company-based introductory training:

  Company-based introductory training ("Einstiegsqualifizierung", EQ) consists of a prevocational work experience placement in an enterprise lasting six to twelve months. Young people have the opportunity to accumulate modular qualifications towards a recognised occupation by completing "qualification modules" in a specific occupational field. The target group for introductory training consists primarily of young training applicants whose prospects of finding a training position are limited, and young people who have not fully reached the requisite level of training maturity. Companies which offer introductory training enter into a contract with the young people concerned. Introductory training programmes are supported by the employment agencies in the form of a non-repayable monthly subsidy towards the allowance paid by the employer. On completion of the introductory training, participants receive a certificate issued by the competent body. Under certain circumstances, up to six months credit for the introductory training can be offset against the regular training period of a subsequent apprenticeship (cp. Bundesinstitut für Berufsbildung (BIBB) (2008a), p. 19f.). In general, between 50% and 60% of EQ-participants succeed in securing a training place in the dual system (cp. Lüke (2011), p. 28 and DIHK expert interview).

- Training modules:

  To meet the needs of "repeat applicants", the "training modules" ("Ausbildungsbausteine") programme was launched in 2007. Target groups are young people seeking IVET who have been unsuccessfully applying for an apprenticeship place through the employment agencies for a year or more or who can provide evidence of at least five rejected applications for apprenticeship places. In eleven significant occupations within the dual system, training modules were developed with a view to helping repeat applicants to make a progressive transition into a standard dual-system apprenticeship. Funding is envisaged for 50 pilot regions in Germany (cp. Bundesinstitut für Berufsbildung (BIBB) (2008a), p. 17).

- Good Practice Centre (GPC) of training modules

  The Good Practice Centre (GPC) - established at BIBB - launched an online database in January 2004, offering for the first time ever an overview of training modules that have already been certified by relevant bodies. The Good Practice Centre's objective is to foster the exchange of information between players and facilitate the comparability of train-

ing modules. The database can be accessed via the GPC homepage at: http://www.good-practice.de.

- Vocational preparation schemes:

  Vocational preparation schemes ("berufsvorbereitende Bildungsmaßnahmen") are funded directly by the Federal Employment Agency (as part of the "transition system"). The target group for these measures consists of young people and young adults who have no initial vocational qualification, are under the age of 25, and have completed the obligatory length of school attendance in the general education system.

- School-level pre-vocational training offered primarily in (vocational) schools:

  Examples of these include training preparation, the pre-vocational training year and the basic vocational training year. Differences in the way this training is regulated exist, depending upon the individual Land's legislation. Every year more than 75.000 young people in Germany undergo a pre-vocational training year with the aim of preparing themselves for vocational training.

- Additional IVET support measures of the Federal Employment Agency target disadvantaged young people (cp. above chapter 2.3.7).
- At municipal level, additional pre-vocational training activities with a socio-pedagogical approach are conducted at educational institutions and social services facilities as part of the youth work being done under the Child and Youth Services Act.
- Dual training contracts for disabled persons:

  In the case of disabled persons for whom initial training in a recognised training occupation is not an option due to the nature and gravity of their disabilities, the competent bodies shall on application of the disabled persons or their statutory representatives make suitable training arrangements available. The content of such initial training shall be developed from the content of recognised training occupations, taking into account the general labour market situation and trend (Section 66 BBiG). In 2011, 11.799 special dual training contracts were concluded for disabled people.

- A larger number of additional support measures exist to address the particular needs of people with disabilities.

On the other hand, with regard to the current the challenges imposed by the current economic crisis, training within the dual system usually provides apprentices with broad skills and know-how which can also be transferred to other enterprises and economic sectors (cp. above). This, in principle allows trainees and skilled employees to move more easily to other companies or sectors which are less affected by an economic crisis.

In June 2009, the umbrella organisations (i.e. DIHK and ZDH) of business chambers which act as competent bodies in the dual system developed an action plan that included several measures to improve the situation on the vocational training market during the economic crisis (cp. above chapter 3.2). An important measure was to assist apprentices of firms which had become insolvent to find another training company. This self-help programme of the business economy allowed almost all of these apprentices to continue training in another enterprise.

The DGB criticises that during the crisis and even in economic upswings the business economy does not offer enough training places for all young people. Therefore, the trade unions call for measures (e.g. training levies, accumulation of financial reserves) which should guarantee access to company-based vocational training independent of the overall economic situation.

The DIHK criticises that the employment agencies send too many youths (with assumed insufficient training maturity) into the costly and inefficient transition system. Within the National Pact for Training and Junior Skilled Workers, the business sector had promised to offer 40.000 company-based introductory trainings which are generally very successful in bringing participants into regular vocational training afterwards. At least some 20% of youths in the transition system would have sufficient maturity to start a much more effective introductory training.

Concerning main benefits/problems for students derived from their participation in apprenticeship type schemes it can be said that Vocational training within the dual system is an attractive option for young people who would like to learn a profession. Compared to other apprenticeship schemes, the combination of work- and school-based training and the nationwide high quality standards are key ingredients which lead to low youth unemployment rates, high employability and a relatively quick insertion into the labour market. Enterprises train their apprentices on-the-job and integrate them into their work processes. In contrast to full-time school-based training, training employer and apprentice already have the chance to find out whether they fit together well and want to continue the work relationship after completion of training. Therefore, one can also assume that training graduates in the dual system have better job and career prospects and higher earnings than graduates from school-based training.

While the above statements are valid for an overall characterisation of the dual system and apprentices are mostly satisfied with their training, some sectoral differences can be detected when more detailed analyses are carried out. A survey from 2010 among 7.317 apprentices in the 25 most frequent training occupations shows that the individual situation in the training company and the affiliation to specific training occupations/economic subsectors are the main factors that influence the quality of training as seen by the trainees (cp. Deutscher Gewerkschaftsbund (DGB) (2010), p. 7 and Table E.62). Furthermore, apprentices tend to assess the training provided by larger enterprises more positively than the one by smaller firms. Due to their larger material and personnel resources, larger enterprises are usually able to guarantee a structured apprenticeship in full scope more easily. By contrast, smaller companies with less personnel must react flexibly to shifts in demand and often integrate their apprentices into work processes more in accordance with the current order- and production-situation and thus follow the training plan less strictly. However, with regard to the quality of the training instruction no substantial differences are indicated by the interviewed apprentices. Nevertheless, trainees in smaller enterprises have to perform tasks that are not (directly) related to the training more often.

Table E.62 Overall assessment of the quality of training in the 25 most frequent occupations in the dual training system as seen by apprentices, 2010

Rank	Occupation	Rank	Occupation	Rank	Occupation
1	Industrial mechanic	10	Metal-construction worker	19	Carpenter
2	Bank clerk	11	Electronic technician	20	Car mechatronics engineer
3	Industrial clerk	12	Plant/installation mechanic	21	Hairdresser
4	Mechatronics engineer	13	Wholesale and foreign trade clerk	22	Painter and varnisher
5	Office clerk	14	Cook	23	Sales person specialised in foodstuffs
6	Medical assistant	15	Dental assistant	24	Hotel clerk
7	IT specialist	16	Gardener	25	Restaurant specialist
8	Office communication assistant	17	Warehouse logistics specialist		
9	Sales assistant	18	Retail merchant		

Source: Deutscher Gewerkschaftsbund (DGB) (2010), p. 6.

Quantitative data with regard to employability, insertion into the labour market etc. are provided above in chapters 2.2.

On the other hand, with regard to the main benefits for enterprises, it is interesting to comment on cost indicators. According to a representative study conducted in 2007 by the Federal Institute for Vocational Education and Training (BIBB) the total *gross* costs for a training place amounted to 15.288 EUR p.a. in Germany. At 3.596 EUR, the *net* costs for vocational training are considerably less. This difference is due to the fact that trainees also perform productive work to the benefit of the training enterprise. During their training, trainees generate an average of 11.692 EUR per year in revenue. In many cases, smaller enterprises notice the financial benefits even faster because trainees are integrated into their operations to a high degree right from the first day of training. In such cases, providing in-house vocational training pays off quite quickly for the training firm.

There are additional economic benefits that training companies can add into their calculations. To start with, there are the costs that are avoided as a result of providing vocational training in one's own company. These include the costs that would arise to recruit, familiarise and train external skilled workers. According to BIBB, recruiting a skilled worker costs an average of 4.214 EUR. This includes the costs for advertisements, job interviews, familiarisation, continuing training etc.

Furthermore, by training apprentices and keeping them as skilled loyal employees, training companies can avoid potential high costs arising from less than optimal recruitments of external (high-wage) employees and fluctuation. The fact that vocational training programmes last several years gives employers time to make a reliable assessment of the trainee's abilities and strengths and to make long-term plans for the individual's employment in the company.

On top of this, there are a number of benefits that cannot be directly measured in financial terms. Companies can gear the training they provide to their own needs. In the process, knowledge and important know-how can be preserved in the respective company. In addition, companies that provide in-house vocational training enjoy a high standing among their customers, suppliers, banks and the general public. They are attractive not only as providers of vocational training but also as employers. Lastly, there are also benefits to the economy as a whole. Only the joint commitment of all enterprises that are capable of providing vocational training ensures that Germany has a sufficient number of qualified skilled workers. When a growing number of enterprises withdraw from vocational training, the demand for skilled labour would increase while the number of qualified employees on the labour market would shrink. A tighter supply consequently would lead to higher labour costs - which all companies would notice when recruiting new employees (cp. for the above mentioned: Bundesinstitut für Berufsbildung (BIBB) (2010), p. 45f.and Bundesinstitut für Berufsbildung (BIBB) (2011), p. 260).

Conversely, with regard to main problems for companies, non-training establishments specify the following reasons for abstaining from offering training positions.

Table E.63 Reasons of non-training establishments for abstaining from offering training positions, frequency of answering category "very important/important" in %, 2010

Reason	Total	Establishment size (number of employees)			Practical IVET-experience in the past	
		1-9	10-49	>=50	Yes	No
Training costs are too high	49	50	44	33	51	48
Lack of time	48	48	53	53	37	52
Training is too complex / too many regulations	42	42	44	31	36	44
Apprentices are too rarely present in the company	40	40	43	21	47	38
No qualified applicants	38	40	29	19	66	31
Own company's work is too specialised	36	32	58	52	15	41
Too low benefits of training for the company	36	34	48	42	33	36
Need for skilled labour covered by continuous training of already employed staff	35	32	55	69	39	35
No need for skilled employees	33	34	36	17	26	35
Trainees leave too often after finishing training	32	30	49	38	40	30
More worthwhile to recruit new (trained) personnel on the (regular) labour market	26	24	33	47	25	26
Bad experiences with apprentices in the past	16	16	16	16	32	11

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 207.

In addition, the interviewed experts mention the following obstacles that also hamper enterprises' participation in apprenticeship type schemes:

- The DIHK points out that training directives have become more complex over the years. Especially smaller-sized enterprises would find it difficult to cover the multitude of skills, know-how and work processes which have to be taught.
- Keeping red tape and administrative burdens to a minimum is facilitated by the fact that the dual training system is administered by business chambers in their function as (semi-public) competent bodies which carry out sovereign tasks. Chambers are self-governing bodies of the business economy and are aware of the necessities and difficulties of managing an enterprise. Therefore, they have an interest in keeping administrative burdens at a tolerable minimum for their member enterprises. Furthermore, training enterprises usually do not have contacts with other administrative offices apart from the competent bodies.
- Several experts suggest to reduce the number of training occupations and to increasingly form broader-defined occupational groups which during the first part of the training provide basic occupational skills for a larger number of related professions. More specialised skills and know-how should be taught in the second part of the training. In view of demographic change and decreasing numbers of apprentices, this would also have the advantage that vocational schools can build classes based on occupational groups more easily (rather than on the more specialised training occupations with smaller numbers of apprentices).
- The demographic development changes the relative position of supply and demand on the training market and thus makes it more difficult for companies to recruit enough apprentices. Here, some stakeholders recommend image- and information-campaigns for the dual training system as a whole but also for specific training occupations and/or regions.

Finally, with regard to main elements for discussion/agreement amongst social partners on apprenticeship type schemes, it must be pinpointed that at the company level, representatives of business and labour (i.e. business chambers and works councils) are in charge of

monitoring the implementation of training directives. At the industrial and macro level, the social partners are involved in the process of both devising new and reforming old training directives ("Ausbildungsordnungen"). In addition, they lobby for or against modifications in the general institutional framework as defined, e.g., by the Vocational Training Act (BBiG).

The interviewees identified the following main elements for discussion/agreement amongst social partners on apprenticeship type schemes:

- Number of training places offered by the enterprise sector,
- Financing of the IVET-system; discussions about introducing a training levy for enterprises that do not (sufficiently) engage in vocational training,
- Level of training remuneration,
- Transition of apprentices into regular employment; retention rates,
- Quality of training (assuring quality during the training process),
- Duration of training; introduction of 2-year training occupations with reduced theoretical learning requirements,
- Extent of integration of trade unions, apprentices and other stakeholders into the quality assurance mechanisms,
- Integration of young people with migration background, social disadvantages or disabilities into vocational training,
- Design and effectiveness of the "transition system"; training maturity of young people,
- Contents of training directives (--> inter alia, definition of particular occupational skills; cp. below).

The process of (re)defining particular occupational skills generally plays out between two different poles: on the one hand, trade unions (sometimes in coalition with craft firms) lobby for broad skill profiles with (general) "labour market relevance". Trade unions also tend to favour unitary skill profiles, where the training period is the same for every apprentice in a given occupation as is the type of qualification awarded at the end of the training period. From a union perspective, common standards prevent a differentiation of occupational profiles that would increase conflict between workers over wage levels, which would in turn interfere with the smooth functioning of the collective wage bargaining system. On the other hand, employers, and especially large firms who expect to retain most of their apprentices, aim to develop more specific skill profiles in order to address their own specific skill needs. They also have a preference for a higher degree of differentiation within and between occupational profiles because they can concentrate costly training measures on more able apprentices, while saving on the training of the less talented. In addition, the introduction of several levels of vocational training allows for more differentiated wage arrangements, reflecting differences in productivity more accurately and weakening the collective voice of employees in wage bargaining (cp. for the above: Thelen/Busemeyer (2008), p. 14).

Identification of specific aspects of the national apprenticeship type schemes and/or particular experiences at sectoral/regional level

Good practices

In the following, some examples of Good-Practice measures are presented. Hence, the list does not claim to be complete. Based on literature review and expert interviews, some measures are briefly described which can be regarded as successful or innovative in their support strategy or which might not be so common in other countries and thus could act as an inspiration for the design of similar projects.

- National Pact for Training and Junior Skilled Workers in Germany

  In the National Training Pact, the Federal Government - in co-operation with the main German business associations (BDA, BDI, BfB, DIHK and ZDH), the Federal Employment Agency (BA), the Standing Conference of Ministers of Education and Cultural Affairs (KMK) and the Officer for Migration Issues of the Federal Government - is committed to securing a sufficient supply of training places for young people. Since its inception in 2004, the pact has been extended twice by the partners to the pact; most recently in 2010 when it was prolonged until 2014 (cp. Bundesministerium für Wirtschaft und Technologie (2011)). Given that the transition from school to training is particularly challenging for repeat applicants, socially disadvantaged young people, young people with learning difficulties or disabilities and young people with a migration background, the partners to the pact will place a specific priority on these groups. At the same time, greater numbers of highly talented school-leavers will also be encouraged to enter the dual training system.

  Since its start in 2004, the partners to the pact set themselves both quantitative and qualitative targets whose accomplishment is assessed every year. The evaluation for the year 2010 showed - inter alia - that to every (interested and capable) youth an offer could be made for vocational training or qualification. The business enterprises' voluntary commitment to create new training places and activate new training companies was greatly exceeded: Instead of the agreed 60.000 new training places p.a. some 70.300 places were provided, instead of 30.000 new training companies some 42.800 agreed to offer IVET for the first time in 2010. Company-based introductory training (EQ) which prepares young people for the transition into regular dual training also continued to be successful. Business enterprises provided 29.010 such work experience places, which have been filled with 22.500 youths (cp. Bundesministerium für Wirtschaft und Technologie (2011a), p.2)

- Innovation Circle on Vocational Education and Training

  Structural change in industry and society, the demographic development and increasingly close international ties are challenges to which vocational training must adapt. In addition to securing an adequate supply of training places today (which is the focus of the National Pact for Training and Junior Skilled Workers in Germany), more far-reaching objectives must be pursued and the structures and interfaces of the vocational training system have to be improved.

  This was the mission of the Innovation Circle on Vocational Education and Training ("Innovationskreis berufliche Bildung", IKBB) appointed in April 2006 by the Federal Minister of Education and Research. The task force was recruited from high-level representatives from Federal and Länder ministries, business associations, trade unions, the Federal Employment Agency (BA), the Federal Institute for Vocational Education and Training (BIBB), enterprises, vocational schools and research.

  The eight meetings of the Innovation Circle were supported by working groups which prepared, specified and developed the relevant topics and positions. On 16 July 2007, the Innovation Circle concluded its work by presenting its recommendations and proposals for action in the "Ten Guidelines for the Modernization and Structural Improvement of Vocational Education and Training". These recommendations provide a commonly agreed basis for further action (cp. below chapter 4.3).

- Federal Institute for Vocational Education and Training (BIBB)

  Germany has a well-developed and institutionalised VET research capacity, including the Federal Institute for Vocational Education and Training (BIBB), and a national network of

research centres that study different aspects of the system to support continuous innovation and improvement in the VET system (cp. above chapter 1).

The Federal Institute for Vocational Education and Training (BIBB) is an internationally renowned centre of excellence for research on initial and continuing vocational education and training (VET) and the progressive development of VET. Its research, development and advisory work is aimed at identifying future tasks of vocational education and training, promoting innovation in national and international vocational education and training and developing new, practice-oriented solutions for initial and continuing vocational education and training.

- JOBSTARTER: Support programme for more training places

  The Federal Ministry of Education and Research (BMBF) supports the development of a favourable training structure through its JOBSTARTER programme. This programme already supplies funding for more than 280 innovative projects in vocational training. All these projects are helping to create additional training places in the regions and are offering various measures to support companies which either have no previous experience with training or which have grown weary of providing training. So far, JOBSTARTER-projects were able to generate 54.500 additional training places, of which almost 36.000 have already been precisely filled. JOBSTARTER makes an important contribution to supporting the activities of the National Pact for Training and Junior Skilled Workers in Germany. For the period 2006 to 2013, the BMBF funds the programme with approx. 125 million EUR, including funds from the European Social Fund (ESF). JOBSTARTER is being implemented by a central steering unit (BIBB) and four regional offices which provide information at local level on the conditions for funding and stimulate co-operation between regional projects and stakeholders. JOBSTARTER provides funding for projects which help to create additional in-company training positions and to recruit suitable trainees. Improved co-operation between local stakeholders should strengthen regional responsibility for vocational education and training and at the same time contribute to structural development. Cross-border education co-operations and training collaborations also play an important role, as regional development in border regions is no longer purely a national concern. Projects are selected via annual calls for proposals and are expected to focus on specific thematic priorities. The projects are implemented inter alia by business chambers, local and regional institutions, educational service providers and enterprises.

- Annual Training Campaign ("I am good")

  The Federal Employment Agency ("Bundesagentur für Arbeit", BA) started an annual training campaign: "I am good". The BA's objective is to bring young people on the right track when choosing a profession and looking for a training position. The campaign supports the daily work of vocational guidance in the local employment agencies and deals with an important issue when choosing a profession: getting aware of one's own strengths. Vocational guidance assists young people - not only before but also during vocational training - in 176 employment agencies all over Germany.

  One of BA's most successful measures in 2010, was to organise a national contest within the scope of its training campaign, giving away twelve premium internships during the summer holidays. Renowned employers such as Volkswagen, RWE Innogy and the Bundesliga football club Werder Bremen supported the initiative. During the internships, the winners were able to experience training professions very closely. Students all over Germany were called on to apply for one of the premium internships at the internet portal "http://www.ich-bin-gut.de". In a short application, they had to describe the strengths that qualified them for the internship, as BA wants young people to recognise

how to use their talents for their choice of profession. The strategy proved successful. More than 1.000 young people applied for the twelve holiday internships.

- Dual study programmes (cp. above chapter 2.2)

  The OECD (2010, p. 53) considers the German dual study programmes as a very promising dual tertiary model. Given the increasing needs of the economy for highly skilled employees and the evidence of positive results from the use of dual structures for all levels of teaching, these programmes should be promoted and might evolve into a key pillar of the education system for the future.

  The system typically mirrors the apprenticeship arrangements: students have to first find a place with a training company that co-operates with a university/academy. If they are successful, a place at a university is practically guaranteed. These programmes offer several advantages similar to apprenticeships. They are attractive to students who want to earn money during their training and their studies. In addition, career prospects upon graduation from such programmes are usually very good. Employers benefit from early access to (future) skilled employees and from the students' productive work contribution. Moreover, dual study programmes also facilitate the process of recruitment.

- Inter-company vocational training centres

  Particularly in the case of technical occupations, the company providing the training often does not have all the equipment and machines necessary for teaching everything required for the occupation. This is often the case in smaller enterprises, especially in the skilled crafts. Inter-company vocational training centres ("Überbetriebliche Berufsbildungsstätten", ÜBS) provide those parts of a trainee's training that his company cannot. In addition, trainees become acquainted with the latest technical developments in their field at such facilities. Inter-company vocational training also serves a pedagogical function as a "third learning environment" where practical and theoretical competence is systematically taught. The duration of inter-company vocational training depends on what the training company is not able to teach its trainee. The enterprises, business chambers, craft guilds and the German government bear the cost of inter-company vocational training (cp. Bundesinstitut für Berufsbildung (BIBB), (2010), p. 53f.).

- Collaborative training

  Collaborative training ("Verbundausbildung") means that a company provides vocational training together with another firm or with an education provider. This option is particularly interesting for companies that are unable to teach all the content that is prescribed by the training directives. The following models can be used to ensure that the vocational training provided is complete. Often, one company is the primary provider of in-company vocational training and the second company only takes charge of the learning content that the first is unable to provide. Good experience has been gathered with collaborative training models in which several firms work together with an education provider. The education provider co-ordinates the vocational training and can also sign the training contract itself. The trainee then spends a stipulated amount of time in the firm, at the part-time vocational school and, for certain segments of his training, at the education provider as well. Another option is a training association which appoints a lead enterprise for the training. Frequently, the association is also the training employer, signs the training contracts and teaches training content. The lead enterprise takes on the trainees of several companies for a stipulated period of time. Thus, a variety of possibilities exist for sharing out vocational training. Generally speaking, all of the participating enterprises determine in a contract which companies are responsible for the spe-

cific parts of the training. The business chambers assist in arranging collaborative training ventures of this type (cp. Bundesinstitut für Berufsbildung (BIBB), (2010), p. 54f.).

- Vocational training assistance

  The Federal Employment Agency (BA) provides trainees under certain preconditions with non-repayable monthly grants in the form of vocational training assistance ("Berufsausbildungsbeihilfe", BAB). Entitled are young people in vocational training if (A) they cannot live with their parents during training because the training enterprise is too far away, or (B) if the training company is not too far away if (1) they are over 18 years of age, (2) are married or living in a civil partnership or (3) have at least one child. The support mainly aims at increasing labour mobility and overcoming financial difficulties that stand in the way of suitable professional training for young people. In order to calculate the actual monthly amount of vocational training assistance, the BA takes into account the training allowances and the annual income of the parents (or permanent partner) insofar as they exceed certain thresholds (exempted amounts). The BA's total spending on vocational training assistance amounted to 584 million EUR in 2009.

- Assistance for apprentices in danger of dropping out of training

  Difficulties with learning, a lack of important specialised knowledge or even personal problems can jeopardize a youth's vocational training or introductory (pre-) training programme. Assistance can be provided during training ("Ausbildungsbegleitende Hilfen", abH), so that individuals in such situations do not drop out. On behalf of the training employer, the local Employment Agency can ask suitable education providers to provide this assistance. Working in small groups or in individual training sessions, experienced experts try to solve the particular problem with the respective youth. This can mean re-doing or catching up on homework or current subjects being covered during training, or teaching the fundamentals of arithmetic or technical basics. The young people are also given help with maintaining their record books or when preparing for an examination. In addition to this training-related assistance, assistance is also there to help with socio-educational problems such as trouble with one's vocational school teacher, rows within one's group or difficulties in one's personal development. The employment agency's "Vocational Guidance Services" and the respective part-time vocational school provide information on these various types of training assistance. The local employment agency decides whether to grant training assistance in the individual case. It also bears the costs of the particular measure. Training assistance can be organised in a wide variety of ways. It can be provided during or outside the hours when in-company vocational training takes place.

- Educational chains until the completion of training

  Launched in September 2010, the idea behind the educational chains ("Bildungsketten") - consisting of three instruments - is to bring about a systematic optimisation of the transitions between general school education, the transition system and dual vocational education and training. The focus is on preventing school drop-outs, avoiding waiting loops, achieving efficient transitions into regular VET and supporting the successful completion of such training for young people who have specific learning difficulties and/or social disadvantages. The Federal Ministry of Education and Research (BMBF) has worked in conjunction with the federal states and acted in accordance with a standardised catalogue of criteria to select over 1.000 lower secondary schools and schools for pupils with learning difficulties right across the country which are to participate in the programme. For all pupils of these schools an analysis of potential will be conducted from school year 7 onwards. The aim is to identify areas of strengths and latent potential and also to specify support requirements. A school-based and extra-school support plan will be developed for young people who are in need of support. This process will be

co-ordinated with all involved stakeholders, including the pupils themselves and their parents. The ministry expects to fund approx. 60.000 such analyses of potential per year.

The participants will then receive extra-school support from full-time, experienced educational guides on an individual and continuous basis. In difficult cases, this coaching will last until the completion of training. The BMBF has planned to fund 1.000 such educational guides. Their tasks are to take on a coaching role to support and monitor the young people personally and develop and implement individual solutions for problems arising in the educational development, whilst co-operating closely with regional educational and support institutions.

The plan is to use the third instrument of the initiative from school year 8 onwards. This involves practice-related vocational orientation in inter-company institutions and similar establishments with close links to the business economy. The aim is that young people (and not just those who have been identified as requiring support) work out their inclinations and gather specific experiences in three occupational fields (whilst recognising along the way that the subjects they have learned at school are of considerable practical use in daily work life). Results will be summarised in some kind of "career choice passport".

Not all the individual instruments described above are new. They have already been used and continue to be used on an individual basis in some federal states. What is new, however, is the strategic interlinking of such instruments within a systemic support philosophy aligned on a broad basis and implemented in a coherent fashion nationwide. Another new aspect is the supplementing of these measures via individual support agreements, the aim of which is to strengthen and emphasise the co-ordination and collective responsibility of a range of stakeholders within individual parts of the educational system. An initial budget of 362 million EUR has been earmarked for the "programme part" of the initiative until 2014. The orientation, however, is towards a longer term approach (cp. for the above: Thiele (2011)).

- Widespread network of partnerships and co-operations between general schools and enterprises (especially in the Federal States of Baden-Württemberg and Schleswig-Holstein) in order to get into contact with young people at an early stage (career orientation, internships, information about career and development prospects in the dual system, joint projects etc.)
- Vocational Training Act (BBiG) as comprehensive legal basis for dual training --> cp. above chapter 1
- Joint fund-based financing of vocational training in the construction industry since 1976
- Collective agreement to retain training graduates for at least twelve months after completion of training in the metal industry
- Mobility coaches (http://www.mobilitaetscoach.de) --> cp. above chapter 3.3.
- Additional qualifications ("Zusatzqualifikationen") --> cp. above chapter 4.1.
- Recruitment of apprentices via social media such as YouTube
- Company-based introductory training ("Einstiegsqualifizierung", EQ) --> cp. above chapter 4.1.
- Very broadly speaking, the German system of dual vocational training in its entirety with high nationwide quality-standards and the active co-operation of all relevant stakeholders.

Elements that do not work / need improvement

- As a consequence of both the limited achievements of school-leavers in some areas of general school education and the shortage of dual training places, a huge waiting list has accumulated over the last decades. In 2010, 46.4 % of applicants to dual training were so-called unplaced/repeat applicants ("Altbewerber") who had finished general school education at least one year ago.
- The great variety of measures for supporting disadvantaged young people, particularly in training preparation, should be better co-ordinated and based on practical requirements so that a consistent and transparent architecture for all funding instruments of the Federal Government, the Länder and regions can be achieved.
- Though a large variety of different training occupations is available, the large majority of apprentices concentrate on a relatively small number of professions. Therefore, career orientation activities should be more successful in raising awareness for the broad spectrum of training occupations.

Challenges

- Challenges identified by the OECD (2010, p. 5f. and p. 17-53):
  - The transition system suffers from undue fragmentation and an absence of transparency. Despite the very substantial resources devoted to the system, too few programme participants make a successful transition into the regular VET system.
  - Career guidance seems highly variable across the Länder, with no single agency responsible for assuring delivery of quality information and guidance services to all students.
  - Some students leave compulsory school with weak core academic skills. The VET system is not currently organised to ascertain whether this is in fact a problem or, if so, to address it.
  - The evaluation of dual system students at the end of their apprenticeship is dominated by the chamber exam. Because their school performance does not count in the chamber exam, students may not take their schooling seriously, thereby limiting their ability to participate successfully in some form of tertiary education.
  - Although Germany has recently opened more pathways from upper-secondary VET to tertiary education, to date very few VET graduates have made use of those pathways (permeability).
  - Shrinking cohort numbers due to demographic change represent an important contextual challenge (--> securing the supply of skilled labour).

- Participation of young people with migration background in vocational education
  - Young women and men with migration background have more difficulties in accessing (company-based) vocational training than their autochthonous counterparts. Twelve months after terminating general school education, only approx. one third (33,7%) of young women and less than half (47,8%) of all young men with migration background and interest in starting dual vocational training succeed in doing so. This is considerably less than their peers without migration background.

Table E.64 Duration of transition into (company-based) vocational training, 2006

Start of (company-based) vocational training in %	Months after terminating general school education		
	12	24	36
Women with migration background	33,7	54,7	59,1
Women without migration background	50,8	63,5	71,8
Men with migration background	47,2	59,4	66,5
Men without migration background	67,8	80,3	86,4

Source: Bundesinstitut für Berufsbildung (BIBB) (2011), p. 190.

Further analysis (cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 191f.) shows that these results cannot only be explained with lower academic levels and lower school leaving certificates often attained by young people with migration background. BIBB-survey data hint at other important factors which hamper transition into vocational training; especially social factors. In addition to their own lower school achievements, the less favourable social background of young people with migration background, i.e. the lower school- and occupational education of their parents, the lower professional status of the father, exert a negative impact on their transition success into VET. But even taking account of all (statistically) observable factors, young people with migration background still show lower chances of acquiring a training place. So, BIBB concludes that other (possibly non-statistically observable) factors have to be at work which are related to the migration background. But according to BIBB, no final judgement has been reached about the nature of these factors. In this connection, BIBB (2011, p. 188) also acknowledges that young people with migration background form a very heterogeneous group both with regard to their "migration story" as well as to their school qualifications and their social living conditions.

According to the Bundesinstitut für Berufsbildung (BIBB) (2011, p. 243), the share of youths with migration background amounts to 23% in the age group of 20-24 yrs. and to 25% in the age group of 15-19 yrs. Furthermore, almost one third (32%) of children aged 5-9 yrs. have a migration background, thus highlighting the central task and challenge of better integrating them into the educational and vocational system and ultimately into the labour market.

- Reducing the share of (formally) unskilled young people

  Since the beginning of the 1980s, the unemployment rates of non-formally qualified people (i.e. "unskilled" persons without dual or fully-qualifying vocational education or without completed tertiary education) have been increasing disproportionately. In 2005, the unemployment rate of these "unskilled" persons (26%) was almost three times higher than the one for people with completed vocational training (9,7%). At the same time, jobs are increasingly being cut or relocated to low-cost-countries which (in the past) had been filled with unskilled workers. Unskilled persons have a high risk of not finding a permanent job with career and development prospects. Therefore, youths and young adults without completed vocational education carry a highly elevated risk of becoming unemployed which from the individual and the societal point of view (loss of taxes and social security contributions) cannot be accepted and should thus be targeted (cp. Bundesinstitut für Berufsbildung (BIBB) (2011), p. 245).

  Most recent data for 2008 show that 2,163 million young adults in the age of 20-34 are classified as not formally qualified (14,9%-share in the entire age group). Again German nationals with migration background (22,6%) and foreign nationals (35,7%) carry a much higher risk of being formally unskilled than German nationals without migration background (9,6%). In view of the demographic developments and the pay-as-you-go design of social security systems, it seems to be of high importance to create favourable framework conditions which allow all young people to develop their skills and talents and

to integrate as skilled employees (or self-employed) into the labour market. This would not only open up career and life perspectives for all willing and capable young people but would also avoid a further financial strain on the shrinking working population.

Table E.65 Young adults aged 20-34 without vocational or university/tertiary qualification, 2008

Indicator	With vocational or university/tertiary qualification		Without vocational or university/tertiary qualification		Total		Share of non-formally qualified people in %
	absolute (in 1.000)	in %	absolute (in 1.000)	in %	absolute (in 1.000)	in %	
Male	6.273	50,7	1.087	50,3	7.360	50,7	14,8
Female	6.089	49,3	1.076	49,7	7.165	49,3	15,0
Total	**12.363**	**100,0**	**2.163**	**100,0**	**14.526**	**100,0**	**14,9**
"Hauptschul"-diploma	2.232	18,2	920	43,1	3.152	21,9	29,2
"Realschul"-diploma	4.304	35,1	411	19,3	4.715	32,7	8,7
University entrance qualification	5.575	45,4	363	17,0	5.938	41,2	6,1
No school leaving diploma	86	0,7	432	20,2	518	3,6	83,4
No information	78	0,6	8	0,3	86	0,6	9,3
Total	**12.275**	**100,0**	**2.134**	**100,0**	**14.409**	**100,0**	**14,8**
German nationals w/o migration background	9.843	79,4	1.047	49,1	10.890	75,0	9,6
German nationals with migration background	1.250	10,1	366	17,2	1.616	11,1	22,6
Foreign nationals	1.299	10,5	721	33,8	2.020	13,9	35,7
Total	**12.392**	**100,0**	**2.134**	**100,0**	**14.526**	**100,0**	**14,7**

Source: Bundesinstitut für Berufsbildung (BiBB) (2011), p. 247.

Though difficult to quantify exactly, the Wissenschaftszentrum Berlin für Sozialforschung (WZB) (2011, p. 9) has provided some model calculations on the costs which could be saved by cutting the percentage share of formally unskilled people in one age cohort by half. Based on several assumptions, the authors specify the potential saved costs with regard to one single age cohort as 1,5 billion EUR (over a 35-year employment trajectory). This approximative calculation only refers to lost income taxes and social security contributions as well as to payable unemployment and social assistance benefits and thus (significantly) underestimates the amount of potential cost savings.

- Enterprises' complaints about lacking training maturity of school-leavers

  A survey among 14.299 (answering) enterprises carried out in February 2011 by the German Association of Chambers of Industry and Commerce (DIHK) revealed that almost one quarter (24%) of all firms were not able to fill offered training positions. Since 2005 and 2006, the percentage share has doubled. An extrapolation by DIHK shows that these figures correspond with at least some 55.000 training positions which remained vacant (only with regard to the fields of industry, services and trade).

  The lack of suitable applications is by far (65%) the most important reason why enterprises were not able to fill offered training positions. As acknowledged by Deutscher Industrie- und Handelskammertag (DIHK) (2011, p. 18 and p. 21), this result also reflects the demographic developments which affect the vocational training system and society as a whole.

Table E.66 Enterprises' reasons for not being able to fill offered training positions in 2010, in %

Reasons	in %
There were no suitable applications.	65
After a mutual agreement the trainee did not step up to start training (due to other preferred alternatives)	21
The training contract was dissolved by the apprentice after the start of the training.	19
There were no applications at all.	10
Other reasons	20

Source: Deutscher Industrie- und Handelskammertag (DIHK) (2011), p. 22.

However, more than three quarters (76%) of inquired enterprises complain about a lacking training maturity of young school-leavers. This is clearly the number one obstacle mentioned by the firms. According to the DIHK, this result makes clear that a favourable overall economic development alone will not automatically solve all problems on the VET-market. Though slight improvements have occurred, still almost half (48%) of all companies observe deficiencies in elementary mathematical skills of the current generation of school-leavers (2006: 53%); 53% criticise oral and written communication/language skills (2006: 66%). Enterprises' dissatisfaction with school-leavers basic school qualifications is above-average in the North and West, and less pronounced in the South (where pupils in the Federal States of Bavaria and Baden-Württemberg regularly perform exceptionally well in the PISA-studies of the OECD). Training maturity does not only encompass formal but also social and personal skills. Here as well, enterprises notice substantial shortcomings. Since 2006 (38%) the share of firms that negatively evaluate school-leavers' discipline has constantly risen to 48% in 2011. Almost the same holds true for the resilience and endurance of young people which is assessed negatively by 45% (up from 39% in 2006). Complaints about low motivation (willingness to perform) are constantly expressed by half of all enterprises over the years. The DIHK points out that the formation of social skills is to a particular degree the result of a responsible and dedicated parental education. Social skills would also be developed in school, but in the first degree it would be the task of the parents to lay the necessary foundations. Therefore, parents would be decisively responsible for their children's success in making the transition from general school education to vocational training and for the success of the apprenticeship. In total, already 35% of enterprises which noticed a lacking training maturity of many applicants were not able to fill vacant training positions. Another major hampering factor is seen by almost half of all enterprises (49%) in young peoples' unclear ideas about their occupational interests and preferences. In 46% of all enterprises, these obstacles hamper their training activities.

Table E.67 Enterprises' reactions to lacking training maturity of school-leavers, 2011, in %

Reactions	in %
Extra private tuition offered by the enterprise itself	56
Use of assistance for young people with learning difficulties, social disadvantages etc. offered by the Federal Employment Agency ("Ausbildungsbegleitende Hilfen")	34
Use of company-based introductory training ("Einstiegsqualifizierung") financed by the Federal Employment Agency	19
Offering internships for young people who participate in prevocational training measures offered by educational service providers	19
Offering long-term internships for pupils' learning in enterprises ("practice classes"), i.e. one day per week over one year	17
Use of honorary mentors and coaches	12
Offering internships for school teachers	7

Source: Deutscher Industrie- und Handelskammertag (DIHK) (2011), p. 36.

In spite of marked deficiencies observed at a growing part of young school-leavers, skilled labour will be increasingly in short supply and therefore the enterprises decide to help themselves.

An increasing number of enterprises is prepared (under certain preconditions) to train also young people with learning difficulties. Only 31% of all enterprises would *not* resort to this option (2010: 36%). In general, 38% of enterprises consider social skills and motivation more important than school achievements. The DIHK underlines again that a favourable overall economic development and demographic change (taken on their own) do not automatically allow all school leavers to find a training position. Instead, there would be the danger that despite a growing willingness of enterprises to engage in training, an increasing number of training positions could not be filled with suitable young people. Hence, the enterprises' claims for better school and family education (parental interest in and support for their children's school career, prevalence of a learning culture) remain.

Table E.68 Preconditions for an increased willingness of enterprises to train young people with learning difficulties, 2011, in %

Preconditions	in %
Social competences are more important than school achievements	38
Does not come into question for my entreprise.	31
If public financial support is provided	24
Better information needed about strengths and weaknesses of young people	24
Also without public support, young people with learning difficulties are given a chance	23
If public support is provided (socio-pedagogical assistance)	14

Source: Deutscher Industrie- und Handelskammertag (DIHK) (2011), p. 38.

The DIHK also explains deficiencies in school-leavers' qualifications by referring to slower adjustment processes in general school education (cp. Lüke (2011), p. 24). As a response to the increasing automation/mechanisation and globalisation, demanding new professions have been developed. On the one hand, this would have to be judged positively as Germany has to stand up to international competition and this could only be done with well-trained employees. Schools, however, would still lag behind and this would also explain current complaints about insufficient qualifications of many school-leavers.

Job counsellors of the Federal Employment Agency call on training employers to have more patience and understanding. The demands of enterprises and the IVET-system would be placed upon young people who have barely entered the "serious world of work". Hence, it could not be expected that young people are already highly organised, forward-thinking and completely mature. Vocational training would mean to encourage and enable young people to perform well. Sometimes enterprise owners would also project high professional demands onto school-leavers which they themselves would not always fully comply with (cp. Lüke (2011), p. 24).

Other stakeholders put into question whether complaints about lacking training maturity would really be a new phenomenon as the older generation had already been complaining about the younger generation since the ancient times of Aristoteles. By contrast, training enterprises could also benefit from the talents and interests of the current generation of young people. Apprentices could, for example, introduce their firms to social media (such as Facebook and Twitter) and thus contribute to the utilisation of new marketing and communication channels.

Recommendations

- The Innovation Circle on Vocational Education and Training presented the following recommendations and proposals for action in the "Ten Guidelines for the Modernisation and Structural Improvement of Vocational Education and Training" (cp. Innovationskreis berufliche Bildung (IKBB) (2007)):
    1. Encouraging completion of school education – improving training maturity,

2. Optimising training preparation for the disadvantaged – reorganising funding structures,
3. Optimising transfers – securing pathways to company training,
4. Strengthening the occupation principle – making vocational education and training more flexible,
5. Broadening the training basis – making effective use of training,
6. Enhancing transfer opportunities – securing the employability of vocational skills,
7. "Second chance" education – promoting qualifications for young adults,
8. Greater openness towards Europe – improving mobility and recognition,
9. Strengthening dual training by European comparison – securing potential on the international education market,
10. Providing a basis for future-oriented vocational training policy – strengthening co-operation between industry, science and politics.

- Recommendations put forward by the OECD (2010, p. 6 and p. 17-53):
  - Create a co-ordinating committee for the transition system within each Land to improve co-operation between stakeholders and make transition offers more transparent. Evaluate the cost-effectiveness of individual transition measures and roll out the most promising initiatives to the whole country.
  - Reform the career guidance system to deliver well-informed guidance to all. Fix lead responsibility for career information and guidance in a single governmental agency. In the longer run, consider structural reform of the dual system to facilitate effective career choice.
  - Assess the literacy and numeracy skills of all students entering the transition system, and those entering apprenticeships without a school leaving certificate from a Realschule or Gymnasium. Provide explicit basic skills instruction for those in need of remediation. Place greater priority on general education and broad academic skill development in the part-time vocational schools.
  - Make inclusion of the school mark in the final certificate mandatory and include an explicit assessment of literacy and numeracy skills in the final school exam. In the longer run, merge the Chamber exam and the school exam into a single final assessment. Strengthen collaboration between schools and employers through an integrated assessment process.
  - Open access to tertiary education further and address transition barriers perceived by students. Design adequate guidance, induction and financial support measures for less academically trained people wanting to attend university. Promote dual universities and dual programmes at regular universities and encourage more flexible, part-time university offers and the recognition of prior learning and experience.

- Additional recommendations gathered from expert interviews:
  - Improving the general qualification level and social skills of school-leavers
  - Better integration of young people with migration background, social disadvantages or disabilities into the dual training system,
  - Trainers are the link between the occupational demands of the training company on the one hand side and the apprentices on the other. They need special competencies when working with youths who lack sufficient social skills. Therefore, trainers should be better prepared, e.g. by way of seminars for early detection and settlement of conflicts.
  - Increasing attractiveness of the dual training system for highly-talented school-leavers as an alternative to university studies,
  - In view of an increasing competition for apprentices, training companies should make the quality of their training more transparent in order to be more attractive. For example, companies could advertise high success rates at final examinations,

high quality of training instruction and equipment, high level of satisfaction among apprentices, opportunities to acquire additional qualifications during training, subsequent career prospects etc.

- Large multinational foreign companies with local units in Germany should be integrated more strongly into the German system of dual vocational training. At the same time, local units of large German enterprises abroad might provide an impetus for transferring and adapting the German IVET-system to other countries.
- Better recognition of migrants' qualifications acquired abroad,
- Creation of core occupations as a building block for European vocational education and training,
- Better linkage between vocational and continuous training. In view of the demographic trends (strongly decreasing number of apprentices, shrinking working population, raised retirement age) continuous training is expected to be the mega-topic of the future. Thus, vocational training is requested to lay the necessary foundations and provide incentives for life-long learning.

Other relevant information

Table E.69 Statistical information provided by the Federal Statistical Office on VET- and training schemes on ISCED-levels 3,4 and 5 in Germany

Germany

Number of students in upper secondary education and post-secondary non-tertiary education

ISCED level	Orien-tation	VET-type	National name of the programme	Description name of the programme in English	2005	2006	2007	2008	2009	2010
Total Secondary education (ISCED3 and 4)					3 366 762	3 414 050	3 460 998	3 501 956	3 300 166	m
▪ General education					1 212 688	1 272 906	1 311 319	1 323 263	1 360 818	m
3A	G		Allgemeinbildende Programme im Sekundarbereich II	Upper secondary schools (general)	788 191	824 056	850 456	863 128	965 998	m
3A	G		Allgemeinbildende Programme im Sekundarbereich II an beruflichen Schulen	Upper secondary general programmes at vocational schools	339 336	362 878	376 781	378 974	318 227	m
4A	G		Fachoberschulen, 1 jährig	Specialised vocational high schools, 1 year	29 438	27 488	26 573	25 019	20 469	m
4A	G		Berufsoberschulen/Technische Oberschulen	Berufsoberschulen/Technische Oberschulen	17 546	19 015	19 372	19 252	20 385	m
4A	G		Sekundarbereich II, Abendschulen	Upper secondary evening schools	38 177	39 469	38 137	36 891	35 739	m
▪ VET					2 154 074	2 141 144	2 149 679	2 178 693	1 939 348	m
3B	V	1	Berufsschulen (Duales System) Erstausbildung	Dual System	1 260 012	1 279 030	1 205 147	1 241 011	1 269 227	m
4A	V	2	Berufsschulen (Duales System) (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Dual System (second cycle) for students with university entrance qualification	231 557	249 437	257 365	269 834	303 549	m
4B	V	3	Berufsschulen (Duales System) (Zweitausbildung, beruflich)	Dual System (second cycle)	180 440	127 876	206 850	199 091	85 137	m
3C	V	4	Beamtenausbildung (mittlerer Dienst)	Training for civil servants (medium level)	16 426	11 896	9 731	9 324	11 259	m
3B	V	5	Berufsgrundbildungsjahr	Basic vocational training year	48 079	50 137	47 937	46 031		
3B	V	6	Schulen des Gesundheitswesens, 1 jährig	Health sector schools, 1 year	5 366	5 332	5 446	5 466		
3B	V	7	Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	379 726	388 924	386 492	377 334		
4A	V	8	Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung kombiniert mit Studienbere	Specialised vocational schools: occupational qualification (second cycle) combined with qualification for ISCED 5A	32 468	28 512	30 711	30 602		
3B	V	9	Berufsgrundbildende Programme mit Anrechnung auf das erste Lehrjahr	Basic vocational training programmes replacing first year in the dual system.					102 420	m
3B	V	10	Einjährige Programme in Gesundheitsberufen	Health sector programmes, 1 year					14 145	m
3B	V	11	Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification					64 139	m
4A	V	12	Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Specialised vocational schools: occupational qualification (second cycle) for students with university entrance qualification					79 432	m
4A	V	13	Berufliche Programme, die sowohl einen Berufsabschluss wie auch eine Studienberechtigung vermitteln	Vocational programmes offering both an occupational qualification and a university entrance qualification (simultaneously or one after the					8 694	m
4B	V	14	Berufsschulen (Duales System) - Umschüler	Occupational re-training programmes Dual System (second cycle)					1 346	m

Source: ISCED-Mappings in annual UOE-Data collection.
National statistics: Federal Statistical Office: General school statistics, Vocational school statistics, University statistics, Statistics on Personnel in the Public Service, Statistics on Vocational academies

Number of students in ISCED-Level 5 - first stage of tertiary education

Total first stage of tertiary education (ISCED 5)					2 268 741	2 289 465	2 278 897	2 245 138	2 438 600	m
▪ ISCED 5A programmes (university education)					1 927 299	1 953 504	1 950 468	1 915 088	1 998 060	m
5A	a	a	Fachhochschulen	Fachhochschulen	523 808	535 127	541 924	546 013	600 568	m
5A	a	a	Universitäten	University studies	1 403 491	1 418 377	1 408 544	1 369 075	1 397 492	m
▪ ISCEXD 5B programmes					341 442	335 961	328 429	330 050	440 540	m
5B	a	a	Fachschulen	Trade and technical schools	155 228	151 734	144 507	145 473	152 268	m
5B	a	a	Berufsakademien	Vocational academies	28 074	28 524	29 369	32 038	10 316	m
5B	a	a	Verwaltungsfachhochschulen	Colleges of public administration	36 299	32 602	28 977	26 675	27 682	m
5B	a	a	Fachakademien (Bayern)	Specialised academies (Bavaria)	7 548	7 431	7 603	7 528	7 199	m
5B	a	a	Zwei- und dreijährige Programme in Gesundheits- und Sozialberufen bzw. Erzieherausbildung	Health sector and social programmes, Kindergarten teacher training (2 and 3 years)					243 075	m
5B	a	a	Schulen des Gesundheitswesens, 2+3 jährig	Health sector schools, 2+3 years	114 293	115 670	117 973	118 336		

a = categories does not apply.
All tertiary programmes in Germany qualify for entry in the labour market.

Source: ISCED-Mappings in annual UOE-Data collection.
National statistics: Federal Statistical Office: General school statistics, Vocational school statistics, University statistics, Statistics on Personnel in the Public Service, Statistics on Vocational academies

Programmes according to classification used until 2008

Programmes according to classification starting in 2009

Brief explanation of existing VET types

		VET-type	VET Types (Name in original and in English)	VET Types (Name in original and in English)	Distribution of school and work-based training (total training hours)	Is this VET type regarded as an apprenticeship training in your country?
		1	Berufsschulen (Duales System) Erstausbildung	Dual System	40/60	Yes
		2	Berufsschulen (Duales System) (Zweitausbildung nach vorherigem Erwerb einer Studienberechtigung)	Dual System (second cycle) for students with university entrance qualification	40/60	Yes
		3	Berufsschulen (Duales System) (Zweitausbildung, beruflich)	Dual System (second cycle)	40/60	Yes
		4	Beamtenausbildung (mittlerer Dienst)	Training for civil servants (medium level)	50/50	No
		5	Berufsgrundbildungsjahr	Basic vocational training year	100/0	No
		6	Schulen des Gesundheitswesens, 1 jährig	Health sector schools, 1 year	schoolbased, less than 20 % workbased training	No
		7	Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	100/0	No
		8	Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung kombiniert mit Studienbere	Specialised vocational schools: occupational qualification (second cycle) combined with qualification for ISCED 5A	100/0	No
		9	Berufsgrundbildende Programme mit Anrechnung auf das erste Lehrjahr	Basic vocational training programmes replacing first year in the dual system.	100/0	No
		10	Einjährige Programme in Gesundheitsberufen	Health sector programmes, 1 year	schoolbased, less than 20 % workbased training	No
		11	Berufsfachschulen, die einen Berufsabschluss vermitteln	Specialised vocational schools: occupational qualification	100/0	No
		12	Berufsfachschulen, die einen Berufsabschluss vermitteln (Zweitausbildung nach vorherigem Erwerb eine	Specialised vocational schools: occupational qualification (second cycle) for students with university entrance qualification	100/0	No
		13	Berufliche Programme, die sowohl einen Berufsabschluss wie auch eine Studienberechtigung vermitteln	Vocational programmes offering both an occupational qualification and a university entrance qualification (simultaneously or one after the	100/0	No
		14	Berufsschulen (Duales System) - Umschüler	Occupational re-training programmes Dual System (second cycle)	40/60	Yes

Source: ISCED-Mappings in annual UOE-Data collection.

National statistics: Federal Statistical Office: Vocational school statistics, Statistics on Personnel in the Public Service

ENRL-CHANGES

Change in times series from 2008 to 2009 compared to the previous UOE-Data Collection

Country: Germany

The aim of this questionnaire is to allow countries to provide information on changes **in the educational system**, **in coverage** and **in methodology** from the **last UOE Data Collection that may have affected data collected in this survey**

This information will help the international organisation to keep track of breaks in time series in a standardised way.

The questionnaire distinguishes between three possible reasons for significant changes in the data compared to the previous year.

1.) ***Changes in the educational system.*** This refers to "real" changes in the data due to changing conditions of the educational system.
2.) ***Changes in coverage of the data collection.*** This refers to changes introduced due to ex/inclusion of programmes compared to last year's edition.
3.) ***Changes in methodology used.*** This refers to significant changes in the data due to new/modified methodologies in data collection or estimation.

1. Changes in the EDUCATIONAL SYSTEM leading to significant changes in the UOE data Collection

Have there been any significant changes in your country's educational system leading to a significant change in the data reported in this workbook? (Yes/No) yes

E.g.: The duration of certain programmes is extended and the number of students has increased.

If "Yes"

please describe the nature of the change in the box below:

G8-Gymnasium:
For Gymnasium in most German Länder an educational reform took place, which reduced the length of study for the university entrance qualification (Abitur) from 9 to 8 years (after four years in primary school). This reform is known as the G8. As a result, the Gymnasium curriculum was restructured and afternoon classes were introduced.

The introduction stage (Einführungsphase - E1) in grade 10 of the G8-Gymnasium is now allocated to upper-secondary education. But in most Länder the "classical" G9-Gymnasium still exists besides G8. For these G9-Gymnasium grade 10 is still reported in lower-secondary education.

In 2009 the change refers to 96.876 students (11,4 % of all students in ISCED 3A at Gymnasium) who are now allocated to ISCED 3A. According to the ongoing process (depending on the number of the Länder concerned and the starting year of the reform in each land) the number of students in grade E1 will increase in the next years.

please indicate the ISCED levels that were affected. Try to estimate/guess the impact of these changes on the UOE data by expressing them as a percentage or absolute number.
Please make additional comments where necessary*.

ISCED 0 (yes/no):	–	Impact (%, absolute numbers, ..)	–
		Comments	–
ISCED 1/2 (yes/no):	C	Impact (%, absolute numbers, ..)	- 96 876
		Comments	introduction stage (Einführungsphase - E1) in grade 10 for G8-Gymnasium allocated to ISCED 3A.
ISCED 3 (yes/no):	C	Impact (%, absolute numbers, ..)	96 876
		Comments	introduction stage (Einführungsphase - E1) in grade 10 for G8-Gymnasium allocated to ISCED 3A.
ISCED 4 (yes/no):	–	Impact (%, absolute numbers, ..)	–
		Comments	–
ISCED 5/6 (yes/no):	–	Impact (%, absolute numbers, ..)	–
		Comments	–

2. Changes in COVERAGE leading to significant changes in the UOE data Collection

Have there been any significant changes in your country's COVERAGE for the UOE leading to a significant change in the data reported in this workbook? (Yes/No) no

E.g.: Adult literacy programmes, which were not included last year, are now reported.
Some private pre-primary institutions are now included. Reclassification of programmes according to ISCED-97.

leading to a significant change in the data reported in this workbook? (Yes/No)

Vocational programmes in the Federal Länder:

An important achievement of the project "database of the vocational programmes in the Federal Länder" is the detailed analysis of all programmes at vocational schools in the Federal Länder by content of the programme, main diplomas, credentials and certifications awarded. The analysis was based on information comparable to the ISCED-Mapping which had been collected for each programme. The main result of this project is a consistent classification of education programmes, pathways and sectors for all national and international purposes.

Programmes at vocational schools only offering lover secondary general qualifications or only have pre-vocational content are now allocated to ISCED 2A resp. 2B. These changes mainly refer to Berufsfachschulen (of which there are more than 50 different types in the Federal Länder) and those students at Berufsschulen who have no contract in the Dual System (full-time students). In the German Educational Report the whole sector is identified as the ***transition system:*** *preparatory vocational training, vocational education in training programmes not leading to a recognized qualificaton, practice placement or partial qualification.*

In former years programmes at Berufsfachschulen aiming at the qualification of Kindergarten teachers and school-based vocational education for medical assistants, nurses, midwives or social assistants had been allocated to ISCED 3B. While the resp. programmes at health sector schools or Fachschulen had been allocated to ISCED 5B. Now all these programmes independent of the type of school are allocated to ISCED 5B.

please indicate the ISCED levels that were affected. Try to estimate/guess the impact of these changes on the UOE data by expressing them as a percentage or absolute number.
Please make additional comments where necessary*.

ISCED 0 (yes/no):	–	Impact (%, absolute numbers, ..)	–
		Comments	–
ISCED 1/2 (yes/no):	C	Impact (%, absolute numbers, ..)	201 555
		Comments	Programmes in transition system (reported in ISCED 3B before). In addition to 50.300 students in the pre-vocational training year allready allocated to ISCED 2B (pre-vocational) before.
ISCED 3 (yes/no):	C	Impact (%, absolute numbers, ..)	- 317 167
		Comments	ISCED 3 + 4: the number of students is lower, due to programmes now allocated to ISCED 2 or ISCED 5B.
ISCED 4 (yes/no):	C	Impact (%, absolute numbers, ..)	see ISCED 3
		Comments	see ISCED 3
ISCED 5/6 (yes/no):	C	Impact (%, absolute numbers, ..)	115 612
		Comments	Programmes for Kindergarten teachers and school-based vocational education for medical assistants, nurses, midwives or social assistants at Berufsfachschulen, now all allocated to ISCED 5B.

*Please attach additional documentation where necessary, if possible in electronic form.

Sources of information: Germany

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POLAND

Background information

The Polish system of education comprises pre-school institutions, primary schools, gymnasia and post-gymnasium schools. A separate system is formed by institutions of higher education (higher education system or sector). According to the ISCED '97 classification the levels of education are as follows:

ISCED 0 –	kindergarten (pre-primary education)
ISCED 1 –	primary schools
ISCED 2A –	lower secondary schools - gymnasia
ISCED 3A –	general secondary schools, specialised secondary schools, technical secondary schools, supplementary general secondary schools, supplementary technical secondary schools
ISCED 3C –	basic vocational schools
ISCED 4C –	post-secondary schools
ISCED 5A –	higher professional studies
ISCED 5B –	teacher training colleges and foreign language teacher training colleges
ISCED 6 –	doctorate studies

Pre-school institutions (not compulsory) are for children aged 3 to 5/6. Compulsory primary schools are for children aged 7 to 13. All the primary school leavers continue their education in a 3-year gymnasium, a lower secondary compulsory school.
Gymnasium graduates can continue their education in the following types of schools (Eurydice 2010):

- Basic vocational school with the minimum duration of 2 years and maximum duration of 3 years which leads to obtaining of a diploma confirming vocational qualifications upon passing of an exam as well as further education in supplementary schools[229]. (*zasadnicza szkoła zawodowa)*. (ISCED 3C)
- 3-year general upper secondary school leading to receipt of the *Matura*[230] certificate upon passing of the *Matura* examination. (ISCED 3A)
- 3-year specialized upper secondary school offering education in specializations of general vocational education which leads to receipt of the *Matura* certificate upon passing of the *Matura* examination (*liceum profilowane)* (ISCED 3A)
- 4-year technical upper secondary school leading to receipt of a diploma confirming vocational qualifications upon passing of an examination, and also offering a possibility of receipt of the *Matura* certificate upon passing of the *Matura* examination (*technikum*) (ISCED 3A)
- 3-year special schools preparing SEN (Special Education Needs) pupils for employment leading to receipt of a certificate confirming preparation for employment. *(*ISCED 3C)
- At the levels of upper secondary/post-secondary education in Poland there are also 3-year supplementary secondary technical schools (*technikum uzupełniające*) and 2-year supplementary upper secondary schools (*liceum uzupełniające)* . ISCED 3A
- 2-year post upper secondary school (*szkoła policealna*) - intramural or extramural studies for adults over 18 years of age. (ISCED 4C)

[229] Graduates of a 2 or 3-year basic vocational school also have a possibility of taking the *Matura* examination, upon the successful completion of a 2-year supplementary general secondary school (*uzupełniające liceum ogólnokształcące*) or a 3-year supplementary technical secondary school (*technikum uzupełniające*).

[230] Upon completing a cycle of education, a pupil sits an examination called the "matura", which entitles him/her to continue education at a college, university or a technical university. The matura may be taken by pupils from the ISCED 3A level.

- 3-year higher professional studies at universities, technical universities (*Politechniki)* or state higher vocational schools *(Państwowe Wyższe Szkoły Zawodowe)* leading to the award of the title of engineer or the licentiate (an equivalent of the British BA) with the possibility of a 2-year post-diploma course leading to the award of the title of magister (an equivalent of the British MA) It is also possible to take directly a 5-year course leading to the award of the magister title. (ISCED 5A)
- 2-year teacher training colleges, which are not equivalent to higher teaching studies (ISCED 5B)
- Doctorate studies (ISCED 6)

All these types of schools (except of a 3-year general upper secondary school) form the IVET system.

In this system, vocational qualifications can be obtained by participating in courses organised by Vocational Education Centres and Centres for Continuing Education.

Concerning the specific role/importance of apprenticeship type schemes in the National Education, it can be said that in Poland vocational education is increasing in importance. This is due to the growing needs of modern industry and the demand for specialised services. The high ranking of VET found its reflection in the "National Development Strategy" (*"Krajowa Strategia Rozwoju Regionalnego" Ministerstwo Rozwoju Regionalnego, /National Regional Development Strategy, Ministry of Regional Development, Warszawa 2009)*, indicating the need for vocational education tied to the labour market needs.

The report prepared by the Board of Strategic Advisers to the Prime Minister of Poland (*Polska 2030. Wyzwania rozwojowe / Poland 2030. Development challenges. The Chancellery of the Prime Minister of Poland)* points out the need to develop vocational education and create conditions for systematic development of professional qualifications. Unfortunately, vocational schools are viewed negatively by both school children and their parents. In the view of 70% of pupils vocational schools are designated for those who failed their entry examinations the general upper secondary school.

With regard to the national definition of apprenticeship, up until now there is no uniform definition of vocational education. Vocational education encompasses pre-vocational education (primary schools, upper secondary schools), the actual training for a vocation and all types of institutions for the continuation and expansion of vocational training. Therefore, vocational education can be defined as the aggregate of purposefully organised activities and processes enabling preparation for a vocation, inclusive of vocational guidance, and, in particular, the preparation for a specific employment in a specific economic branch and in a specific position *(Nowacki T., Leksykon pedagogiki pracy/Lexicon of work pedagogy, Radom 2004)*.

Apprenticeship is a set of practical classes organised for students "in order to apply and broaden vocational knowledge and skills in a real work environment" (Regulation of the Minister of National Education on practical vocational training, Journal of Laws No. 244, item 1626).

At the central level the Minister of National Education is responsible for vocational education. He/she co-ordinates and carries out the state education policy, partially supervises the work of education superintendents (*kuratoria*) and co-operates with other organizational bodies and units in the field of education. He/she also defines (among others) core curricula for general vocational education.

An education superintendent (*kurator oświaty*) is the chief educational officer at the regional level. He is responsible for general administration of education in a given region. He is appointed by the Head of Region (*wojewoda*), so he is a regional administration official supervised by the Head of Region (who is subordinated to the Prime Minister). The education superintendent implements the policy of the Minister of National Education. On behalf of the

Head of Region the superintendent is responsible for the implementation of tasks defined in the School Education Act (among others vocational education) and in the regulations relevant to the given region.

At the district level, the administrative control over vocational (*technikum, zasadnicza szkoła zawodowa*) schools is exercised by the *powiat (*an intermediate administrative unit between a voivodship and commune[231]).

The School Education Act provides for the involvement of social partners (as well as parents and pupils). At the central level this involvement takes the form of the National Education Council, a social opinion-making body in the area of education. The council should consist of regional education councils' representatives, one per each regional council and one teachers' union representative.

Non-governmental organisations, such as National Chamber of Commerce, Polish Confederation of Private Employers LEWIATAN, Polish Confederation of Employers, Polish Craft Association or Polish Chamber of Training Companies can also submit their suggestions on changes to the course of vocational education. Headmasters of vocational schools establish their Vocational Training Curricula independently, on the basis of the Core Curriculum.

In addition, there are school/institution councils, which operate in schools and other educational institutions. The school council participates in solving school internal problems and is involved in various school internal issues (e.g. approval of school statutes, giving opinions on the school financial plan and school activity plan). The school council includes (in equal numbers) elected teachers, parents and pupils.

*On the other hand, concerning main legal provisions or laws specifically regulating apprenticeship type schemes, it can be said that the g*eneral principles concerning vocational education are contained in:

- The School Education Act of 7 September 1991 (with further amendments)
- The Act of 8 January 1999 on the Implementation of the Education System of the Education System Reform (with further amendments)
- The Act of 27 July 2005 Law on Higher Education (Journal of Laws 164 item 1365)

Detailed provisions concerning the organisation and the course of an apprenticeship (vocational placement) and the acquisition of vocational qualifications in vocational education are contained in the following regulations:

- Regulation of the Minister of National Education of 15 December 2010 on vocational training (Journal of Laws No 244 item1626)
- Regulation of the Minister of National Education of 24 March 2010 changing the Regulation on vocational training (Journal of Laws of 14.04 2010 No. 61 item 378)
- Regulation of the Minister of National Education on occupational classification in vocational education
- Regulation of the Minister of Science and Higher Education of 12 July 2007 on the standards of education for individual fields of study and levels of education.

In Poland schools can provide education for 208 professions specified in the occupational classification in vocational education, in accordance with curricula entered in the index of the Ministry of Education and Science. A basic vocational school provides education for 77 vocations. For 22 vocations the duration of education is two years, whereas for 55 – three years. 4-year technical upper secondary schools offer education to the graduates of gymnasia (lower secondary schools) in 81 professions. Three-year supplementary secondary technical schools

[231] Powiats (NUTS 3), representing a part of voivodship, comprise towns, villages and settlments. There are also some cities which enjoy the rights of a powiat, e.g. Warsaw or Łódź

provide graduates of basic vocational schools with education for 46 professions. Post-secondary schools offer a choice of 147 professions, out of which 106 are of a technician level and 41 "blue-collar vocations". Professions, which are taught at school, are determined by its headmaster in consultation with the body in charge of the school, after getting the opinion of the Education Superintendent and the relevant voivodship or powiat Employment Board.

Existing vet apprenticeship type schemes at national level

Identification of existing apprenticeship type schemes in the country

These are the existing apprenticeship- type schemes in Poland:

- Basic vocational school with the minimum duration of 2 years and maximum duration of 3 years which leads to obtaining of a diploma confirming vocational qualifications upon passing of an exams as well as further education in supplementary schools[232]. (*zasadnicza szkoła zawodowa)*. ISCED 3C
- 3- year general upper secondary school (*liceum ogólnokształcące*), offering 3 years of full-time general upper secondary education for students aged 16 to 19. It offers the Matura examination necessary for admission to higher education. ISCED 3A
- 3-year specialized upper secondary school offering education in specializations of general vocational education which leads to receipt of the *Matura* certificate upon passing of the *Matura* examination (*liceum profilowane).* ISCED 3A
- At the level of upper secondary/post secondary education in Poland there is also the 2-year supplementary general secondary school (*liceum uzupełniające*) offering 2 years of full –or part – time general upper secondary education for students aged 18 to 20 in preparation for *Matura* examination. This school is intended for graduates of the 2/3-year vocational school. On the basis of the decision by the Ministry of National Education this institution is considered to be the level ISCED 3A.
- 4-year technical upper secondary school leading to receipt of a diploma confirming vocational qualifications upon passing of an examination, and also offering a possibility of receipt of the *Matura* certificate upon passing of the *Matura* examination (*technikum*). ISCED 3A.
- 3-year special schools preparing SEN pupils for employment leading to receipt of a certificate confirming preparation for employment. ISCED 3C.
- 3-year supplementary secondary technical school (*technikum uzupełniające*) after a basic vocational school lasts 3 years and is combined with an apprenticeship. After passing qualifying examinations a student acquire the third level of qualification and may continue his/her education at a supplementary secondary technical school. ISCED 3A.
- 2-year post upper secondary school (*szkoła policealna*) - intramural or extramural studies for adults over 18 years of age. Education covers vocational subjects with different duration of studies depending on the vocation. Graduates obtain the fourth level of education and after passing an examination on vocational qualifications – the second or third level of vocational qualifications. ISCED 4C.
- Technical Universities (*Politechniki)* and State Higher Vocational Schools *(Państwowe Wyższe Szkoły Zawodowe.*

[232] Graduates from 2 or 3-year basic vocational school also have a possibility of taking the *Matura* examination, upon the successful completion of the 2-year supplementary general secondary school (*uzupełniające liceum ogólnokształcące*) or a 3-year supplementary technical secondary school (*technikum uzupełniające*).

In all of the abovementioned schools, students have practical training in school laboratories and workshops during the academic year. During holidays students undergo practical training at enterprises with which the school headmasters have concluded an appropriate agreement.

According to the regulation of the Minister of National Education these apprenticeship type schemes have been available since 16 July 2008.

Practical trainings at schools and vocational placements in enterprises were and are accessible to pupils of vocational schools under legal regulations applied at different periods of time. The system and economy transformation made it necessary to implement some changes within the compulsory education and vocational training system. In 1999, within the framework of the education system reform three-year gymnasia were established as a first (lower) level of the secondary school. Upper (second level) secondary schools started operating in 2002. Under the old system, a graduate of an 8-year primary school had a choice of:

- a four-year secondary school of general education (*liceum ogólnokształcące*) for pupils at the age from 15 to 19 (20) years;
- a four-year secondary technical school of general and vocational education *(liceum techniczne*) for pupils at the age from 15 to 19 years;
- a four-year secondary vocational school of general and vocational education (*liceum zawodowe*) for pupils at the age from 15 to 19 years;
- a five-year secondary technical school of general and vocational education (*technikum)* for pupils at the age from 15 to 20 year. Since 2002/2003 this type of school was replaced by a 4-year technical upper secondary school and a 3-year specialised secondary upper secondary shool;
- a three-year basic vocational schools (*zasadnicza szkola zawodowa)* for pupils at the age from 15 to 18 years.

Apart from basic vocational schools, all of the above prepared pupils for the *Matura* examination allowing to continue the education with higher studies.

Starting from 1 September 2004, the following school became operational:

- two-year supplementary general secondary schools (*liceum uzupełniające*) for graduates of basic vocational schools, offering them a chance to obtains the Matura certificate;
- three-year supplementary technical secondary schools (*technikum uzupełniające)* for graduates of basic vocational schools, offering them a chance to obtain the professional title of technician or to sit the *Matura* examination;
- 3-year special schools preparing pupils with mental disabilities of a medium or significant level (SEN pupils) for employment. Upon completion of the course, graduates receive a certificate confirming preparation for employment

According to the regulation of the Minister of National Education of 15 December 2010 on vocational training (Journal of Laws No 244 item 1626), a practical vocational training undertaken within the framework of vocational education and training, i.e. conducted in school laboratories and workshops can last for up to 16 hours per week, providing that students are over 16 years of age.

Vocational placements of an apprenticeship type are generally organised during summer holidays. The average duration of a placement is 160 hours per academic year. Whereas practical training classes at school, dedicated to the acquisition of vocational competences are conducted in school workshops and laboratories, vocational placements for students are organised in a real work environment, i.e. directly in enterprises. School headmasters and university rectors develop apprenticeship programs and decide on their timing and length. Schools with identical profiles may use different programs.

Vocational placement are obligatory for pupils of all vocational schools, regardless of the type of school and are additional to the practical vocational training in school laboratories and workshops. Such placements are organised after completing each consecutive year of education at school.

All changes in the conditions of conducting practical vocational training at schools and vocational placements at enterprises are regulated by the relevant regulations starting from the Regulation of the Council of Ministers of 11 December 1992 concerning the organisation and financing of vocational training, the rights and duties of the organisers of such training and persons enrolled in such training (Journal of Laws No. 97 item 479) up to the latest Regulation of the Minister of National Education of 15 December 2010 on vocational training (Journal of Laws No 244, item 1626)

In secondary schools students have 6 hours of practical training in school workshops or laboratories. The distribution of educational hours is as follows: 40% - classes dedicated to the theory and other subjects, 40% - vocational training and 20% others. The average duration on an apprenticeship placement in an enterprise is 3 to 4 weeks per academic year, in principal upon completion of each year of education, however the final decision is left to the school headmaster. Vocational placements are obligatory for all types of vocational schools regardless of the degree obtained upon completion of a given type of school. The exact duration of a placement is determined by the school headmaster depending on the type of a school and the specialisation taught at the school.

In case of tertiary education students, the duration of practical trainings range from 3 to 12 weeks per academic year depending on the field of education and the university requirements. The exact duration of a placement and its program is determined by the rector. Students are showing an increasing interest in undergoing placement offered by institutions of higher education and students' organisation and often try to organise placements by themselves. The completion of a placement, payable or on a voluntary basis is highly valued by potential employers.

With regard to the prerequisites for taking up apprenticeship type schemes, those are: completion of a lower secondary school and a minimum of 16 years of age. Apprentices must not be employed during the night.

The cycle of education and practical training is subordinated to the needs of a sector/branch, classified as industrial production, services, trade and crafts. When developing the Principles for a Vocational Education Curriculum, the Minister of Education consults with the minister of the appropriate sector and seeks the active participation of specialists and entrepreneur organisations.

It is expected that future vocational education and training will be subordinated to implementing technologies of the future to a higher degree than is the case at the moment. Thirty of such technologies, for example, artificial intelligence, robotics, synthetic fuels, lasers, clean coal technologies, advances electronic systems, biomasses or construction technologies were selected. Faculties associated with these technologies receive preferential treatment.

Quantitative importance of apprenticeship type schemes (information to be provided for all existing apprenticeship type schemes)

Apprenticeship places / beneficiaries

According to the Polish Craft Association, 92,652 pupils participated in apprenticeship placements organised in 24,815 craft enterprises in the school year 2008/2009. For the school year 2007/2008, the number of pupils in technical and vocational upper schools, in-

cluding supplementary secondary technical school was 562,590 pupils and in basic vocational schools – 235,647 pupils.

In the school year 2006/2007, 32,706 pupils took part in the Voluntary Labour Corps (*Ochotnicze Hufce Pracy*), including 18,120 pupils at the level of vocational education and training.

In the school year 2008/2009, 344,100 students attended post-secondary schools, in that 247,600 pupils, i.e. 72% of all post-secondary school students attended non-public schools (The System of Education in Poland. EURYDICE, Warsaw 2010)

Table E.70 Number of students in Secondary education (in thousands)

YEAR	2005/06	2006/07	2007/08	2008/09	2009/10
Total secondary education (ISCED3)	1689,6	1657,1	1623,9	1565,9	1509,2
General upper secondary schools (ISCED3A)	735,7	732,9	715,2	686,0	658,1
VET					
Specialised upper secondary schools (ISCED3A)	202,2	160,0	110,4	72,5	47,3
Technical upper secondary schools (ISCED3A)	520,2	535,0	562,6	568,3	568,1
Basic vocational schools (ISCED3C)	231,5	229,2	235,7	239,1	235,7

Since the year 2005 the number of pupils in basic vocational schools and technical upper secondary schools grows slowly but systematically. The numbers in the above table confirm this observation. This process becomes even more significant if we realise that at the same time the number of pupils in general upper secondary schools and specialised upper secondary schools dropped distinctively (from 735,7 thousand to 658,1 thousand and from 202,2 thousand to 47,3 thousand respectively). This signifies the growing popularity of a typical vocational education.

Characteristics of students

Polish youth shows little interest in vocational education. This represents a serious economic and social problem. The lack of vocational preparation hampers access to the labour market. Many young people decide to leave the country on reaching the age of 18. It is difficult to estimate the number of such cases since most of the data collected is based on information obtained during conversations or from television programs. Unfortunately, no accurate quantitative data is available.

Secondary technical schools are mainly attended by male students (80%). Graduates of lower secondary schools generally choose non-technical schools for their further education. A similar situation prevails at tertiary education institutions. Although the interest in technical studies is increasing gradually, it is still insufficient in comparison to the needs reported by enterprises. At the stage of choosing secondary education, nearly 80% of pupils decide on a secondary school of general education.

Type of studies

At the ISCED 5B level there are tertiary educational institutions preparing students for their entry onto the labour market in Poland. They are Technical Universities (*Politechniki)* and State Higher Vocational Schools *(Państwowe Wyższe Szkoły Zawodowe).*

In some specialisations the acquired education at the BA/BS/MA level does not allow the performance of independent technical functions. It is necessary to obtain the so-called "Professional Powers" (*uprawnienia zawodowe)*. Although technical studies in Poland cover all faculties, out of two million students only 15% choose faculties associated with industry (Poland – ReferNet Report 2010 on the policy of vocational education and training, Warsaw 2010).

Typical exit route for an apprenticeship – Figures on labour market insertion

The vocational career of a graduate depends on the topic studied and the saturation of the relevant industry. Sometimes, graduates of both the secondary and the tertiary education leave their region or even Poland in search of a career. It is difficult to determine clearly the waiting period and the possibilities of entering the labour market for a graduate.

Drop-out related information

At this stage, there is no relevant information available. Taking into consideration the shortage of candidates entering vocational courses in vocational and secondary schools, any student leaving school prematurely represents a social and economic problem.

Quantitative importance of apprenticeship type schemes

In 2009, 67 773 graduates of basic vocational schools applied for examination in 65 professions throughout the country, and 49 115 graduates actually took the exams. Out of the total number of graduates defending their diploma thesis, 43 431 persons, 87% i.e. 37 795 graduates obtained diplomas. Thus, nearly 49% of graduates ended up withdrawing and were satisfied with a certification confirming completion of school.

In technical upper secondary schools and post upper secondary schools 183 125 graduates took final examinations in 101 professions with 56% students obtaining a

Table E.71 Number of students in upper secondary schools in years 2006 – 2010

Type of school	2006/07	2007/08	2008/09	2009/10
Basic vocational schools	229 170	235 674	239 132	235 676
General upper secondary school	732 908	715 245	688 029	658 107
Specialised upper secondary school	159 963	110 450	72 543	47 299
Technical upper secondary school	534 989	562 900	568 336	568 895

The table below shows the number of students in vocational schools broken down by areas of education, country-wide:

Total students	Years 2007/2008	241.251	69.609
Schools specialising in the following areas of education			
	Art	1.505	559
	Economy & Administration	25.725	21.659
	Engineering & Technical	89.774	736
	Production & Processing	40.555	10.031
	Architecture & Construction	25.069	247
	Agriculture, Forestry and Fishing	3.829	1.049
	Service sector	54.794	35.328

Source: Oświata i wychowanie w roku szkolnym 2007/2008, GUS / Education in the school year 2007/2008 – GUS – total number of students broken down by a field of education

Description of Apprenticeship Type Schemes

Training curricula and training/education contents/competence profiles

Educational competence profiles are established following consultations between the Ministry of National Education and those Ministries that have an interest in training curricula for certain professions, represented by institutions and enterprises governed by them. After consultations with the Ministries and entrepreneur organisations the Minister of Education

approves the Basic General Education Curriculum on the basis of which school headmasters develop and approve Vocational Education Curricula. There may be some insignificant differences between individual curricula at regional levels due to certain needs reported by regional entrepreneurs and their organisations as well as educational centres.

Role of enterprises in the apprenticeship type schemes and description of company based training

Education in IVET schools must be consistent with the needs of enterprises. Company based training is an important part of pupils education in the out-of-school vocational education. During compulsory placements in enterprises pupils gain experience in practical application of their skill and theoretical knowledge when performing duties assigned to the given workplace. Education at a workplace allows to improve vocational competences and qualifications gained at IVET school and facilitates finding employment.

Company-based training must ensure:

- possibility of using production equipment;
- confronting and improving the theoretical knowledge in real production environment;
- gaining professional qualification permitting finding and starting employment;
- gaining skills associated with functioning in working environment and interacting in a working team.

The obligations of an employer accepting an apprentice are outlined in Art 8.2 of the regulation of the Minister of National Education and Sport of 1 July 2002 on practical vocational education *(Journal of Laws, No 113, item 988 with subsequent changes).* According to the abovementioned regulation, companies accepting students or juvenile employees for practical vocational training (apprenticeship) must:

- ensure material conditions appropriate for carrying out practical vocational training, in particular: training workplace furnished with necessary machines, equipment, devices, materials and technical documentation complying with the requirements of occupational safety and hygiene, work clothing and shoes as well as personal protection and personal hygiene means to which employees in that position are entitled in accordance with separate regulations; premises to store work clothing, work shoes and personal protections means, supportive /prophylactic/ meals and drinks free of charge to which employees at that position are entitled in accordance with separate regulations, as well as access to sanitary and hygiene facilities and staff communal facilities;
- appoint respectively: teachers, practical vocational training instructors and apprentices coordinators;
- familiarise students or juvenile employees with the organisation of work and work rules, in particular in terms of adherence to work order and work discipline, and the principles of occupational safety and hygiene;
- supervise the course of vocational placement;
- prepare post-accident documentation in case of an accident during vocational placement;
- cooperate with the school or employer, referred to in Art. 3.2 (i.e. the employer who concluded a work contract with students to undergo vocational training);
- inform the school or employer, referred to in Art. 3.2 about a student or a juvenile employee violating work rules.

The aim of enterprises, where vocational placements are taking place, is to get to know people who may become potential future employees, educating students, taking into ac-

count the specifics of an enterprise, acquiring new employees by offering jobs to apprentices and establishing permanent cooperation with a school educating for professions that are essential at the enterprise. In order to ensure proper pedagogical care and a course of vocational placement in line with the program, the enterprises nominate a person in charge of apprentices, a coordinator, who takes care of the merits of apprenticeship and supervises courses.

The duration of vocational placements in an enterprise range from 4 to 6 weeks in the first and subsequent years of education, depending on the vocational school headmaster's decision. Vocational placements take place during school holidays. During the school year, practical vocational training takes place in school workshops and laboratories once or twice a week and does not last longer than 16 hours per week. Enterprises are selected by mutual agreement between the school's headmaster and the employer and both parties conclude an agreement on apprenticeships. The obligations of an enterprise are laid out in the Regulation of the Minister of Education of December 2010 and the concluded agreement. The enterprise must be familiar with the "philosophy" of vocational placement, belong to a sector that corresponds to the pupil's educational requirements, have appropriate technical equipment, trained placement coordinators and appropriate staff facilities. The enterprise is entitled to select students and determine the number of apprentices in consultation with the school headmaster.

School headmasters seek to conclude vocational placement agreements with large enterprises with modern production and work organisations (*see good practice examples),* operating within sectors that apply new technologies. If there are no large enterprises within a given region, schools organise vocational placements in micro firms or small enterprises that guarantee a good level of placement. Craft firms are particularly willing to accept apprentices for the entire period of the vocational training, that is they concluded an agreement with the apprentice whereby he/she undergoes a practical training during the apprenticeship at the firm and at the same time continues education at school. In order for the apprenticeship to satisfy the provisions of law, a craft firm concludes also an agreement with the relevant vocational school.

Specific role of the company trainer

The Regulation of the Minister of National Education of 15 December 2010 on vocational training (Journal of Laws No 244 item1626) outlines the requirements relating to vocational teachers and practical vocational training.

Practical trainings are conducted by teachers/employees for whom educative and didactic work is a basic occupation with the number of weekly working hours prescribed for teachers. Practical training may also be conducted by employers themselves or employees nominated by an employer – hereinafter called the "practical vocational training instructors". They should have qualifications required to work as a teacher, which are laid down in the Regulation on detailed qualification requirements for teachers as well as the definition of schools and cases in which teachers without completed higher education or initial Teacher Training Establishment may be employed. Practical vocational training instructors without completed higher education should hold, at least, the title of a master within the profession in which they are going to teach or within the professions included in the scope of professions, within which they are going to teach. They should also have pedagogical training as required from teachers, or have completed a pedagogical course with a syllabus, which has been approved by an education superintendent, covering not less than 70 hours of psychology, pedagogy and methodology and 10 hours of methodology practice in total, or a pedagogical course entitling them to perform the function of a practical vocational training instructor completed before 6 January 1993.

Practical vocational training instructors, not holding the title of master in the profession, within which they are going to teach should have pedagogical training or should have completed a pedagogical course as well as:

- hold a certificate of completing a technical upper secondary school or a supplementary technical upper secondary school or a school of equal standing or a certificate of completing a post upper secondary school or a diploma of completing a post-general education school or a upper secondary school and professional title in the profession within which they are going to teach or in a profession within the scope of the professions, within which they are going to teach and have at least 3-years work experience in the profession, within which they are going to teach; or
- hold a certificate of completing a secondary vocational school and the title of a qualified worker or an equivalent in the profession within which they are going to teach, have at least four years of work experience in that profession gained after obtaining the professional title; or
- hold a certificate of completing a general secondary school, a profiled upper secondary school, a supplementary general secondary school, a technical upper secondary school and a supplementary technical upper secondary school educating in a profession different to the one they are going to teach or a secondary vocational school and the title of a qualified worker or an equivalent in the profession within which they are going to teach and have at least six years of work experience in that profession gained after obtaining the professional title; or
- hold a graduate diploma in the faculty (specialisation) appropriate for the profession within which they are going to teach and have at least three yeas of work experience in that profession, gained after obtaining the diploma, or a graduate diploma in a different faculty (specialisation) and have at least six years of work experience in the profession within which they are going to teach.

Usually, a practical vocational training instructor trains at a work place no more than 5 apprentices. If the number of apprentices at the enterprise is larger than 5, the employer nominates a vocational placement coordinator.

The Regulation of the Minister of National Education stipulates that the employer of an organisation where vocational placements are held, may release the vocational placement coordinator from performing his/her duties under employment contract, partially or in full, due to specifics of business conducted by the employer or the number of students undertaking vocational placement. For the duration of such a partial or full release from work duties, the vocational placement coordinator is entitled to a monthly salary calculated at the level of a holiday leave.

Due to the importance of the role played by a teacher or vocational placement coordinator, a lot of attention is paid to preparing teachers for the role of a vocational education teacher, essential for increasing the efficiency of the vocational education process.

Two contest projects: *The launch of a new type of studies preparing teachers of VET subjects* and *development and pilot implementation of in-service teaching programmes in business establishments for VET teachers and practical vocational training instructors* are being implemented within the Human Capital Operational Programme for the years 2007-2013. The aim of these activities is to attract new persons to the VET teacher profession and to familiarise teachers with modern techniques, technologies and real work environments.

Description of school based training

At school, vocational education is conducted during theoretical classes relating to a profession as well as practical classes in school workshops and laboratories. Practical classes take

place once a week and cannot last for longer than 6 hours a day for youth of up to 16 years of age and 8 hours a day for youth over 18 years of age. The classes are conducted by teachers and practical vocational training instructors. Their qualifications must comply with the Regulation of the Minister of National Education of December 2010 on vocational training (Art. 10 of the Regulation). Vocational training instructors, who do not hold the title of master in the professions within which they teach must have appropriate pedagogical training or have completed a 70-hour pedagogical course and hold a certificate of completing a technical secondary school or a vocational secondary school or hold a graduate diploma in a faculty relevant for the profession within which they teach.

Role of students in apprenticeship type schemes

In the case of basic vocational schools and technical secondary schools, school headmasters secure vocational placement places for their students by concluding an appropriate agreement with an enterprise or an entrepreneur organisation or some other organisation organising vocational placements. For example, the Foundation for the Promotion of Entrepreneurship in Lodz together with partners from Belgium, Slovenia, Germany, Bulgaria, Romania and Spain have organised vocational placements abroad within the framework of the Q-Placements Project., i.e. the project "Training Placements in Foreign Enterprises for Vocational Training of Students: an European Approach to Quality. The Project was realised from 1 October 2008 until 30 September 2010 and was co-financed from the EU Funds - the Leonardo da Vinci Program (Lifelong learning program).

The leader of the Project was Cámara Oficial de Comercio e Industria de Terrassa (Spain) and the Foundation for Promotion on Entrepreneurship was the only partner from Poland.

In order for a student to participate in vocational placement, he/she must be over 16 years of age and have good academic results. Whilst participating in a placement the apprentice has to observe the rules of Occupational Safety and Hygiene, realise the placement syllabus, perform official tasks and use his/her technical know-how as well as show initiative and teamwork ability. Apprentice rights are regulated by the concluded agreement and the provisions of the Regulation of the Minister of National Education on vocational training dated 15 December 2010. The scope of knowledge and skills to be acquired by an apprentice during the placement are defined in the placement syllabus. Credits for a placement are awarded in accordance with the placement syllabus, for example, after passing an examination set by a school representative, a placement coordinator and a representative of the enterprise. The extent of such an examination is determined by the school headmaster in consultation with the employer. The practical knowledge examination, ending the period of vocational training is set by the District Examination Commission. Requirements for this type of examination are strictly determined and standard for the entire country.

Contractual relationships between enterprises/students/VET schools

According to the Regulation of the Minister of Education of 15 December 2010 (Journal of Laws, No. 244, item 1929) a school headmaster concludes an agreement with an entity accepting students for practical vocational training placement. The agreement contains the school's address and the address of the enterprise, the profession for which training will be provided, a list of participants, personal data broken down by groups, the form and duration of a placement, the rights and obligations of the parties to the agreement and the mode of allocating and settling costs of the placement. The vocational curriculum and the placement syllabus are attached to the agreement. An employer may also conclude an agreement with an apprentice, determining the apprentice's duties and possible remuneration therein. The concluded agreement does not constitute a classical employment contract. All matters associated with the conclusion of the agreement and apprentice's remuneration are regulated by provisions of law. Issues relating to the method of financing the placement and apprentice's remuneration are discussed in point 2.3.7 (Financing-related information). Agreements rep-

resent a very important element, preventing misunderstanding between the school, the employer and the apprentice and constitute a guarantee for the reliable fulfilment of obligations assumed by the parties.

Financing-related information

- Who finances IVET/apprenticeship type schemes (the State, parents or students, enterprises themselves (all enterprises, are some exempted)?; distribution by agents;

  The measures taken to encourage participation of employers in the vocational education process include creating financial mechanism, benefiting the employers entering into cooperation with educational institutions with respect to vocational education. One mechanism is subsidies paid to employers from the labour fund[233] to assist with the cost of vocational education of juvenile workers. This is done on the basis of Art 70b of the Act on the Education System and depends on the training form and duration. The subsidies are subject to valorisation on the basis of the general consumer price index if it amounts to at least 105% during the period following the calendar year in which the last valorisation was carried out. In 2009, subsidies were valorised on the basis of CPI of 105.7% and amounted to:.
- in case of training for performance of a certain job – PLN 253.68 (approx. EUR 66.75*) per month, regardless of the number of students
- in case of professions with a 24-month educational cycle – PLN 4848.46 (approx. EUR 1 275.91) per pupil,
- in case of professions with a 36-month educational cycle – PLN 8080.76 (approx. EUR 2 124) per pupil
- adopted rate of exchange 1Euro = 3.8 PLN

Additionally, local self-government units as the authorities in charge of schools receive the educational part of the General Subvention for financing educational tasks. One of such tasks is to maintain post-lower secondary schools providing vocational education, including company-based practical vocational training. In order to provide such authorities with appropriate funds for the realisation of tasks associated with vocational education, the educational subventions are increased successively.

Within the framework of the educational subvention, the authorities in charge reimburse employers with whom schools have concluded agreements for practical vocational training for:

- the remuneration of practical vocational training instructors who conduct practical training with students – up to the minimum basic salary of a contract teacher holding a teacher training college (in 2009 – PLN 1516, approx. EUR 398.94);
- an educational subsidy for practical vocational training instructors who conduct practical training – not less than 10% of an average remuneration in the sector of enterprises which do not pay bonuses from profits (in 2009 – not less than PLN 332, approx EUR 87.37);
- the cost of work clothing, work shoes and personal protection means, essential at the training workstation allocated to apprentices for the period of vocational placement in a given school year – up to 20% of an average remuneration (in 2009 – up to PLN 664, approx EUR 174.74) per student;

[233] The Labour Fund operates since 1 January 1990. Its main purpose is to promote employment, vocational activation and alleviating the consequences of unemployment. The Labour Fund is financed mainly by contribution paid by employers on behalf of employees and by persons conducting own business activities as well as subsidies from the State Budget and the EU budget (Journal of Laws of 20.04.2004, No 69, item 415 on the promotion of employment and labour market institutions with subsequent changes – Journal of Laws of January 2011, No 106, item 964).

- an educational subsidy for a vocational placement coordinator – not lower than 10% of an average remuneration providing the vocational placement coordinator has not been released from performing work duties (in 2009 – not less than PLN 332, approx EUR 87.37);
- a bonus for a vocational placement coordinator, which he may receive from an employer for the period of conducting vocational practice, amounting to not less than 10% of an average remuneration (in 2009 – not less than PLN 332, approx EUR 87.37).

(Data from : *„Kształcenie zawodowe i ustawiczne. Informator" /Vocational and continuous education. Guide-book/ MEN, Warszawa 2010)*

A school sending students to a practical vocational training:

- supervises the realisation of the practical vocational training syllabus;
- cooperates with the entity accepting students for a practical vocational placement
- ensures that students are insured against the consequences of accidents,
- approves the appointed practical vocational training instructors and vocational placement coordinators or appoints practical vocational training teachers to conduct practical vocational training,
- reimburse students who undertake practical vocational training in a place outside their place of residence and outside the school's headquarters, who do have the opportunity to return everyday to their place of residence or school's headquarters, for their travel costs by paying an equivalent of public transport costs taking into accounts discounts to which students are entitled,
- provides free accommodation and care as well as meals allowance of not less than 40% of allowance granted to an employee on a home business trip, to students, who undertake practical vocational training in a place outside the school's headquarters and are unable to travel there on daily basis,
- calculates the cost of practical vocational training incurred by the school within the framework of the allocated funds.

According to Art 19 of the Order of the Council of Ministers of 20 May 1996 concerning vocational training of young persons and their remuneration (Journal of Laws of 1996 No 60, item 278 as amended), young persons are entitled to receive a remuneration during the period of vocational training, calculated as a percentage of a national average monthly salary in the previous quarter, applicable from the first day of the month following the month in which such a salary was published by the Head of the Central Statistical Office in the Polish Official Journal "Monitor Polski". The percentage of an average salary, referred to above, is payable by the employer accepting apprentices and amounts to:

- in the first year of learning – not less than 4%,
- in the second year of learning – not less than 5%,
- in the third year of learning – not less than 6%.

Young persons undergoing training for performance of a specific job are entitled to not less than 4% of the average salary.

According to Art 9 of the Regulation of the Minister of National Education and Sport of 1 July 2002 on practical vocational training, authorities in charge of schools organising practical vocational training outside the school provide funds to allow student to undertake practical vocational training. The funds are designated to:

- reimburse employers for the remuneration of practical vocational training instructors who conduct practical training with students – up to the minimum basic salary of a contract teacher holding a teacher training college, determined in separate regulations;

- reimburse employers for an educational subsidy for practical vocational training instructors who conduct practical training – not less than 10% of a remuneration in the sector of enterprises, which do not pay bonuses from profits, applied in the forth quarter of the previous year and published by the Head of the Central Statistical Office, hereinafter called the "average remuneration"; the educational subsidy is determined and paid by the employer;

Quality assurance mechanisms

The provisions of the Regulation of the Minister of National Education of December 2010 on vocational training provide for appropriate and uniform quality of education. The provisions of the Regulation clearly outline the conditions for conducting apprenticeships at work places as well as practical vocational training at schools on the territory of the entire country. The course of vocational placements is monitored by the management of vocational school which concluded vocational placement agreements with entrepreneurs. Random inspections are carried out by Local Education Authorities who also monitor the course of vocational placement in enterprises and vocational schools. At this stage, enterprises who decided to accept apprentices do not report any signs of feeling that the requirements relating to the assurance of appropriate conditions for vocational placement are too onerous or bureaucratic.

Changes and perspectives in the national apprenticeship-type schemes

Recent (last 1-5 years) or planned changes in the national apprenticeship type schemes

By 2015 the Ministry of National Education plans to introduce several changes to the national curricula for vocational placements and vocational education (*Co warto wiedzieć o kierunkach zmian w edukacji Przewodnik. MEN Warszawa 2010/What should be known about policy changes in education. A guidebook. Ministry of National Education, Warsaw 2010).* Changes to vocational education relate to the following fields:

- classification of the professions in vocational education
- structure and organisation of vocational education
- participation of employers in vocational education
- training and continuous training of vocational teachers
- system of examinations confirming vocational qualifications.

The above changes are aimed at:

- integrating general and vocational education and furnishing students with key competences;
- ensuring school headmasters' independence when drawing timetables allocating teaching hours to general and vocational education;
- introducing a uniform list of subjects for basic vocational schools, technical upper secondary schools and general upper secondary schools;
- introducing the possibility of integrating general education of subjects at an extended level with vocational preparation, e.g. extending physics and mathematics in the professions of mechanical technician;
- gradual liquidation of post upper secondary schools, profiled upper secondary schools and supplementary technical upper secondary schools. Practical Training Centres (CKP – Centra Kształcenia Praktycznego) and Continuing Education Centres (CKU – Centra Kształcenia Ustawicznego) to be incorporated into Sectoral Centres;

- allocating at least 60% of teaching hours to vocational training at basic vocational schools (ZSZ);
- allocating at least 50% of teaching hours to vocational training at technical upper secondary schools;
- practical training at basic vocational schools will take place:
    - 1 day per week in grade I
    - or 3 days in grade II and III (at workplace, at CKPs or in school workshops)
- introducing extramural coursed in vocational schools (courses providing vocational qualifications conducted in cooperation with entrepreneurs – a certificate of vocational qualifications with a supplement;
- integrating extramural and school based education in sectoral branches of vocational education (educating young persons and adults)
- employing specialists from the economy in vocational schools on the basis determined in the Labour Code and establishing the remuneration at the level of a diploma teacher;
- launching post-diploma studies for teacher of vocational subject within the framework of the Human Capital Operational Programme for the years 2007-2013;
- implementing pilot vocational training programmes for teachers of vocational education in enterprises in order to familiarise the teachers with modern techniques and technologies;
- modification of the core curricula of vocational education from the effects/requirements perspective (operationalisation of vocational education aims and direct reference to the European Qualifications Framework
- full correlation of the core curricula of vocational education with the core curricula for general education;
- the core curricula of vocational education should be the standard for examination requirements
- creating subject-based detailed curricula and modular detailed curricula for vocational education;
- introducing a system of all-year examinations confirming vocational qualifications (departing from the semester system) conducted in the sectoral education centres;
- possibility of verifying each separate qualification during the education process (a certificate confirming a qualification – after confirming all individual qualifications within the professions, a student obtains a diploma and a supplement thereto);
- creating a computerised bank of examination questions;
- strengthening the practical aspect of an examination at the technical upper secondary school level;
- liquidating the system of examination for a professional title;
- standardising the system of vocational examinations regardless of the type of education (extramural or school-based);
- the participation of employers' organisations, professional associations, economic self-governments and individual employers in creating examination centres providing real work environment conditions;
- introducing a new rule whereby employers would participate in vocational examinations.

The above constitute the most important changes reported by vocational teachers, vocational education experts and entrepreneurs associated in employers' organisations and chambers of commerce. It is essential to create conditions that are suitable for the organisation of vocational placements at enterprises (especially in this "post-crisis" period) and the participation of entrepreneurs' representatives in examination boards.

It is expected that the new examinations confirming vocational qualifications for the pupils of basic vocational schools will take place for the first time in the year 2015 and for the pupils of technical upper secondary schools in the year 2016.

The organisational and substantial changes proposed for the vocational education system are due to the needs of the Polish economy and the labour market, the related strategies for national and regional development and the full integration into the vocational education system applied in the EU countries.

Reports from the researches conducted in response to the needs of employers indicate a growing demand for employees with vocational skills combined with general skills such as mathematical skills, computer knowledge, a fluent command of the native language and a foreign language, communication skills, understanding, systemising, the ability to evaluate information in terms of its value and importance and to use it independently, problem solving abilities and analytical thinking. Good general education not only helps with performance of a profession studies but also represents the base for continuous improvement of professional qualifications and their possible diversion. The opinion of many labour market players that there is a certain discrepancy between the currently existing educational system and the needs of the labour market is well justified.

The proposed curricula reform provides for strengthening general education in vocational schools. Education in basic vocational schools will be completing the general education cycle started in a lower secondary school and thus will ensure the cohesion of curricula and solid general education foundations as well as enable the integration of vocational and general education.

Changes in the organisation and curricula will allow to eventually adapt vocational training to the needs of the labour market. In order to achieve this the following solutions are implemented: the possibility of conducting extramural education by schools, mechanisms to encourage employers to engage in the process of training and vocational education as well as modernisation of the continuous education system for teachers with a proposition of introducing periodic trainings for vocational subject teachers teaching in the field of modern methods of vocational training and modern techniques and technologies as well as training through work placements or internships in companies.

Another proposition within the modification framework is to make the procedures for creating a classification of vocational education qualification more effective by providing for the possibility of adding new professions by sectoral organisations and employers or professional associations. This will accelerate the process of adapting the classification of qualifications to the expectations of the economy and the labour market (at the moment any new professions to be included in the classification are submitted only by ministers, appropriate for such professions). Additionally, the functional idea of a classification of qualifications is undergoing a certain change. Under the new approach individual qualifications within certain professions will be included in the classification of "school-acquired" qualifications. These qualifications will be consistent with the National Qualifications Framework and will be verified separately by the way of external vocational examinations. In this way the concept of qualification will definitely become the fundamental concept for vocational education.

An interdisciplinary approach to the modernisation of vocational education will enable schools to create an educational offer attractive for the labour market by linking the traditional education in school-based forms with extramural forms of education. The primary value is for a vocational school to became the true school of a positive choice, open to continuous education.

Effect of the recent economic crisis on the national apprenticeship type schemes

The world economic crisis slowed down the growth of Poland's economy. In November 2008 the Polish government adopted the "Stability and Development Plan" ensuring the stability of currency and public finances. In the years 2009 – 2010 Poland was a country of a relatively low, in comparison to the other EU countries, increase in unemployment of young people, entering the labour market (ReferNet Report 2010 – Poland). The economic crisis did not have a significant effect on the employers' attitudes towards providing vocational placements for school pupils and students. In order to alleviate the effects of the economic crisis for employers and employees the Polish Sejm adopted the Act on mitigating the consequences of the economic crisis for employees and entrepreneurs (Journal of Laws of 7 August 2009).

The entrepreneurs' involvement in the vocational education process and the organisation of vocational placements at enterprises increases slowly but systematically. Up to date 11 agreements with employers' organisations have been concluded aimed at promoting and encouraging entrepreneurs to accept apprentices. As mentioned previously, there was increase in the amounts of monies paid out of the Labour Fund for educating youth as well as vocational placement's coordinators and teachers.

Student geographical mobility issues

In order to ensure increase geographical mobility of youth at schools and student the Education Development strategy envisages that in the years 2007 – 2013 intensive measures will be taken in order to prepare for participation in the international education space and the international labour market. Such measure include:

- students' exchange programs for primary, secondary and university students as well as for vocational education participants, providing also for foreign vocational placements (the program "Youth in Action");
- opening of the Polish system of education to foreign pupils and students as well as the preparation and organizations of programs of education in foreign languages;
- implementation of a system for international validation of professional qualifications, diplomas and learning/studying periods;
- organizing foreign traineeships and apprenticeships

Foreign placements are organised within the frameworks of EU projects realised by jointly by the Polish and foreign school, or by students' organisations or local and foreign foundations. Unfortunately it is difficult to assess reliably the number of vocational schools pupils and higher vocational institutions students participating in foreign placements.

Such programs as Erasmus, COMENIUS, LEONARDO da VINCI and the joint realisation of EU programs associated with foreign apprenticeships is particularly helpful in achieving greater geographical mobility. At the same time, academic youth is too often forced to look by themselves for the possibility of undertaking foreign internships.. And this is why they are very eager to take advantage of the assistance offered by students' organisations or their alma maters.

An important obstacle for motivating young people to travel abroad within the framework of vocational education is:

- insufficient identification and valuation of competences gained during foreign placements;
- insufficient number of such placements;
- legal and administrative obstacles;

- lack of interest on the part of young people
- lack of fluency/knowledge of language and knowledge of culture;
- lack of pedagogic know-how in the field of learning during a placement;
- lack of knowledge about the benefits of foreign vocational placements (this data originates from the paper on the MOVE-IT Project, April 2007 *www.ec.europa.eu/education/more-information/doc/moveitsum*

The main advantage generated by the mobility of pupils and student is a greater openness towards education, learning and European institutions which makes education more accessible and effective and thus contributing to the modernisation and creation of new workplaces. For the pupils point of view foreign IVET placements give them not only new vocational skills but increase their personal and international competences and give them the feeling of unity with other citizens of EU countries. Additionally it motivates them to continue education and has a positive influence on the development of professional career. .

Employers benefit from foreign IVET placements through an increase in qualifications and competences of their employees which allows them to act on the international market. Through sending apprentices for foreign placements enterprises gain information about new markets, their requirements and increase the standing of an enterprise within the sector.

IVET centres are interested in participating in the organisation of foreign placements since it increases the attractiveness of trainings and offered educational programs and gives the IVET centres better ranking. Foreign placements increase the chances of obtaining employment, make pupils more adaptable to the changing work environment and more open to new technologies and innovative solutions in the field of organisation of production and management of enterprise. Unfortunately, despite the support of the MEN [234]and self-government authorities the number of IVET students participating in foreign vocational placements is still too low, and in the view of the interested authorities and the students, themselves, does not satisfy the current needs. There is no accurate information on the number of pupils and students interested in the participation in foreign vocational placements.

Evaluation of existing apprenticeship type schemes

Qualitative Assessment of the National Apprenticeship Type Schemes

Vocational placements constitute an important element of vocational training since they provide the possibility of obtaining knowledge of the profession in a workplace. We can look at crafts as an example, where the so-called dual education system has been practiced for many years. A pupil gains the theoretical knowledge at a vocational school and the practical knowledge in a real work environment at the employer's enterprise. This combination of a practical training at work and theoretical learning at school is highly valued by entrepreneurs. They feel that a well prepared graduate of vocational education must have contact with its practical aspects and such preparation can be assured only by a practical vocational training in a real work environment at the employer's. Vocational education in the so-called dual system increases the chances of a young person to enter the labour market since he/she already has the appropriate practical knowledge and experience within a given profession as opposed to pupils who learn the profession only at school. After completing a practical vocational training young apprentices become valuable employees sought after by employers.

[234] MEN – abbreviation of the Ministry of National Education (Ministerstwo Edukacji Narodowe). The Ministry encompasses the State administrative department of education.

Vocational placement programs are concerned about modern techniques and technologies but it is not always possible to place a pupil in a modern production or service enterprise. That's why sometimes happens that the skills acquired during vocational placement in a certain work place cannot be applied in another enterprise and occupation. The Polish vocational system applies the concept of an "occupation" and not "occupational qualification", which has a certain negative influence on the extent of the knowledge passed onto pupils. However, there is no doubts that the vocational placement program contributes to the development of vocational education.

Apart from the positive factors associated with the learning of a profession in a real work environment, such as gaining professional experience, familiarising oneself with the profession ethics and establishing professional and business contacts there are also negative elements such as low remuneration of apprentices and low financial compensations for employers providing such placements. Pupils are reluctant to undertake vocational placements outside their place of residence due to the high cost of living. This does not apply to organised forms of foreign placements which are organised by schools.

The interest of enterprises in organising vocational placement is growing slowly but steadily. This is due to the shrinking possibilities of attracting new employees. Enterprises try to ensure relatively good conditions for placements so that pupils would want to stay there in the future. Vocational placement programs are structured in such a way as to prevent the possibility of using apprentices as a cheap labour force.

Certain attention should be paid to vocational placement for disabled youth or young people with incomplete post lower secondary school education. For the latter vocational training and vocational placement are organised by the Voluntary Labour Corps (Ochotnicze Hufce Pracy) and alleviating in this way the difficult social problem of youth unprepared for the entry onto the labour market.

In the context of the international economic crises, learning and education by means of vocational placements gains a special significance. Unfortunately, due to the impassivity of the process of implementing changes to the basis of vocational curriculum, the reaction to the needs of the market and enterprises are delayed. Not without blame, either are the entrepreneurs, who react too slowly to the changes caused by the crisis and fail to take steps to implement changes to vocational curricula. And it is precisely in this period of economic difficulties that investments into knowledge and competences of young people should not only be continued but even increased.

There is also an increase in the awareness of pupils and students of benefits gained through participation in vocational placements. Many of them (the quantitative data is not known) decide to look themselves for the possibilities of employment during holiday, even without any pay, on voluntary basis. Certificates confirming participation in an internship are a valuable element of a CV when looking for a job. Usually it leads to finding employment quicker, with a better pay for the first job and better chances for promotion. A serious problem is to find an appropriate venue for an internship appropriate for the vocational education. In the case of pupils from basic vocational schools and technical secondary schools, local and foreign vocational placement are organised by school headmasters through concluding relevant agreements with entrepreneurs and entrepreneurs' organisations. Due to lack of interesting and well-paid internships in Poland, academic youth often decides to go abroad on their own accord, where often they are exploited by dishonest entrepreneurs. Such information is often heard during conversations with students, who independently arranged a placement with an entrepreneur operating abroad.

Pupils and students can obtain information about vocational placements abroad in their schools or look for information at the internet websites of students' organisations, foundations, associations or local or bilateral commercial partnerships and chambers. Amongst the most popular institutions supporting foreign placements are:

- the Scholarship and Training Fund – cooperation between Poland, Norway, Island and Liechtenstein with respect to providing financial support of foreign placement www.fss.org.pl
- the Lithuanian and Polish Youth Exchange Fund – www.PL-LTyouth.eu
- Information network EURODESK – publishes information about vocational placements, voluntary arrangements and work opportunities for pupils and students www.eurodesk.org.pl
- ERASMUS – provides information and support for studies and placements abroad www.erasmus.org.pl
- Leonardo da Vinci – program provides for foreign placement www.leonardo.org.pl
- COMENIUS School Partnerships – the program provides financial and organisational support of partnership cooperation between European schools www.comenius.org.pl
- AISEC – students' organisation assisting with and organising students' foreign placements www.aisec.pl

Enlightened entrepreneurs are aware of benefits generated for their businesses through participation in vocational placement programs, such as the possibility of developing international qualifications and competences of future employees, essential for effective operation on the international market, new impulses, ideas and knowledge of new markets, new attitudes and new work methods introduced by apprentices, the fact that the contact of an apprentice with a natural enterprise environment develops technical and organisational culture of future employees, makes the management of enterprises more sensitive to the social needs of employees and surroundings and increased the ranking of the enterprise on the labour market.

Additionally, such entrepreneurs have the opportunity to observe and assess apprentices and identify the suitable ones, to whom they offer employment. They are often supported in their decisions by vocational coordinators or vocational training instructors. Many enterprise employ also vocational consultants, who provide assistance to both, the apprentices in terms of finding the most suitable workplace and the employers in terms of identifying potential employees.

Specific aspects of the national apprenticeship-type schemes and particular experiences (good/ bad practices)

Main challenges for the Polish vocational education system are:

- 1) increasingly higher degree of popularity of education at the secondary and tertiary level
- 2) increase in the interest in vocational education
- 3) demographic process and the growing mobility of the society (willingness to go abroad) force changes in the education system and the system of incentives for young persons and employers in accepting apprentices
- 4) deepening material and environmental differences (the phenomena of exclusion) taking into consideration the influence of family environment when choosing the direction of education
- 5) expecting new competences from persons entering the labour market, forced by technical and civilisation progress (information technologies, globalisation, the need of innovativeness and entrepreneurship) interaction of new cultures;
- 6) the need for flexibility in adjusting vocational education to the needs of the economy in the situation of rapidly changing production techniques and technologies
- 7) the growing importance of life learning with a parallel lack of such behaviours in the society

- 8) changing the image of vocational education prevailing in the society
- 9) the need to create conditions for harmonious and effective cooperation between entrepreneurs and schools/vocational education centres.

Although it would be difficult to say the cooperation between employers and vocational schools is a common occurrence, there are many positive examples of such cooperation:

- **1). State Schools of Construction in Gdańsk** cooperate with leading companies of the construction sector and producers of building materials, equipment and devises as well as their direct users. The cooperation is based on jointly setting perspective aims, the realisation of which contributes to the development of schools and brings significant benefits to local enterprises and environment. Amongst enterprises cooperating with the State Schools of Construction in Gdańsk are: GEBERIT, BRAAS-MONIER, FAKRO, KNAUF, JUNKERS, BOSCH, BLUM, HETTICH, FIRST, MAPEI, YTONG–XELLA, ROCKWOOL, SANITEC KOŁO, OTTIMO, COMAP, ATLAS, VELUX, NIDA GIPS, SCHIEDEL, WAYNE DALTON, APEX, Hurtownie FIRST, AL KOR and FEMAX. Providing the school workshops with additional equipment allowed the creation of modern training centres for production enterprises (Education Centre for Assemblers, Education Centre for Roofers, Heating Installations Workshop, Roof Windows Assembly Workshop, Workshop for Light Constructions from KNAUF Plasterboards, Workshop for the Production of Furniture and Furniture Fittings, Workshop for Construction Materials and Chemicals).
- **2). Wrocław vocational schools** have signed patronage agreements under which practical vocational training is carried out in the following enterprises:
  - Whirpool – mechanical sector professions
  - Fagor – Mastercook – mechanical sector professions,
  - Delaval – mechanical sector professions,
  - Elektrotim SA – electrical sector professions,
  - LG Electronics – electronic sector professions.
- **3). Vocational schools in Gdynia, Warsaw, Mysłowice, Szczecin, Radom and Wrocław** cooperate with Mercedes-Benz., which undertook to provide a systematic training for teachers and didactic materials and to equip the school workshop with car models for practical training purposes. The company organises vocational placements for pupils within the framework of practical vocational training and supplies the schools with car components and parts recovered under the guarantee and post-guarantee repairs.
- **4). Vocational schools of Wielkopolski region and Volkswagen Poznań** cooperate in the field of training for the profession of a mechatronics fitter. Depending on academic results and the level of fluency in German Volkswagen Poznań helps the best graduates to obtain appropriate certificates to perform the profession of a mechatronics fitter in Germany.
- **5). The Program of cooperation between the company Skanska and vocational schools** started in September 2007. It was established as a result of observations of the situation on the construction market and expectations of increasing problems with finding construction workers. The company started cooperating with 14 basic vocational schools and technical upper secondary schools providing education within construction professions. The schools are located all over the country: in Brzozów, Gdańsk, Krosno, Leżajsk, Leszno, Łódź, Poznań, Rzeszów, Tarnobrzeg and Warsaw. The main aim of this cooperation is to attract employees from amongst the best graduates of these schools.

(good practice examples are taken from the paper "Vocational and continuous education. Guidebook. " MEN, Warsaw 2010)

Recommendations

Vocational education has two important aims: to provide the opportunity to gain education corresponding to the choice and interest of pupils and to take advantage of the potential of

all participants of this system in order to develop the country taking into account the needs of the social and economic system. Due to the low level of educational subvention for vocational education and passing the costs of vocational education onto local self-government, education in general secondary schools became a cheaper alternative. Subsequently the number of pupils in basic vocational schools educating blue collar workers decreased in comparison to the year 2000 by 43% and the number of pupils gaining the title of a technician dropped by 48%. Thus vocational training is becoming a priority in the activities of post lower secondary schools and schools for adults. .

There is the definite need for cooperation and discussion between social partners with respect to vocational placement programs. Main elements of such a discussion should disclose:

- difference in the evaluation of preparation level by schools and employers;
- discrepancies between educational stay (interests of apprentices) and the needs of employers
- launching new trends in education – changing the centralised process of submitting new occupations to the Ministry of National Education for one which is less bureaucratic and time consuming;
- a system of labour market researches for the needs of education;
- financial shortcomings in vocational education – vocational placements
- shortcomings of vocational placements in terms of the quality of vocational education outcome
- trends for improving cooperation between schools and entrepreneurs' organisations with respect to preparing placement syllabuses and support for the schools technical resources;

According to the experts the most important issue in improving the system of vocational training and education and vocational placements are:

- to develop vocational consultancy services for young people already at the level of lower secondary schools and the creations of conditions for establishing contacts between pupils and teachers of vocational schools and entrepreneurs / employers;
- to implement a modular system of education combining it with experiences in the field of dual education using for that purposes the experiences of craftsmen and vocational education in Germany;
- increase in the efficiency of education through linking closely the theoretical education with practical training at school and vocational placements in enterprises;
- to ensure systematic vocational trainings for vocational teachers and developing the technical base in vocational schools and Practical Education Centres through increasing the funds allocated for that purpose by the state budget and regional self-governments;
- to create a system of material incentives and promotions for entrepreneurs by creating a cohesive system encouraging vocational placements under the supervision of qualified and well-paid experts, employed by enterprises;
- to develop a network of schools and training centres educating specialist for the needs of vocational educations and vocational placements in order to prepare a team of pedagogues and didactics specialists in the field of vocational education
- to develop a national system for concluding vocational placement agreements between employers and persons interested in undertaking a vocational placement and thud to create strong ties and responsibilities for both parties with respect to the conditions and the course of such placements, taking into account the financial aspects such as grants for apprentices and the possibility of employment after completing a placement at the employer;

- to simplify the process of developing curricular basis, curricula and standards of examination requirements for new professions which are appearing in all fields of the national economy and to involve in this process entrepreneurs, commercial and trade chambers and commercial associations to the extent greater than at the moment;
- to increase the importance and efficiency of the external examination system by systematically developing and improving didactic materials and textbooks which would include information on newly developed technologies and innovative solutions applied in the economy;
- to develop a system of monitoring and diagnosing the needs of the economy in terms of vocational education and best vocational placement programs.

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THE NEHERLANDS

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Zoetermeer, July 29, 2011

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Background information

A short introduction

This first chapter gives a global overview of the education field relevant for this study on apprenticeship-type schemes. Apprenticeship-type schemes combine education and training in schools or other VET institutions with workplace based training. These apprenticeship-type schemes are primarily aimed at young people, although they may also include older workers who, for instance, want to obtain a formal qualification.

Vocational Education and Training

MBO (middelbaar beroepsonderwijs) is the abbreviation for secondary Vocational Education and Training (VET) in the Netherlands. VET is the main supplier to the labour market and is often regarded as the 'foundation of the economy' and the 'backbone of society'. Approximately 40% of the Dutch working population has completed a vocational course up to at least a secondary vocational training level.

There are currently 630 000 students in the VET sector, 485 000 of them are taking part in regular VET courses. The remainder follows adult education programs. The government invests about 2.6 billion Euros annually in this sector, which represents approximately 12% of the total budget for education.

Secondary vocational education prepares people for professional practice or further education. To ensure a good connection to the labour market, secondary vocational schools have extensive contacts with the regional business community, municipalities and social organizations. There is a practical connection with a company in all courses (in vocational education).

The duration of a training varies from half a year to four years. Secondary vocational training has four levels:

- Level 1: this level is aimed at (executive) assistant work (ISCED 2C).
- Level 2: this is a basic vocational training for performing practical work (ISCED 3C).
- Level 3: this is a professional education aimed at schooling a versatile and independent (production) worker (ISCED 3C).
- Level 4a and 4b: 4a is a middle-management training (ISCED 3A), and 4b is a specialist training (ISCED 4).

There are two different routes to obtain a VET degree:

- The 'beroepsopleidende leerweg' (BOL-route): this is a combination of school and internships. A student goes to school all week, but during the school year the student must have an internship with a duration of 10 or 20 weeks.

- The 'beroepsbegeleidende leerweg' (BBL-route): the student immediately starts working and goes one or two days a week to school to learn the theory.

VET is an important part of the Dutch education system, but it has some image problems. The last couple of years the VET (MBO) has had some negative media exposure. Students complain about poor training and (too much) cancelled classes. Schools also struggle with the introduction of competence-based learning (see also: section 3.2.1) and schools (and students) feel that there is, because of this competence-based learning, to much attention for behavioural aspects in school instead of learning (practical) skills.[235]

The Associate Degree

In the tertiary sector apprenticeships are mainly there as a required internship during a study. But recently the Associate Degree Program (AD) came into existence, this is a 2-year course that enables the transition from vocational specialists, workers and job seekers to higher education possible. This program leads to an ISCED 5B level certificate. The program is (partly) intended for VET students who finished school and still want to study, but don't want to follow a 4-year Bachelor study. In the second year of the study, the student must have a job or an internship. The AD program started in 2006 and is still in its pilot stage.

Life long learning

Accreditation of prior learning (Erkenning Verworven Comptenties: EVC) is the common name given to the process of recognizing the competences an individual has gained through formal, informal or non-formal learning in various settings. This implies that professional competences acquired by learning on the job, in a home setting or in voluntary work are in principle comparable to those acquired in formal learning situations. Moreover, competences include more than knowledge, skills and attitude. They also implicitly refer to the talent to adjust to changing circumstances, flexibility or employment potential. Therefore, competences not only include professional competences but social and personal competences as well. The recognition of these competences means awarding certificates or diplomas on the basis of a generally recognised standard, such as the qualification structure for vocational education.

Important national bodies and legislation

There are different-types of organizations that fulfil an important role in the Dutch education system. The Ministry of Education, Culture and Science ("*Ministerie van Onderwijs, Cultuur en Wetenschap – OCW*") is responsible for the total education system, including vocational education and adult education. The Ministry of Agriculture, Nature Management and Food Quality ("*Ministerie van Landbouw, Natuurbeheer en Voedselkwaliteit – LNV*") is responsible for education and training in the agricultural sector.

Most training centers for vocational education and training are represented at national level by the Dutch Council for Vocational Education and Training ("*MBO Raad*"). A similar structure exists in the agriculture sector, where the AOC Council ("*AOC Raad*") represents agricultural regional training centres. Private training centres are represented by the Dutch Council for Training and Education ("*Nederlandse Raad voor Training en Opleiding – NRTO*").

In the BBL-route a student must work at an "officially recognised learning company" (in Dutch: erkend leerbedrijf). There are 17 national VET knowledge centres ("*Kenniscentrum Beroepsonderwijs Bedrijfsleven – KBB*"), and they are responsible for the official recognition of learning companies. The centres jointly represent more than 40 different branches of industry. Next to these 17 centres there's Colo. Colo is the umbrella association of the 17 centres.

[235] http://www.mboraad.nl/?news/1654442/MBO+Raad+wil+de+problemen+boven+tafel+krijgen.aspx

The most important legislation for the (I)VET ((initial) vocational education and training) is the Act on Vocational and Adult Education ("*Wet educatie en beroepsonderwijs – WEB*"). This act brings together all types of secondary vocational education and adult education and is aimed at strengthening and further integrating the system of initial and post-initial vocational education and training.

Existing VET apprenticeship-type schemes at national level

Identification of main existing apprenticeship-type schemes in the Netherlands

VET

The secondary vocational training has four levels. A level 1 study can be seen as a study for assistants aimed at simple executive work. The duration of a level 1 study varies from a half year to four years. Level one leads to an ISCED 2C level certificate.

A level 2 study is a basic vocational training for performing practical work. The duration of the study is two to three years, and you get an ISCED 3C level certificate.

A level 3 study is aimed at reaching a professional level, where the student is learned to be a versatile and independent (production) worker. The duration of the study is two to four years, and you get an ISCED 3C level certificate.

A level 4a study is a middle-management training that takes about three to four years to complete. When finished the student gets an ISCED 3A level certificate. There is also the possibility to follow a specialist training (level 4b) after the middle-management training. This adds about one to two years to the study with an ISCED 4 level certificate as a result.

A BBL education is possible on all levels and the additional requirements, next to an employment contract with a company, for enlisting in a BBL training there is a training prerequisite. This prerequisite is connected to the level the student wishes to start, namely:

- Level 1 (ISCED 2C) requires an ISCED 1 certificate.
- Level 2 and 3 (ISCED 3C) require an ISCED 2B certificate.
- Level 4a (ISCED 3A) requires an ISCED 2A or 3C (gained with a level 3 VET training) certificate.
- Level 4b (ISCED 4) requires an ISCED 3A certificate.

There are no other prerequisites, like a minimum or maximum age. There is a good match between the different levels. When a level is completed, the student can get exemptions for parts of the following level.

Secondary vocational education courses are offered by different institutions: regional training centres (Regionale Opleidingscentra: ROCs), agricultural training centres (Agrarische Opleidingencentra: AOCs) and trade schools (Vakscholen). Also, a (limited) number of colleges have a separate department for vocational training. All of these schools and training centres are (partly) funded by the government, but there are also about 125 private training centres that aren't funded by the government.

The VET courses are divided into four sectors:

- Health and social care
- Technology
- Economy
- Agriculture

ROCs are mainly aimed at three sectors: health and social care, echnology and economy. Trade schools focus on training for an industry such as graphic arts or shipping. The AOCs provide training for the agriculture sector. This includes training in the field of plant and animal care and environmental studies.

There are two different routes to obtain a VET degree (at any level): the BBL-route and the BOL-route. The BOL and BBL-route were introduced in the school year 1997/'98 with the introduction of the law named 'Wet Educatie en Beroepsonderwijs' (WEB).

BBL versus BOL

The BBL-route ('*beroepsbegeleidende leerweg*') is the apprenticeship-type scheme in The Netherlands in the VET, and level 2, 3 and 4 of the VET fit the definition of an apprenticeship-type scheme that is used in this study. The BBL-route implies that a student immediately starts working and goes one or two days a week to school to learn the theory, and the student can use this route to get a degree at level 2, 3 or 4. Level 1 is not part of this study, but it will be mentioned in the tables in this report, to give a complete outline of the VET system in the Netherlands.

To a lesser degree the BOL-route ('*beroepsopleidende leerweg*') can also (partly) be seen as an apprentice-type scheme. The student goes to school all week, but has one or more periods of internships during a school year. On average, an internship lasts 10 or 20 weeks. Furthermore, a student can participate in the BOL-route as a fulltime or part-time student. In this and the next section, also information on the BBL-route will be presented. This way the outline of the complete VET system will be clear, before we zoom in on the BBL, levels 2, 3 and 4.

Students in the BOL-route have to spend a minimum of 20% and a maximum of 60% of their time in an internship. In the BBL-route the student has to spend at least 60% of his or her time working at a company. The levels in both routes (BOL and BBL) have about the same duration. For example: there are no big differences in the time required to complete a level 2 study in either the BOL or the BBL-route.

The Associate Degree

The Associate Degree (AD) program is a two-year part of a four-year college bachelor, but it has its own degree: the Associate Degree (ISCED 5B). The Associate Degree also allows a student to continue with the bachelor program without delay when he or she has this degree.

The AD program is not yet officially introduced. In the beginning of 2011 the decision was made to give the AD program a permanent status, and the (legislative) preparations are now being made. The first round of pilots started in the 2006-2007 school year. After that year the number of AD programs gradually increased. The duration of the pilots has also been extended. Originally, the pilots would end with the school year 2009/2010. But after the positive interim evaluation of the AD program it was decided that schools could start the intake of new AD students. When the AD program has been adopted the already started programs will get a permanent status, but there is no exact date set yet.

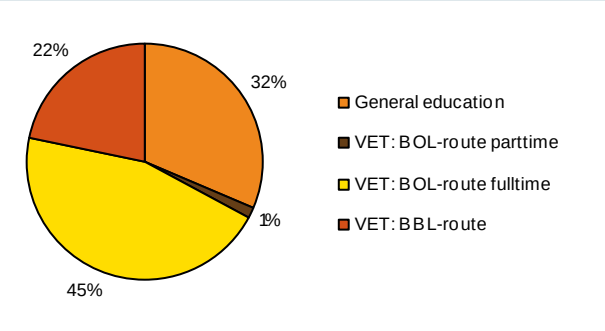
Quantitative importance of apprenticeship-type schemes

This section will give a quantitative outline of the importance of apprenticeship-type schemes. The first part of this section will give a global review of the secondary and tertiary education, and the relevance of the VET and the Associate Degree within these levels. The second part of this section will be about the apprenticeship schemes in the VET (the BOL and BBL route).

Global overview

The VET is an important part of the secondary education system in the Netherlands as can be seen in Graph E.14. In 2009 there were about 730 000 students following a secondary education. About 230 000 of these were following a general education (32%), and about 500 000 students (68%) were following a VET type education (excl. level 1 students).

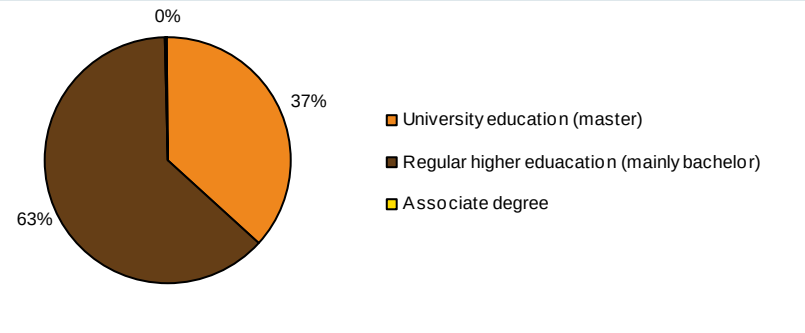
Graph E.14 Distribution of students in a secondary education (2009, in %).



Source: CBS, 2011

The Associate Degree is at present only a very small part of the tertiary education. In 2009 there were about 639 000 students in tertiary education, and only 2 200 of these students were participating in an Associate Degree program. This means that less than 1% (0.3%) of the students in a tertiary education were following a Associate Degree program in 2009 (see Graph E.15).

Graph E.15 Distribution of students in a tertiary education (2009, in %)



Source: CBS, 2011

In this study, the following VET types can be seen as possible apprenticeship-type schemes:

- The BOL-route (part-time and fulltime).
- The BBL-route.
- The Associate Degree.

Table E.72 gives a brief explanation of these types regarding the (average) distribution of school and work-based training and whether this type of scheme is regarded as an apprenticeship training. As is shown in Table E.72, only the BBL-route is considered to be apprenticeship training.

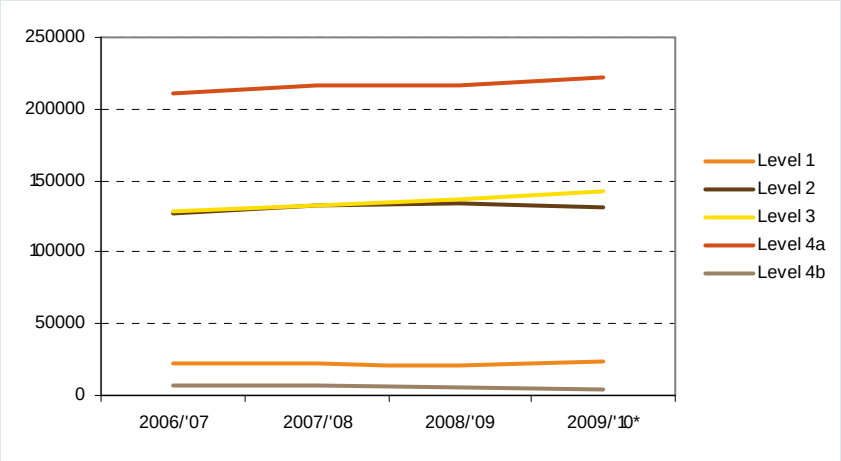
Table E.72 Brief explanation of existing VET types

VET Types	Distribution of school and work-based training (total training hours)	Is this VET type regarded to be apprenticeship training?
BOL-route part-time	80/20	No
BOL-route fulltime	80/20	No
BBL-route	40/60	Yes
Associate Degree	80/20	No

Recent evolution VET

Graph E.16 gives an overview of the number of students per level (1 through 4b). Level 4a has the most students. In the school year 2009-2010 there were about 220 000 students participating in a level 4a study.

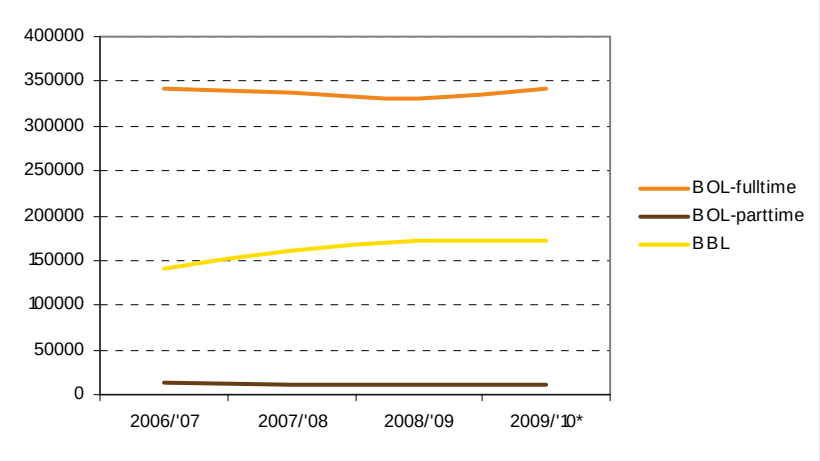
Graph E.16 Number of VET students recent years per level



Source: CBS, 2011

Graph E.17 shows that the BOL-fulltime route has the most students: about 342 000 in the school year 2009/'10. The BBL-route has grown in the period 2006-2010, from 141 000 students in 2006/'07 to 172 000 in 2009/'10. There is a very slight indication of the effect of the economic crisis on the number of students in the BOL and BBL route. There is a slight increase in the number of students in the BOL-route since 2008, and the number of students in the BBL-route stopped growing since 2008. This is a logical effect: when there are not enough workplaces for the BBL-route (some) students will choose for a BOL-route type education. But the effect of the crisis is not very large. This can be the effect of the necessity of (demand for) student labour on the labour market, or because of the crisis measures that are were implemented (see section 3.2).

Graph E.17 Number of students recent years per route

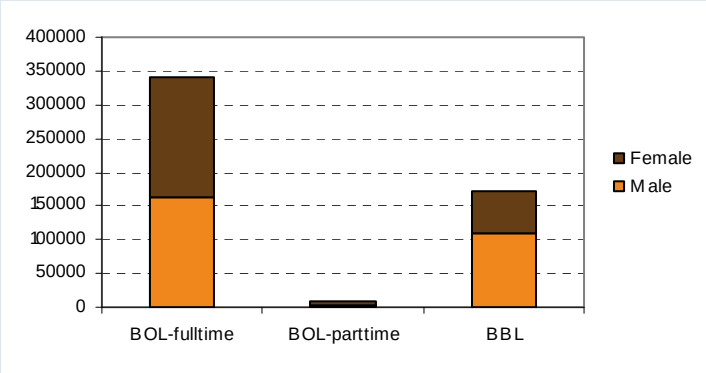


Source: CBS, 2011

Characteristics of students

In 2009/'10 there were about 524 000 students in the VET, 52% of them were male and 47% female. As Graph E.18 shows, there are more men (110 000) in a BBL-route than women (62 000).

Graph E.18 Number of students by gender and route (2009/'10)

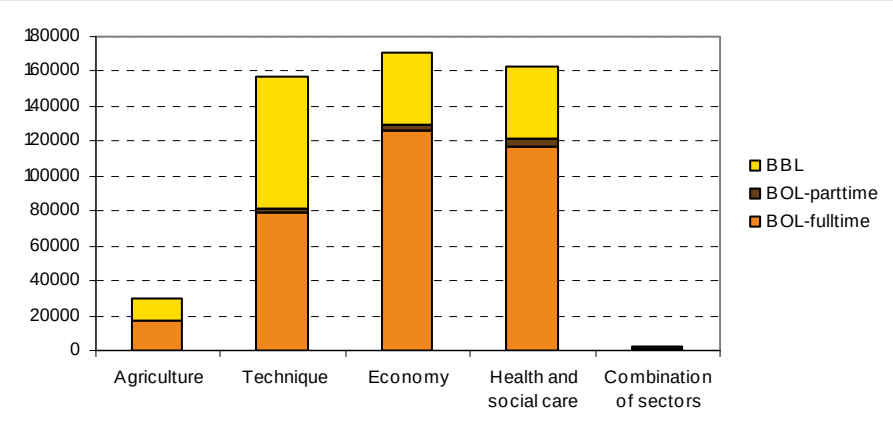


Source: CBS, 2011

Type of studies

As mentioned before, the VET is divided in four sectors (health and social care, technology, economy, agriculture). Graph E.19 gives an overview of the number of students in each sector. In each sector the BOL-route is in terms of number of students the most important route. Only in the technology sector, the difference is minimal: 76 000 students in the BBL-route and 82 000 students in the BOL-route (part-time and fulltime).

Graph E.19 Number of students over four sectors per route (2009/ '10)

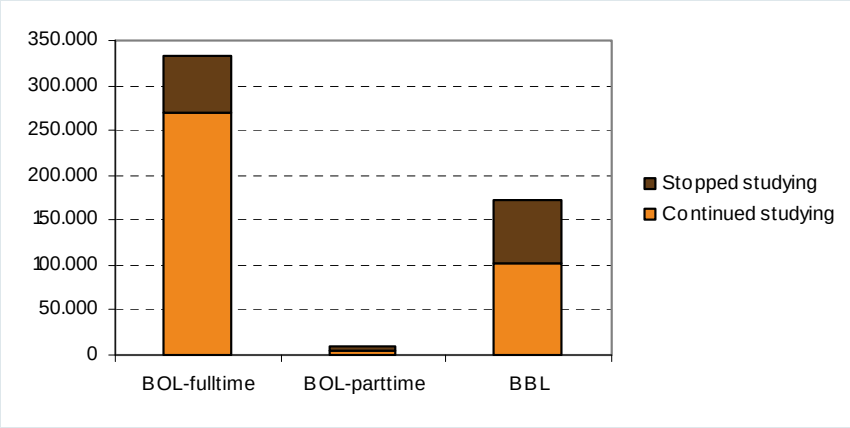


Source: CBS, 2011

Exit-route and labour market insertion

At the end of a school year a student has the choice: continue or stop studying. Graph E.20 gives an overview of the students that were following a VET study in 2008/'09 (divided over the BOL and BBL-route) and what they were doing in 2009/'10. As shown in Graph E.20, the number of students that stopped with their school activities is about the same in the BOL (68.000 fulltime and part-time students) as the BBL-route (69.000). But the BBL-route has less students than the BOL-route, so the percentage of students that were in a BBL-route in 2008/'09 and not in school in 2009/'10 (40%) is higher than in the BOL-route (20%).

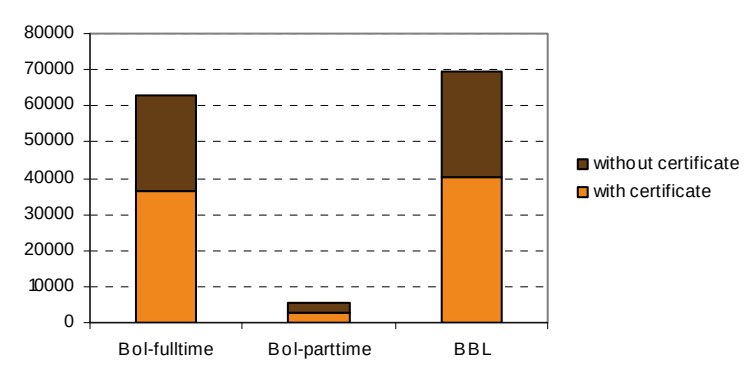
Graph E.20 (Out) flow of students from 2008/'09 to 2009/'10



Source: CBS, 2011

A student can stop his education with or without a certificate. Graph E.21 shows the number of students who are not following education in 2009/'10, but were in 2008/'10, and whether they left with or without a certificate. Just over 40% of the BBL and BOL-students left education without a certificate.

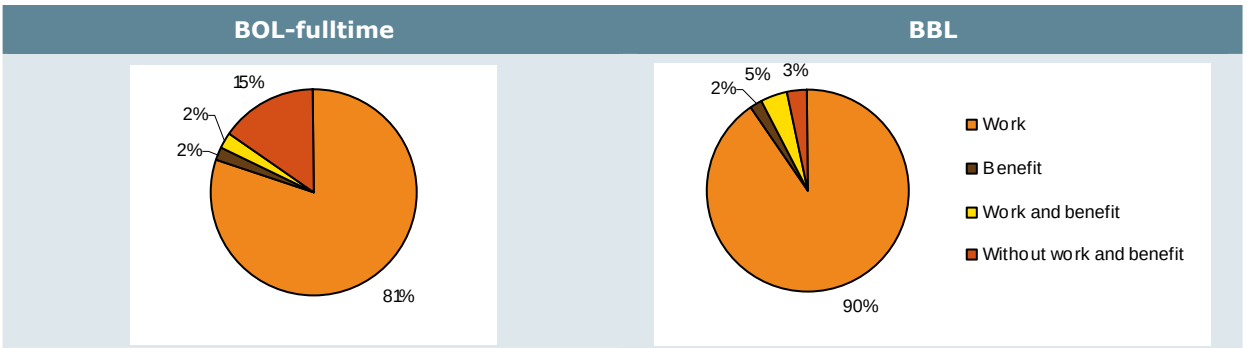
Graph E.21 Outflow of students from 2008/'09 to 2009/'10, who stopped studying, with or without a certificate



Source: CBS, 2011

What are the chances that someone with a VET-certificate finds a job? Or do they end up on benefit? About 90% of the students that get a degree in a BBL-route find work within a couple of months, this percentage is a bit lower for students in the BOL-fulltime (see Graph E.22). There is no information available on the BOL-part-time route. The number of students in this route is limited and it is likely that they follow the part-time route because they already have a job.

Graph E.22 Qualified graduates entering the labour market: employment and benefit (2007/'08)



Source: CBS, 2011

Associate Degree

There is not a lot of information available about the Associate Degree (AD). The most recent information can be found in the monitor study of the AD program in the period 2006-2010.[236] The most important information about the Associate Degree is as follows:

- There were 450 AD students in 2006, and this increased to 2 200 in 2009.
- About half of the AD students follow the program in part-time. The large proportion of part-timers is due to the fact that about half of the students come from a work situation and only one quarter comes directly from a VET education.
- About fifty percent of the AD graduates continue learning via a bachelor education.
- Full-time AD graduates find a job, a job about which they are very satisfied of finding / doing. Their starting salary is roughly midway between that of persons with a VET and with a bachelor degree.
- AD graduates have more often a temporary labour contract than bachelor graduates.

[236] Graaf, d., E. van den Berg (2011), Monitor Associate degree 2006-2010, Amsterdam: SEO.

Operational Description of apprenticeship-type schemes

Training curricula and training/education contents/competence profiles

The curricula / competence profiles of all the official (I) VET educations and courses are structured on the basis of a (national) qualification structure. The structure of vocational education is changing at the moment. The (I) VET system is working towards a new competence-based qualification structure. These so called occupation competency profiles ("beroepscompetentieprofielen") are the basis of the (national) qualification dossiers ("kwalificatiedossier"). As of August 1, 2010 almost all initial courses (97%) are designed on the basis of these new competence-based qualifications. It is to be expected that on August 1, 2011 all of the new students will start their VET education based on the new competence based qualification.

The qualification dossier describes key tasks, processes and competencies that make up a specific job and are therefore the basis of a (national recognized) (I) VET course. The qualification dossier can be seen as the basis. A school can decide on how to design the education process.

There are several agencies involved in the creation, review and evaluation of the qualification dossier. First there is the Ministry of Education, Culture and Science who directed the introduction of the competency based qualification. The ministry makes financial resources available, organises evaluations of the structure and is responsible for the legal basis of the competence-based qualification structure.

Secondly there are the 17 national VET knowledge centres that form a link between education and the work floor. They are responsible for establishing and maintaining the qualification dossiers. The umbrella organization of these 17 centres is Colo. The government finances the (social) tasks knowledge centres. The board of most knowledge centres are comprised of representatives of behalf of employers, employees and the VET-sector.

The competence profiles cannot be changed at short notice, they are defined for a school year. Some sectors do stimulate the number of places in the sector for apprenticeship schemes (BBL-route). When a sector needs more workplaces for these schemes a sector fund can compensate an enterprise for the costs.

Role of enterprises in the apprenticeship-type schemes and description of company based training

In the BBL-route and in the BOL-route a student must work in an official recognized learning company ("*erkend leerbedrijf*"). The 17 VET knowledge centres are responsible for the official recognition of learning companies. To become an official learning company the company must meet the following requirements:

- The trainee must perform activities that fit in the daily operations of the company. The trainee must perform tasks that are in line with the education that the trainee is following. An important part of the tasks of the trainee are assignments that he or she needs for a successful conclusion of the education.
- The necessary facilities for a good practical training must be available.
- There must be a practice trainer ("*praktijkopleider*") for the trainee. A practice trainer has at least the professional training level for which the trainee is learning. Furthermore, the practical trainer must be able to transfer his expertise in a good way. This trainer must have proof that he can function as a trainer, for example by means of relevant diplomas, certificates or experience.

- The employer must maintain regular contact with the educational institute of the trainee.
- There must be a set curriculum or practice guidance tools, with which the trainee is trained in a structured way.
- There must be enough time, space and resources for the practical training.
- The employer / practice trainer ("*praktijkopleider*") must be available and open to the support of a consultant of the knowledge centre of the sector.

Once companies are an official learning company they can promote that they are and recruit BBL (and BOL) trainees via, for example, special websites for official learning companies, their own company website, or direct contact with a school. In an average BBL-route the trainee works about four days a week and goes to school one day a week. In an average BOL-route the student goes to school all week, but has one or more periods of internships during a school year. The duration of an internship is 10 or 20 weeks.

At the beginning of 2011 there were about 223 000 official learning companies, with a total of 300 000 practice trainers. There is no data available on the size (number of employees) of these companies.

Specific role of the company trainer

As mentioned before, there are about 300 000 practice trainers among the 223 000 learning companies. This is sometimes - often in a small company - the owner / entrepreneur. But it can be another employee who has at least the same level of training for which the trainee is studying along with several years experience. A practice trainer is responsible for the organization, supervision and assessment of the (learning) process of the trainee.

There is an (official) training for a practice trainer, but this is not always a compulsory training. Each VET knowledge centre has its own rules and regulations regarding the necessary skills of a practice trainer. These skills are mainly practical skills: organizing, counselling, and evaluating the learning process of the student. But this also implies some form of pedagogical skills. Observing and listening to the student to estimate what the he or she needs and where development opportunities are is part of the job of a practice trainer. An average learning company (in other words: the practice trainer) invests about 25 days a year in the training of one BBL student. This time is spent on activities like counselling the student and evaluating his or her activities. For comparison: a learning company / practice trainer invests about 20 days a year in a BOL trainee.

Description of school based training

Secondary vocational education courses (BOL and BBL-routes) are offered by different institutions: regional training centres, agricultural training centres and trade schools. And, as mentioned before, the courses are divided over four sectors: health and social care, technology, economy and agriculture. ROCs are mainly aimed at three sectors: health and social care, technology and economy. Trade schools focus on training for an industry such as graphic arts or shipping. The AOCs provide training for the agriculture sector. This includes training in the field of plant and animal care and environmental studies. There are about 70 VET schools, of which 42 are a ROC, 11 are an AOC and there are 14 trade schools.

The schools vary greatly in size and number of locations. ROCs in large cities sometimes have 30 00 students across many locations. AOCs and trade schools have an average of about 2 000 students.

All of these VET schools are aimed at preparing people for a profession or for further education. To ensure a good connection with the labour market schools have extensive contacts with the regional business community, municipalities and social organizations. In all courses in VET the connection with the practice comes first. These schools are accessible for everyone who is older than 16.

The goals and exam terms are laid down in the occupation competency profile of a specific education (also, see section 2.3.1). But these profiles do not give an exact outline of the school based training for a education or a BBL student. The school based training for a BBL student can consist of:

- Making and evaluating practice assignments (partly performed on the work floor).
- Practical lessons about the (theoretical side of the) profession.
- Learning general skills, e.g. English, PC-skills.

It is important that a BBL student can apply what they learn in school in their work. The exact contents of the school activities are different per sector / education direction.

Role of students in the apprenticeship-type schemes

Students have several search options when they need a traineeship at an official recognized training company (an apprenticeship for BBL students and an internship for BOL students). The main options are:

- The student searches independently for a traineeship. There are websites that contain a database of official recognized training companies and the traineeships that they have available. Some organizations promote that they are an official recognized training company on their own site and a student can apply for a traineeship.
- The school has a database and/or connections with the (local) companies and help students find a traineeship.

A mix of both options is also possible.

To start a BBL education the (potential) apprentice must have an employment contract with a company, because (gaining) working experience is the basis of the training. As mentioned before, the (I) VET consists of four following levels and there is a training prerequisite to start at a specific level (see section 2.1):

Early 2008 the VET Counsel ("*MBO Raad*") and Colo made a joint proposal for the standardistion of examination to the secretary of state of the Ministry of Education, Science and Culture. This resulted in examination profiles which give an outline of the process and preconditions of an examination (more about this in section 3.1). The enforcement of the examination profiles is mainly the responsibility of the sector. The Education Inspection (part of the Ministry of Education, Culture and Science) monitors the examination.

Existence/non existence of contractual relationships between enterprises/students/VET schools

BBL students have two contractual relations:

- An employment contract with the employer. This is a formal contract in which the working terms are set, like: duration of the agreement (fixed-term or permanent / full or part time), wage (most likely the legal minimum wage in case of an IVET student, this is set in the collective labour agreement of the company or sector);
- A practice agreement ("*praktijkovereenkomst*") with the employer and the school. This contract specifies the rights and obligations of all parties involved.

Compared to a BOL student, there are some differences. A BOL student only has a practice agreement and the BOL student only gets a compensation for the internship, and not a regular (minimum) wage as is the case with BBL students.

Financing-related information

VET institutions are publicly financed providers. Block grant funding is the main system used, within the government budget at national level. The amount that an institution receives is based on:

- The number of students per course/learning path.
- The number of certificates/diplomas awarded per institution.

The subsidized educational institutions also offer contracted educational activities to employers/employees. This is a source of private funding.

There are several options for a company offering an apprenticeship to be financially compensated for hiring a BBL student:

- Tax benefits: a company can get a reduction in tax and social insurance contributions for different groups of employees. One of these groups is the BBL student. A BBL student is an official employee and the employer is required to pay wage tax and national insurance contributions. But the employer has the possibility to get a reduction on the taxes he has to pay.
- There are various funding schemes for training. There are European, national and local funding opportunities. Examples of these schemes are the European Social Fund (ESF) and provincial grants for a better connection between the education and the labour market.
- In some cases, a company can get a grant from the training fund of the sector. Most of the sectors in the Netherland with a collective labour agreement have a central education and development fund. Some of these funds are (partly) aimed at stimulating the available internships and apprenticeships in the sector by giving the employer a grant like a fixed amount of money per student.

Every BBL student that is older than 18 has to pay a tuition fee to VET institutions. This fee is linked to the level of the study:

- For level 1 and 2 the costs are 213 Euro for the school year 2010/2011.
- For level 3 and 4 the costs are 517 Euro for the school year 2010/2011.

For comparison: a BOL student pays 1 031 Euro for the school year 2010/2011. Full-time students receive financial support from the age of 18 under the Student Finance Act (via the Ministry of Education, Culture and Science). But part-time BOL students and BBL students don't receive this support because they are not full time students (they work four days in the week).

The money the different institutions get is not labelled, so it is not possible to give a precise indication of the costs of the BBL route. But for the entire VET, the following information is available concerning 2010:

- ROCs, AOCs and trade schools received 2.8 billion euro of subsidy from the government.
- The 17 knowledge centres received 124.8 million of subsidy from the government.

Quality assurance mechanisms

As mentioned before, there is a nationally prescribed format for examination profiles. The different sectors have *translated* the national format into a sector format. And these sector profiles examinations again get translated in the examination regulations of an institution. The sector itself is the most important supervisor, in which the 17 knowledge centres fulfil an import role. These knowledge centres have a total of 800 education advisers ("*opleidingsadviseurs*") who monitor the quality of the apprenticeship and support the learning companies. The activities of an education adviser include:

- Visiting learning companies to inspect the quality of the supervision.
- Guidance of the practice trainer ("*praktijkopleider*").
- Providing information and (face-to-face) guidance regarding the apprenticeship.

The education advisor is also responsible for actively building and maintaining a network of learning companies.

But there is also a national government body that monitors the VET. This is the Education Inspection (part of the Ministry of Education, Culture and Science). Their form of inspection is risk-based: for the institutions and programs where things are going well the supervision is restrained. They are monitored on a basic level with simple checks without any further investigations. Institutions and programs with poor or inadequate quality or a weak financial position are more intensively monitored. In extreme cases, the Minister may impose sanctions if the quality is inadequate over a prolonged period of time. The Education Inspection publishes a list of schools with insufficient quality on a regular basis.

Changes and perspectives in the national apprentice-type schemes, geographical mobility issues

Recent (last 5 years) or planned changes in the national apprenticeship-type schemes

There have been no changes in the VET that are specifically aimed at the apprenticeship-type schemes. But there are two general changes that are in progress in the VET system. These are:

- The standardisation of examination.
- The introduction of competence based education.

Standardisation of examination

Early 2008 the VET Council ("*MBO Raad*") and Colo made a joint proposal for the standardisation of examination to the Secretary of State of the Ministry of Education, Culture and Science. This resulted in the examination profiles which give an outline of the process and preconditions of an examination. An examination profile is in fact a kind of conversation about the agenda of examinations. An examination profile shows:

- How the involvement of industry is regulated in the examinations in question.
- What arrangements have been made with regard to coverage and content.
- How the expertise of all concerned is secured.

There is a nationally prescribed format for these examination profiles. The different sectors have translated the national format into a sector format. And these sector profiles examinations again get translated in the examination regulations of an institution. The General As-

sembly of the MBO Raad (VET Council) has stated that these new examination profiles must be implemented by August 1, 2011.

Competence based education ("competentie gericht onderwijs")

A new structure of graduation requirements is being implemented in the VET system. These requirements are called the competence-based qualification structure. Schools use this qualification to develop competence-based education. In addition to gaining knowledge and learning skills there is a lot of attention for learning a professional attitude. Thus, students learn for example how to better communicate and collaborate.

The competence based qualification indicates which knowledge, skills and competencies VET students should have after completing their training. These competencies are described in a profession or professional qualification guideline. When a student demonstrates that he has the right knowledge, skills and competencies, he receives a diploma. The Education Inspection, part of the Ministry of Education, Culture and Science, monitors the quality of education and examinations.

A lot of the current (first year) VET students follow a competence based education. Since the 2010-2011 school year, almost all regional training centers ("*ROCs*"), agricultural training centres ("*AOCs*") and trade schools ("*vakscholen*") offer competence based education. Currently the government deals with an amendment to the Education Act on the introduction of a competence-based qualification structure for vocational education. It is envisaged that from August 2011 all students in the first year of a vocational training will follow competence based training. This is subject to approval by parliament.

Effect of the recent economic crisis on the national apprenticeship-type schemes

Effect economic crisis

The intake in the BBL route (apprenticeship training) in the VET is highly cyclical. In times of crisis, more apprenticeships and young people are forced to move to a training in the BOL route because there is not enough work. This can lead to motivational problems and higher drop out rates. The employment prospect of an (unskilled) school dropoutis very limited. It is therefore important that even in times of crisis enough apprenticeships are available. Because of this (known) effect of a economic crisis a lot of sectors (unions, employers representatives, training and development funds) started to stress the importance of apprenticeship schemes (the BBL route) for the future of the sector.

The main aim of the government, during the crisis, was to prevent youth unemployment. It is a known effect that during a (economic) crisis the youth unemployment will go up. That is why the School Ex Program ("*School Ex Programme*") was initiated in the spring of 2009.

Youth unemployment program: the School Ex Program

Continue learning or enter the job market? Young people who have a vocational diploma stand for exactly this choice at the end of their school year. In times of economic crisis, as in 2009, this decision is more important than during good economic periods. Because of the expectation that the youth unemployment in the Netherlands could reach 150 000 in the autumn of 2009, the choice was made in the spring of 2009 to start a comprehensive program to encourage young people to continue learning after their graduation. This program was called the School Ex Program ("*School Ex Programme*").

The School Ex Program stimulated examination candidates in the VET system to keep on studying after gaining their diploma to decrease the (potential) youth unemployment and to increase their chances on the labour market. And another aim of the program is to help stu-

dents who do not decide to keep on studying in finding work by supporting them via the central employment agency ("*UWV Werkbedrijf*").

The Ex School Program consists of two main elements:

- A student has the possibility to make a registration of what he or she is planning to do after graduation. This is called the 'mobility registration'. This mobility registration is made via a short survey that the student has to fill in.
- Providing (individual) training and advice. This was aimed at direct personal contact with the students (class, tutor group, career talk, graduations) so that the students would get advice from the school to motivate them to keep on studying.

The activities and measures VET schools undertook in the spring of 2010 to encourage young people to continue learning have paid off. Nineteen percent of examinees have been influenced by the campaign, of which sixteen percent opted to continue learning and three percent said that their choice for a follow up education had been changed because of the program. Another five percent said that the ex-school program influenced what they are going to do after school in another way, but in what way is not clear. The program was prolonged with an extra year because of the success of influencing students in a positive way.

A recent study also shows that unemployment varies greatly between both education levels and the followed pathways, during the crisis and the duration of the Ex School Program.[237] Unemployment is highest among the lower educational levels and generally higher for BOL students than for BBL students. This study also shows that the BBL graduates are generally less willing to stop their study for a job. And because of the School Ex Program more BBL graduates knew that the central employment agency ("*UWV Werkbedrijf*") offers support in finding work.

Building on the successful campaign in 2009, the VET schools are also approaching examination candidates for 2010 asking them about their future plans.

Student geographical mobility issues

It is becoming increasingly common and more accessible to study abroad. Students can graduate abroad, have an international internship or they can even follow an entire study abroad. Most VET schools have their own network of international learning companies. But the accent of the international orientation of most schools is the international internship (in the BOL-route) and less on the international apprenticeship (the BBL route).

International focus

Internationalization of vocational education is a prerequisite for achieving the objectives of the strategy of the European Commission for 2020. This strategy pays much attention to the recovery of the European economy and the importance of a well-educated and flexible workforce. The VET Council ("*MBO Raad*") is of the opinion that they must provide support and advice to the VET institutions.

the VET Council has made a focus in their support and advice because internationalization is a vast subject. There are three areas of focus for the coming year. The following areas cover the international developments and ambitions of the VET Council:

- European instruments
- Skills
- Mobility

[237] Meng, C., T. Huijgen & C. Ramaekers (2010), MBO-diploma in tijden van crisis, Doorleren of werk zoeken? (*VET diploma 2010: Continue learning or seeking work?*), Maastricht: ROA.

The area 'mobility' is the most important one for this study. This area breaks down in the following subjects.

The VET Council wishes to encourage mobility of students and teachers to be active on the (international) labour market and putting the Dutch vocational education on the map. The following agents / organizations are used for this end:

- Neth-ER, an association aimed at increasing the Dutch participation in European programs.
- EUproVET, a representational platform for European VET providers.
- Via various thematic working groups that are initiated by the European Commission.

When organizing internships all matters related to preparation is crucial. This applies to an even greater extent for international internships. To support school counsellors a manual has been developed with practical tips to be taken into account in the organization of international internships. This has been funded with a grant from the Leonardo da Vinci programme.

Europass is useful for VET students who wish to work, study or have an internship abroad. Using a set of documents, VET students can capture their skills and competencies which can be used for applications. The Pass consists of:

- Mobility Pass.
- European CV.
- Diploma Supplement.
- Diploma Certificate.
- Common European Framework of Reference for Languages.
- Europass is an initiative of the European Commission.

Colo and the VET Council work together on the platform www.workplacement.nl. Students, schools and companies can learn more about international internships on this site:

- Students can get practical information and links to other websites regarding the necessary preparation, international recognized learning companies, consequences regarding their scholarship and housing.
- Schools can find more information about: projects regarding international internships, subsidies and the guidance of students with an international internship.
- Companies (non-Dutch) can find more information about: the organization of an international internship and the coaching of a Dutch student.

International internships

In 2008 a total of 2 644 VET students went on an internship abroad (this is about 0.5 percent of all VET students). 63 percent of all of these placements came from the sector Services, Healthcare, Education and Welfare. This means that as many as 1 666 of the 2,644 foreign trainees came from that sector. There has been a large increase in the number of students that had an internship in Turkey. Turkey has grown as a popular internship country. The number of VET students who went to Turkey for their internship increased by as much as 272 percent. Despite this sudden growth Great Britain, Spain, Germany, Belgium and France are still the most popular countries for VET internships. There is no specific public data available about the number of students per country for the BBL route only. The numbers provided refer to all VET students.

Future perspectives and other possible relevant issues

There are no specific large changes expected regarding apprenticeships in The Netherlands. The two most relevant changes have been described in section 3.1, regarding the standardisation of examination and the introduction of competence based education. But there are some other (more general) issues for the coming years.

The government recently started with the Action Plan VET Focus on craftsmanship 2011-2015 ("*Actieplan MBO Focus op vakmanschap 2011-2015*"). This plan is aimed at improving the quality of vocational education. The most important parts of this plan are:

- VET educations will be more intensive: more hours per school year and less school years. For example: in the first year of the VET the number of lessons hours will go up and a level 4 education will be 3 years instead of 4. There will be more attention for the guidance and coaching of students. There will also be an extra investment in good information, getting class schedules in order and more variation in teaching methods to ensure further reduction of absenteeism and school dropouts.
- It is the ambition to improve the quality of the examinations. For example: the (general) literacy and numeracy examinations will be more centrally (national) organized.
- The government is also investing in the professionalization (via training) of teachers in secondary vocational education in the coming years.
- The current qualification structure will be simplified and brought more in line with the demands of the industry.
- A level 1 education will get its own (new) position within the vocational education system. It remains a training for obtaining a recognized diploma that gives access to further training at level 2 and it will also prepare for employment. The level 1 education will also be renamed to: entrance training ("*entreeopleiding*").

This is a new program, how these ambitions will be realized is not clear at the moment. The government is investing 150 million euro in this plan.

Evaluation of existing apprenticeship-type schemes

Qualitative assessment of the national apprenticeship-type schemes

Relevance of apprenticeship-type schemes

In recent years, participation in the BBL route increased significantly, partly as a substitute for the reintegration of people with a relatively large distance to the labour market by other means, but also to a large extent because of training demands of individuals and companies. VET institutions, as commercial education centres, have a very important position in the schooling of employees. A VET institution offers employers and their employees the possibility to school (experienced) workers through a BBL-education. Employers and employees use the VET increasingly as a tool in the context of Lifelong Learning. VET institutions are thus providing an important contribution to the employability of workers and the competitiveness of the companies involved.

An important characteristic of the vocational education system are the differences and similarities between the two different learning routes (BBL and BOL). For example: a level 3 study leads tot the same qualification / certificate for a BOL and BBL student. The only difference is the way the students reaches this certificate (in other words: the route is different but the end result is formally the same).This means that the system can move along on the waves of cyclical developments in the labour market and the personal strengths of a student (is the student a learner or a worker?). This is, also among the interviewed experts, seen as one of the strong aspects of the VET system.

The labour situation of BBL graduates is stronger than BOL graduates with the same level of degree. Employers do not always ask for a school diploma, but also what you have done.

Learning hours?

In the BBL learning pathway a student learns the profession primarily on the work floor. Once a week they return to school for their (theoretical) knowledge and education. In practice, however, a small part of these students are scarcely taught at school (there are no exact numbers about the size of this group).[238] The reason for this is that the different educational activities are not mutual exclusive, which causes ambiguity regarding the official school hours versus the work hours. The main question is: what are lessons hours and what are educational activities? The State is planning to tighten the law because of this uncertainty (see also the planed actions in the 'Action Plan VET Focus on craftsmanship' mentioned in section 3.4).

The problem of scarcely taught BBL students also has two underlying causes: the motivation of the student and the pressure of the company. Students who choose for a BBL education are (more likely) to have a 'hands-on' mentality and aren't always motivated to go to school. Next to this there is the possible pressure of the (learning) company. When there is a high workload the employer can ask the employee (BBL student) to come to work instead of going to school. These two causes reinforce each other.

The aim of the government is that students in an apprenticeship-type training (BBL) have an annual minimum of 240 school hours. This means that a BBL-student has 6 clock hours per week of school based learning. The secretary of state of the Ministry of Education, Science and Culture believes that the measures also contribute to a positive image among students, parents and businesses of the BBL route. The VET Council ("*MBO Raad*") had already announced a code of conduct with a standard 120 clock hours of educational activities. But the secretary of state considers this number of hours too low. This also shows, as mentioned before, an important discussion in the VET sector. What are school activities and how much lesson hours are reasonable for a BBL-route education? As described above, especially the number of hours is subject to debate in the VET sector.

Labour market position

As mentioned before, about 90% of the students that get a degree in a BBL-route find work, this percentage is a bit lower for students in the BOL fulltime route. About 80% of the BOL graduates find work. Furthermore, only 3% of the BBL graduates end up without work and benefits while about 15% of the BOL graduates end up without work and benefits.

So the labour market position of BBL graduates is better, mainly because most of them end up working with the company where they followed their apprenticeship.

There is also a difference in the monthly income of BBL end BOL students after they graduate. Table E.72 gives an overview of the monthly income of students who after they graduated in the school year 2007/2008 started working. The table shows the percentage of students within a route and level with a certain income. It is clear that BBL graduates earn on average more the BOL graduates.

[238] http://www.besturenraad.nl/content/staatssecretaris-eist-minimaal-240-uren-instructie.

Table E.73 Monthly income of students (in euro) after graduating (school year 2007/2008) in %

Route, level	< 500	500 - 749	750 - 999	1000 - 1249	1250 - 1499	1 500 - 1749	1750 - 1999	> 2000	Total
BOL, level 1*	41	21	13	9	7	4	2	2	100
BOL, level 2*	28	21	16	13	9	6	4	4	100
BOL, level 3*	13	16	19	16	14	12	5	5	100
BOL, level 4*	11	12	15	16	15	12	9	9	100
BBL, level 1	4	4	8	9	15	19	13	27	100
BBL, level 2	2	4	9	11	13	11	11	39	100
BBL, level 3	1	2	4	8	12	16	17	40	100
BBL, level 4	1	1	3	5	8	11	17	54	100

Source: CBS, 2011 (*: BOL fulltime)

Drop outs

The percentage of drop outs in the apprenticeship training (BBL) is slightly higher than in the school based training (BOL), but the difference is rather small. The difference in return (dropouts who return to school within three years) on the other hand differs. A recent study shows that only a few BBL students go back to school.[239] Only one fifth to one fourth of those participants re-register within three years. Among BOL students the percentage of dropouts that return is somewhat higher, about one third of them return back to school within three years. The study doesn't provide an explicit reason for these different patterns. But a possible explanation might be found in the motivation of a BBL student. Perhaps a BBL student is less motivated to go back to school because he or she already has a job and prefers working over learning.

Dropouts can be seen in the BBL and BOL route, but it is the highest for level 1 students for both routes. BOL students return more often as their level increases. Also, BOL routes that have a low percentage dropout rate yield a high return rate. Remarkably, this pattern does not apply to the BBL route. In this route the return rate is (at all levels) between 20 and 25 percent. Again, the study doesn't provide an explicit reason for these different patterns. But a possible explanation might be in found the motivation of a BOL student. Perhaps a BOL student is more motivated to go back to school because he or she can't find a job or prefers (for the moment) to get a higher education through study over working.

Learning companies and students

If a company decides it wants to offer an apprenticeship, they have to be recognized as a learning company by the knowledge centre of the sector.
There are several advantages of becoming an official learning company and hiring a BBL (or BOL) student. First of all, you get an (extra) employee who will work for the company. There are also a number of tax benefits through tax reduction and grant funds and there are also various funding schemes for training.

Learning companies also face some problems in performing their tasks. A recent study among learning companies shows the following conclusions regarding the traineeships (BOL and BBL working places):[240]

- The preparation and counselling of the students / apprentices by schools can be improved.
- There must be more uniformity in the intern- and apprenticeships between VET schools in the traineeships. Every school can set there own program regarding an education, as

[239] Wijk, B. van, E. Fleur, E. Smits & C Vermeulen (2011), De verloren zonen (m/v), Terugkeer in het onderwijs van voortijdig schoolverlaters (*The lost sons (m/f), Return to education of school dropouts*), Utrecht: ECBO.
[240] Detmar, B. & I.E.M. de Vries (2009), Beroepspraktijkvorming in het MBO, Ervaringen van leerbedrijven (*Practical training in secondary vocational education, training companies' experiences*), Amsterdam: Dijk12 Beleidsonderzoek.

long as the predetermined end terms are met. Because of this, companies who deal with the same education from different schools are faced with different programs and requirements.

- The knowledge centres are too much out of the picture regarding the traineeships.
- Companies invest a lot in the costs of education.

Students are satisfied about the counselling they get from the learning company (2010 data). BOL students and BBL students are equally satisfied with this counselling.

Quality of the VET

Because school based training (BOL) and apprenticeship-type training (BBL) are both offered by one school, the functioning of VET schools can give an indication of the quality and problems of the system.

The most recent report of the Education Inspection (part of the Ministry of Education, Culture and Science) reaches the following conclusions about the state of VET schools in The Netherlands.

There are some questions about the effectiveness of MBO, but the intricate range of programs makes sure that young people and the (regional) labour market are well served. The VET system is very accessible. The VET schools also have very close ties with the local companies to generate enough apprenticeships. The intensive interaction between learning inside and outside the school is a strong point. In terms of quality, many courses meet the requirements of consistency in the program. There is a proper preparation and implementation of occupational training, and intake and placement of new students is adequate.

But, nonetheless, there are some improvement possibilities for VET schools. The Education Inspection suggests the following issues:[241]

- One of every seven agricultural and economical courses shows a deficit in the educational process, performance or both.
- One third of the examinations are not sound.
- 30 percent of the students leave school without a degree.
- The registration and follow up policy of absent students during classes is generally speaking not in order.
- Half of the students think the program is not a good preparation for the job. There is a slight difference in the perception of BOL and BBL students: 54% of BOL students and 42% of BBL students think that the program is not a good preparation for the job. The Education Inspection doesn't describe the underlying problem regarding this (dis-) satisfaction, but it is likely that it has to do with the contents of the education program and the relevance of this program (in the perception of the students) regarding the labour market ambitions of the student.

Student or employee?

For students there is a risk that they are seen as full-time cheap labour instead of a student / employee in training. Students and schools have to be aware of this problem. But with the financial and economic crisis this problem is more urgent. Companies replace employees with a flexible or temporary contract with a (cheaper) intern or apprentice, making it more

[241] Inspectie van het Onderwijs (2011), De staat van het onderwijs, Onderwijsverslag 2009/2010 (*The state of education, Education Report 2009/2010*), Den Haag: Inspectie van het Onderwijs

like cheap labour than a person who is part of a professional training within the company.[242] In addition, there is more competition on the market for intern- and apprenticeships from experienced unemployed professionals who try to find a job through an intern- and apprenticeship. There is no specific data available about this problem.

Identification of specific aspects of the national apprenticeship-type schemes and/or particular experiences at sectoral/regional level that are regarded as good practices

To underline a couple of important aspects of a successful BBL initiative we will give a description of two interesting projects:

- BBL Jobs in Emmen (a city in The Netherlands).
- Continue building, continue studying.

This section will end with information about the Dutch VET and apprenticeships in an international perspective.

BBL Jobs in Emmen

The ministry of Education made agreements / covenants with municipalities and educational institutions in secondary education and vocational education in 39 regions. The goal of these covenants was to reduce the number of drop outs between 2007 and 2011 with 40%. The emphasis is on preventing early school leaving. The school receives a subsidy based on results: € 2,000 for each (potential) early school leaver that they prevent from leaving school. One of the projects that is initiated with this subsidy is '*BBL Jobs in Emmen*'.

The main goal of the project *Jobs in Emmen* was to create BBL jobs for young people in retail, catering and logistics in the region of Emmen. This project was part of the national Youth Unemployment Plan. The project was aimed at young people who want to get a qualification in retail, catering or logistics, but who are not entirely willing or unable to attend school. These are young people who have no qualification, but do have a practical attitude and like to work in the retail, catering or logistics.

This project was a initiative of the central employment agency ("*UWV Werkbedrijf*") in the Netherlands and several local municipalities, the regional entrepreneurs association and the regional reporting and coordinating point for early school leavers ("*Regionaal Meld- en Coordinatiepunt voortijdig schoolverlaters – RMC*"). They cooperated to get young people in a BBL route and finding potential employers for these students.

These organizations made an inventory, screened and registered young people who were interested in obtaining a qualification. These young people were given information about the project and they made a resume under professional supervision (including photo) with information about:

- Why they wanted to work in retail, catering or logistics.
- Their qualities.
- What experience they have.

These resumes were sent to the entrepreneurs in the city of Emmen (via the entrepreneurial association). The entrepreneurs / companies also received additional information on the BBL and grant opportunities. Next was the matching of the resumes with the needs of the companies so that a youngster could go (back) to school while the employer acquired an enthusiastic new employee. The young people received extra support throughout the entire

[242] Petit, R., G. Kuijvenhoven, W. van Esch & S. Karsten (2011). Zien en gezien worden als toekomstig werknemer. De rol van sociaal kapitaal in en rond het mbo (*Seeing and being seen as a furure employee. The role of social capital in and around the VET*). Utrecht: ECBO.

process from the project organization so that everything is done to combat early school leaving.

There is no public information available about the number of participants and the exact success rate. But this project is used as a best practice and as inspiration for new projects within the part of the youth unemployment program which is aimed at the prevention of school drop outs.

The main lessons and good practice that can be seen in this project are:

- An active participation of the different stakeholders is necessary, especially for specific problem groups.
- A VET school doesn't have to take the initiative in getting people to school or, specifically, in an apprenticeship (BBL).

Continue building, continue studying

This project is an initiative of the employer and employee organization in the construction sector ("*Bouwend Nederland*", "*FNV Bouw*" "CNV Vakmensen" and "*CNV Hout en Bouw*") which started at the beginning of the economic crisis (April 2009). It is a known effect that in times of crises the number of apprenticeships drops, and this project therefore aims at stimulating a company to create (more) apprenticeships.

The project is in essence a countercyclical training and it is intended to support employees and students. Companies can have their adult workers follow a (part of a) level 2 or level 3 VET course, but they must also do something in return. The company must continue offering or increase their number of apprenticeships. This project started in 2009 and will end in 2011.

This program was promoted under the members of the involved organizations. Organizations that wanted to participate in this project can contact one of the five (specially designed for this project) centres across the country or they enlist themselves on a website that was build for this project. The project is still running, and so far about 5.000 adult workers started a VET course and about 1.700 learning places were generated for students because of this project.

The main lessons and good practice that can be seen in this project are:

- The importance of stimulating the creation (or continuation) of apprenticeships during an economic crisis: good workers are needed after the crisis.
- Employer and employee organizations both recognize the relevance off countercyclical training and have to work together to obtain results.
- *Kill two birds with one stone*: being creative during a crisis can help solving two potential problems.

An international comparison

The Education Council advises the government on matters of education. The council advises on the outlines of policy and legislation in the field of education and has an independent position. The Education Council made a comparison between the Netherlands and other countries that shows that a number of aspects of the Dutch system scores well.[243] Firstly, the equivalence of school based training (BOL) and apprenticeship pathways (BBL) is seen as a strong point. Other countries have either one or the other pathway. Another strong point is the attention for the flow of students from secondary to higher education and the

[243] Onderwijsraad (2009), Ontwikkelingsrichtingen voor het middelbaar beroepsonderwijs (*Development directions for vocational education*), Den Haag: Onderwijsraad.

dual nature of the senior secondary vocational education. The most important lessons for the Netherlands are described below.

On some aspects, the Netherlands has a similar position as other countries. This includes the accessibility of secondary vocational education (for example the easy access of a level 1 study in VET). A second aspect on which the Netherlands scores comparable with other countries is the influence of government and industry in preparing and drafting the qualification requirements and in the examination.

A number of findings in the report of the Education Council are interesting for the Dutch situation for possible future development. The First of all the mixing of general and vocational education in the Netherlands is very low in the Netherlands compared to other countries. In this context, other countries have more programmes that cut through different sectors, especially regarding higher VET levels. These programs can be useful for the higher professions which need a broader view across multiple sectors.

When it comes to the strengthening of private contributions, the Netherlands can learn form other countries regarding the involvement of all partners in the vocational education. Teachers, parents, students and municipalities can be a strong influence in preventing educations becoming to much focussed on the trade and industry.

Recommendations

Secondary vocational education is much more central in the Dutch education system than is often thought. It trains students for a profession and further learning. This position of secondary vocational education in the Dutch educational system can be further enhanced by links with the adjacent types of education. This can be horizontal and/or vertical links. More horizontal links can be achieved by more connections between vocational and general secondary education. Further vertical integration of the vocational education can be achieved through stronger links with secondary vocational education and higher education within a specific sector.

A recent advice of the Education Council mentions the following point specifically regarding the apprenticeships schemes (BBL) in The Netherlands. BBL students find it more difficult to continue studying. [244] There is not a full dual equivalent in higher vocational education. The recent pilots regarding the Associate Degree (see chapter 1) are a step in the good direction. But a BBL student may prefer work in practice over following yet another course.

The most active discussion and development in the VET system is the implementation of the competence-based education ("*competentie gericht onderwijs*", see section 3.1). It is to be expected that on August 1, 2011 all of the new students will start their VET education based on the new competence based qualification. But we are not there yet.

A couple of years ago (2007) the Education Inspection saw three directions regarding necessary quality improvements. These were:

- More in-depth training, particularly by offering theory that is tailor-made to the professional future of the student / profession.
- A better balance between knowledge (theory), skills (practice) and attitudes (competence) with a greater variation in learning and practice methods.
- More structure for the participants.

[244] Onderwijsraad (2009), Ontwikkelingsrichtingen voor het middelbaar beroepsonderwijs (*Development directions for vocational education*), Den Haag: Onderwijsraad.

Some progress has been made the last three years regarding the last two areas is.[245] That can be seen in the large number of courses that satisfactorily introduced the competence-based education. Nonetheless, many students still desire more (classic) classroom teaching and more personal instruction by teachers. More clarity, more structure, more challenging and better organization of the education process is often mentioned as areas for improvement by students.

Progress is less visible on the first point. The level of the new courses aren't always as good as students and companies expect. They expect more theoretical baggage in their training regarding the broad context of their future professional practice. This is something that requires more attention in the VET sector. But there is enough overall, and still increasing, support for the implementation of competence-based learning.

All eyes in the VET sector are now focussing on the new Action Plan VET Focus on craftsmanship 2011-2015 ("*Actieplan MBO Focus op vakmanschap 2011-2015*"). This plan is aimed at improving the quality of vocational education with (possibly) some big changes in the VET structure.

Additional tables

Table E.74 Number of students in Secondary education

	2005	2006	2007	2008	2009	2010
Total Secondary education (ISCED3 & 4)	**666,874**	**688,78**	**711,861**	**719,793**	**729,194**	**-**
▪ General education	206,374	215,543	224,74	227,514	229,738	232,322
▪ VET	460,5	473,237	487,121	492,279	499,456	-
– BOL-route part-time	13,216	12,427	10,903	9,538	9,084	-
– BOL-route fulltime	317,826	328,961	326,939	322,156	331,695	-
– BBL-route / apprenticeship	129,458	131,849	149,279	160,585	158,677	-

Source: CBS, 2011 (-: no information available)

Table E.75 Number of students in Tertiary education

	2005	2006	2007	2008	2009	2010
Total Tertiary education (ISCED 5)	562,728	575,757	589,162	606,367	638,606	658,62
▪ University education (master)	205,886	208,618	212,713	220,504	233,128	241,686
▪ Higher education	356,842	366,689	374,799	383,713	403,278	416,934
– regular higher education (mainly bachelor)	356,842	366,239	373,149	381,563	401,078	-

Source: CBS, 2011; SEO, Monitor Associate Degree 2006-2010 (-: no information available: the Associate Degree was introduced in 2006 and there is no information available over 2010)

[245] Inspectie van het Onderwijs (2009). Competentiegericht MBO: kansen en risico's. Vervolgonderzoek naar de implementatie van competentiegericht onderwijs in het mbo (*Competence-based VET: chances and risc. Follow-up study to the implementation of competence-based learning in VET*). Den Haag: Inspectie van het onderwijs.

Table E.76 Number of VET students recent years per level

	2006/'07	2007/'08	2008/'09	2009/'10*
Level 1	22,99	22,521	21,646	24,334
Level 2	126,702	132,048	133,729	130,769
Level 3	128,603	132,508	136,446	142,307
Level 4a	211,063	216,156	216,435	221,675
Level 4b	6,869	6,409	5,669	4,705
Total	**496,227**	**509,642**	**513,925**	**523,79**

Source: CBS, 2011 (* = preliminary data)

Table E.77 Number of VET students recent years per route

	2006/'07	2007/'08	2008/'09	2009/'10*
BOL-fulltime	341,486	337,656	331,803	341,755
BOL-part-time	13,922	11,963	10,591	10,092
BBL	140,819	160,023	171,531	171,943
Total	**496,227**	**509,642**	**513,925**	**523,79**

Source: CBS, 2011 (* = preliminary data)

Table E.78 Number of students by gender and route (2009/'10*)

	2006/'07	2007/'08	2008/'09	2009/'10*
BOL-fulltime	341,486	337,656	331,803	341,755
BOL-part-time	13,922	11,963	10,591	10,092
BBL	140,819	160,023	171,531	171,943
Total	**496,227**	**509,642**	**513,925**	**523,79**

Source: CBS, 2011 (* = preliminary data)

Table E.79 Number of students over four sectors per route (2009/'10*)

	Agriculture	Technology	Economy	Health and	Combination	Total
BOL-fulltime	17,552	79,167	126,582	117,187	1,267	341,755
BOL-part-time	174	2,533	2,593	4,789	3	10,092
BBL	11,866	75,858	41,632	41,344	1,243	171,943
Total	**29,592**	**157,558**	**170,807**	**163,32**	**2,513**	**523,79**

Source: CBS, 2011 (* = preliminary data)

Table E.80 (Out) flow of students from 2008/'09 to 2009/'10*

	Continued studying	Stopped studying	Total
BOL-fulltime	268,753	63,05	331,803
BOL-part-time	5,337	5,254	10,591
BBL	102,189	69,342	171,531
Total	**376,279**	**137,646**	**513,925**

Source: CBS, 2011 (* = preliminary data)

Table E.81 Outflow of students from 2008/'09 to 2009/'10*, who stopped studying, with or without a certificate

	with certificate	without certificate	Total
Bol-fulltime	36,213	26,837	63,05
Bol-parttime	2,721	2,533	5,254
BBL	40,501	28,841	69,342
Total	**79,435**	**58,211**	**137,646**

Source: CBS, 2011 (* = preliminary data)

Table E.82 Qualified graduates entering the labour market: employment and benefit (2007/'08)

	BOL-fulltime	BBL	Total
Work	30,4	33,25	63,65
Benefit	930	630	1,56
Work and benefit	900	1,69	2,59
Without work and benefit	5,82	1,11	6,93
Total	**38,05**	**36,68**	**74,73**

Source: CBS, 2011 (* = preliminary data)

Sources of information: The Netherlands

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- The following sites were consulted:
  - www.besturenraad.nl
  - www.aanvalopschooluitval.nl
  - http://aco.fundeon.nl
  - www.mboraad.nl
  - www.besturenraad.nl
  - www.rijksoverheid.nl

SLOVAKIA

Background information

To understand the current system of vocational education in Slovakia, it is necessary to consider its historical development. Only after the Word War II, the apprentice schools were gradually replaced by schools offering school based VET. The development of VET was backed significantly by legislation from 1960; and further strengthened by the 1976 educational reform. It made IVET a core of the education system. Institutions training workers had a status of secondary schools - the secondary vocational apprentice schools[246] (*SOU, stredné odborné učilište*). Besides two- or three-year training programmes many SOU started to offer four-year programmes finished by a school leaving exam (maturita) with a graduation certificate. A three-branch model of secondary education - grammar school (*G, gymnázium*) providing general education, secondary vocational school[247] (*SOŠ, stredná odborná škola*) providing predominantly theoretically based vocational education, and SOU providing predominantly practically oriented vocational education – was created in the 1970s (and lasted till 2008). However, there has been criticism of the unequal quality of the graduation certificates, especially those offered by SOU.

Before 1990 the economy in Czechoslovakia was organised mainly in large state owned enterprises. The enhanced status of SOU was supported by massive investment into SOU facilities. In contrast to G and SOŠ, SOU with a projected 60% of the age cohort benefited from the relationship with and financial support of large enterprises or respective sector headquarters.

Economic changes after 1989 influenced also the co-operation of schools with enterprises and stopped their participation in the mandatory vocational training of students. Almost all SOU students traditionally contracted and co-financed by relevant enterprises became "state students" fully dependent on the state budget and state managed schools, as at the same time enterprises became unable to maintain SOU. As a consequence of disengagement from the enterprises, vocational schools faced considerable financial problems reflected particularly in their material equipment which gradually became out of date. Teachers lost contacts with new technologies and innovations in their fields and topicality of training programs was greatly endangered. Practical training had to be moved from enterprises to laboratories and workshops of the schools. In 1990, respective ministries became responsible for established SOU to save them from the collapse.

Secondary vocational schools (SOŠ) traditionally provided for ISCED 3A and in special cases, post-secondary education, which is content-related rated ISCED 4, and 5B. Originally, they very rarely offered ISCED 3C training. However, after the 2008 reform supported by the Education Act [01], all VET schools are named SOŠ and therefore all ISCED 3C programmes are offered by SOŠ. Thus, SOŠ represent a variety of schools preparing students for both higher education and the labour market in professions requiring good general and vocational education with firm grounding in theory and also for blue collar professions [02].

Currently, initial vocational education and training (IVET) is school based in Slovakia. There is no typical apprenticeship scheme, and all participants are seen as pupils (students). There is a possibility for companies to co-finance IVET at secondary VET schools and also

[246] In some documents (e.g. CEDEFOP country reports for Slovakia) this type of schools is named as secondary vocational schools. In this report these schools are named as secondary apprentice schools to describe better their characteristics.

[247] In some documents (e.g. CEDEFOP country reports for Slovakia) this type of schools is named as secondary specialized schools. The term 'secondary specialised school' for schools providing ISCED 3A vocational education (SOŠ, stredná odborná škola) seems to be inappropriate. For example, Slovakia has the same school system as the Czech Republic, because until 1993, it was one state. There is only slight divergence since 1993. Czech country reports are using for those schools the term 'technical school', which is better but not perfect because it includes also schools providing economic, health care, etc. secondary education.

partly participate at training of students for which they are interested as future employees. To distinguish between them and students not in preparation for respective company the former are sometimes called "apprentices", regardless the fact that legislation does not make such a differentiation and all programmes are strictly school based and regulated by education sector legislation [02].

Secondary IVET system in Slovakia has remained among EU strongest in terms of number of participants, despite long-term strengthening of general education. This shift, accompanied also by the students' preference of ISCED 3A over ISCED 3C studies still contributes to the mismatch in supply and demand in the labour market, where ISCED 3C graduates are extremely missing in some professions although there are many ISCED 3C graduates unemployed. These discrepancies in supply and demand led to the newest reform of VET governance based on the Act on VET. Improvement is expected also from regional Centres of VET in process of establishment under sectoral players' supervision, and from the strategic leadership of employers in programming VET supply [02].

Nevertheless, it must be stressed that secondary vocational studies are offered together with at least partly provided general education. There are no formal VET studies shorter than 3 years in Slovakia except some rarely attended ISCED 2C studies aimed at low achievers. They offer so-called lower secondary vocational education (*nižšie stredné odborné vzdelanie*) preparing for very simple activities performed usually under supervision of other professionals.

On the other hand, no legislation defines vocational education explicitly. Secondary vocational schools are specified by the Education Act as schools offering education programmes lasting 2-5 years providing "knowledge, skills and abilities" necessary for carrying out respective occupations and vocational activities.

The Act on VET [03] was highly expected by all stakeholders as an impulse for a change. Indeed, it opened the door for a wide and deep assertion of employers' needs into the provision of secondary VET. This act stipulated the establishment of four-party Regional VET Councils - advisory bodies affiliated to self-governing regions and similarly of four-party National VET Council affiliated to the government to cover trans-regional topics. These councils consist of representatives of state administration, self-governing administration, employers and representatives of trade unions and/or employees.

Furthermore, 'sectoral assignees' for respective (sectoral) fields of study were agreed by the Ministry of Education and the representatives of employers. Profession organisations of employers ('sectoral assignees') participate in newly created Sectoral VET Councils. These councils are composed predominantly of representatives of employers chaired by the president of the 'sectoral assignee' institution and co-chaired by the representative of the respective sectoral ministry and by the representative of the Ministry of Labour, Social Affairs and Family. While the Ministry of Education is not represented, the sectoral expert from the State Institute of Vocational Education is an obligatory member to take care of the compatibility of Sectoral VET Council's proposals with educational legislation.

On July 1, 2002, self-governing regions got the responsibility for establishing and cancelling (in compliance with the network of schools and school establishments) of all originally state managed secondary VET schools and VET facilities aimed at provision of practical training for some VET schools[248].

Although the Ministry of Education has remained responsible for the development of overall VET strategies, the supply of sub-national strategies to the four-party National VET Council and subsequently to the Ministry of Education is regulated by the Act on VET. It includes sectoral VET strategies, regional VET strategies and plans of labour-market needs.

[248] Act no. 416/2001 on transfer of some responsibilities on municipalities and self-governing regions.

However, the quality of employers‘ contribution to VET strategies depends substantially on the quality of their data – and this is the crucial challenge coming from the Act on VET. The problem with both a lack of relevant data and underdeveloped research is visible from the failure of employers to deliver valid and relevant ‘plans of labour market needs’ [04].

Financing schools delivering graduates of specific profiles and required volumes should be affected by these decisions. This is an extraordinarily powerful tool expected to change networks of schools and programmes to adjust them to employers’ needs.

Existing vet apprenticeship type schemes at national level

Identification of existing apprenticeship type schemes in the country

Education system

Compulsory education lasts 10 years and this usually means nine years of basic school and at least one year of a higher secondary school. Such a construction is intended as built-in driver to prevent from early leaving school education. It is implicitly expected that mainstream students achieve at least ISCED 3C education level. Since 2008 a system of education levels has been refined by the new Education Act to better diversify among the results of education. The lower secondary vocational level is newly introduced for low achievers originally having troubles to receive a Certificate of Apprenticeship corresponding to ISCED 3C level. All ISCED 3A and 4 programmes’ graduates are considered as full secondary education graduates, making difference between VET and general education only [02]. The VET education has different possibilities according to the following scheme.

Table E.83 Education pathway scheme

EDUCATION PATHWAY	PROGRAMME CERTIFICATE
▪ 2-year (exceptionally 3-year) ISCED 2C training branch with a final exam*	▪ A certificate on final exam, exceptionally also a Certificate of Apprenticeship
▪ 3 to 4-year ISCED 3C training branch with a final exam	▪ A certificate on final exam + a Certificate of Apprenticeship
▪ 4 to 5-year ISCED 3A study branch with vocational training (odbor s odborným výcvikom) with a “maturita” school leaving exam	▪ A “maturita” school leaving exam certificate (in some cases also with a Certificate of Apprenticeship)
▪ 4 to 5-year ISCED 3A study branch with practice (odbor s praxou) with a “maturita” school leaving exam	▪ A “maturita” school leaving exam certificate (in some cases also with a Certificate of Apprenticeship)
▪ 6-year ISCED 5B study branch at conservatory	▪ A “maturita” school leaving exam certificate after 4th year with the option to leave conservatory or stay for two additional years to receive absolutorium diploma.
▪ 8-year study branch at dance conservatory (containing both lower and upper secondary levels)**	▪ A “maturita” school leaving exam certificate together with a certificate on absolutorium exam and absolutorium diploma after 8th year

Notes:

* for basic school low achievers or those who even did not complete basic school (due to repeating classes).

** a specific case; the programme focused for pupils completing Grade 5 of basic school; it is an upper secondary level from graduates age point of view, however graduates are trained in a high level, as documented by absolutorium, and classified ISCED 5B [02].

Nevertheless, there are students who complete compulsory education earlier due to repeating classes at the basic school. If not interested in 2-year ISCED 2C training (indicated in the first row), they leave schooling without qualification. Early school leavers are a quite rare case, with exception of Roma minority.

Table E.84 Types of IVET programmes at lower secondary level

Programme	ISCED	General and vocational subjects	Duration of studies	Transfer to other pathways	Remarks
Conservatory*	2A	n/a	4 years	Conservatory*	* Or any secondary school, if not able/ interested to continue.
Training for simple and auxiliary working	2C	General subjects below 10 % **	2 or 3 years	Labour market; complementary studies***	** 126 out of 1 890 total hours within 2 year programme and 192 out of 2 880 hours in 3 year programmes. *** Programme designed to complete lower secondary education. No possibility to achieve ISCED3 level; they are expected to enter labour market.
Training for mentally disabled	2C	13 % ****	3 years	None	**** e.g. 384 out of 2 976 (13 %) in 3 years lasting Metallurgy programme.
Practical school (for mentally strongly disabled)	2C	Diverse *****	3 years	None	***** Basic distribution is: 24 general, 24 vocational, 15 free/ optional, 15 disposable of total 78 week hours in 3 years programme.

The most visible change in comparison to the situation before 2008 is that one branch of secondary VET, the so-called secondary vocational apprentice schools, disappeared. Since September 2008, there are only two secondary branches. The general education branch is represented by grammar schools (G) and VET branch by secondary vocational schools (SOŠ). In practice it means that all secondary vocational apprentice schools (SOU) were renamed to secondary vocational schools. Secondary vocational apprentice schools were originally established to offer education for skilled workers and predominantly ISCED 3C programmes finishing with a Certificate of Apprenticeship in contrast to secondary vocational schools offering ISCED 3A programmes finishing with the "maturita" school leaving certificate. The gradual development led to a dramatic increase of ISCED 3A programmes offered by secondary vocational schools and to a non-transparent system of VET schools with increasing share of associated (*združené*) and joined (*spojené*) schools. Thus the new legislation has accepted reducing differences between the two kinds of schools [02].

Apprenticeship training

There is no typical apprenticeship training in Slovakia although ISCED 3C students from secondary vocational apprentice schools (SOU) were often considered and called apprentices. Since 2008 ISCED 3C students of former SOU are students of secondary vocational schools (SOŠ), according to the Education Act. Their practical training was and is usually school based. Even if organised outside the school, in centres (or workplaces) of practical training, it is ensured by a contract between the school and the provider. Nevertheless, students may be educated for individuals and legal entities at school in theory, receiving practical training at the workplace of this entity. This is however a marginal case, permanently about 1 % in contrast to the 1980s, when SOU students were under contract with an organisation co-financing their training and offering students pocket money.

Act on VET already in force since September 2009 stimulates employers to contract students recognising related eligible costs of employers as tax deductible. Nevertheless, even these students are considered students of the school based VET system. On the other hand, it can start to indicate employers' preferences, and gradually also typical apprenticeship training or at least alternate training might occur in the future [02].

This act newly stipulates a Centre of VET. The status of the Centre of VET can be assigned to a secondary vocational school, centre of practical training, school farm or centre of vocational practice provided it cooperates with respective profession organisation, it is equipped

with modern material and technical equipment, and it delivers VET for respective occupations. Profession organisation must take a decision on the establishment of centre of VET upon the approval of establisher. Thus, no centre can be created by regional authorities without the support of respective profession organisation. It is expected that these regional centres of VET will become leaders in the provision of quality training as they will be excellently equipped in co-operation with regional authorities and employers (sectoral players).

Sectoral ministries, assisted by Sectoral VET Councils established by profession associations/ chambers, are responsible for preparation of sectoral VET strategies aimed at the analysis of sectoral skills and future training of students for sectoral occupations. Education sector representatives play just an advisory role in it. Regional self-governments, advised by the Regional VET Council, again with the dominant influence of employers, are responsible for elaboration of regional VET strategies. Sectoral VET Councils under the supervision of specific employers representing the profession bodies identified by law prepare "Plans of labour market needs", indicating the number of graduates needed in respective study/training branches for the following five years. These plans are expected to be used as the basis for decisions on the networks of VET schools and their study programmes on the next 5 years period.

IVET at upper secondary level

According to the Education Act all VET schools are categorised as secondary vocational schools (SOŠ) since the 2008/2009 school year. Nevertheless, former VET programmes types remained preserved, although all studies were redesigned according to principles of the curricular reform starting since September 2008.

Study branches offered with a strong focus on theory by former secondary vocational schools were renamed as study branches with practice (odbor s praxou) and those offered with a stronger focus on practical training by former secondary vocational apprentice schools were renamed as study branches with vocational training (odbor s odborným výcvikom). In study branches with practice students participate at working process or assist there in a form of continuing activity for a period set by curricula; it usually happens within summertime. In study branches with vocational training, vocational training is organised in alternance with theoretical education in school workshops or in places suitable for training contracted by schools during the whole school year (i.e. in Centres of VET or workplaces in enterprises).

Table E.85 Types of VET programmes at upper secondary level

Programme	ISCED	General and vocational subjects	Duration of studies	Transfer to other pathways
Study branch with practice	3A	43-48 % / 57-52 %*	4 or 5 years	4A, 5B, 5A
Conservatory	3A	n/a	2 or 4 years	5B, 5A
Study branch with vocational training	3A	43-48 % / 57-52 %**	4 or 5 years	4A, 5B, 5A
Training branch	3C	about 25 % / 75%**	3 years	3A (follow up)

Notes: * 57 %/43 % in study branches with practice at a bilingual school

** a share of general subjects is slightly higher at schools with a minority language of instruction

Admission requirements for all types of programmes are set by respective state educational programmes and have remained unchanged by the 2008 reform. Admission procedure may or may not comprise admission test as it is up to individual school policies to decide upon this.

Typical age of newly enrolled students is 15 years. Upper age limit for admission is not explicitly set as in practice it is not a point of concern. As compulsory education lasts 10 years, attending at least a first class of secondary school is obligatory for regular students gradu-

ating from 9-year basic school without repeating classes. Registration and tuition fees are not applied in public and church affiliated schools.

Changes in pedagogy and innovativeness in the class and workshops depend dominantly on the individuality of respective teacher and trainer. School directors have little opportunities to stimulate this as remuneration of teachers and trainers is comparably poor and tariff based with a low share of bonuses. Nevertheless, there is no clear picture about the situation nation-wide about the quality of teaching methods and innovativeness, and even no impact of EU projects, and ESF projects due to insufficient evidence from monitoring and research.

The plurality of studies and VET schools remained preserved in order to offer studies corresponding to requirements of respective occupations. A decree on secondary schools [05] and in force since 2009 recognises 60 names (and types) of secondary vocational schools.

The Act on VET strengthened involvement of employers in programming IVET in effort to facilitate assertion to labour market and to prevent from current huge mismatch between IVET and labour market needs. Nevertheless, without counterbalancing their power by taking into account also other factors, i.e. wishes and behaviour of students and their parents, this could result in similar malpractice like introducing financing per capita without quality check of graduates, which caused a decline of "production" of ISCED 3C graduates and an increase of ISCED 3A graduates indicated above.

The future will show to what extent regional VET councils affiliated to self-governing regions and self-governing regions themselves will manage to balance lobbying and regulate inflow into respective programmes appropriately. It must be stressed that not pure labour market demand and employers' co-funding (e.g. within the German-style dual system) but requests of employers for VET graduates financed from public money should serve as proxy data for anticipation of labour market needs. It is clear that development of know-how for anticipation and forecasting skill needs is very urgent in support of evidence based policy making [06].

IVET at tertiary level

All Slovak public higher education institutions provide university type education in accordance with the Higher Education Act No. 131/2002 Coll. This type of education is considered as ISCED 5A.

All higher education institutions have reshaped their studies to a three-level model: with bachelor, master and doctoral studies (with exceptions of specific studies, e.g. medical studies and theological studies) in order to be compatible with the Bologna Declaration. There are however, no higher education 5B studies offered in Slovakia. ISCED 5B participants visible in UOE statistics for Slovakia are in fact students of post-secondary education of SOŠ, and are not considered tertiary students.

Table E.86 Types of VET programmes at post-secondary level

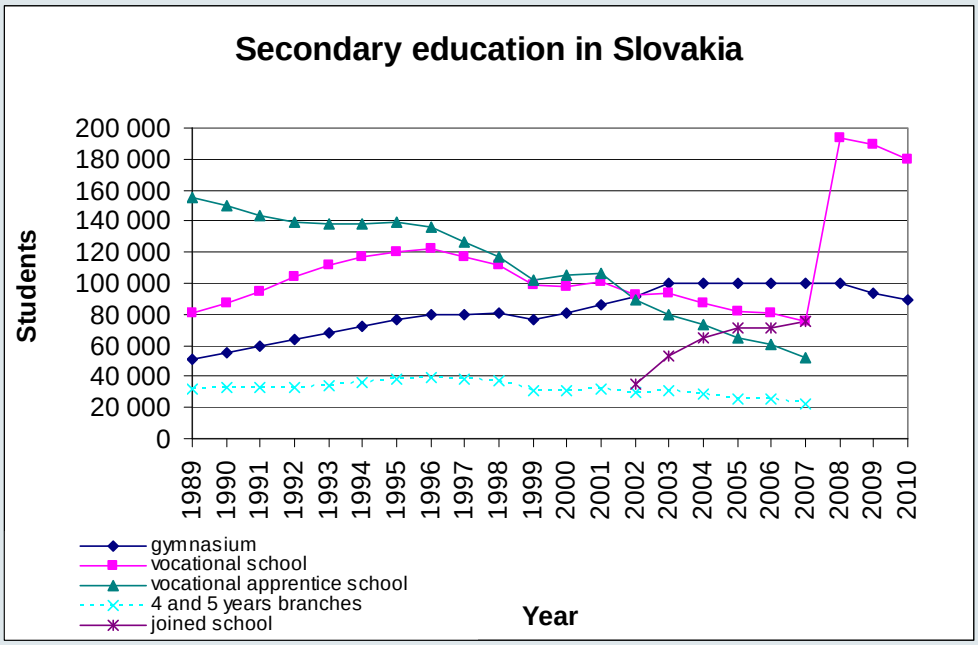
Programme	ISCED	General and vocational subjects	Duration of studies	Transfer to other pathways
Follow-up study branch	3A	44-47 % / 56-53 %*	2 years	4A, 5B, 5A
Qualifying	4A	0 % / 100%	2 years	5B, 5A
Specialising	5B	0 % / 100%	2 years	5A
Higher professional	5B	0 % / 100%	3 years	5A
Refresher	4A	0 % / 100%	6 month+	4A, 5B, 5A

Note: * a share of general subjects is slightly higher at schools with a minority language of instruction

Quantitative importance of apprenticeship type schemes

Economic transformation, which started in the beginning of 1990s, had a substantial effect on the organisation structure of the whole economy. Large state owned enterprises that formed the significant part of the Slovak industry sector were privatised. They were either divided into smaller viable private companies or bought by foreign investors. There have been established also new green field large companies as the result of foreign direct investments. This structural change has had the fundamental effect on the secondary VET school system. Large enterprises, which were closely related to secondary VET schools and educating apprentices mainly for their own needs, cut their support to decrease unproductive costs. All previous responsibilities were transferred to the state, particularly the respective ministries. This substantially reduced financial resources for VET schools as well as for supporting apprentices. This decreased attractiveness of these schools as well as the number of apprentices.

Graph E.23 Secondary education in Slovakia



Source: Statistical Office SR

Note: "4 and 5 years branches" are only a part of vocational apprentice school and represents those students finishing with maturita exam.

There was another tendency in the secondary education system that also contributed to this effect. In VET schools a demographic decline, together with per capita financing and the surplus of places at higher status ISCED 3A VET and ISCED 3A general education study branches caused the low enrolment in lower status studies, in particular blue collar ISCED 3C training branches. It is to a large extent a consequence of failures to counterbalance per capita financing, which stimulated schools at risk of low enrolment to disregard from labour market needs and quality standards of graduates by efficient quality assurance policies.

In the 2000s, as a consequence of a population decline, a decline in the interest in blue-collar professional training (due to its lower status and lower employability) and gradual loosening of the links with labour market, and later also as a consequence of introducing per capita financing, SOŠ and SOU were encouraged to merge to form associated secondary schools (ZSŠ) or joined schools (SŠ).

From the viewpoint of dynamics of students in VET schools, numbers rose substantially from 193 thousands in 1970 to almost 260 thousands in 1995. The turning point was between

1997 and 2000 due to a decrease in relevant population. Currently this number reached about 196 thousands. Secondary VET schools have dominated permanently over secondary general schools. From 81.8% in 1970 this portion increased to 83% in 1987. From 1988 there is decrease of about 4 percentage points every 5 years. Currently secondary vocational schools have 66.3% [07].

The high participation of population on secondary education has resulted in a good education attainment of Slovakia in the EU comparison.

Table E.87 Persons with upper secondary education attainment (%)

YEAR	2005	2006	2007	2008	2009
EU 27	46.2	46.3	46.5	46.6	46.4
Slovakia	68.7	69.2	69.7	70.1	70.1

Source: Eurostat

Table E.88 Females with upper secondary education attainment

YEAR	2005	2006	2007	2008	2009
EU 27	45.1	45.2	45.4	45.3	45.1
Slovakia	66.7	67.4	67.6	67.8	67.6

Source: Eurostat

However, high graduation rates do not mean that the education system has equipped its students with the knowledge, skills and competences that they need in labour markets. There are no reliable, internationally comparable data about the quality of upper secondary school graduates. But these graduation rates at least indicate the extent to which education system is able to prepare students to meet the minimum expectations of labour market.

Apprenticeship places, types of studies

The Act on VET is creating better conditions for apprenticeship training with benefits for participating companies. However until now, they have been unwilling to finance VET and their attitude is changing only slowly. Merely about 1-2% of secondary vocational school students have contracts with specific companies and are trained in their premises. The term apprentice is not used in corresponding legislation. However commonly, any vocational training of type C is considered as an apprenticeship and successful finishing of this type of studies is awarded by "apprenticeship certificate".

There are 60 names of SOŠ (corresponding to types of schools and their programmes) listed in the Decree of Ministry of Education [05]. Conservatories (konzervatórium) were originally subsumed under secondary vocational schools. In new legislation, they are explicitly named separately in parallel to the category of secondary vocational schools. There are two types, dance conservatory, and music and drama conservatory.

New entrance to upper secondary education

New entrance to upper secondary education is decreasing due to demographic changes.

Table E.89 New entrants in ISCED 3 in Slovakia (in thousands)

YEAR	2005	2006	2007	2008	2009
Total	76999	74999	76036	72464	70111
Females	37950	36957	37591	35881	34701
%	49.3	49.3	49.4	49.5	49.5

Source: Eurostat

Share of people that attend this type of schemes

In Slovakia the ratio between students at general and vocational upper secondary education is in favour of vocational branches, but trends for the general branch is increasing well above 25% since 2005. In EU 27 the trend is similar attaining about 50% in the general branch. For female students the numbers at secondary general schools are even higher.

Table E.90 Students at ISCED level 3-GEN - as % of all students at ISCED level 3

YEAR	2005	2006	2007	2008	2009
EU 27	39.5	48.3	48.5	49.7	50.4
Slovakia	25.8	26.3	26.8	27.7	28.4

Source: Eurostat

Table E.91 Students at ISCED level 3-VOC - as % of all students at ISCED level 3

YEAR	2005	2006	2007	2008	2009
EU 27	60.5	51.7	51.5	50.3	49.6
Slovakia	74.2	73.7	73.2	72.3	71.6

Source: Eurostat

Typical exit route for an apprenticeship-type student

The general type of upper secondary schools is preparing students for tertiary education, while secondary vocational schools for entering labour market.

Table E.92 Graduates in ISCED 3 (in thousands)

ISCED	2005	2006	2007	2008	2009
3	81525	80210	78602	72998	71454
3 general programmes	19765	19881	19404	18796	19619
3 vocational programmes	61760	60329	59198	54202	51835
3A	62573	62307	61681	58441	58021
3C_S shorter than 3 years	808	744	878	933	895
3C_L longer than 3 years	18144	17159	16043	13624	12538

Source: Eurostat

The share of secondary school graduates continuing in higher education studies amounted to 49.8 % in the 2008/2009 academic year and to 49.6 % in 2009/2010 according to the Institute of Information and Prognoses of Education (ÚIPŠ, Ústav informácií a prognóz školstva).

Interestingly, the share of full-time students in higher education decreases with the share of vocational training within the secondary education of graduates entering tertiary education, e.g. when it comes to the HEI applicants graduating from respective secondary schools in 2009, registered for the 2009/2010 academic year is as follows: 80 % of applicants graduating from grammar schools, 69 % from secondary vocational schools and 54.9 % from conservatories. (These data reflects the new structure of secondary schools set by the Education Act).

Currently due to crisis effects, the unemployment of secondary school graduates has increased. It is particularly important for VET schools because graduates from ISCED A usually continue in their studies at the tertiary education level [08].

Table E.93 Rate of unemployment of graduates from upper secondary schools (%)

Period	General	Vocational
6/2009	3.2	9.1
9/2009	4.7	19.8
12/2009	4.4	17.8
3/2010	5.8	17.8
5/2010	4.4	13.0

Source: Institute of information and school prognoses

Drop-out related information

There are pupils that are not able to finish at least the mandatory 10 years education what represents 9 years of basic school and lower level secondary vocational school. However, these numbers are relatively low compare to the EU 27 average.

Table E.94 Early leavers from education and training

YEAR	2005	2006	2007	2008	2009	2010
EU 27	15.8	15.5	15.1	14.9	14.4	14.1
Slovakia	6.3	6.6	6.5	6.0	4.9	4.7

Source: Eurostat

Operational description of apprenticeship type scheme

Training curricula and competence profiles

The Education Act introduced curricular decentralisation. In the 2008/2009 school year first grade classes of VET schools started to be taught according to curricula elaborated autonomously by schools in co-operation with regional/local stakeholders who were explicitly invited to contribute to adjustment of curricula by this act. This act also changed the system of secondary education, abolishing secondary vocational apprentice schools. From September 2008, there are only two secondary streams. The general education stream is represented by grammar schools (G) and VET stream by secondary vocational schools (SOŠ). Nevertheless, a variety of programmes has remained preserved.

The decentralisation reform was introduced making obligatory only state educational programmes and leaving elaboration of details on schools. The original general recommendation, introduced in 1990 that 10 % week hours and 30 % of content of original uniform curricula could have been replaced to meet local/regional needs after agreement of relevant stakeholders, is substituted by a framework regulation set by the state education programme valid for respective groups of branches (sectors) and embedded in the Education Act.

The Act on VET changed substantially the general framework for vocational education. It transferred many responsibilities concerning training and education content to profession organisations and employers. Employers are in a strong position to judge what mix of skills is optimal for particular occupations and it therefore makes sense for employers to play a key role in establishing curricula. However, if employers have their influence too dominant, programmes may overestimate the importance of occupation-specific skills and give insufficient attention to the generic skills needed for mobility between firms and between occupations. Interests of employers depend on the level at which they are expressed. While locally employers may wish their employees not to have strong transferable skills since this may increase labour turnover, collectively employers or their associations have an interest in a flexible and adaptable labour force. Moreover, they can take into account in new curricula technology and economic progress in particular sectors.

Description of school based training

Practical training of ISCED 3C students was and is usually school based. Its aim is to provide students necessary skills and knowledge for successful entering labour market. However, there is still no feedback how to asses labour market needs. Usually school based training is determined by available equipment in school workshops and experiences of training staff. Its extent for different branches of VET is presented in Table E.3. The increase in the number of hours of practical training (at least 1200 within the ISCED 3A double qualification VET programmes, and at least 1520 within the ISCED 3C programmes) opens the door for looking for placement of at least parts of practical training into the workplace or specific facilities in enterprises.

When a company is interested to provide training in its premises, there is already direct contact with a real demand. Merely about 1-2% of secondary vocational school students have contracts with specific companies and are trained in their premises. This is based mainly on activity of secondary vocational school directors, sometimes also pupils, and their personal contacts. On the other hand, fiscal incentives to do so are not still sufficient. Enterprises are eligible for classifying IVET training costs for VET school students as tax deductible only in case this training goes beyond the activities obligatory provided by school and covered by the state budget.

Nevertheless, the school has additional possibilities for practical training. An improvement is expected from regional Centres of VET in process of establishment under sectoral players supervision, and from the strategic leadership of employers in programming VET supply. The Act on VET newly defines "Centre of VET" where stakeholders (self-governing region, profession organisation, company, etc.) establish the training facility with higher standard of equipment. It can be based on already existing training facilities. Its aim is to concentrate offered financial and human resources for providing high quality vocational training. These institutions have to fulfil conditions of superior equipment and close co-operation with relevant profession organisations.

Role of enterprises in the apprenticeship type scheme

Commonly, any vocational training of type ISCED 3C or 2C is considered as an apprenticeship and successful finishing of this type of studies is awarded by "apprenticeship certificate". There is only a very marginal number of students trained by companies and their training co-financed by companies. Until now, they have been reluctant to finance voluntarily VET and their attitude is changing only slowly. The Act on VET 2009 is creating framework for apprenticeship training with beneficial position for participating companies. Involvement of other players has been made possible within newly created Regional VET councils composed of representatives of state, self-government, employers and employees. Employers can participate in elaborating IVET graduates' profiles and setting requirements for knowledge, skills, abilities and working habits. They can also facilitate practical training

and provide for equipment and materials. In contrast to employers mentioned above acting in relation to respective schools and school curricula, employer associations or profession associations are also expected to act in a more general level, e.g. contribute to the elaboration of graduates' profiles in the state curricula, contribute to the development of textbooks and provide other teaching aids. They are in fact the most powerful body in preparing background documents, in particular VET regional strategies for decision making of regional self-governing authorities. They became more influential in quality check as they delegate their representatives to examination commissions for school leaving exams.

A dramatic change in the VET governance introduced by the Act on VET, significantly strengthening the influence of employers on VET, is also partly caused by understanding of educational authorities that it is impossible to respond to the rapid technological progress without private initiatives.

Specific role of the company trainer

Even in case of provision of training at the workplace, practical training itself is regulated by the school and follows the education sector legislation. There are traditionally three categories of VET school teachers officially recognised by the education sector legislation: teachers of general subjects, teachers of vocational subjects and teachers of practical training. The latter category of teachers is involved in practical lessons at school, e.g. in laboratories and practical lessons connected to workplaces specified within the curricula and aimed at applying theoretical knowledge obtained in theoretical subjects.

Based on an agreement between a school and a company, practical training can be provided directly by the company in its own premises and by its own staff, but under the supervision of the school. These professionals are often called instructors to differentiate between them and trainers from schools.

Trainers or instructors are responsible for assisting in attaining respective skills (predominantly manual) during practical training. Although IVET is dominantly school-based, in some cases practical training is offered outside the school. Options comprise in addition to company's workplace to centres of practical training (SPV, stredisko praktického vyučovania), originally aiming at the practical training of students of former secondary vocational apprentice schools (SOU), and since September 2008 also training branches of secondary vocational schools (SOŠ), and centres of vocational practice (SOP, stredisko odbornej praxe) originally aimed at the practical training of students of secondary vocational schools.

Qualifications of IVET teachers and trainers are strictly regulated by the Ministry of Education. Since November 1, 2009 there is the Act No. 317/2009 Coll. on Pedagogical Staff and Professional Staff, and the Decree of the Ministry of Education No. 437/2009 Coll. on Qualification Prerequisites and Specific Qualification Requirements for Respective Pedagogical Staff and Professional Staff Categories. Since November 1, 2009 Act No. 317/2009 Coll. and subsequent decree also apply for IVET trainers as well as instructors and other learning facilitators at VET schools and school establishments. IVET trainers are usually graduates from relevant secondary VET school who additionally completed studies to acquire relevant pedagogy skills. Gradually however bachelor studies for trainers are replacing it as it is more attractive for future trainers to acquire a bachelor decree.

Role of students in the apprenticeship type scheme

Initial vocational education and training is school based. Schools can accept an initiative of other entity willing to offer a support partially covering practical training for a student this entity is interested in, e.g. as a future employee. Even if organised outside the school, in centres of practical training or workplaces, it is ensured by a contract between the school and the supporter (affecting about the fifth of VET students, in 2009). In such a case, a company can

conclude a contract, according to the Labour act, with the student of secondary vocational school whom it is interested to hire. The student, if older than 15, signs a contract according to which he/she is in training for this entity and this entity is obliged to offer him/her an employment contract after successful completion of study. The company can also offer motivation scholarship and a wage for productive work performed in its premises. These expenses are for the employer tax deductible. This kind of relation can be considered as apprenticeship. However, it is a marginal case, currently about 1.5 % of respective students.

As a consequence of population decrease, VET schools fight hard to attract students. VET schools organise various campaigns, including open door days, and visits of surrounding basic schools to present their programmes and opportunities for students. Contracts with companies and financial incentives for students can make VET schools more attractive.

Promotion of workplace learning have only recently started to emerge as a consequence of a lack of labour force and dissatisfaction of employers with school graduates expected to substitute the qualified labour force previously available from the herd of the unemployed. Some, but not all, profitable enterprises facing a lack of labour force show a positive attitude towards investment in practical training, regardless whether it is from profit money or in a form of tax deductibles. These large companies also show a positive attitude towards provision of training in their own facilities [09]. This may be the consequence of financial incentives of government for foreign investors to train their newly hired staff.

Better co-operation in promotion of VET may appear as a consequence of Act on VET. The newly created bodies, the National VET Council, Regional VET Councils and Sectoral VET Councils can contribute substantially to promotion of VET in all sectors. Financial incentives are also expected from enterprises due to introduction of recognition of some related costs as tax deductibles.

Nevertheless, as has been expressed in interviews with experts, these expectations are becoming a reality only very slowly. Currently, it is the task of individual vocational schools to use their personal contacts and permanent effort to create functional relations with enterprises for co-operation in education and practical training for their students. Only a small number of students can attend training in workplaces of cooperating enterprises with prospects of employment after receiving apprenticeship certificate.

Contractual relationship

As already mentioned, Initial vocational education and training (IVET) is school based in Slovakia. There is no typical apprenticeship scheme, and all participants are seen as pupils (students). Consequently, there are not contractual relationships.

Financing-related information

Whole education system in Slovakia is underfinanced compared to the EU average. The situation is especially difficult because public financing has decreasing trends.

Table E.95 Total public expenditure on education as % of GDP, for all levels of education combined

YEAR	2005	2006	2007	2008
EU 27	5.04	5.04	4.96	:
Slovakia	3.85	3.80	3.62	3.59

Source: Eurostat

Table E.96 Total public expenditure on education as % of GDP, at secondary level of education (ISCED 2-4)

YEAR	2005	2006	2007	2008
EU 27	2.25	2.23	2.20	:
Slovakia	1.88	1.76	1.69	1.64

Source: Eurostat

The Act on VET specifies in detail the possibilities of employers to adjust IVET to their needs. This act, however, opens the door for initiative of stakeholders rather than it sets clearly defined mandatory duties. Financing VET shall be supported by tax incentives for employers contributing to the modernisation of school equipment, in particular in practical training, and co-financing the VET for pupils drafted as their future employees. The act also sets a VET Development Fund headed by the Minister of Education collecting voluntary contributions from non-state subjects. However, it is considered not being able to provide for the significant inflow of co-funding VET from private sources. With respect to financing the act instead of "train or pay" principle and levy based obligatory funding, introduces a voluntary funding, which makes the Fund vulnerable of illiquidity. Schools that established good contacts with enterprises and other donors consider new regulation as endangering their incomes in favour of the Fund. In contrast to this, opportunity to classify some expenses for learners identified as future employees as tax deductible items for contributing future employer are seen positively.

Since January 2004 all primary and secondary schools (of respective category established for the purpose of budgeting) were funded equally through per capita funding from the state budget, regardless their ownership status, in order to encourage the establishment of non-state schools.

From 2005, the essential part of income tax goes from the Ministry of Finance (MF) directly to self-governing bodies to cover their expenditures: 70.3 % was earmarked for municipalities, 23.5 % for self-governing regions and 6.2 % out of the total income tax remained with the state as a reserve. As a rule, the directly collected income is just about the 20 %, while the transferred part of the personal income tax is about the 80 % of all tax income of self-governing bodies.

The decentralisation reform differentiates between the so-called original and transferred competences in state administration. Original competences are to be borne by the budget of self-governing bodies, while transferred competences entitle them to require additional funding from the state budget. Financing secondary VET institutions belongs to transferred competences, and therefore self-governing regions and municipalities are entitled to receive additional contribution from the state budget. As visible from the Table E.97, regional schools are dominantly state budget funded (94.56 %).

Table E.97 Sources of regional education financing in 2009 (in EUR and %)

Indicator	EUR	%
State budget	1 259 983 693	94.56
Municipalities and higher territorial units	18 094 236	1.36
Renting school facilities	7 481 349	0.56
Profit from own entrepreneurial activities	860 614	0.06
Contributions from parents to cover partially costs related to material care*	923 504	0.07
Contributions from parents to cover partially educational costs in selected schools (including tuition fees in private schools)	12 326 836	0.93
Contributions and gifts	4 436 083	0.33
Contributions from entrepreneurs and entrepreneurs' associations**	189 087	0.01
Others (including means from students' productive work)	28 251 925	2.12
TOTAL	**1 332 547 327**	**100**

Source: Ministry of Education

Notes: * contributions to meals and accommodation at facilities established by regional school offices

** new category in comparison to 2008 data.

There are no direct mandatory contributions to IVET from businesses to VET schools. Employers could contract students in VET school for the purpose of future employment and as a consequence to co-finance their VET accordingly.

Parents pay for school supplies and special textbooks. There are no detailed analyses of these marginal sources. Private schools are however entitled to charge parents with admission and tuition fees.

Schools can also earn from their own entrepreneurial activities. Entrepreneurial activities cannot in any case harm education. VET schools offering ISCED 3C VET (typically former SOU) are entitled to earn from productive work of students.
All schools can apply for diverse grants from public or private grant-giving programmes, and submit projects to earn from European structural funds and various sub-programmes of Lifelong Learning Programme, in particular the Leonardo da Vinci programme. Schools can also accept gifts from sponsors based on a deed of gift.

2 % of the income tax and corporate tax can be allocated based on a free decision of tax payers for activities of NGOs, therefore schools set up school-affiliated NGOs earning from this source successfully for improvement of learning environment.

The following Table E.98 details state budget funds earmarked for current expenditure and capital expenditure. It clearly indicates that the dominant share (94.87 %) of funding from the state budget is allocated by norms (per capita) [02].

Table E.98 Breakdown of state budget sources in 2009 (in EUR and %)

BUDGET LINE	EUR	%
Current Expenditures Total	1 246 055 461	98.89
OF WHICH:		
▪ Wages, insurance, (allocated by normatives)	957 955 639	76.03
▪ Operations(allocated by normatives)	241 345 753	19.15
▪ Other (not by normatives)	46 754 069	3.71
▪ Capital expenditures	13 928 232	1.11
Total funding from the state budget	**1 259 983 693**	**100.00**

Source: Ministry of Education

Quality assurance mechanisms

The IVET system is still based on traditional quality assurance mechanisms:

- input based accreditation of schools; based on formal assessment of compliance of application of school (including non-state schools and school establishments) with conditions (relevant documents) required by law;
- supervision of the State School Inspection (ŠŠI); its performance is based on the annual plan and results in the annual report on the status of education and upbringing;
- responsibility for quality assigned declaratively by law to respective players (e.g. director of school, establisher, Ministry of Education (MŠ).

Thus, all working quality system mechanisms in IVET are inherent to the education system. Furthermore, quality checking activities are dominantly aimed at the assessment of students' performance in educational terms. The first impulse to address quality management from the institutional point of view came from the Decree of the Ministry of Education No. 9/2006 Coll. on the Structure and Content of Reporting on Educational Activities, Outcomes and Conditions of School and School Facilities. It introduced obligatory annual reporting to the public and softly pushed schools to declaration of mission statements and self-evaluation. Nevertheless, no strong accountability inducing mechanism has been implemented and no national policy on quality management adopted. Reviewing these annual reports indicates a need to train school managements in performance of self-evaluation processes. A new ESF project "External Evaluation of School Quality Facilitating Self-Evaluation Processes and School Development", launched in 2009 and conducted under the surveillance of the State School Inspection, should therefore elaborate know-how to support schools in self-evaluation, as well as to improve current know-how in quality monitoring of the state inspection.

Changes in the national apprenticeship type scheme

Recent changes in the national apprenticeship type scheme

Diminishing the work based part in vocational education has brought problems of mismatch with labour market needs and high unemployment of young people entering labour market. The effort to improve this situation is reflected by recently adopted legislation changes, i.e. Education Act in 2008 and Act on VET in 2009.

Vocational secondary education has been adapted recently to fit better to the new economic and political situation. The structure, curricula and methodology of vocational education have been renewed according to the expectations of knowledge-based economy and required labour knowledge and skills. One of the key policy targets has been to increase the attractiveness of vocational education at upper secondary level.

Reducing the number of vocational education fields and programmes by broadening qualifications is also a consequence of changing labour market where broader competences are needed as opposed to narrow specialisation. Flexibility to move from one profession to another and the ability to learn have become integral objectives of new vocational qualifications.

The Act on VET for the first time explicitly sets responsibility towards identification of labour market needs. Self-governing regions have to prepare regional strategies in co-operation with Regional VET Councils composed of relevant stakeholders. Labour market needs should be articulated and transformed into a "plan of labour market learning needs" elaborated by profession organisations of employers and submitted to the Regional VET Council and the National VET Council for commenting, with a final decision by the self-governing region. The

exact numbers of graduates of the respective study and training programmes are to be set. Although it is not clear how the respective data will be decided on, there is a serious risk of very strict regulations based on the lobbyism of employers. It is a pity that know-how for forecasting/anticipating skill needs has not been developed in advance. There is a risk that the years of graduate supply produced with a disregard for labour market needs, which has been caused by the defective practice in the way schools are financed, is being replaced by a turbulent period of conflicts between employers' requirements to satisfy their business plans and students/parents expectations about the future. Methodological assistance for self-governing regions is very urgent, in order to support evidence-based policy making and prevent from replacing of the current one-sided policy by a new one.

Effects of the recent economic crisis on the national apprenticeship scheme

The resent economic crisis has had large impact on the Slovak economy. The growth of Slovak GDP decreased from 10.4% in 2007 to 6.4% in 2008 and -4.7% in 2009. Data from 2010 however shows a rush revival over the EU27 growth and the newest revised data indicates a reasonable growth at 4.5%.

Despite strong impact of economic crisis on employment, its effect on VET is not visible so far. With regard to IVET, the Slovak school-based system is less vulnerable by economic results of businesses compared to a genuine apprenticeship system. So far, the crisis has affected neither the VET schools nor the interest of pupils in study in training branches. This can however change in the future, and even a stronger trend to a shift towards general education and a lack of interest in ISCED 3C training might be observed.

Slovakia has no genuine apprenticeship system naturally sensitive to business cycles. Secondary IVET is school based and therefore places are not much endangered by the crisis directly. So far, state budget shortage has not influenced provision of places. In opposite, places were expanded to prevent young people from entering the labour market featuring low job creation. No other measures have been taken as a direct response to the crisis towards the initial vocational education and training system. Revision of existing programmes or curricula are driven by the curricular reform introduced before the crisis, however curricula of VET schools can be affected by the crisis as they are autonomously designed by schools. Rush changes in terms of knowledge, skills, competences are not expected.

In a period of shortage of workers businesses and schools learnt to cooperate, and practical training improved during the last few years in branches where companies offered new equipment and technology for training. Centres of VET are to be established in all regions according to the Act on VET based on regional policy strategies of VET development. Apparently, for more active engagement of employers in this process, in particular during progressing crisis, interventions to motivate employers to get involved into IVET and formal CVET would be welcomed. Nevertheless, the creation of Centres of VET is in progress despite the crisis. Diverse VET councils (national, regional and sectoral) created following the Act on VET started their activities during the severest period of the crisis. The opportunity for partnerships among social partners and across sectors has been used. The results however indicate unpreparedness of councils to offer data for evidence based policy making not only due to the crisis.

There are no serious consequences on VET directly linked to the crisis. Many politicians even believe that the crisis is over and Slovakia again entered the period of growth and therefore no specific measures are needed anymore. However, there is no place for large optimism. Slovakia's economy remains vulnerable because its current growth is caused by the revival in foreign demand for its goods. High unemployment, in particular high youth unemployment, must be urgently addressed.

The main lesson from the crisis is however as follows: A further restructuring of the national economy is urgently needed, what must be reflected also in VET. Heavy dependence on ex-

port of industrial goods makes the country vulnerable and low job creations for young professionals with higher education accelerates the brain drain for employment and self-employment opportunities abroad. Although the current mismatch between demand and supply must be addressed, and curricula in IVET in particular in ISCED 3C studies reformed, IVET graduates supply must not be adjusted just to current labour market needs as expected by employers. It is urgently necessary to anticipate the necessary skills in the domestic labour market need, but also to take into account EU labour market able to absorb the highest quality people by offering adequate working positions or at least more attractive wages. Slovakia is at the risk of massive over-qualification or the massive brain drain in the future.

Student geographical mobility issues

Students' mobility in Slovakia is mainly a result of various European education programmes. In 2007-2009, there were 369 Leonardo da Vinci Mobility projects submitted for all target groups, out of which 284 were approved.

Data indicates a dominant share of projects aimed at secondary IVET schools and it shows a very low number of projects focused on people at labour market (PLM).

The total number of approved participants was 3 997 in 2007–2009. The table below shows the number of participants according to the target groups.

Table E.99 Number of approved participants and mobility activities* according to target groups

YEAR	2007		2008		2009		2007-2009	
PARTICIPANTS	Plan	Real	Plan	Real	Plan	Real	Plan	Real
IVT	1 176	1 175	918	934	1 124	446	3 218	2 555
PLM	82	64	70	51	56	19	208	134
VETPRO	149	125	183	147	219	62	551	334
TOTAL	1 407	1 364	1 171	1 132	1 399	527	3 977	3 023

Source: Lifelong Learning Programme National Agency.

Notes: * Leonardo da Vinci Mobility activities finalised by 31st December 2009; Plan – approved, Real – realised; Target group acronyms are: IVT- young people in IVET, i.e. pupils of secondary specialised schools, PLM - people at labour market - who are involved in VET within which they take part in their placement abroad, i.e. employees, self-employed people and employable people at labour market (including graduates of secondary VET schools), VETPRO – VET professionals, i.e. VET teachers, trainers, instructors, counsellors responsible for VET in enterprises or accredited educational institutions.

The figures in the Table E.99 correspond to the figures of submitted projects. Pupils of secondary vocational schools are dominant, and a comparably lower number is in case of professionals in VET. People on labour market are a less represented group. When comparing numbers of planned and realised mobility activities it is necessary to take into account that many 2008 and 2009 mobilities are being finalised in 2010 and 2011.

Mobility in VET is still considered by schools as a sort of benefit for students and an opportunity to make training more attractive for them, rather than a regular effort to support plurality and specialisation in training. Assessment and validation in a mobility context is organised according to agreed practice among the participating institutions. There is no specific regulation on the assessment of skills and competences acquired during mobility experience.

Nevertheless, participation in secondary VET mobility is hampered by a lack of co-financing from national/local sources and a limited knowledge of foreign languages. Thus, interested students from poor families and with poor language proficiency are almost excluded.

Future perspectives and other possible relevant issues

It is inevitable to adjust the VET system to technological progress. Although it is recognised by authorities, there have been no specific measures in support of this for a long period. As has been documented so far, Slovakia is among countries insufficiently investing in human resources and the education sector is underfinanced with accumulated, partly hidden, modernisation debt. There have been no public sources available for modernisation.

Before the Act on VET came into force in September 2009 stakeholders were invited to participate in respective VET related activities, however, their engagement was not explicitly agreed and set by legislation and their participation was dominantly based on personal cooperation or partnership rather than the institutional one. A curricular reform starting in September 2008 and changes in governance in force since September 2009 are two milestones of the recent VET reform. It is too soon to predict a real impact of involvement of stakeholders in the respective VET related activities, as the quality of labour market intelligence envisaged by the Act on VET suffers from a lack of reliable know-how as can be seen from the first documents (regional strategies, sectoral strategies, and in particular plans of labour market needs) submitted for discussion at the National VET Council meetings and available at its website www.radavladyovp.sk [02].

As already stressed, stakeholders' rights and responsibilities are in the process of change and the real impact of their involvement will be much clearer after the reform plans embedded in the newly adopted legislation are settled. The currently available findings indicate that a much longer period of time is needed than expected by legislators. Educational standards are at the same time under the pressure of changes induced by the ongoing curricular reform. There is however no research and no relevant and reliable data, which would reflect labour market needs, to influence educational standards. More time is needed to interlink activities conducted under education and labour sectors players to agree on an undisputed model of matching skills needed by jobs on market with the skills provision offered by VET (but also with skills interesting for adoption by the population) [02].

Evaluation of existing apprenticeship type schemes

Qualitative assessment of the national apprenticeship type schemes

The school based VET in Slovakia has been the result of long term development. It has had many advantages. Primarily, the state can guarantee the stability of the system, its quality standards and necessary coordination with labour market needs. This is valid particularly in relation to at least for general part of education.

Problems emerge in training for work skills required by particular sectors and companies. Before 1990, companies were obliged to participate in on-place training of students in vocational apprentice schools by financial support and providing workshops and qualified training personnel in their facilities.

In 1990s these relations have been interrupted for several objective and subjective reasons. Formerly large enterprises were privatised and restructured. The majority of them had to look for new markets and cut unproductive costs to survive. The former system of companies' involvement in VET collapsed and the state took all obligations and responsibilities for their existence and running. The result was a sudden lack of financing for VET schools. Per capita state financing led to decreasing quality of education and mismatch between the structure of VET schools graduates and labour market needs. On the other hand, the necessary feedback concerning employers' needs has been lost. The usual apprenticeship system already during the education of pupils matches requirements of employers and availability of qualified workers.

Vocational education and training should play a central role in preparing young people for work, developing skills and responding to the labour-market needs of the economy. Despite this role, VET has been oddly neglected and marginalised in policy discussions, often overshadowed by the increasing emphasis on general academic education and the role of schools in preparing students for university education. It has also often been seen as low status by students and the general public [10].

Investors at least during1990s profited from available well qualified work force. The problem emerged in 2000s, where there has been a lack of qualified workers for new coming investors. The recent economic crisis and higher unemployment increased available qualified persons but problems will return. Companies still hope to get right employees without investing in their education; therefore, they are reluctant to support vocational schools.

The state tries to attract investors to solve unemployment problems. Among incentives there is in addition to direct payments and tax holidays, also support for training of new employees. Large enterprises prefer short term requalification for specific positions in production process to more general and long lasting VET. It solves acute needs of employers, but the flexibility of these workers is not satisfactory for their entry to labour market. However, companies without those privileges are reluctant to contribute for vocational education.

The Act on VET has brought needed flexibility for VET education and opportunities to attract employers to participate in VET education by providing material and financial resources and to influence contents of education and trainings. However, it seems that incentives for employers including their influence in vocational education system and tax deductions for provided financial contributions are not enough. It needs to put some obligations for employers and on the other hand, for state to be more generous in providing incentives. A better balance is needed. There is a big unused potential in exploiting work based training for relating employers and secondary vocational schools.

Based on interviews with experts, these drawbacks of the current legislation framework are already being reconsidered and there are new initiatives for solving existing problems. This process however will not be very fast because different stakeholders have very contradictory goals and positions concerning the final outcome.

Advantages of apprenticeship education are evident primarily in bringing new financial resources for VET schools and solving unemployment problems by matching employers and school graduates already during their education. The Act on VET has been focused on these topics. It provides good framework to balance all advantages of school based and apprenticeship systems of VET schooling. Moreover, it allows flexibly accommodating education and training process to recent economic and technology developments through feedback of employers who are in contact with these processes and simultaneously have opportunities and power to influence the content and methods of teaching in vocational schools.

For multinationals familiar with the dual system in VET, conditions for controlling practical training were improved to such an extent that the sectoral dual VET system could become functioning in the future also in Slovakia.

Identification of specific aspects of the national apprenticeship type schemes

The adoption of the Act on VET has been a good step in solving serious problems of secondary vocational schools which include low attractiveness for students and low quality of education due to under-financing and dissociation from enterprises as prospective employers.

Definitely, for secondary vocational schools more promotion is necessary. Prospective students and their parents do not know what is behind names of particular study branches.

Traditional names are used despite profound changes in their study and training contents. In many cases the traditional name hides sophisticated knowledge and skills like operators of NC machines and complex processes in machinery, electronic, chemical, etc. industries.

As it was stressed by some interviewed experts, the new Act on VET is a result of long-term discussion between the state administration and many employers' and entrepreneurial organisations. The final result has been accepted by all parties involved.

A quite short time for the existence of the new legislation does not allow making definite and detailed judgements. However, desired development seems to be slow compared to expectations. All new measures that have opened space for engagement of employers are not used satisfactorily, particularly those that include material and financial contributions of companies. Strictly defined tax deductions are not flexible and attractive enough. There are no obligations for employers to participate in the system of VET and no measures to force them. It is evident for example in behaviour of foreign large investors, who in their home country heavily contribute and participate on VET and in Slovakia totally abstain.

Secondary vocational schools, which are under the pressure of per capita funding and a population decline, must balance on the impute side their education programmes with desires of students and their parents, disregarding labour market needs due to the VET policy systemic failure: non-existing benefits for schools. New policies tend to put too strong emphasis on recommendation of employers in the effort to make VET schools better responding to their demand regardless the fact that there has been no reliable know-how for anticipation of skill needs developed yet and that employers have no responsibility estimating their demands correctly due to the IVET financing scheme based on public money. Only successful schemes for matching expectations of employers for future employees are based on direct contacts and interactions of apprentices with real production processes at working place.

Collecting demands of employers for new workers cannot give any usable results because there is no possibility to bring together so complex characteristics and to abstract from them applicable education profiles. There is no functional body representing employers to do this task. In Slovakia the membership in Chamber of Commerce and Industry is voluntary and there are many other organisations and associations of companies based on particular common interests. It means that each group has different demands and expectations concerning the profile of VET graduates. For example an individual employer through its association asks for graduates tailored for his specific needs while the Chamber of Craftsmen asks for flexible people with wider skills and entrepreneurial capabilities to be able to run their own businesses.

There is still no genuine system and there have not been developed any reliable mechanisms for anticipation of skills needs yet. There is only sectoral data or regional data, collected ad-hoc. All these surveys were limited by specific focus corresponding to respective sectoral fields of interest and without efforts to develop instruments to be used periodically to monitor labour market supply and demand.

Recommendations

A simplified structure of the study fields and flexible education programmes in secondary vocational schools will give graduates education and training what better matches the demand of labour market. When combined with the mandatory relations to enterprises, it will help improve the graduates' chances of employment.

An important issue of vocational education is also its ability to prepare students for entrepreneurship.

Changing a teacher career growth system will stimulate teachers to invest in their qualifications, improving the overall quality of the pedagogical process. The new system should be free of formalism and based on active work with pupils.

The funding level directly affects the quality of human resources and it is a key element in the proper functioning of the entire regional education system. Financial sustainability is becoming the key issue. After several years of operation, the Government should also fine-tune the normative funding system, which has served its purpose of rationalisation, but also resulted in phenomena that impacted adversely on the quality and structure of schools.

In more regulated labour markets, such as in Slovakia with wage minima and strong employment protection, young people may face difficulties in transferring from school to work unless there are formal pathways leading to employment, such as apprenticeship training. Companies do not provide workplace training voluntarily, unless they see it as beneficial, and recruitment of good employees through such training is a strong incentive, but not sufficient.

One quite general problem is that vocational programmes often take some years to complete, so there is a time lag between the decisions on the mix of provision and when VET graduates enter the labour market. School-based programmes are also several years long. Many employers find it hard to predict their future requirement for prospective employees. Students also find it hard to predict which kinds of jobs are going to be in demand in the future. Anticipating future skill needs, both regionally and by occupational sector, and defining the necessary VET output, is also a difficult task for forecasters. If VET provision is not shaped by labour market needs, it will be more likely to reflect the capacity of VET institutions (often biased towards existing and cheaper programmes) and uninformed student preferences.

The VET governing reform does not make it clear enough how to achieve the declared goals of linking VET and labour market. Creation of advisory bodies (VET councils) and inviting employers to influence VET is positive, however without know how in anticipation of future skills needs and real expertise in policy making it might be useless or result in other forms of malpractice. Absence of relevant research does not allow for evidence based policy making.

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SPAIN

Background information

According to the definition used in Spain, Initial Vocational Education and Training (IVET) refers to all training actions which give youngsters the qualifications needed to work in certain jobs, facilitate entry into work and allow them to participate actively in social, cultural and economic life. Therefore, the aim of vocational training is to enable students to acquire skills that allow them to:

- Develop general competences relevant for the studies undertaken.
- Understand the organisation and the characteristics of the social-productive sector, as well as the mechanisms to access the labour market; be familiar with labour legislation and rights and duties derived from labour relations.
- Learn independently and through teamwork; be trained in conflict prevention and peaceful resolution of conflict in all areas of personal, family and social life.
- Work in safe and healthy conditions and predict possible work-related risks.
- Develop a professional identity that encourages future learning and adaptation to the evolution of productive processes and social change.
- Consolidate an entrepreneurial spirit to carry out professional activities and initiatives.
- Acquire competences regarding Information and Communication Technologies (ICTs), languages of Member States of the European Union, teamwork, Health and Safety, as well as other issues included in European guidelines.
- Make lifelong learning a reality and use learning opportunities through the different training pathways to keep updated in different fields (social, personal, cultural and professional).

With regard to the importance of IVET in the context of the Spanish Education System, it is possible to argue that vocational training studies have been traditionally regarded as a "second best" option in Spain, meaning that vocational training has not been considered as a genuine option for the pupils who have finished compulsory education, especially for the most brilliant ones. Thus, vocational training studies have been, for a long time, a typical destination for those students who had lower marks in compulsory education or had fewer economic resources. This "bad" social image of vocational training explains the traditionally lower number of students who chose vocational education in comparison to academic/general studies.

However, it is important to underline that during the last decade this situation has experienced a remarkable change, as vocational training studies have attracted an increasing number of students (although still far from the figures in some of the most advanced EU countries). This situation can be explained by a number of interlinked elements:

- On the one hand, public authorities (both central and regional ones) have "rediscovered" the importance of vocational training studies and have devoted an increasing number of financial, material and human resources to vocational training centres.
- On the other hand, pupils themselves have become increasingly attracted by vocational training studies for two main reasons. First, there is an increasing social recognition of their importance and, secondly, labour insertion amongst vocational training students has been very high in the last years (specially in some professional families linked with some manufacturing and tertiary activities), and often related to good working conditions for these new labour market entrants in terms of salaries and types of contracts.

With regard to the apprenticeship system in Spain, the Spanish Education System does not contemplate the figure of apprentices as such. However, the Spanish IVET sub-system in-

cludes an apprenticeship-type scheme, based on the "in-company training" module offered in all IVET training cycles, which will be the focus of this Spanish national chapter. More precisely, the Spanish IVET sub-system is structured around two types of vocational training cycles, i.e. middle-level training cycles ("ciclos formativos de grado medio" in Spanish, which equate to ISCED 3B Level) and upper-level training cycles ("ciclos formativos grado superior" in Spanish, which equate to ISCED5B Level). The "in-company training" module ("Formación en Centros de Trabajo", or FCT, in Spanish) accounts for approximately 400-600 hours (around 20-30% of the total training hours of an IVET cycle), and it takes place at the workplace.

On the other hand, and apart from IVET training cycles, it is convenient to comment on a specific type of working contract known as "Training Contract" ("Contrato para la Formación" in Spanish). This "Training Contract" is regulated by the Workers' Statute ("Estatuto de los Trabajadores" in Spanish) and provides participants with practical and theoretical learning. More precisely, it is aimed at young people aged between sixteen and twenty-one, and is specially designed for students suffering from lack of qualifications. Theoretical training must cover at least 15% of the maximum working day, and contents are regulated by the training modules in the professional certificates for the job related or through the study plans established by ESPEE-INEM (Spanish National Public Employment Service- Institute of Employment). In any case, these "Training Contracts" are not considered to be included in the focus of this report, as they are not part of the National Education System and aim at youngsters with a poor student record.

From a governance perspective, the responsibility for initial vocational training in Spain is co-shared by educational authorities both at national and regional level (the so-called "Autonomous Communities"), following the de-centralised model established under the Spanish Constitution of 1978. Thus, the Central Government (Ministry of Education) is responsible for, amongst other things:

- The enactment of the basic rules that apply to the Education Statutory Law, laying down general rules for the whole educational system in Spain.
- The setting up of minimum rules for teaching centres.
- The implementation of the overall educational programme, setting the minimum contents of the educational programmes, and regulating the validity of academic and vocational qualifications throughout Spain.

Meanwhile, the Autonomous Communities are responsible for the regulatory development of the basic national rules and the regulation of the non-basic elements or aspects of the educational system in their particular regions, including executive and administrative management powers, except for the areas that continue being the responsibility of the central government. As well as this, the Autonomous Communities round out the basic general legislation by setting the curriculum for the training courses that correspond to each diploma in their own geographical area. In fact, Autonomous Communities enjoy a relatively large room for manoeuvre which might give place to some disparities amongst them.

Concerning the role of social partners in the design and organization of the Spanish VET system, their participation is one of its key characteristics. This is evident looking into the four different National Agreements on this matter signed between the Spanish main social partners' representative organisations since 1993. In this context, vocational training has become one of the key issues in the Spanish social dialogue and collective bargaining process.

Finally, concerning the legal provisions or laws regulating the Spanish VET system, these are the main regulations:

- First, the Statutory Law concerning the Right to Education or "Ley Orgánica de Derecho a la Educación" in Spanish (LODE) passed in 1985, which establishes the right to education.
- Second, the Education Statutory Law or "Ley Orgánica de Educación" in Spanish (LOE), passed in 2006 and regulating the pre-university and university levels of the Spanish educational system. Among others, the LOE established the current structure of Vocational Training Cycles and introduced the "in-company training" module as a compulsory module which can not be considered as employment. The LOE substitutes previous education laws, such as the General Statutory Law of the Educational System (LOGSE) of 1990, the Statutory Law for Participation, Evaluation and Government of Teaching Centres (LOPEG) of 1995, and the Statutory Education Quality Act (LOCE) of 2002.
- Third, the Statutory Law on Qualifications and Vocational Training or "Ley Orgánica de las Cualificaciones y la Formación Profesional" (LOCFP) in Spanish, passed in 2002. This Law establishes a unique system of vocational system, comprising initial vocational training (mainly aimed at young people before entering the labour market); continuous vocational training (aimed at people currently at work) and, finally, occupational training (targeted at job integration and re-integration of unemployed workers). Interestingly also, this LOCFP establishes a modular system of vocational training and academic and vocational guidance, and lays down the main guidelines for the National System for Qualifications and Vocational Education and Training ("Sistema Nacional de Cualificaciones y Formación Profesional", SNCFP in Spanish).
- Fourth, the Royal Decree 1538/2006 of 15th December by which the general planning of the Initial VET system is regulated. This Royal Decree establishes the structure and profile of the training cycles associated to initial VET, always based on the National Catalogue of Professional Qualifications ("Catálogo Nacional de Cualificaciones Profesionales", CNCP in Spanish) and the main guidelines suggested by the EU.

Finally, it is worth mentioning the recent Law 2/2011 for a Sustainable Economy, which affects the whole of the Spanish Economy but which includes a section on VET, and the Organic Law 4/2011, additional to the Law 2/2011 for a Sustainable Economy, which includes some modifications to previous education laws. This new legal framework introduces some changes for the Education system, such as greater permeability, quality improvement, more flexible schemes for studying and more efficient recognition and validation of professional competences (acquired through informal learning).

Existing VET apprenticeship type scheme at national level

Identification of main existing apprenticeship type schemes

As previously mentioned, the main existing apprenticeship type schemes in Spain refer to the "middle level" and "upper level" cycles included in the Spanish Initial Vocational Training System, on account of the "in-company training" module included in all IVET cycles. Thus, these vocational programmes can be defined as apprenticeship-type schemes in the sense that they combine training in a VET institution with training in the workplace, even if this workplace-based training is different to other experiences in other countries, such as the "dual system" in Austria or Germany.

Detailed information on the two types of IVET cycles in Spain is provided next:

- Middle-level training cycles ("ciclos formativos de grado medio" in Spanish) are usually accessed after completing lower secondary compulsory education (typically at the age of 16). These cycles correspond to the professional track (vocational training) in the second stage of secondary education, and students in these cycles are normally aged from 16 to 18 years old. The students who successfully complete the specific middle- level

vocational training obtain the title of Technician, and they can enter the labour market or continue further in education (accessing to general upper secondary education, where they are accredited with the studies related to the obtained degree). A middle-level training cycle relates to 3B ISCED Level.

- Upper-level training cycles ("ciclos formativos de grado superior" in Spanish) are usually accessed after completing upper secondary education (in Spain upper secondary education refers to the so-called "Bachillerato", which represents the general track, ISCED 3A), usually at the age of 18. It is also possible to gain entry to upper level training cycles by means of an examination which accredits ISCED 3A level (this test is regulated by the Autonomous Communities and the social partners play an important role in determining its content). The students who successfully complete the specific higher level vocational training obtain the title of Advanced Technician, considered to be the final qualification before starting work. However, and for those students who want to continue with their studies, this qualification also provides them with direct access to certain university studies related to the studied vocational training cycles and without the need to sit for an examination. The specific qualification obtained determines the university studies for which there is direct access in every case. An upper-level training cycle relates to 5B ISCED level.

With regard to the length of these programmes, it must be remarked that the LOE (2006) established that all IVET cycles must include a total of 2,000 hours, which are imparted during a period of 2 academic years. Moreover, the same law stated that the "in-company training" module must take approximately 400-600 hours; that is, around 20-30% of the total duration of the IVET cycle takes place in an enterprise.

Nonetheless, previous legislation had established that the duration of IVET cycles might vary between 1,300 and 2,000 hours (spread over one and a half or two academic years), where the "in-company training" module could take between 350 and 700 hours. In this sense, the requirement of 2,000-hour length cycles recognized by the LOE is being progressively implemented throughout Spain, and nowadays there are still some training centres offering courses which follow the old legislation.

On the other hand, and concerning the dates when apprenticeship-type schemes where introduced in Spain, it must be said that before the nineties the contact between the Educational System and the labour market was not formalised and it was not very common. In fact, it was the General Statutory Law of the Educational System (LOGSE) of 1990 that introduced a stronger link between the productive system and VET schools, giving raise to an important reform within the Spanish Educative System. More precisely, this Law initiated what is known as "in-company training", by promoting the implementation of training activities in the workplace. Furthermore, in 1993 a collaboration agreement was signed between the Ministry of Education and the Superior Council of Chambers of Commerce, by which "in-company training" periods were formalized. As a consequence, and over the following years, the Chambers of Commerce supported companies concerning their relationship with VET schools and the training of students (e.g. by elaborating orientation guides).

However, it was the Education Statutory Law (LOE), passed in 2006, that established the compulsory nature of the "in-company training" in all IVET cycles and determined its current structure, enhancing partnership between the initial VET system and the enterprises and inducing students to be in contact with the professional world.

In general terms, the "in-company training" module shapes up the professional competences that the student should master when he/she finishes the training cycle, and it complements the qualifications already acquired in the educational centre through experience in real production processes. Therefore, the in-company training module allows the student to observe and to carry out the typical tasks which characterize the work posts and the professional profile for which the student is being prepared.

According to the Royal Decree 1538/2006, the objectives of the "in-company training" module are the following ones:

- Completing the attainment of professional competencies acquired in the education centre, by carrying out a set of pre-determined training activities in the workplace.
- Learning about the organisation and relationships existing in a workplace.
- Contributing to the success of VET, by helping students acquire the motivation for lifelong learning and the ability to adapt to changes.
- Evaluating student's professional competences, particularly those aspects which require real-work situations and cannot be appraised in the education centre.

As legally established, in both IVET cycles (i.e. middle-level and upper-level ones) the so-called "in-company training" module takes place on a compulsory basis at the end of the cycle; therefore, this module can be considered as the last stage of the vocational training cycle. It is indispensable that a student has successfully passed the section of the cycle in the VET school so that he/she can start the "in-company training" module (although some exceptions may apply). At the same time, successful completion of this practical module is a required condition for obtaining the corresponding degree (title of 'Technician' or 'Advanced Technician'). In any case, those students who can prove that they have work experience related to their professional studies can be exempted from it.

Interestingly also, it is established that the "in-company training" module of IVET can not be considered as employment, as there is not a contractual relationship between the company and the student. In fact, the in-company training is based on an agreement between the training centre and the company, so the pupil is considered to be a student, not an employee.

Finally, concerning IVET specialities or economic sectors, in Spain it is possible to identify 26 professional families ("familias profesionales" in Spanish) in a wide array of different activities. For each professional family, a number of associated middle-level and upper-level training cycles are defined, each of them leading to a particular degree. Thus, VET is specially focused on providing qualifications for work and it facilitates entry into the labour market, by offering the possibility of studying a wide variety of professions, including primary, manufacturing or tertiary activities.

Quantitative importance of apprenticeship type schemes

This section aims at describing the existing Spanish initial VET system from a quantitative perspective. To start with, data available indicate that there are a total of 281,787 students following IVET Middle-Level Courses (ISCED 3B), and a total of 256,228 studying Upper-Level Courses (ISCED 5B), according to 2010/2011 academic year data (see Table E.100 and Table E.101).

Looking at the general education framework of Spain, it should be pinpointed that there is still an uneven distribution between the vocational and the general tracks in education, being IVET a less preferred option. Some of the elements which may have an effect on this imbalance might be the assumption that higher level qualifications facilitate the entry into the labour market, together with a doubtfully efficient careers advice and students' guidance services. As well as this, the situation of economic markets and the productive specialisation of each region also influence the choice made by students.

However, from a time dynamic perspective, it is possible to identify a clear upwards trend in the number of total students enrolled in Initial VET studies, both in middle-level and upper-level programmes. More precisely, in 2009 IVET experienced the highest increase in numbers, when the new course took in 44,000 students more than in the previous academic

year. Specifically, the percentage of secondary education students (i.e. middle-level cycles) who choose the vocational route (instead of the academic track, i.e. the "Bachillerato", which is the most common way chosen for accessing university) confirms a remarkable upward trend, increasing from 27.6% in 2005/06 to 31.4% in 2010/11. Furthermore, in the year 1998, only 1 student in 10 chose the vocational track; currently, it is 1 in 3, which means an outstanding growth. This growth is especially remarkable when bearing in mind the demographic decrease in the number of people within that age range. However, the number of students who choose vocational studies still remains lower than the proportion that chooses the academic pathway, which is around 2/3 of the total (see Table E.100).

Table E.100 Number of students in Secondary education

	2005/06	2006/07	2007/08	2008/09	2009/10**	2010/11**
Total Secondary Education (ISCED3)*	834,980	828,224	821,182	838,979	879,758	898,240
▪ General education ("Bachillerato" or Academic Track) (ISCED3A)	604,806	595,571	584,693	589,473	608,428	616,453
▪ Initial VET (Middle-level Cycle) (ISCED 3B)	230,174	232,653	236,489	249,506	271,330	281,787
▪ % of students who choose VET after compulsory education	27.6%	28.1%	28.8%	29.7%	30.8%	31.4%

*Special programmes for students who have not finished compulsory education are not included

** Provisional data

Source: Ministry of Education (http://www.educacion.gob.es/portada.html)

Concerning the number of students in upper-level programmes, it is slightly lower than the number of students in middle-level ones (approximately 25,500 students less). Additionally, the percentage of students in upper-level cycles, in comparison to the total of students in ISCED 5 Level in general, is only 15.1%. In any case, and although it is still low, the number of students in upper-level cycles has experienced a growing trend over the last years (see Table E.101).

Table E.101 Number of students in Tertiary education

	2005/06	2006/07	2007/08	2008/09	2009/10**	2010/11**
Total Tertiary education (ISCED 5)	1,660,681	1,636,198	1,604,605	1,600,326	1,649,294	1,700,328
▪ University education* (ISCED 5A)	1,443,426	1,423,396	1,389,553	1,377,228	1,404,115	1,444,100
▪ Initial VET (Upper-level Cycle) (ISCED 5B)	217,255	212,802	215,052	223,098	245,179	256,228
▪ % of students in ISCED 5B (over the total of ISCED 5 students)	13.1%	13.0%	13.4	13.9	14.9	15.1

*It includes both long and short cycles (long= 4 o 6 year-long degrees; short= 3 year-long degrees)

Source: Ministry of Education (http://www.educacion.gob.es/portada.html)

On the other hand, when breaking down the data by gender, it is possible to state that overall participation in IVET is pretty balanced between genders, although the presence of women is higher in upper-level cycles. Thus, more precisely, 46.8% of the students in middle-level cycles are women, whereas the percentage goes up to 51% in upper-level cycles (see Table E.102).

Differences between men and women can be clearly observed if looking at the type of studies or specialities. Thus, some branches are much more attended by women: "personal image" (96.2% of women in both levels), "sociocultural and community services" (91.6% and 90.4% of women in middle-level and in upper-level cycles respectively) or "textiles, clothes and leather" (89.4% and 84.2% of women in middle-level and in upper-level cycles respec-

tively). Meanwhile, the great majority of students are men in specialities such as "maintenance of motor vehicles" (98% of men in middle-level cycles and 97.3% in upper-level cycles), "mechanical manufacturing" (96.6% and 90.2% of men in middle-level and in upper-level cycles respectively), or "wood, furniture and cork" (94.6% of men in middle-level cycles and 89% in upper-level cycles) (see Table E.102).

Table E.102 Number of students enrolled in initial VET, by level of VET, gender and professional family, academic year 2008-2009

VET Cycles	Middle-Level Cycles		Upper-Level Cycles	
	Total	% Women	Total	% Women
Total	**249.506**	**46.8**	**223.098**	**51.0**
▪ Agrarian Activities	4,635	17.8	3,884	22.9
▪ Physical and Sports Activities	4,694	29.7	8,697	27.9
▪ Maritime and Fishery Activities	1,333	7.3	1,126	10.9
▪ Administration and Management	49,081	75.0	40,231	72.2
▪ Graphic Arts	2,785	40.6	1,568	45.5
▪ Commerce and Marketing	10,849	66,9	11,429	52.4
▪ Image and Sound	2,720	50.1	9,658	36.1
▪ Building and Public Works	657	7.2	10,019	32.2
▪ Electricity and Electronics	29,932	2.6	22,305	21.2
▪ Mechanical Manufacturing	9,850	3.4	5,576	9.8
▪ Hotel and Tourism Industry	12,130	40.9	10,053	65.8
▪ Personal Image	16,901	96.2	4,620	96.2
▪ Food Industry	1,365	47.2	795	54.5
▪ Computing (ICT)	19,647	13.2	21,966	16.3
▪ Wood, Furniture and Cork	2,628	5.4	419	11.0
▪ Production Maintenance	10,375	2.1	8,104	21.5
▪ Maintenance of Motor Vehicles	22,371	2.0	6,333	2.7
▪ Chemistry	2,587	62.1	3,910	54.4
▪ Health	35,909	88.2	28,510	76.9
▪ Sociocultural and Community Services	8,606	91.6	23,343	90.4
▪ Textiles, Clothing and Leather	376	89.4	512	84.2
▪ Glass and Ceramics	51	43.1	40	35.0
▪ Non-distributed by family	24	58.3	0	0.0

Source: Ministry of Education. Non-University Education Statistics. Detailed results.
http://www.educacion.gob.es/horizontales/estadisticas/no-universitaria/alumnado/matriculado.html

Interestingly also, and without considering the gender perspective, it can be pinpointed that some concrete professional families concentrate the largest share of students, for example, "Administration and Management" (89,312 students in both levels), "Health" (64,419 students in both levels), "Electricity and Electronics" (52,237 students in both levels). In contrast, branches such as "Glass and Ceramics" (91 students in both levels) and "Textiles, Clothing and Leather" (888 students in both levels) receive a much lower number of students. Main reasons for these preferences among students could be related to the access to the labour market, in the sense that some qualifications offer better prospects of finding a job.

From a broader perspective, and in order to give an insight on the situation of young labour market entrants in general, it can be mentioned that in Spain there are a total of 7,478.4 thousand people between 16 and 29 years old (data for the 1st quarter of 2011). Interestingly enough, out of them, 47.5% are involved in some kind of studying activity, where women youngsters are particularly involved (49.6% of women in comparison to 45.6% of men). [249].

[249] Data from the Spanish Labour Force Survey (EPA), elaborated by the Spanish National Institute of Statistics: http://www.ine.es/jaxi/menu.do?type=pcaxis&path=/t22/e308_mnu&file=inebase&N=&L=0
More detailed information in the website of the Spanish Institute for Youth (INJUVE) in: http://www.injuve.es/contenidos.type.action?type=1263865380&menuId=1263865380

Concerning employment levels in Spain among youngsters aged 16-29, data available for the 1st quarter of 2011 show that the employment rate is 40.5%. The largest share of occupied youngsters refers to salaried employees (92.2%), in comparison to a remaining 7.8% working as self-employed. On the other hand, it must be highlighted that the unemployment rate amongst Spanish youngsters is very high (34.7%), being this figure higher for men in comparison to women (36.1% and 33.2%, respectively). In fact, unemployment is a worrying issue for the Spanish economy in general and the Spanish young population in particular, specially taking into account the increase of the unemployment rate amongst youngsters over the last 4 years (in the 1st quarter of 2007, the unemployment rate was 13.0%).

Moreover, if Spanish data is compared with information at European level, it is possible to remark that unemployment among Spanish youngsters is much higher than in other European countries. Thus, Eurostat data shows that the unemployment rate for the EU-27 average among those aged less than 25 years is 20.9% (2010 data), whereas this percentage was the double in the case of Spain, reaching 41.6%. Meanwhile, figures in other countries are, for instance, 13.8% for Germany, 23.3% for France or 27.8% for Italy[250].

Interestingly also, and continuing with the issue of labour market insertion among Spanish people aged 15-29 years, the Spanish Institute for Youth (INJUVE) published in 2006 a report called "Youth and Employment"[251]. According to this report, it takes more than 7 months for Spanish youngsters to find their first job. Furthermore, women need a much longer time to find it than men do after completing their studies (9.4 months in comparison to 6 months on average, respectively).

As well as this, it is stated that 66.1% of youngsters signed a temporary contract of employment for their first job, with no significant differences in terms of gender or age. Meanwhile, only 10.2% of youth signed a permanent employment contract for their first job. Noteworthy too is the fact that 19% of the surveyed youth did not sign any employment contract at all, where this percentage is higher amongst very young people (15-19 years old) and women.

On the other hand, a specific survey known as "ETEFIL" and carried out by the Spanish Institute of Statistics also offers interesting information on the access to a significant job[252] after obtaining an IVET degree (unfortunately, data available refers to the year 2005)[253]. According to this source of information, 11.8% of the middle-level IVET graduates were not able to find a significant job in a period of 5 years after graduation, whereas the proportion of upper-level graduates who did not find it was even higher (21.1%).

In contrast, among those who were able to find a significant job, 45.9% of the middle-level IVET graduates were able to find it immediately after graduation, percentage which goes down to 42.3% in the case of upper-level graduates. Moreover, in the case of middle-level graduates, 21.6% spent 1 to 6 months to find a significant job, and 10.6% 6 to 12 months (for upper-level graduates, numbers are 21.7% and 9.8% respectively). (See Table E.103).

[250] Source: Eurostat. Labour Force Survey. Unemployment rate, by age group. Less than 25 years. http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdec460

[251] For more information see:
http://www.injuve.es/contenidos.type.action?type=1112484564&menuId=1112484564

[252] A significant job is defined as a job whose contents and characteristics are related to the type and level of carried out studies.

[253] Survey on Education to Training Transition and Labour Insertion (ETEFIL), elaborated by the Spanish National Institute of Statistics (INE), 2005. It analyses the transition into work of Spanish youngsters (it refers to those who finished their studies in the 2000/2001 academic year, considering their labour situation 5 years after). http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft13%2Fp451&file=inebase&L=0

Table E.103 Time to access to a significant job after obtaining an IVET degree (%) (among those who were able to find it within a period of 5 years)

	Middle-Level Graduates	Upper Level Graduates
Straight after graduation	45.9	42.3
From 1 to 6 months	21.6	21.7
From 6 to 12 months	10.6	9.8
More than 1 year	21.9	26.1
Total (within a period of 5 years)	100	100

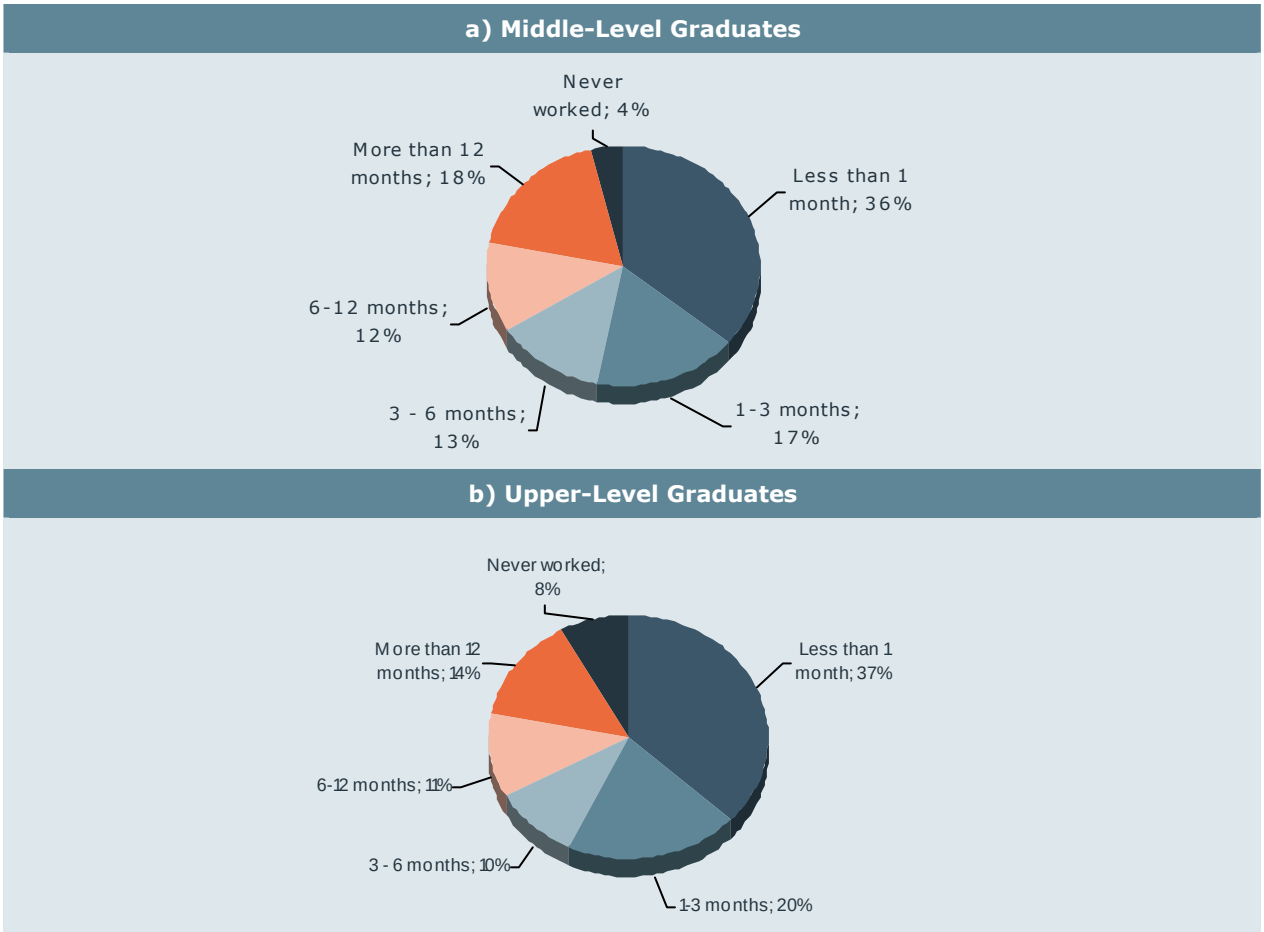
Source: Survey on Education to Training Transition and Labour Insertion (ETEFIL), Spanish National Institute of Statistics (INE), 2005

Conversely, there is another interesting source of information which provides data on the same issues, where some conclusions seem to vary (still, it must be taken into account that the sample and dates are not the same in both surveys, and ETEFIL refers only to "significant" jobs). This source is the "Vocational Training Barometer[254]" which describes the labour situation of middle-level and upper-level graduates (results available for the year 2010). Concerning the time needed to find the first job, results show that as the education level grows, the time required for labour insertion decreases. 53% of the middle-level graduates enter into the Labour Market in less than 3 months, while this figure goes up to 57% in the case of upper-level students. Broadly speaking, 78% of IVET graduates find a job in a period inferior to 1 year (see Table E.104).

With regard to the type of contract, 52% of the VET graduates access their first job through a temporary contract, 25% sign and indefinite contract, 13% enter the labour market through a temporary work agency, and 10% a part-time contract.

[254] VET Barometer 2010, developed by Nexos Fp (project started by CEAC Training Centre to promote their relationship with companies). The sample is constituted by people graduated in middle-level and upper-level IVET cycles over the past 5 years: http://www.nexosfp.com/docs/ResumenEjecutivo10.pdf

Graph E.24 Time needed for labour insertion among VET graduates



Source: VET Barometer 2010, Nexos Fp
http://www.nexosfp.com/docs/ResumenEjecutivo10.pdf

Moreover, and according to the same source of information (the "Vocational Training Barometer"), it is worth commenting on the reason why students choose the vocational track. The 2010 results show that 48% of the students consider that it is for vocational reasons (they've always been interested in the subject studied), whereas 30% of them relate it work opportunities (they think it is easier to find a job with a VET degree). Interestingly also, concerning the satisfaction level with the VET cycle studied, 84% of the students grade their degree as 'good' or 'very good'. More precisely, students assign an average mark of 7.92 to VET training (in a scale 1 to 10), whereas the mark given by 'Bachillerato' (i.e. General Upper Secondary Education, ISCED 3A) students to their studies is 7.21.

On the other hand, it is interesting to comment on the percentage of students who are able to sign a working contract with the company where they had carried out their "in-company training module", although it is not easy to find data on the issue. In any case, the possibilities for VET students to be hired depend on the professional family, as well as on the economic context. According to the Superior Council of Chambers of Commerce, in the year 2003 25% of the VET students in Spain continued working in the company where they had been trained. These results do not differ from the results obtained by a study carried out in the Autonomous Community of Asturias, which indicates that in the year 2001 24.2% of the VET students where hired by the company where they had carried out their "in-company training" module[255].

[255] Magazine of the Ministry of Work and Immigration. Available in Internet at: http://www.mtin.es/es/publica/pub_electronicas/destacadas/revista/numeros/76/Revista76.pdf

Moreover, and according to some interviewees' approximate figures, currently one of the professional families with the best labour prospects includes industrial activities and especially automotive industry, where around 50% of the students might be able to find a job in the company where they have been trained. In any case, according to the interviewees, the effects of the crisis are clearly noticeable in the number of graduates hired, as nowadays companies can not afford to hire as much graduates as they did 3-4 years ago.

Finally, this section on quantitative data will present information on early school leavers and school failure. Indeed, the importance of this issue is highly emphasized by both the European Commission and the Spanish Government, given that a high number of early school leavers is an obstacle to the development of a knowledge-based economy and a greater social cohesion.

According to the consulted literature, it seems that poor academic results and early school leaving are directly linked to students' social background (including parents and students' attitudes, parents' education level and job, etc.). In this sense, it is interesting to pinpoint that the vocational track at Upper Secondary Level is generally chosen by pupils with the poorest student records[256], whereas "Bachillerato" is chosen mainly by those who want to go to university. In any case, those who end up in vocational training appear to fail less once they incorporate into post-compulsory studies, maybe because their studies are more focused on subjects of their interest.

As far as some of the interviewees have explained, drop-out rates are lower among upper-level VET students than amongst medium-level VET students. Approximate figures provided indicate that the percentage of middle-level students who get their Technician degree is around 75-80%, whereas in upper-level cycles just about 90-95% of the students end the programme. Certainly, students in middle-level studies are younger (they have just finished compulsory education), and in many cases they are difficult students who might have repeated some course during compulsory education. On the other hand, students in upper-level cycles have already finished "Bachillerato" (upper-secondary level, academic / general track), and they are generally more mature and ready to choose their professional career.

On the other hand, and concerning schooling data, the schooling rate in Spain has grown among 16-year-old students, from 85% in 1997 to 89% in 2007. However, among students aged 19, the schooling rate has decreased (56% in 1997 and 54% in 2007). With regard to early school leaving, the percentage of 18-24 years olds with only lower secondary education or less and not in education and training (that is, early school leavers) was 31.9% in 2008 (almost 1 out of 3). This percentage was higher for men (38%) than for women (25.7%)[257]. From a time dynamic perspective, data are notably serious, as the number of early school leavers has increased since the year 2000, when the percentage of early school leavers was 29.1%.

Additionally, available European data for 2007 show that the EU-27 average for early school leavers was 14.8%, whereas in Spain the percentage was 31.0% (only Portugal and Malta showed higher figures than Spain). Certainly, the European goal of 10% for 2010 is far from being reached[258]. As well as this, the completion of upper secondary education among those aged 20-24 has decreased from 66% in 2000 to 61.1% in 2007, whilst the European average of upper secondary education completion increased from 76.6% in 2000 to 78.1% in 2007.

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[256] "School failure and dropouts in Spain", La Caixa, 2010

[257] Data from the Ministry of Education (2010).
http://www.educacion.gob.es/dctm/ievaluacion/indicadores-educativos/seie-2010-completo-imprenta.pdf?documentId=0901e72b8062e4f6

[258] Information from Indicators and Benchmarks from DG Education and Culture (2008) based on the EU Labour Force Survey. Available at: http://ec.europa.eu/dgs/education_culture/publ/pdf/lisbon/progress2008-8p_en.pdf

Therefore, whereas the general European tendency is the reduction of early school leavers and the increase in the proportion of graduates in upper secondary education, Spain follows the opposite way. The main reason for this lies in the remarkable economic boom experienced by Spain during the last decade, until the beginning of the crisis in 2008- 2009. The outstanding growth of the Spanish economy, mainly based on the construction sector, and the resulting exceptional generation of jobs, encouraged youngsters to leave the education system and enter the labour market, even before having obtained a degree.

At present, and as a consequence of the economic crisis and the lack of employment, it is expected that this increasing dropout rate will be inverted, so from the year 2010 onwards the number of students remaining in education should normally raise. Indeed, new policies promoted by the Spanish Government aim at encouraging Spanish youngsters to remain in education and obtain higher education levels. One of the highest challenges for the Spanish Education System is to reduce the high levels of school failure and dropouts in Spain, and increase qualification levels among employees, given that better education and training leads to better jobs and reduces employment options.

Operational Description of Apprenticeship Type Schemes

Training curricula and training/education contents and competence profiles

To start with, and concerning the internal configuration of contents in IVET cycles (in both levels), it is interesting to remark that each cycle is structured according to a set of training modules (or learning units) associated with a particular vocational skills unit or with cross-disciplinary / generic skills (following the competence units described in the National Catalogue of Professional Qualifications or CNCP, as explained below). The modules imparted in VET centres have both theoretical and practical contents, whereas the "in-company training" module consists exclusively of practical work in a real-time setting.

With regard to specific public/private competent bodies defining training contents, generally the Ministry of Education is responsible for the development of the overall education programmes, setting the minimum contents of educational programmes, and regulating the validity of qualifications throughout Spain. With regard to the vocational training curricula and competence profiles in particular, there are different institutions within the Spanish IVET System in charge of developing education contents and skills needs at national level:

- The General Council for Vocational Training ("Consejo General de Formación Profesional", or CGFP in Spanish[259]) operates as an advisory and consulting body for the government, and it is composed of public authorities (basically the Ministry of Education, the Ministry of Labour and the regional governments), together with representatives of the most important Spanish trade unions and employers' organizations. Therefore, it is a consultative and tripartite body, where the Presidency alternates every 2 years between the Ministry of Labour and Social Affairs and the Ministry of Education. Members of the General Council for Vocational Training (i.e. the social agents) make suggestions for improvements concerning new IVET degrees and qualifications proposed by Public Authorities, before those are officially approved through Royal Decree. Moreover, the CGFP is responsible for matching the needs in the labour market with educational policies, and it elaborates a proposal on the National Programme on Vocational Training for the Government, aimed at assessing on vocational training plans and policies.
- The National Institute of Qualifications ("Instituto Nacional de las Cualificaciones" or INCUAL in Spanish)[260] promotes the identification and update of the vocational training needs together with the social partners. The INCUAL is responsible for defining, drawing up and updating the National Catalogue of Professional Qualifications ("Catálogo Nacional de Cualificaciones Profesionales", CNCP in Spanish), as well as the Modular Cata-

[259] For more information on the CGFP see: http://www.educacion.gob.es/educa/incual/ice_consejoGeneral.html
[260] For more information on INCUAL see: https://www.educacion.gob.es/iceextranet/accesoExtranetAction.do

logue of VET and VET contents corresponding to each qualification. In other words, the National Catalogue of Professional Qualifications lists the professional qualifications according to the appropriate competences for each profession, with the aim of fostering professional and personal development, taking into account the needs of the labour market. The 26 professional families which make up the National Catalogue of Professional Qualifications have been created according to affinity criteria among the different professional competencies. So far, the National Catalogue of Professional Qualifications has published 441 professional qualifications. Additionally, INCUAL also helps the CGFP to achieve the objectives of the National System of Qualifications and Vocational Training ("Sistema Nacional de Cualificaciones y Formación Profesional" or SNCFP in Spanish), which is a collection of instruments and actions to promote the integration of vocational education and training. Indeed, the National System of Qualifications and Vocational Training is based on the National Catalogue of Professional Qualifications.

Although VET general contents are firstly elaborated at national level, regional educational departments play a key role in further developing the curricula and training programmes, taking into account the socio-economic aspects of their geographical territory. In other words, the Autonomous Communities regulate the non-basic elements of the educational system in their particular regions and develop or extend basic national contents according to the regional context, always within the framework of the LOE (Education Statutory Law of 2006).

Concerning the role of teaching centres, they implement the general curriculum approved by public authorities, following the VET Modular Catalogue and the contents approved for each qualification. Thus, teaching centres draw up an annual programme with objectives, content, criteria for evaluation, sequencing and methodology, which necessarily stick to national/regional requirements, but which at the same time fit the characteristics of the students and the possibilities for training offered locally.

With regard to the role of enterprises to decide training contents, the only module which takes place in the workplace is the "in-company training" module, so it is in this particular learning unit where companies can directly influence students' training curricula. In fact, the VET centre's tutor and the designed tutor at the company jointly establish the student's individual training programme at the workplace, which includes the list of professional competences to be acquired, together with the related learning activities and the evaluation process.

This training programme must stick to a predefined set of professional competences which students should master when they finish the learning process in the company, as established by National and Regional Authorities. For this purpose, the training centre normally prepares a generic training programme in advance, which is then individually rearranged together with each collaborating company, depending on its infrastructural, technological and organisational conditions, as well as according to the student's profile.

Interestingly also, and from a broader perspective, Employers' Organizations and Chambers of Commerce can play an important role in the sense that they can transmit the needs expressed by companies to competent public authorities in charge of designing and updating educational policies, and particularly to the General Council for Vocational Training.

On the other hand, and with regard to mechanisms to adapt contents/curricula to technological and economic progress within each sector, the National Government revises and updates all vocational degrees on a regular basis (or creates new ones, if necessary) either at its own initiative or at the request of other agents such as education departments, social agents or the General Vocational Training Council.

In this sense, it is worth mentioning the Occupational Observatory[261] ("Observatorio Profesional" in Spanish), which is a section within the INCUAL (National Institute of Qualifications) responsible for providing information on the supply and demand of professional categories and activities in the labour market. Moreover, the Occupational Observatory is also involved in the definition, elaboration and update of the CNCP (National Catalogue of Professional Qualifications).

As well as this, the National Reference Centres ("Centros de Referencia Nacional" in Spanish) are in charge of carrying out innovation and experimentation duties, by productive sector. Their operation is based on the creation of a network of centres, conceived as a reference point for the CNCP and a partner of the INCUAL in the study of changes in qualifications.

Role of enterprises in the apprenticeship type schemes and description of company based training

Companies play a vital role concerning the "in-company training" module; they act as key collaborators with teaching centres and both of them are responsible for the accurate development of the workplace-based training.

As collaborators, companies are committed to:

a) Fulfil the training programme agreed, implementing all training activities as arranged with the training centre.
b) Select a tutor or supervisor within the company, that is, a person responsible for the coordination and management of the "in-company training" module and the implementation of the programme.
c) Facilitate the contact with the tutor of the teaching centre and his/her visits to the company, in order to monitor and evaluate the training activities carried out by students.
d) Ensure the development of the training activities planned, as well as the monitoring and evaluation of the programme.

In some Autonomous Communities, Chambers of Commerce, Employers' Organizations or Public Authorities may assess or support companies if they are interested in training students and participating in the FCT module. Thus, for instance, Confebask (the Basque Employers' Organisation) has published a practical guide for companies regarding the administrative process and requirements, the tasks and responsibilities expected from the company, etc. Moreover, this organisation periodically meets up with companies concerning the issue of the FCT module, and it monitors the role played by companies and assesses their needs.

In general terms, students spend a minimum of around 400-600 hours in the company, which are distributed over 12-16 weeks, meaning 20-30% of the total number of hours of the VET cycle. This period of workplace-based training takes place always at the end of the cycle, once the student has passed all the modules provided in the teaching centre. During the "in-company training" module, the working hours assigned to the student is as similar as possible to the school timetable. All the training takes place in the workplace and is supervised by the company trainer, except for a number of tutorial activities or personal office hours which take place in the teaching centre once every two weeks.

On the other hand, and with regard to the selection of companies and students, conditions might vary among regions. Firstly, the situation depends on the prevailing economic sector and the industrial tissue of the area (type of companies, productive systems, internal organisation, etc.), as well as on how proactive companies in general are. Moreover, the gen-

[261] For more information see: http://www.educacion.gob.es/educa/incual/ice_obsProfesional.html

eral economic circumstances (i.e. crisis period or booming cycle) inevitably influence on companies' attitude and availability.

Secondly, there may be public or private bodies which support the selection of companies. Thus, it is interesting to pinpoint that in some Autonomous Communities Chambers of Commerce or Employers' Organizations might be quite active and carry out intermediation activities to put companies and VET schools in contact. Thus, for instance in the case of the Basque Country, Confebask may act as an intermediary between companies and VET schools. In other Autonomous Communities, however, members of the Public Administration (e.g. the Education Department) may carry out intermediation tasks in a more or less dynamic way. In any case, employers' organizations and trade unions in general do not normally take part in the process of access and distribution of companies.

Given that the "in-company training" module is compulsory for all students, it is very important that VET centres are able to sign enough company collaboration agreements in order to offer to all of its pupils a training post in a company. In this sense, many teaching centres enjoy stable or long-term agreements with some companies, by which companies are committed to offer a training post to a new student (or several new students) every academic year.

With regard to the characterization of the participating companies, it can be firstly said that the companies where students carry out their "in-company training" module are normally located close to the VET school (in the same area or region). It is not easy to determine a particular profile of participating companies, as their characteristics depend on the historical economic context of the region as well as on the different professional families. In this respect, the same VET training centre may collaborate both with SMEs and large companies at the same time. Larger companies might have more resources for taking in students, but, at the end of the day, the great majority of the Spanish business tissue is composed by SMEs.

The main criteria for a teaching centre to select a company lay in its suitability (infrastructure, resources, production system, organisational structure, etc.) with regard to the training programme, in the sense that the accurate training of the student must be guaranteed. For this reason, when there is a lack of resources, it is possible to sign an agreement with several companies at the same time, especially in the case of SMEs. The idea is that students can take advantage of the different resources/working process in each company, and distribute their "in-company training" time between different workplaces. As well as this, and from a practical point of view, VET teaching centres prefer to collaborate with companies which show a strong commitment with the whole process and offer the possibility of a long-term relationship.

In some cases, students themselves may show their interest for accomplishing their in-company training module in a specific enterprise. Even if the company agrees with the student in offering him/her a training post, it is required that the teaching centre visits the company and certifies its suitability as a collaborator company for the "in-company training" module. Moreover, all the administrative steps established by the corresponding regulations should be accomplished; therefore, it is necessary to sign a collaboration agreement, arrange an individual training programme, etc.

On the other hand, and concerning how students are selected, normally it is teaching centres that distribute students among available posts in different companies. More precisely, the career department of VET teaching centres manages the distribution of training posts among students, in many cases together with the teachers (who know better each student because they spend more time with them). The decision on how to allocate students depends on the needs of the company and the profile of the student, not only concerning his/her marks, competences, experience, etc., but also with regard to location proximity, availability of transport, etc.

As it can be expected, the students with the most brilliant student record are offered the best posts for training in companies. Certainly, VET schools watchfully care for long-term relationships with companies; subsequently, they try to allocate high-performance students in top companies (the most prestigious and cooperative ones), so that the training period turns out to be a success for both the company and the student. As well as this, the best students are sent to companies which offer high hiring prospects, that is, to those companies interested in employing the student after he/she gets the VET diploma.

At times, companies themselves prefer to hold an interview with two or three students already selected by the VET Centre, in order to take the final decision about which student is the most suitable for the post. Actually, many companies may be interested in employing the student after the FCT module, so they prefer to carry out a stricter selection process.

Specific role of the company trainer

The company must formally design a supervisor who is responsible for the student during the "in-company training" module. Larger companies are normally better structured and the role of the supervisor is more formally defined; smaller companies, however, appoint the supervisor in a more informal way.

Indeed, the tutor or supervisor in the company is one of the key elements of the "in-company training" module. He is responsible for organising and preparing the post that shall be occupied by the student, arranging all the resources required for accomplishing the training programme in accordance with the objectives agreed in the training programme and the technical resources available. As well as this, the supervisor must support the student and introduce him/her into the real world of work from a practical point of view: health and safety issues, interpersonal skills, team work, etc. Finally, the company trainer has to carry out monitoring tasks in order to evaluate the student's performance.

More precisely, the typical functions of the company tutor are the following ones:

- Preparing the individual training programme (together with the tutor from the training centre)
- Managing and supervising training actions
- Assessing students
- Evaluating students' performance
- Solving technical or personal problems
- Filling in training and monitoring documentation

Broadly speaking, the characteristics of the company trainer are not strictly regulated, but he/she should have the necessary knowledge to develop the above mentioned tasks. Typically, company trainers are experienced workers, with enough practice and understanding to accurately train students. Even though specific training is not legally required for company trainers, it must be mentioned that the Council of Chambers of Commerce developed in the '90s a Manual for the in-company training module with a general guide for tutors. Subsequentely, a series of sectoral guides were elaborated, intended to provide company trainers with methods, procedures, mutual compromises, etc. adapted to the different professional branches. Additionaly, short introductory courses (1 day) were orgnised, but this practice was discontinued as from 2000.

Description of school-based training

School based training accounts for approximately 70-80% of the total tuition hours of both middle-level and upper-level vocational training cycles, which means about 1,400-1,600 hours. The whole of the school-based training hours take place at the beginning of the train-

ing cycle, and the successful completion of all the school-based modules is a requisite to start the "in-company training" module.

The school based training follows a modular structure according to the Modular Catalogue of Vocational Education and Training. Each training module is associated with one competence unit, which can be defined as the minimum set of professional competences which can be partially recognized and accredited. Professional units may include technical competences (specific to a qualification and transversal to other qualifications) as well as core competences (i.e. those competences that allow the individuals to adapt to a changing labour environment in different fields or social contexts). All these competences aimed at preparing the students to be qualified to work in a particular profession and acquired through school based training, are later on complemented through experience in real production processes, thanks to the "in-company" training module.

The training centre is responsible for providing the theoretical modules of the vocational training cycle, as well as preliminary practical contents. Moreover, the training centre arranges and supervises the practical training that takes place in the external company/organization. The manager or director of the training centre, as the chief representative of the centre, is officially in charge of signing the specific arrangements between the centre and the companies, and he/she also designates the tutors who will be the direct responsible for managing the "in-company training" module in each VET cycle. The designated tutor is the main responsible for the practical arrangement of the collaboration between the school and the company, and he/she visits the workplace and evaluates the technical conditions of the company, discusses the individualised training programme with the company supervisor, etc., developing a direct relationship with the organisation.

As well as this, the tutor deals directly with the students, and he/she is responsible for explaining them the terms and conditions of the "in-company training" module in general as well as the specific tasks to be carried out by each student at the assigned company in particular. Moreover, the tutor is in charge of tutorial activities or personal office hours with the students who are participating in the "in-company training" module (which normally take place during one working day every two weeks).

Furthermore, he/she periodically contacts the company with regard to the continuous assessment of the student and revises the evaluation report provided by the company in order to give a mark to the student for his/her performance at the end of the "in-company training" module. In fact, the collaboration between the tutor of the training centre and the supervisor in the company is recommended to be close and fluid. As an average, the teacher should visit the company every 2 weeks, and he/she should try to keep phone contact every week. In any case, there are no legal requirements regulating this contact, and the visits frequency depends on the experience of the company, previous collaborations and outcomes, etc. Thus, if the company is new and relations with it have just started, the monitoring will be stricter and more frequent.

With regard to the type of institutions offering initial vocational training in Spain, the training centres that offer specific middle level vocational training are normally the same ones that offer upper level training. At the same time, vocational education may be provided in institutions exclusively devoted to teaching vocational training, but also in institutions providing other types of education. A typical case is that this provision is offered along with the compulsory secondary education and/or along with the "Bachillerato" (non-compulsory secondary general education, academic track), in institutions known as Secondary Education Schools. In these cases, vocational training is organised independently of the other types of provision, but they may share personnel and material resources.

The Royal Decree 1538/2006 establishing the general organisation of vocational training estates that initial vocational training may be provided at the following institutions:

- Public and private institutions authorised by the relevant education authority.
- National reference institutions, specialised in the different productive sectors, and which are responsible for, according to the 2002 Statutory Law on Qualifications and Vocational Training (LOCFP), innovation and experimentation in vocational training.
- Vocational training integrated institutions (the LOCFP defines this category as those institutions offering all types of vocational training provision included in the National Catalogue on Vocational Qualifications).

All these institutions must meet a series of requirements which apply throughout the whole of Spain. Some requirements include, for example, the need of offering at least two training cycles per school, or a maximum student-teacher ratio of 30/1. Other requirements to be met are related to safety and hygiene conditions, equipment and facilities, etc.

Concerning teachers' qualifications, the Organic Law 2/2006 states that IVET teachers are required to have obtained a university degree (Bachelor, Engineer or Architect), in addition to the corresponding pedagogic training. Moreover, the Royal Decree 1538/2006 specifies that each IVET degree is regulated by a specific law (a Royal Decree), and each of them establishes which qualifications instructors must have in order to teach the corresponding professional modules. Therefore, all the requisites to be fulfilled by teachers are normalized in the corresponding law regulating each VET degree. Interestingly also, it is stated that, for some particular modules, it is allowed to hire professional experts (and not necessarily in possession of a university degree) who are specialist teachers according to their experience in the labour market.

Role of students in the apprenticeship type schemes

In order to get access to enterprises and start training in the workplace, it is a must that the student successfully completes the school-based section of the degree. As well as this, successful completion of the "in-company training" module is required for obtaining the final vocational diploma ("Techinician" or "Advanced Technician"). Exceptionally, those students who can prove that they have work experience related to their current professional studies can be exempted from it.

As a rule, it is VET schools that distribute students among companies. Schools are responsible for signing the collaboration agreement with each company and for establishing a fluid relationship with them in order to continuously supervise the training process. Sending a student to a particular company is a great responsibility for the training centre. Certainly, the student is not only responsible for his/her own image, but his/her attitude will also determine the stability of the collaboration agreement between the company and the training centre. If a student does not fulfil the minimum requisites, he /she will project a bad image not only of himself, but also of the training centre.

During the "in-company training" module, students are required to attend a number of tutorial activities or personal office hours with his/her tutor in the training centre, which normally last for one working day every two weeks. Furthermore, and during this practical training period in the workplace, students must fill in a series of documents where the work they develop is registered. By way of guidance, this documentation includes the following papers: the "in-company training notebook" ("cuaderno de prácticas"), similar to a diary where the students writes down all the different activities carried out; "monitoring sheets" ("fichas de seguimiento"), where the student registers main performance indicators on a weekly basis; "reports" ("informes"), which include further comments from a qualitative point of view; etc. In any case, each Autonomous Community is responsible for defining the required documentation, and even each school can adapt it and elaborate its own documents for students' monitoring and evaluation.

Actually, during the "in-company training" module, students' performance is continuously assessed. Indeed, the training programme includes a set of evaluation criteria comprising attitudes and technical know-how, with the aim of setting out the guidelines for the acquisition of the professional competences. The main persons responsible for evaluating the student's performance are the tutor in the VET school and the supervisor in the workplace, who are also in charge of arranging the individual training plan. The company trainer coordinates the student's activities and elaborates a report concerning the professional competences acquired. Meanwhile, the tutor of the training centre carries out the final and formal evaluation, considering the information provided by the supervisor in the company as well as the documentation handed in by the student. The results of this evaluation are graded as "qualified" or "not qualified" (numeric marks are not given).

It is pretty unusual that a student fails the "in-company training" module. The reason for failing is normally related to the student's attitude and a lack of interest, maybe because the student does not like the job, he/she does not understand his/her tasks, he/she feels nobody takes care of him/her, etc. For this reason, VET schools make a great effort to get continuous feedback both from students and companies, in order to ensure that both parties are pleased with the process. If a student fails this module, he must repeat it in the next academic year.

Existence/non existence of contractual relationships between enterprises/students/VET schools

The Education Statutory Law (LOE) established that during the "in-company training" module there is no contractual or labour relationship between the student and the company. As a result, the youngster keeps his/her "student status", as he/she is not directly hired by the company as an employee. Indeed, the existing relationship is based on an agreement between the training centre and the company, as a way to promote the idea of partnership between the IVET system and the enterprises.

More precisely, the collaboration agreement is a formal agreement between companies and education centres, and its main features are the following ones:

- It can refer to one or several students from the same training centre. If more than one student are carrying out their "in-company training" module in the same enterprise, a single agreement between school and enterprise is enough.
- It can be terminated at any moment by any of the two signatories.
- The student can not cover any formal position within the business organisation, as he/she is not an employee and there is no employment relationship (if a labour contract is to be signed, the agreement with the school must be cancelled).
- Students must have a health and accident insurance (through the extension of the school insurance) and a public-liability insurance (through an additional insurance signed by the competent public administration).

The collaboration agreement must be signed by a representative of the company and a representative of the training centre (normally the manager or director), and it must also be validated by the competent public administration of the Autonomous Community. Normally, the administration has template or sample documents available (in many cases online) which facilitate the process. As a general rule, administrative steps are well-defined and they are simple to be taken by both schools and companies.

The agreement is an official document which defines terms and conditions for both parties, insurance for the student, etc. The document must include the name of the student (or students), the number of hours and the working period. Moreover, the agreement must enclose the training programme, which must be elaborated according to the specific characteristics of the company, including training/productive activities and evaluation processes.

Therefore, the training programme must fulfil the basic guidelines established by the public administration, but it can be adapted to the specific conditions of the school, the student and the company.

Financed-related information

The financing for IVET in Spain comes from public funds and contributions from private institutions and the households. The total spending on education is therefore defined as being the sum of the funds that come from public sources, mainly from the Ministry of Education and the Autonomous Communities, or from EU funds and private sources (companies, families, etc.). Certainly, in Spain, European Funds constitute a relevant financing tool for the support of VET, especially the European Social Fund. In this sense, it is worth mentioning that the existence of several superimposed sources of financing makes it difficult to calculate the resources allocated to vocational training.

All financing of initial vocational training within education is direct, through the General State Budgets and the Autonomous Community budgets. Funds are not only allocated to public education institutions but they can also be allocated to private centres in the form of subsidies or scholarships and financial aid for students. The amount of financing is set according to the number of students, and there are no mechanisms to relate financing with quality.

With regard to expenditure figures, the last two decades have seen an increase in spending on education. According to forecasts made by the National Institute of Statistics, in 2008, spending on education in Spain was 49,887.2 million Euros from public spending and 8,936 million Euros from family spending (estimates based on the initial budgets), the latter including only payments for educational services to schools, academies and private classes.[262]

Between the years 1997 and 2007 the percentage of GDP devoted to Education decreased from 4.52% to 4.41%. However, these are just relative figures, since in absolute terms resources assigned to Education increased from 22.8 to 46.5 millions of Euros between 1997 and 2007. If this data is broken down, it can be observed that the General Regime Education Programmes (from primary level to IVET) implied 62% of the total public expense over those 10 years. The section which has experienced the most remarkable increase is "Secondary Education, VET and Special Regime Education Programmes", which has augmented in 2.26 percentage points. [263]

On the other hand, and concerning public support measures for employers, it should be said that in some Autonomous Communities there are financial incentives for companies. Initially, when the "in-company training" module was first established in Spain, the Education Councils of Autonomous Communities administrations used to offer companies some financial incentive, which basically consisted of a very low and symbolic amount of money. Currently, some Autonomous Communities do not offer it anymore (in the Basque Country, for instance, it is still provided). In any case, this financial incentive is not at all the main motivation for companies to take in students, given that it was such a little amount. Moreover, companies used to give this money to students or to training centres.

As well as this, some Autonomous Communities grant to students an amount of money per month mainly aimed at covering travelling expenses (it can be of approximately 80€ in the case of the Basque Country). Furthermore, some companies might voluntarily offer some payment to the student as a way of compensation for the effort and work at the end of the module (e.g. around 200€); in some cases, this payment is just the money that the com-

[262] Source: Ministry of Education. Academic year 2008/2009.

[263] Data from the Evaluation Institute. Ministry of Education. 2010: http://www.educacion.gob.es/dctm/ievaluacion/indicadores-educativos/seie-2010-completo-imprenta.pdf?documentId=0901e72b8062e4f6

pany receives from the Autonomous Government. From a practical point of view, the best reward a student can normally receive is the fact of being hired by the enterprise once the "in-company training" module is over.

Quality assurance mechanisms

Broadly speaking, the Institute of Evaluation[264] is the institution responsible for the evaluation of the Spanish Educative System as a whole, and it is dependent on the Ministry of Education. Its main tools for the evaluation process are basically two: the National System of Indicators and the General Evaluation Plans, where the assessment of VET programmes is expected to be improved and deepened in the following years.

The main functions carried out by the Institute of Evaluation are:

- Elaborate multi-annual plans for the general evaluation of the educative system
- Coordinate the participation of Spain in international evaluations
- Elaborate the National System of Indicators of Education, which assesses the development of education policies
- Collaborate in the implementation of general diagnosis evaluations.

As well as this, with the aim of enhancing standardized quality management models within the VET system and following the European Quality Assurance Reference framework for Vocational Education and Training (EQARF), the Ministry of Education is working on the development of a National Quality Network. The quality criteria to be promoted are the following ones:

- Conception of a VET Strategic Plan shared by all stakeholders, with common actions and indicators to assess the quality of the VET System
- Development of quality management plans at national level agreed by all competent administrations
- Creation of an evaluation system for results and processes, aimed at supporting assessment and improvement models.
- Promotion of the improvement of the educative system, based on results and measurements

Concerning quality assurance among companies, it must be remarked that the public administration does not directly supervise them. The VET school is responsible for deciding if the company is suitable or not, and for guaranteeing the success of the "in-company training" module, by keeping a fluid relationship with companies and supervising the training conditions. Hence, one way or another, the quality of the "in-company training" module depends on the monitoring tasks carried out by the tutor of the VET school.

Changes and perspectives in the national apprenticeship-type schemes, geographical mobility issues

Recent (last 1-5 years) or planned changes in the national apprenticeship type schemes

To start with, and from a legislative point of view, it must be remarked that the main law regulating Spanish IVET is the LOE (Organic Law on Education), which is relatively recent (it was passed in 2006). It partially changed the structure of the education system, by estab-

[264] See more information in: http://www.educacion.gob.es/ievaluacion.html

lishing and regulating Intermediate Level and Advanced Level Vocational Certificates in IVET. It has been implemented in different stages over the last years, and most changes have already been introduced. Nevertheless, for instance, one of the new conditions which have not been definitively implemented yet in the whole of the country is the requirement for all VET cycles to last for 2 years (2,000 hours).

On the other hand, a main change experienced by the VET System refers to the number of students. In fact, the Spanish VET has been traditionally pushed into the background by the "Bachillerato" and University programmes (general/ academic pathways). For this reason, one of the main policy concerns for Spanish Authorities has traditionally focused (and still focuses) on increasing the number of students, especially in upper-secondary level IVET (middle-level cycles).

In this sense, top priority objectives for education policies have been the following ones:

- Reduce the high early school leavers rate
- Increase the attractiveness and social recognition of VET, linking it to labour market needs
- Consolidate upper-level VET as an alternative to university studies
- Promote lifelong learning through a more flexible VET system and the validation of professional work experience.

Therefore, and during the last decade, the Spanish Government has implemented several support measures aimed at increasing the number of students in the vocational track. The positive results of these policies are revealed by the upward trend of VET participation figures. As a result, in recent years, VET is becoming a real alternative for students.

On the other hand, the key recent developments in the last five years in the Spanish VET system have tried to increase the quality and efficiency of the existing VET supply. Basically, these policy developments can be summarised as follows:

- Set up of the National System of Qualifications and VET, which has originated a National Catalogue of Professional Qualifications (NCPQ), a Modular Catalogue of VET and a collection of Certificates of Professionalism, facilitating both the transparency and the building of bridges between education and professional work. New mechanisms for the validation of competences acquired through formal and informal training (e.g. work experience) are implemented. Moreover, in the last years, a number of new VET degrees have been developed, basically with the idea of responding to the new demands imposed by the production system.
- Establishment of a National Quality Network especially intended to upgrade the initial VET subsystem. For this purpose, a number of VET centres are designed as National Reference Centres specialised in different economic sectors and involved in developing innovative and experimental activities on VET matters. This is a project which is not fully completed yet.
- Introduction and dissemination of several EU tools, namely EQF, ECVET and Europass, as well as the promotion of international geographic mobility for VET students, under the framework of the Erasmus and Leonardo projects.

Finally, it is necessary to comment on some recent changes, such as the Law 2/2011 for a Sustainable Economy, passed in March 2011 by the Spanish Government, and aimed at modernizing the Spanish economy as a whole. Its main objective is to promote innovation and knowledge in Spain, by means of environmentally friendly measures and within a context which favours high-quality employment, equality of opportunities and social cohesion. This law includes a section on Vocational Training, and the most important issues approved with regard to this section are summarised in the following points:

- Permeability within the Education System: one of the most discussed questions lies in the access of VET students to further studies, particularly concerning permeability between the general and the vocational paths. The Government has promoted flexibility at Upper-Secondary and Tertiary levels, extending vocational training opportunities for students. The "Technician" degree (middle-level cycles) allows the direct entry within the "Bachillerato" (Upper-Secondary Level, general track), regardless of how the degree has been obtained (i.e. through formal or informal learning). Moreover, students with a 'Technician' degree will be able to obtain the "Bachillerato" degree in one single academic year (instead of in 2 years). On the other hand, students with an "Advanced Technician" degree can directly access to university studies, without passing an exam.
- Information and career guidance: the Government, together with Autonomous Communities, will develop a virtual platform so that all Spanish citizens can be better informed about training opportunities and competence validation.
- Quality improvement: The Government will promote specific training plans for teachers, through the National Reference Centres and the National Quality Network. Moreover, education and work administrations will support the collaboration between companies and training centres to enhance research and innovation.
- Students' mobility: the Government will develop a new National Qualifications Framework in accordance with the European framework, in order to promote students' and workers' mobility.
- 'Specialisation courses': The Government is working on a Royal Decree for regulating 'specialisation courses', aimed at both "Technicians" and "Advanced Technicians". These courses take from 300 to 500 hours (from 3 to 6 months) and their objective is to update and broaden the knowledge acquired in VET cycles, in order to better adapt to the needs of the labour market. Furthermore, these courses also include workplace training and they will be available for the 26 VET professional families.

Moreover, the Organic Law 4/2011, additional to the Law 2/2011 for a Sustainable Economy, modifies the Organic Laws 5/2002 (on Qualifications and VET) and 2/2006 (on Education), basically with the aim of making the VET system more flexible and promoting the training of the Spanish population and the recognition of professional competences. The following points list the main contributions of this law:

- The Ministry of Education and the Ministry of Work and Immigration must adapt the existing VET qualifications and degrees (as well as corresponding modules or learning units) or create new ones following the modifications introduced in the National Catalogue of Professional Qualifications, according to changes in the productive system/ business tissue. In this sense, the administrative requirements for the updating and creation of VET qualifications have been reduced, in order to facilitate a quicker adaptation to the labour market needs. Thus, for instance, VET degrees do not have to be approved through a "Royal Decree" format anymore; alternatively, they can be validated by means of a different type of regulation known as 'Order', which means a much faster process.
- VET training centres can offer specific and shorter training programmes created from a particular set of learning modules (normally among those already included in VET degrees, that is, officially validated "learning units" or "professional competence units"). These specially- made training programmes lead to an academic certificate issued by the competent administration, which accredits the acquired professional competence units.
- Education and labour competent administrations are in charge of programming the offer of VET programmes, and they must actively collaborate with local corporations and social and economic agents. Additionally, it is remarked that this offer should be adapted to the socioeconomic context and development perspectives, as well as to citizens' expectations and training demands.

- VET training will be made more flexible through distance learning activities, making it possible to combine studying with work and/or other responsibilities. As well as this, some courses will be offered both full-time and part-time. The Spanish Government, in collaboration with Autonomous Communities, will create a distance learning platform or "Virtual Platform" for the study of VET degrees, which aims at increasing the participation in VET. Priority will be given to growing economic sectors, or those which are generating new posts.
- Concerning the recognition of professional competences, the Government, together with Autonomous Communities, should give priority to the evaluation and accreditation of professional competences related to growing sectors, unemployed collectives or sectors where it is necessary to have an academic certification to get a job. Moreover, public administrations will promote education activities to facilitate the attainment of VET degrees or professional certificates.

As well as this, during the months of June and July of 2011, Government and social agents have been working on the amendment and development of terms and conditions for working contracts, as a consequence of the labour reform approved in 2010. One of the main issues concerns the high unemployment rates which affect Spanish youngsters; therefore, new employment alternatives are being considered to deal with this situation, such as "internship contracts" ("contratos de prácticas" in Spanish) or "part-time contracts". In this sense, in August 2011 the Minister Cabinet approved a Royal Decree Law with urgent measures by which "training contracts" ("contratos de formación" in Spanish) were modified, as a way to promote employment among young people. This new type of "training contract" is based on the German Dual System, but adapted to the needs of the Spanish labour market, and it is regulated by the Spanish Ministry of Labour. It is aimed at youngsters who have not finished compulsory secondary education, or who neither have a professional certificate (ISCED2 or ISCED3) nor a university degree. Moreover, it is intended for youngsters aged 16 to 25, or even 30 till the end of the year 2013.

Effect of the recent economic crisis on the national apprenticeship type schemes

Broadly speaking, education and training constitute key strategic tools to face new economic and social demands, making it necessary to integrate training and labour market. Actually, the main action lines guiding the education policies implemented by the Spanish Government are inevitably conditioned by the crisis context, and they are aimed at shaping a more qualified society, which is able to gain higher business productivity and better employability. Thus, over the last years the main points include the introduction of flexible training schemes to facilitate the combination of work and study, the increase of informal learning accreditation, the reduction of the early school leavers´ rate, the increase of social recognition of VET, etc. Moreover, and concerning the implementation of these actions, priority is given to growing economic sectors or sectors where it is necessary to have an academic certification to get a job, as well as to collectives of unemployed people.

From training centres' point of view, one of the effects of the crisis is that the number of students is bigger, due to high unemployment rates. In other words, as it is so difficult to find a job, people take the opportunity to improve their qualifications. As well as this, the effect of the crisis can also be observed among fresh graduates. Before the economic downturn, students entered the labour market relatively fast, as it was no difficult to find a job. However, at the present time, working opportunities have decreased. One of the consequences of this is that there are more students who continue in education, studying another VET cycle or even accessing to some university programme.

On the other hand, concerning reluctance of enterprises to participate and provide training places, circumstances vary among regions and professional families. Most VET schools see their options to find collaborating companies reduced, given that as the workload decreases, enterprises prefer to assign work to employees rather than to students. As a general rule, it

seems that in crisis time smaller companies have more difficulties to find resources to train students. In any case, even if companies in general may be happy to receive students for the "in-company training" module, it can not be denied that the economic crisis is making it difficult for them to sign further working contracts with the students after their working period.

Conversely, some VET schools feel that enterprises have not stopped taking in students for the "in-company training" module. In this sense, they explain that when companies do not have a heavy workload, supervisors can devote more time to train students and carry out monitoring tasks. This is the case for prestigious VET centres which boast long-term and stable relationships with companies.

Student geographical mobility issues

To start with, and from a national point of view, the basic minimum contents for each training cycle are similar throughout the whole Spanish territory, in order to favour labour mobility across Spain. In any case, Autonomous Communities enjoy the competences to define part of these training contents, having in mind the specific socio-economic characteristics of the region.

With regard to mobility at European level, there exist two different initiatives to promote it:

- Erasmus action: it corresponds to tertiary level programmes (ISCED 5), both IVET and university programmes. Training centres can manage the programme following to different ways: a) as a consortium or group of different education centres, and b) directly, as an independent institution. These actions can be aimed at both students and teachers.
- Leonardo da Vinci action: it promotes International exchanges and projects in the VET arena. It is aimed at promoting innovation and entrepreneurship, improving the quality of training and facilitating the acquisition and use of competences abroad. Mobility projects imply international stays in companies or training centres for people involved in studying activities or in the labour market, as well as stays and exchanges for VET professionals and people responsible for training in Europe.

Unfortunately, not all the training centres promote these programmes. In some cases, students must directly contact the Education Department of the Autonomous Community to get further information and take the necessary administrative steps to study a VET programme abroad. In other cases, employers' organizations and chambers of commerce are in charge of managing these international programmes. Therefore, some experts consider that geographical mobility programmes are not sufficiently developed, and they mention the need for building a wider legal framework and encouraging VET schools to take part in these programmes. Geographical mobility is a new issue for the Spanish VET system, and participation levels are still relatively low; however, students' participation has grown over the last years, and they are more and more involved.

Finally, it is interesting to comment on the "Proposal for the Basque VET Plan 2011-2013"[265]. According to data published by the Basque Government, the number of students who carry out their "in-company training" module out of the Basque Country (including both the rest of Spain and foreign countries) has increased over the last years, from 11.25% in the academic year 2007/08 to 12.23% in 2009/10. From a strategic point of view, the internationalization of companies can be promoted through the training of future employees on specific skills related to the sector as well as on language and international skills. For this

[265] VET Directorate of the Basque Government, 2011. "III Plan Vasco de Formación Profesional 2011-2013. Propuesta". More information at http://www.openideiak.com/pg/file/fprofesional/read/64468/iii__plan_vasco_de_formacion_profesional_2011_2013__propuesta

reason, and to help young students to work at international levels, several measures are being proposed:

- Develop programmes to reinforce language skills among VET students, so that they can carry out their "in-company training" module abroad (especially among middle-level cycles students).
- Consolidate and extend the offer of trilingual education.

Future perspectives and other possible relevant issues

Looking at the future, it is possible to identify a number of policy priorities for the Spanish VET in the coming years (some of them are already being applied). They can be summarised as follows:

- Continue the efforts to upgrade the social image of VET amongst students, citizens and employers as a successful and very interesting option for youngsters to assure their fully incorporation and further development in the labour market.
- Increase co-operation with social agents and Autonomous Communities in order to achieve a VET system that may respond to the new challenges for the Spanish economy, i.e. new demands of the job market, increasing importance of ICTs in everyday life, the age structure of the population, the current economic crisis or the globalisation of competition.
- Increase the existing co-operation between enterprises and VET centres, so to improve the skills of students and their quick and easy access to enterprises.
- Increase existing resources for VET in general, especially in relation to the training of teachers and the upgrading and modernisation of existing equipments in training centres.
- Introduce flexible training approaches which facilitate that students combine studies with work.
- Increase existing efforts for the evaluation and accreditation of informal and non-formal types of learning.
- Increase attention to some groups with special training needs (i.e. long-term unemployed, early school leavers, immigrants, etc)

Evaluation of existing apprenticeship type schemes

Qualitative Assessment of the National Apprenticeship Type Schemes

Broadly speaking, the general importance and prestige of VET has improved over the last years, especially among companies. When the "in-company" training module first started, teaching centres had to carry out "public relations" activities among companies in the area, that is, they used to visit companies so as to inform them about the advantages of collaborating with a teaching centre through the "in-company training" module. However, nowadays companies are becoming familiar with the VET system and in many cases they directly contact the VET school to show their interest for taking a student in. Certainly, the relationship between companies and education centres is getting stronger and stronger.

The combination of work based and school based training is considered to be very important in the national IVET context. Companies highly appreciate the fact that students spend this period of time in a real-work setting, since they acquire professional competences which can only be learnt in the labour market. As well as this, for most students the "in-company training" module means their first contact with the world of work, and it facilitates young-

sters' labour insertion. Interestingly also, the experts consulted consider that the duration and structure of this work-based training period is correct.

With regard to advantages derived from companies' participation in apprenticeship-type schemes, it must be said that the greatest benefit for a company is the possibility of knowing potential employees and having the opportunity to train them even before signing a working contract. What is more, for some companies the VET centre is seen almost as a "recruitment centre" where they can find a suitable student to be hired after his/her training period.

In this sense, there is a social debate around the idea that students might be taken in as 'cheap labour'. In some cases, it has been criticized that companies may take advantage of students and ask them to carry out tedious and not instructive tasks, which no other employees want to do. To avoid this situation, training centres keep a very close contact with companies in order to ensure that the training programme is being fulfilled, and that the whole process is being satisfactory both for the student and for the company. In any case, it is true that in some cases it is not easy to distinguish between "training" and "production"; certainly, students are trained while producing. The key is to remember that the student is taken in by the company in order to learn and a predetermined training programme must be accomplished.

Following with the benefits for the employer, it can be said that there is some diversity of opinions concerning the productivity of the students. Thus, VET schools and representatives of the Public Administration consider that students are productive for the company, in the sense that they generate a benefit after their work. Even if the company has to devote some resources to the training of the students (e.g. human and material resources), the benefit that the company receives from the students' work is normally greater than the resources invested. In fact, when the student starts the "in-company training" module, he/she already enjoys a broad knowledge on that particular professional arena and has much to offer to the company. Conversely, companies and employers' organizations think that in most cases the training period in the company is too short for the student to be really productive. The company must follow a training plan and the student learns a wide variety of tasks, so he/she does not really have enough time to master the job and generate a benefit by himself/herself.

Interestingly also, some companies, particularly small and traditional ones, emphasize the new ideas that young students bring into the organisation, opening the doors to innovation and latest working processes. Finally, concerning financial incentives, it can be said that financial support is not at all the reason why the company takes part in the process (either because it does not exist or because the amount of money provided is very low).

Concerning the benefits for students derived from their participation in apprenticeship-type schemes, the most remarkable advantage refers to increasing employability options. Students see the "in-company training" module as a period during which they can demonstrate their skills and aptitudes in a working post where they may have options to be employed. As well as this, the workplace based training implies an opportunity for a first contact with a real working environment, where students can develop skills or try processes and technologies not accessible in VET schools.

On the other hand, a frequently discussed issue refers to the transferability of skills among enterprises. Broadly speaking, VET cycles provide students with a wide knowledge in different processes, subjects, etc. related to the degree. In other words, students acquire competences of general nature, so they are not specialised in a particular issue. However, during the "in-company training" module, the company trains the student for the specific post that he/she has been assigned. Therefore, skills acquired in the VET centre are straightforwardly transferable, but skills acquired in a particular company during the "in-company training"

module are normally linked to a specific process or technology not so easily transferable to other workplaces.

Interestingly also, with regard to geographical mobility, it is estimated that there is a lack of national regulation on the issue, so some Autonomous Communities have managed to further develop international mobility agreements in their own area. In some cases, even training centres have individually developed agreements with foreign centres. Thus, it seems necessary to elaborate a standardized national legal framework so that the stay abroad fulfils common requirements, such as the training programme and its contents.

In addition, it is also interesting to comment on the efforts made by Public Authorities to promote lifelong learning through a more flexible VET system, as reflected in recent education policies. Although there is no much information on the issue, it is worth mentioning the data from the Superior Council of Chambers of Commerce, which indicates that the number of students enrolled in VET distance learning has increased over the last year (in 2011 the number of students has increased in 71% in comparison to the previous year). Additionally, the information contained in the "Proposal for the Basque VET Plan 2011-2013"[266] indicates that flexibility and permeability measures applied over the last years within the VET system have been positively and increasingly extended among the Basque population. Thus, for instance, part-time education has become an interesting flexible option which allows the combination of studying tasks with work responsibilities. Available data demonstrate the degree of acceptance and consolidation of this training modality; in the academic year 2007/08 1,428 students in the Basque Country studied part-time VET programmes, whereas in the academic year 2010/11 figures grow to 2,603.

On the other hand, and concerning social considerations, there is another remarkable question currently discussed by Public Authorities and social agents, which concerns equal opportunities in accessing the training system. This issue refers to the potential development of a comprehensive and consolidated grant scheme which really allows and facilitates the progress of all students throughout the training system. This grant system would be particularly aimed at those youngsters aged 18-24 who have abandoned the education system just after having finished compulsory education. The idea is to take them into the education system and facilitate the combination of work and study at the same time. For this purpose, it has been suggested that part-time work contracts should be promoted, in order to encourage young employees to continue studying and get higher qualifications while working.

Finally, it is important to discuss the capability of VET cycles to adapt contents and methods to technological, social and economic progress. In this sense, one of the main initiatives for identifying the competences required by the productive system is the National Catalogue of Professional Qualifications, constituted as a uniform and standardized framework which is updated according to changes in the labour market. In this sense, it must be pointed out that the National Catalogue of Qualifications is a relatively new tool, and the consequent lack of experience cause that this continuous adaptation process is not fully mastered yet. The INCUAL (Institute of Qualifications) is supposed to periodically revise the National Catalogue of Qualifications, but the revision and updating process is still slow, and it delays other related practices. What is more, some experts see a conflict of perspectives between the Ministry of Education and the Ministry of Labour, and these differences make the updating even more complicated.

As well as this, some stakeholders have criticized that the administrative process followed to approve new degrees or modify the contents of the existing ones is pretty time-consuming and legal steps slow down the revision of VET cycles. In this sense, it must be positively

[266] VET Directorate of the Basque Government, 2011. "III Plan Vasco de Formación Profesional 2011-2013. Propuesta". More information at http://www.openideiak.com/pg/file/fprofesional/read/64468/iii__plan_vasco_de_formacion_profesional_2011_2013__propuesta

argued that the recently approved Law 2/2011 for a Sustainable Economy and the additional Organic Law 4/2011 have tried to reduce the administrative requirements for the updating of qualifications. Additionally, the new regulation has tried to promote and facilitate the correspondence between VET degrees, real training needs and the contents of the National Catalogue of Professional Qualifications.

Furthermore, and concerning the effects of the economic downturn, it must be taken into account that these modifications of the education legal framework were approved during the crisis time. Thus, although there have not been major changes within the structure of the VET system specifically related to the crisis, certainly the legal changes introduced are aimed at overcoming this economic downturn and facing the expected growing period. Thus, for instance, new regulations state that the offer of VET programmes must be adapted to the socioeconomic context and the development perspectives. In this respect, new legal adjustments allow VET schools to offer specific training programmes (shorter than middle-level or upper-level cycles) adapted to the training needs of a particular region. Additionally, the evaluation and accreditation of professional competences is specially promoted in growing economic sectors and among unemployed collectives.

To end with, it should be remarked that the structure of the Spanish VET system is relatively recent and, looking to the future, there are not big changes expected. The last amendments introduced are in line with those aspects which have been traditionally criticized, so it seems that the development of the Spanish VET system is being lead to the right track. Yet, it is early to assess recent changes, and moreover, it is necessary that the VET system continuously evolves together with technological, social and economic progress. In any case, it is also important to point out a very positive aspect: political changes in Spain have not had strong effects on the VET system for the last 20 years, in the sense that political parties have generally agreed on the organization and development of the VET system.

Identification of specific aspects of the national apprenticeship type schemes and/or particular experiences at sectoral/regional level that are regarded as good practices (elements to be reinforced)/bad practices (elements to be changed/reformed)

To start with, and concerning "good practices", there are two interesting projects worth to be mentioned:

- The "Ciceron Project"[267]· is a centralised system based on an agreement signed between the Chamber of Commerce of the Autonomous Community of Castilla y Leon and the Department of Education of the Government of that Autonomous Community. This project is aimed at developing the VET system and specially the FCT module, and it supports and assesses all the agents implied in the FCT module: students, companies, education provincial councils, etc. Among other services, the Ciceron project boasts an online database where companies and training centres can make public their interest for collaborating in the FCT module and contact each other. As well as this, the website makes all the required documentation available: agreement templates, documents for the student supervision and evaluation, etc. Therefore, the Ciceron project allows the access to information provided by Official Chambers of Commerce, the Department of Education, companies, training centres and VET students.
- "Ikasi eta Lan" pilot project took place in a few schools of the Basque Country during 3 academic years, with the impulse of the Regional Education Department, the employers' organisation and the VT centres' associations. The project "ikasi eta Lan" (which in Basque means "learn and work") introduced a new apprenticeship scheme characterized by a real employment contract with a company. Students were provided with theoretical training in the school, from 8 to 12.30 every morning, and then, in the afternoon, they had to work in a specific company. Students signed a part-time working contract and

[267] http://www.ciceron-fct.com/ciceron-public/

they got paid approximately 600€. This project implied real work for students, in the sense that they were producing for the company, and they were being trained as a part of the production system. This training system was available only for upper-level VT cycles and its duration was 3 years. From the training centres' point of view, the project was seen as a very useful programme, as companies could enjoy the work of a young student and train him according to the company's needs. Companies could even envisage and plan their training needs or vacancies and prepare students for future needs. However, as a consequence of the economic crisis, the programme has not been relaunched for the last years, even though most actors consider the experience a success, permitting a better learning of competences (both specialised and transversal) and somehow marking the way forward.

- "Berrindu- Encuentros con la realidad" (or "Meeting with the reality" in Spanish) is a program organised by Adegi[268], the employers' association of Gipuzkoa. This program is aimed at teachers and professionals working in VET schools in Gipuzkoa, and it consists of organising visits to companies in the area. The basic idea of "Berrindu" is to facilitate that teachers visit companies' facilities, in order to get to know real working processes and promote the exchange of practical experiences. Thus, thanks to this programme, VET schools can gain access to innovative experiences with regard to manufacturing and management processes which are applied in the real business world.

Generally speaking, and thanks to the increasing prestige of the VET system, the relationship between VET centres and companies is getting stronger and stronger, and normally they keep a "win-win" relationship from which both parties can obtain a benefit. In many cases, the cooperation between schools and business goes further than just a cooperation agreement based on the "in-company training" module. Examples of collaboration include, for instance, schools that sign cooperation projects for research, teachers that are at the same time qualified professionals of a company, VET schools that support companies in training needs assessment, teachers that spend training periods in a company learning about new working processes, etc.

Furthermore, many training centres have the possibility to develop some custom-made courses according to companies' needs. For instance, if a company is suffering from lack of competences to handle a particular technology, a VET school can support the company by organising and teaching a specific course on that particular technology. In those cases, many schools ask the company to hire a percentage of the students afterwards in exchange. This type of agreement is usually promoted by the Autonomous Community, which is even willing to support it financially. As well as this, there are also interesting projects developed by training centres, based on the implementation of a "technical assessment centre", conceived as a support unit for companies of the regional business tissue. An example of this project took place in a rural area where the most qualified people were the students and teachers of that VET training centre.

On the other hand, and with regard to challenges experienced by the Spanish VET system, it is possible to comment on the relationship between upper-level cycles and university degrees. Permeability between centres is an issue which has been made more flexible thanks to the Law for a Sustainable Economy, but still public bodies are working on it. A particular case is the situation experienced by some VET schools a few years ago. Some schools signed bilateral collaboration agreements with universities, by which some of the subjects studied in upper-level cycles were validated for VET graduates accessing university. On the other hand, university students were allowed to study some practical courses in VET schools. Thanks to this connection, VET programmes gained greater reputation. However, public administration invalidated these bilateral contracts because they were not officially regulated. The recent Sustainable Economy Law has facilitated the access of VET students

[268] For more information see: http://www.adegi.es

to university, but the Government is still working on the collaboration terms between universities and VET schools.

Looking to the future, and also concerning universities, it is expected that in a few years time (from 2013 onwards) university degrees will include a period of in-company training similar to the module nowadays included in all VET cycles. This will probably mean more competition and difficulties for VET training centres to find collaborating companies, as companies may have to choose between taking in university students or VET students. In fact, for the last years (and especially during the crisis time) it is not strange to find students with a university degree who, after finishing university, access to upper-level VET cycles with the aim of obtaining a more practical education and being trained in real-work situations.

On the other hand, some stakeholders have raised the idea of extending the period of the "in-company training" module of VET courses. One reason for this is that in some cases training centres do not have all the technologies or infrastructures found in the labour market, or even teachers are not as qualified as real professionals. In some particular Autonomous Communities or professional families, for instance, some students in health-related cycles spend more time than the average in hospitals or health care facilities, because of the availability of better resources and more experienced and skilled workforce.

Recommendations

According to the information collected in the interviews, some of the commentaries concerning the improvement of the national apprenticeship type schemes could be the following ones:

- Even if the relationship between schools and companies has improved a lot over the last years, it is still recommended that this contact should be reinforced, in order to better adapt the contents of the VET system to the labour market needs. In this sense, several suggestions have been made, such as the organisation of meet-ups or encounters with companies, professionals, trainers and social partners from different professional families, in order to determine existing training needs in the labour market, as well as the creation of a platform where current and future training needs can be contrasted. On the other hand, it is recommended that the Spanish VET system should place greater emphasis on work experience and on in-company training, and it should also promote the effective involvement of working professionals in teaching. Moreover, some experts estimate that teachers should be better trained, and their knowledge should also be updated.
- Changes and adaptations of training contents in VET programmes are relatively slow, since legal processes require many formal administrative steps. As well as this, the updating of the National Catalogue of Professional Qualifications is a relatively new process which also requires many administrative formalities, slowing down the process. It can not be denied that new legislation has tried to make the process of modifying or approving new qualifications easier and more flexible. However, the implementation of this recently approved regulation is still in progress, and the amendments introduced seem not bet enough. In conclusion, it is recommended that the Public Administration makes a greater effort to make official processes lighter and quicker, avoiding the burden of red tape.
- Concerning quality evaluation, it is suggested that the National Quality Network should be further developed. In this sense, recommendations include letting all stakeholders take part in quality assessment processes, as well as elaborating precise assessment plans and quality indicators which allow analysing results and reaching accurate conclusions to take precise improvement actions. Moreover, and with regard to quality assurance of in-company training periods, the competent public administration should develop standardized mechanisms to evaluate companies and their training processes. In other

words, there should be more control and monitoring over companies, so that not so much responsibility is left in VET schools' hands.

- With regard to geographical mobility issues, the participation of students in international programmes is still low, mainly because the implementation of these programmes is relatively recent. Indeed, many VET training centres do not take part in these activities. Therefore, it is suggested that geographical mobility should be promoted, as a very convenient tool to support the internationalization of the Spanish business tissue. In this sense, it seems necessary to develop a legal framework which standardizes and regulates the training of VET students abroad. As well as this, students' language skills should be reinforced.

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UNITED KINGDOM

Background information

The recent Wolf Review (2011) has highlighted the importance of vocational education and training within the framework of qualifications and education in England[269]. As Wolf (2011) notes, '[m]ost English young people now take some vocational courses before they are 16; and post-16 the majority follow courses which are largely or entirely vocational.' While vocational education sits alongside a general (academic) route, it has been seen as the poor relation and as a result has been subject to continual attempts to revise and restructure it in order to deliver greater parity of esteem.

For example, intention to increase the vocational options available for young people between the ages of 14 and 19 was announced in the green paper, '14-19 Extending Opportunities, Raising Standards' (DfES, 2002), with plans subsequently confirmed in the white paper, '14-19 Opportunity and Excellence', (DfES, 2003). '14-19 Opportunity and Excellence' recognised the need both to improve vocational options and raise the status of vocational provision. 'Curriculum 2000: Innovations, Opportunity and Change' (LSDA, 2002), further reinforced the message. This noted, among other points, the need to: increase parity of esteem for vocational qualifications, and to enhance and broaden 'A' level (Advanced post-16 qualifications) programmes by introducing vocational elements. Across the course of the next few years new programmes, and a range of new awards were introduced.

More recently, governments have sought to increase the qualification and skill levels of individuals, to focus more attention on the technician level (Level 3, equivalent to ISCED 4), a need identified by the Leitch Review of Skills (HM Treasury, 2006). Different strategies have focused on the needs of young people and adults, those in work and those preparing to join the labour market. For young people, the critical policy development has been the intention to raise the participation age (RPA) in education and training. The concept was introduced in the 'Raising Expectations: staying in education and training post-16' Green Paper (DCSF, 2007) and its implementation was established in the 2008 Education and Skills Act. The strategy has subsequently been confirmed by the more recent Coalition government in 'The Importance of Teaching' (Schools White Paper 2011). As a result of this strategy, young people are encouraged and at a final point mandated, to remain in education or training until the age of 18 and gain a minimum qualification of Level 2 (ISCED Level 3) with the achievement of Level 3 (ISCED 4) seen as the most desirable outcome.

The challenge now identified is that not all young people benefit from vocational qualifications which benefit them in the labour market. Wolf (2011) reports, '[c]onventional academic study encompasses only part of what the labour market values and demands: vocational education can offer different content, different skills, different forms of teaching. Good vocational programmes are, therefore, respected, valuable and an important part of our, and any other country's, educational provision... But (critically) many vocational students are not following courses of this type.' The Confederation of British Industry (CBI) notes the centrality of apprenticeship but also its key concern in their reform:

> *'There must be a "respected and credible" vocational offer to employers and individuals that can command the same respect as academic options. This should be based on an expanded Apprenticeships scheme and reformed vocational qualifications.' (BIS, 2010)*

The vocational qualification offer will, as a result, be reformed – to provide a simplification since it is found to be 'complex and opaque' when compared to other EU nations and to focus on those elements which benefit young people and employers most. Apprenticeships are

[269] The UK has a devolved system of governance for education and training and there are differences in the provisions and regulatory frameworks of England, Northern Ireland, Scotland and Wales. The information in this case study focuses on England although later stages may explore the similarities and differences between the systems across the UK.

seen as the high quality route to achieving improved outcomes for young people who choose to leave full-time education in order to enter work. They are a crucial part of education and training provision within the UK and are critical to raising the participation age. Until the RPA strategy was established, three options were available to young people at the end of compulsory schooling: they could choose to continue in education, they could take up a training post (an apprenticeship) or they could enter the labour market through taking up a job without training (JWT). This latter route is no longer acceptable to policy officials and expanding the provision of apprenticeships is seen as the key route to meeting the needs of young people in this group – so far as they have obtained qualifications which enable their access to an apprenticeship. For capable young people, an apprenticeship is now the only route to gaining nationally recognised and accredited initial vocational education and training which has a significant and mandatory element of work-based learning within the English system.

Apprenticeships have received significant support from successive governments in recent years with the previous Labour and current Coalition administrations detailing plans for their expansion. The most recent announcement, contained within the Schools White Paper (2010) envisages that 131,000 young people would start an apprenticeship in 2010/11.

Historically, apprenticeships have been held in high esteem and they are currently viewed as a high quality route which deliver benefits to young people (who gain good quality qualifications which underpin labour market transitions) and employers (who may access skilled young people and train to the company's standards). However, in the intervening period, reforms are said by some commentators to have led to a devaluing of apprenticeships such that there is concern that young people and employers lack awareness of the opportunity to undertake them. These reforms have included a shift from time-served and employer contracted apprenticeships to accredited- and competency-based approaches (through National Vocational Qualifications) and new models of delivery. The expansion of apprenticeships into non-traditional sectors may have had an influence here and some have argued this led to the establishment of a two-tier system such that Apprenticeships in traditional sectors are viewed as having higher value than those delivered in non-traditional sectors. There has been an increasing focus in recent years on achievement rates in apprenticeships and this may have led to a tightening of entry criteria. Apprenticeships are available to all young people in England, and particularly *suitable* for those who want to qualify through work-based training rather than to continue in full-time learning.

The Data Service[270] identifies that an apprenticeship in England is 'a framework consisting of a National Vocational Qualification (NVQ), Key Skills qualification (typically functional literacy, numeracy, IT skills), a technical certificate (which provides the 'knowledge' input element and may be combined within the NVQ) and input focused on employment rights and responsibilities. Learning as part of an apprenticeship takes place both in the workplace and with a local learning provider. The apprenticeship framework ranges from qualifications at Level 2 to Level 4 (ISCED equivalent 3 to 5).

Responsibility for apprenticeships straddles the policy areas of the Department for Education and the Department for Business, Innovation and Skills. Consequently, ministerial responsibility encompasses both of departments. The Department for Education has responsibility for education among children and young people; hence its interest extends to young people engaged in Apprenticeships (up to the age of 19). The Department for Business, Innovation and Skills focuses on adult skills and training (ie post-19 years) and adult apprenticeships are within its remit.

[270] an independently managed organisation, established and funded by the Department for Business, Innovation and Skills and supported by the Skills Funding Agency to act as a single, central point of information about further education in the UK.

The National Apprenticeships Service coordinates and leads apprenticeships in England with responsibility for providing information and advice to employers and to young people. It is tasked with providing a job matching process. These responsibilities are delivered through a national policy and business delivery team, and regional teams with dedicated employer and learner services. The national team works to promote Apprenticeships and develop policies and practices which enhance the learner and employer experience. Regional teams provide detailed support to employers and support training providers and careers guidance staff in schools and colleges. The Apprenticeships, Skills, Children and Learning Act 2009 set priorities and targets for the activities of the National Apprenticeship service. This act provides the legal framework/legislative structure for apprenticeships.

OFSTED, the Office for Standards in Education, Children's Services and Skills in England, regulates apprenticeship training. It has responsibility for the regulation and inspection of schools, colleges, training providers and other education establishments to achieve excellence in the care of children, young people and adults and in education and skills for learners of all ages. The social partners declare their centrality to supporting apprenticeships although the Trades Union Congress (TUC) has noted a decline in the influence of unions in recent years. The social partners provide a critical dialogue on the government policies and strategies.

Existing VET apprenticeship type scheme at a national level

Existing apprenticeship type schemes

The UK education system comprises schools, sixth form and further education colleges and universities. Schools typically provide education to all young people between the ages of five and 16 and sixth forms (in schools or as independent colleges) and further education colleges cover the 16-19 age range – although some school-aged students may attend college for certain qualifications in the 14-16 age range. Universities typically provide higher education (HE) for those aged 18 and over although HE may be delivered by other institutions including further education colleges, employers and private providers.

Young people are currently (until 2013) required to stay in full-time education until the age of 16 and over 80 per cent already do this (DfE, 2010). In the final two years of compulsory schooling (known as Key Stage 4), young people prepare for and take nationally accredited qualifications which are the equivalent of up to ISCED 3. The qualifications include General Certificate of Secondary Education (GCSE) – which is seen as the academic route – and/or vocational qualifications encompassing for example, National Vocational Qualifications (NVQ) and Business and Technology Education Council qualifications (BTEC) at Level 1 (ISCED 2), BTEC First at Level 2 (ISCED 3) and Diplomas (introduced in 2008), which span the 14-19 age range and may be completed to a higher level in post-compulsory education. Diplomas contain some work-based learning although the extent of this depends upon the sector being studied towards. Typically, Diploma students in the 14-16 age range experience up to 10 days work-based learning across two years. However it should also be noted that all young people in Key Stage 4 typically undertake a 10 day work placement to gain insight into the world of work in any case. From 2005, a small-scale work-based learning programme was operated in Key Stage 4, which was known as the Young Apprenticeships. By 2010, places were available to around 10,000 students nationally who combined up to 50 days work-based learning with study towards vocational qualifications alongside or as an alternative to some of their GCSE qualifications. However the Coalition government announced in March 2011 that funding would no longer be made available to support the delivery of this route in future years.

Beyond the age of 16, young people may enter full-time education, full-time training or work. Until 2013 there is no duty on those entering work at the age of 16 to continue their

studies although there is entitlement to time off to study towards a Level 2 qualification (ISCED Level 3). Those considered as being in training follow the apprenticeship route (the framework and qualifications are clearly defined by government) although some employers may encourage other qualification routes for young workers for example, completion of Higher National Certificates, although these do not form part of the apprenticeship framework. Those in education may follow an academic route and study towards Advanced level studies (ISCED 4) or may study towards vocational qualifications which do not have a significant element of work-based learning. These vocational qualifications may include the Diploma, NVQ as well as BTEC and City and Guilds. Full-time tertiary level study is typically completed over two years. Those young people studying towards the academic route will take AS (Advanced Subsidiary) Levels in the first year of the post-16 study and A (Advanced) Levels in the second year. Vocational studies tend to use continuous assessment methodologies and length of study tends to depend upon the qualification level being studied towards.

The academic and vocational options continue into higher education. As part of activity to widen participation in higher education, Foundation Degrees were introduced in 2001. These were designed in conjunction with employers and combine varying extents of work-based learning with taught elements within higher education institutions depending on sector. A Foundation Degree might be the study aim of an apprentice who has completed the requirements of an Advanced Apprenticeship, depending on the sector. Foundation degrees are equivalent to the first two years of a traditional undergraduate degree within the English system and are studied, typically, over two years in full-time mode and three years in part-time mode. Other vocational higher education qualifications include Higher National Diplomas (the same level as a Foundation degree and studied across two years in HE typically) and Higher National Certificates (typically one year of HE study). These are known as work-related courses rather than as work-based learning in the UK. Professional qualifications (eg related to accountancy or human resource practice) may also be combined with work and studied at levels with equivalence to undergraduate, Foundation or postgraduate degrees.

Pre-requisites for each type of qualification and route post-16 vary extensively, and are guided by prior achievement rather than age. Access to higher education including vocational HE options depends on the achievement of qualifications at Level 3 (ISCED 4) which include A Levels but also Access to HE courses which are designed for people who would like to study at university but who left school without qualifications, such as A levels. While there are the defined routes for young people within the UK system as detailed above, adults may also take the same qualifications although attend all-adult provision.

The following section now focuses on information related to apprenticeships as formally defined in the UK system. All apprenticeships in England conform to the framework of an NVQ qualification, technical certificate (which may be embedded within the NVQ) and the provision of Key Skills. The framework was first introduced in 1990 but has been subject to some revision in the intervening years. The changes have not however changed the overall combination of competence development and demonstration (through the NVQ), knowledge input (technical certificate) and functional skills (Key Skills element). The Specification of Apprenticeship Standards for England (2011) sets out that apprentices will receive a minimum of 280 guided learning hours in any year.

Fuller and Unwin (2009) identify that two models of apprenticeship have evolved as a result of the changing labour market and policy emphases. Craft apprenticeships (closest to the mediaeval model) continue in the sectors traditionally associated with apprenticeship delivery such as engineering and construction. Non-craft apprenticeships have grown out of other schemes to engage more young people in training (and then apprenticeships) and to engage a wider range of sectors in the delivery of apprenticeships. The priority in these arguably has been to counteract youth unemployment, address low skill levels and social inclusion.

A further debate proposed by these authors surrounds concepts of extensive and restrictive apprenticeship (Fuller and Unwin, 2008; see also Fuller and Unwin 2003a, 2004, 2006). An extensive apprenticeship is seen to contain a number of best practice factors and incorporates a dual relationship as trainee and employee (for a restrictive apprenticeship, being an employee dominates the experience), planned off the job training (compared to mostly on-the-job training) and a gradual transition to full work participation and a vision for in-work career development and progression (rather than rapid completion and a static in-work status) among a large number of factors. The benefits of the extensive model have been recognised as a result of this work and Fuller and Unwin have worked with the Skills Funding Agency and National Apprenticeship service in order to provide good practice guidance for employers and training providers so that this model of apprenticeship further embeds (Fuller and Unwin, 2010).

These differences certainly exist and impact on the experience of training; however in practice all apprenticeships in England conform to the framework of an NVQ qualification, technical certificate (which may be embedded within the NVQ) and the provision of Key Skills. The framework was first introduced in 1990 but has been subject to some revision in the intervening years. The changes have not however changed the overall combination of competence development and demonstration (through the NVQ), knowledge input (technical certificate) and functional skills (Key Skills element). The Specification of Apprenticeship Standards for England (2011) sets out that apprentices will receive a minimum of 280 guided learning hours in any year.

With the policy to expand apprenticeships, new models of establishing the employee/employer relationship have emerged. The traditional model has been maintained whereby an employer recruits a young person as an apprentice, and provides work-based learning and (often) off-the-job training until they gain agreed standards of competency. Other delivery models conform to the apprenticeship framework and include:

- Group Training Associations (GTA). 'Group Training Associations were originally set up in the 1960s to train on behalf of groups of employers, using funds contributed by them through a statutory training levy and with assistance from the relevant Industry Training Boards to purchase capital and equipment. Whilst GTAs have evolved over time in many ways including coverage of a much wider sector spectrum, they can still be defined by their core characteristics: a training organisation governed by representatives of (usually subscribing) employers; a company limited by guarantee and registered charity reinvesting all surpluses; a training provider whose curriculum is centred on apprenticeship for engineering, construction and manufacturing (NAS, 2009).
- Apprenticeship Training Associations (ATA). This model has been introduced from Australia. '[A]pprentices are employed by the Training Association and "hired out" as a flexible workforce to other employers, known as "host companies" for the work-based element of their apprenticeship. Host companies pay the Training Association a fee for the hire of the apprentice, which comprises their salary plus a service charge which covers the management costs of employing and supporting the apprentice. The Training Agency takes on most of the administration, dealing with the payroll, support and supervision of the apprentice and being the legal employer. A benefit for host companies is that they can hand back the apprentice with two weeks' notice, resulting in a far more flexible and demand-led approach to the employment of apprentices. This is particularly attractive in the current economic climate, particularly for SMEs.' (NAS, 2009). The TUC has expressed concern about this model and specifically, the quality of training and the implications of the contractual arrangements for young workers.

Apprenticeships are available from the age of 16 and there is no upper age limit. The government has set out its intention that they become the key route to qualification, particularly for low skilled adults in work (BIS, 2010). While there are no age limits, differential levels of government funding are available by age. Full funding is available to cover the

training fees of 16-18 year old apprentices. For those aged between 19 and 24 years, employers are expected to contribute 50 per cent of the training fee. Where apprentices are over 25 years old, typically employers fund the full costs of training (NAS website).

Apprenticeships cover all sectors and range from levels equivalent to upper secondary schooling to undergraduate education. The intensity and duration of training depends upon the sector and level of qualification (the NVQ) being studied. Apprenticeships are available in the following sectors: Agriculture, Horticulture and Animal Care; Arts, Media and Publishing; Business, Administration and Law; Construction, Planning and the Built Environment; Education and Training; Engineering and Manufacturing Technologies; Health, Public Services and Care; Information and Communication Technology; Leisure, Travel and Tourism; and Retail and Commercial Enterprise. The frameworks for each sector 'are developed by Sector Skills Councils, which are licensed by government to work with employers to develop National Occupational Standards. Some examples of the typical duration of training for different levels and different sectors are discussed below.

Hasluck et al. (2008) undertook a study to assess the net benefit of apprenticeships to employers. In order to complete this analysis they reviewed the typical time required to complete an apprenticeship in different sectors and at different qualification levels. Their research focused on six sectors and provided a contrast between traditional and non-traditional apprenticeship areas of training. The sectors were: engineering; hospitality; retail; business administration; and, construction. Their study demonstrated significant differences in the length of training by sector. For instance:

- Engineering apprenticeships typically take between three and a half and four years to complete. During this time a range of qualifications are typically achieved from Level 2 through to Level 4 (ISCED Levels 3 to 5)
- in Hospitality, the achievement of a Level 2 qualification (ISCED Level 3) is typical within apprenticeship delivery and this requires up to 12 months of training
- Retail apprenticeships are typically short duration and involve the achievement of a Level 2 qualification. Apprentices spend between three and 12 months in training.
- Business Administration apprenticeships are typically taken at Level 2 and Level 3 (ISCED Level 3 and 4). The time required to complete a Level 3 apprenticeship varies between two and four years. Level 2 apprenticeships would (typically) be achieved in less time, eg around 12 months.
- Construction apprenticeships tend to be at Level 3 (ISCED Level 4) which is considered by employers the minimum standard of competence to work on construction sites. To achieve a Level 3 qualification through the apprenticeship takes around three years.

Hasluck et al. (2008)

Quantitative importance of apprenticeship-type schemes

Data is not available about the number of young people taking up different types of qualification within Key Stage 4 nor on the achievement of these different qualifications. Instead the government reports on achievement of the equivalent of Level 2 (ISCED 3). Similarly, the Data Service reports aggregated data by Level of achievement for those engaged in learning and training between the ages of 16 and 19. However, as Wolf (2011) has noted, most young people undertake some vocational studies in the 14-19 age range.

Uptake of vocational qualifications in higher education is developing. HEFCE (2010) (the higher education funding council in England) notes that in 2009-10 "99,475 students were registered, or were expected to register, on foundation degree programmes." This report also notes the government target for 100,000 Foundation Degrees to be delivered by 2010. However it has not been possible to find disaggregated data in order to report on take up of

Higher National Certificates or Diplomas (HNC/HND). Further analysis by HEFCE (ibid.) demonstrates that creative arts and design sector Foundation degrees were the most popular full-time option, while business studies/administration was the most frequent part-time option studied. Across full- and part-time study modes, female students are dominant. Young people (aged under 20) dominate the full-time mode entrants while those aged over 30 are the most common among part-time entrants. Just over half (59 per cent) of full-time entrants to Foundation Degrees progress into further higher education studies ie in order to achieve an undergraduate honours degree. Whether they were studying or otherwise, HEFCE (ibid.) found close to half of Foundation Degree graduates were in work six months after completion.

The Schools White Paper (DfE, 2010) reports on the number of young people engaged in apprenticeships. This notes that 113,700 young people aged 16–18 became an apprentice in 2009/10 and the DfE for in 2010-11, set an expectation that 131,000 young people would join an apprenticeship programme. Alongside this, the number of adult apprenticeships is due to expand with an additional 75,000 delivered in the 2011-14 period (BIS, 2010). BIS reports that this expansion would lead 'to more than 200,000 people starting an Apprenticeship each year'.

It is reported (see section 4.1) that the number of young people aged 16 to 18 entering apprenticeships represents around six per cent of the cohort. The large majority in this group continue in full-time education however may follow general academic study routes (by taking A Levels) or vocational studies (but without significant work-based learning).

Information on the number of apprenticeship starts is published in a quarterly statistical first release (SFR) which is published by the Data Service. The most recent SFR (January 2011) reports that: 279,700 apprenticeships were started in 2008-09 representing an increase of 16.6 per cent compared to 2008/09. Of these there were: 190,500 Intermediate Level Apprenticeship starts (Level 2/ISCED Level 3); 87,700 Advanced Level Apprenticeship starts (Level 3/ISCED 4) and 1,500 Higher Apprenticeship starts (Level 4/ISCED 5). Learners under the age of 19 started 116,800 Apprenticeship frameworks; 19 – 24 year olds started 113,800 Apprenticeship frameworks and 25+ year olds started 49,100 Apprenticeship frameworks (Data Service, 2011). Participation/share is not broken down within the SFR however it contains details which suggest that 1,095,000 young people were enrolled in learning and training in 2009-10 therefore the share in apprenticeships may be estimated at around 25 per cent of post-16 young learners. The SFR does not provide a more detailed analysis by sector or by type of apprenticeship.

Research undertaken by Marangozov et al. (2009) demonstrates that the take-up of apprenticeship is strongly gender, race and ability biased. Many commentators have expressed concern about this situation, over many years (see Miller et al. 2004, Miller et al. 2005 and Fuller and Unwin, 2003). The Marangozov study found 'women are significantly under-represented in the sectors of construction, plumbing, electrotechnical, engineering and vehicle maintenance and repair…. People from Black minority ethnic backgrounds are particularly under-represented in hairdressing, construction, vehicle maintenance and repair, and electrotechnical activities….Learners from Asian minority ethnic backgrounds are under-represented in construction, hairdressing and electrotechnical apprenticeships. Chinese and mixed ethnic background apprentices are under-represented in vehicle maintenance and repair, construction, and engineering apprenticeships…. Learners with learning difficulties are under-represented among electrotechnical apprenticeships, management, active leisure and learning, and retail. Under-representation for learners with disabilities is notable in the electrotechnical, plumbing, active leisure and learning, vehicle maintenance and repair, and hospitality and catering sectors'. The study provides information on the distribution of apprenticeships by sector (see Table E.104) for 2008-09.

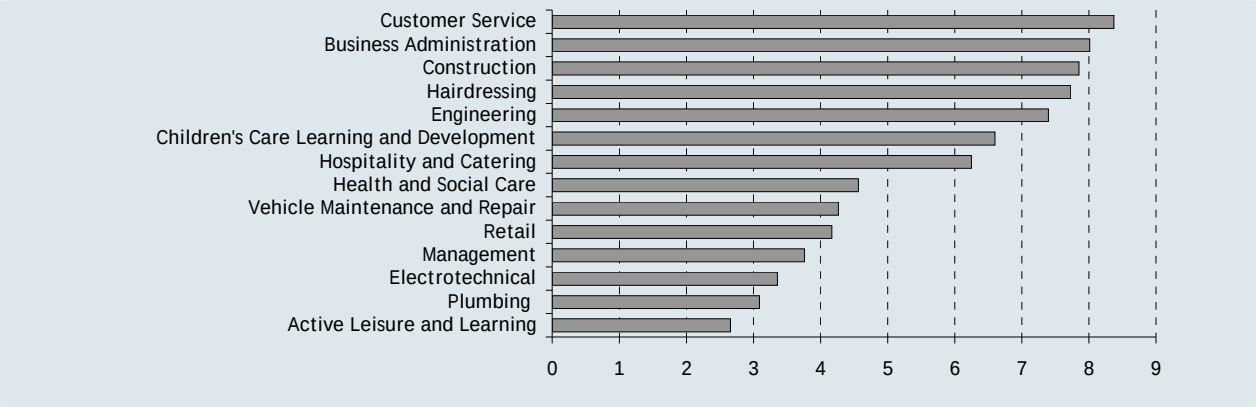
Table E.104 No. Apprenticeship & Advanced Apprenticeship framework starts (Aug 08–Jan 09)

Sector	N
Customer Service	11,342
Business Administration	10,910
Construction	10,752
Hairdressing	10,502
Engineering	10,076
Children's Care	9,008
Hospitality and Catering	8,458
Health and Social Care	6,197
Vehicle Maintenance and Repair	5,701
Retail	5,669
Management	5,054
Electrotechnical	4,575
Plumbing	4,209
Active Leisure and Learning	3,602
Other subjects	29,567
Total	135,622

Source: IES analysis of ILR August 2008- January 2009 (Marangozov et al. (2009))

Details of achievements (successful completion) are included in the Quarterly Statistical First Release (Data Service, 2011). The most recent of these notes that '[t]he volume of Apprenticeship framework achievements in 2009/10 was 171,500 … an increase of 19.6 per cent compared to 2008/09. Of these there were: 111,900 Intermediate Level Apprenticeship framework achievements; 59,400 Advanced Level Apprenticeship framework achievements; 200 Higher Apprenticeship framework achievements. Learners aged under 19 achieved 73,100 Apprenticeship frameworks; 19 – 24 year olds achieved 64,200 Apprenticeship frameworks; and 25+ year olds achieved 34,300 Apprenticeship frameworks'.

Graph E.25 % Distribution of apprenticeship framework starts by sector (Aug 08–Jan 09)



Source: IES analysis of ILR 2008-09 (Marangozov et al. (2009))

Hogarth et al. (2009) have studied apprenticeship completion rates in some detail. Their study showed an overall rate of completion of 65 per cent for Apprenticeship and Advanced Apprenticeships based on 2007-08 data. They report the difficulties of making national and international comparisons however assess that this completion rate (or expectations of completion) should be raised to between 70-80 per cent. Their analysis suggested:

- women were more likely to complete than men at Level 2, but the gender difference was not significant for Advanced Apprenticeships (at Level 3);
- Black and Pakistani apprentices are somewhat less likely to complete than their White counterparts;

- where apprentices have a learning difficulty, disability or a health problem, they are less likely to complete. (Hogarth et al. 2009)

More recent figures suggest that the recommendation from Hogarth et al. (ibid.) for the expectation of a 70-80 per cent completion rate has been achieved. FE News (2009) reported BIS figures for 2008-09 showed an overall success rate for apprenticeships of 70.9 per cent, compared with 65 per cent in the previous academic year, and 37 per cent in 2004/05.

The Hogarth study notes a number of factors which affect drop out rates not all of which could be considered negative: 'there are many events which bring about non-completion which are difficult to control; for instance, redundancy, firm closure, the apprentice becoming pregnant or ill'. They also note that opportunities for progression to further learning and the provision of information and advice about progression opportunities are a factor in improving completion rates.

Data on learner destinations is being collected through the Framework for Excellence in England. Indicators included in this are: Success Rates - the percentage qualifications that were successfully achieved as a percentage of those started; Learner Destinations - the percentage of people who progressed in learning or work as a result of completing their course; Learner Views - a score based on what people studying or training with an organisation thought about them; and, Employer views - a score based on the views of employers using an organisation for staff training. However it has not been possible to locate national figures in time to include information in this report. As a result, we have drawn on information available from a study which used a survey method to assess destinations.

Perez-del-Aguila et al. (2006) undertook a small-scale study to explore the post-training destinations of apprentices. Their findings suggest that the majority of apprentices continue to work for the employer with which they trained and the majority continue to work in the sector in which they trained. There were different opportunities for promotion and progression between sectors and the authors assess that employers reward the loyalty of apprentices through promotion. Analysis of secondary data (Labour Force Survey) suggested a greater propensity for self-employment among former apprentices over other adults in the labour market. Progression to further learning appeared more varied and was highly dependent on availability of appropriate provision and employer support.

Operational Description of Apprenticeship-Type Schemes

Training curricula and training/education contents/competence profiles

A 'blueprint' for apprenticeships was confirmed in 2005 which has set in place the key tenets of an Apprenticeship to which all sectors and delivery models must conform (LSC, 2005). The information supplied in this document set out the 'essential content [to be covered by the sector apprenticeship framework] and areas where flexibility is possible as a basis for agreement by those principally concerned with the design and implementation of Apprenticeships, that is: Sector Skills Councils, Sector Bodies and their employers, the Learning and Skills Council (LSC), the Department for Education and Skills and the Qualifications and Curriculum Authority (QCA).' Sector Skills Councils and Sector Bodies are responsible for determining and publicising entry criteria within their sectors.

Sector Skills Councils (SSCs) are independent, employer-led, UK–wide organisations introduced across the past five years. The UK Commission for Employment and Skills (UKCES) reports that the 22 existing SSC cover 90 per cent of the UK economy. The SSCs are tasked to achieve four key goals, which are to: reduce skills gaps and shortages; improve productivity, business and public service performance; increase opportunities to boost the skills and productivity of individuals in the sector's workforce; and, improve learning supply through the oversight of National Occupational Standards, apprenticeships, and further and higher edu-

cation. The UKCES notes the centrality of their role on a skills issues, including: working with employers to identify future skills needs; developing skills and training solutions; setting occupational standards; influencing and shaping the future development of qualifications; designing apprenticeship frameworks; encouraging greater investment in training; and, providing labour market information that assists in long-term business planning[271].

National Occupational Standards (NOS) are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. NOS are developed for employers by employers through the relevant Sector Skills Council or standards setting organisation. The NOS form the basis of National Vocational Qualifications competencies.

Since the blueprint was published, the national body with responsibility for qualifications and curriculum has been restructured and changed. In 2007, the intention to replace the QCA with an independent Office For Qualification and Examination Regulation (OFQUAL) was announced and subsequently confirmed in Apprenticeships, Skills, Children and Learning Act of 2009. This body regulates general and vocational qualifications in England and Northern Ireland (a different arrangement exists in Wales and Scotland).

The essential content and areas of flexibilities within the Apprenticeship framework and established by the Blueprint (LSC, 2005) are detailed in Table E.105 below.

Table E.105 The UK Apprenticeship Blueprint

	Essential content	Areas of flexibility
Competence-based element	The competence-based element must be assembled from sector-relevant National Occupation Standards, take the form of a National Vocational Qualification (NVQ) and be assessed using methods designed to test competence.	The content of the competence element may be determined by the Sector Skills Councils, Sector Bodies and their employers.
	Assessment methods should be determined by the Sector Skills Council in collaboration with the QCA *(now OFQUAL)*.	The qualification name may be varied to suit the sector.
Knowledge-based element	The knowledge element must be designed to provide evidence that underpinning theoretical knowledge required by sector entrants has been demonstrated.	The knowledge element may, or may not be integrated with the competence element.
	The knowledge element will be independently assessed using appropriate methods determined by the Sector Skills Council and Sector Bodies and agreed by the QCA.	The knowledge element may be separately accredited or may be accredited as part of the competence element.
	The knowledge element should form part of a progression route from between levels and into higher education.	Progression from Advanced Apprenticeship to higher education may require additional knowledge, provided that this is clearly stated and the means of progressing is available on commencement of the Apprenticeship.
Transferable skills (Key Skills/Functional Skills)	The following Key Skills should be delivered:	The range of proxy qualifications.
	Application of Number at: Level 1 (Apprenticeship) and Level 2 (Advanced)	The relaxation requirement where a learner holds other qualifications and the time limit relating to this relaxation.
	Communication at: Level 1 (Apprenticeship) and Level 2 (Advanced)	How the aspiration that apprentices achieve Level 2 Key Skills and advanced apprentices achieve Level 3 key skills is be expressed within the framework.
	Key Skills assessment must include an end test, unless an exemption/relaxation applies.	Contextualisation, integration and embedding of Key Skills external assessment.
	Recommendations of Wolf (2011) include requirement that all apprentices achieve a grade of A-C in GCSE examinations for mathematics and English.*	Key Skills delivery models within the Apprenticeship.
Employment rights and responsibilities	Employment rights and responsibilities must be included and it is essential all apprentices understand their responsibilities for equal opportunities, health and safety and the safe learner concept.	The content and assessment of employment rights and responsibilities is the responsibility of the Sector Skills Councils and Sector Bodies designing the framework.
Other considerations	Key Skills, where required by the learner, must be independently accredited (although they may be delivered as part of other qualifications).	Sector Skills Councils, Sector Bodies and the QCA may wish to consider the feasibility of introducing grades to Apprenticeships or their component parts.
	Knowledge and competence based elements must lead to accredited qualifications.	

Source: Adapted from LSC (2005)

[271] http://www.ukces.org.uk/sector-skills-councils/about-sscs/

The following section provides an overall context and illustrative examples based on different sectors to assist with the identification of different bodies involved in delivery. Construction and Customer Service have been selected as the two sectors for detailed investigation on the basis of representing a traditional and non-traditional apprenticeship sector which deliver considerable volumes of apprenticeships in England (see Table E.1 above).

CiTB-Construction Skills is the Sector Skills council for construction. It has responsibility for defining the National Occupational Standards for the sector, the apprenticeship framework, the Diploma in Construction and the Built Environment (C&BE) and for the reform of the major qualification frameworks related to the sector[272]. Skillsmart Retail is the equivalent body within the retail sector and has similar responsibilities to CiTB-Construction Skills in that it has responsibility for the apprenticeship framework in addition to a range of other vocational qualifications. Skillsmart Retail's apprenticeship framework template (Skillsmart Retail, 2010) demonstrates that it has control over which qualifications are delivered within the framework and which awarding bodies training providers may use for qualifications. The framework published by CiTB-construction shows there are differences between the UK regions for example, in Scotland the Scottish National Vocational Qualifications are delivered.

The Sector Skills bodies are industry representatives and as a result have a close understanding of the needs of the employers within their sectors. They represent all workers within the sector and undertake skills profiling and labour market analysis in addition to their role in developing the vocational qualifications offer within their sectors.

The Apprenticeship Blueprint (LSC, 2005) sets out the responsibilities of government, employers, training providers and apprentices. It views the government, employers and apprentices as the 'owners' of apprenticeships and training providers as an honest broker working in partnership with thee owners. Enterprises work with training providers (typically) to identify the qualification specialism (related to job role and sector and corresponding National Occupational Standards) within the apprenticeship framework that will best deliver to the skills needs of the enterprise. Enterprises feed into the sector's apprenticeship framework through their relationship with their SSC.

The flexibilities within the framework have been shown in Table E.105 above. This also detailed the bodies which may influence any variations. An example of how this works in practice, ie that the apprenticeship may be varied to suit an employers specialism within an occupation, is shown in the CiTB-Construction Skills Apprenticeship Employer Pack (undated).

Table E.106 Example units in the competence element of the Bricklaying NVQ

Typically all apprentices would study the following units	Plus Optional units (any one unit from the following)
VR01 Conform to General Workplace Safety	VR42 Erect Masonry Cladding
VR02 Conform to Efficient Work Practices	VR43 Lay Domestic Drainage
VR03 Move & Handle Resources	VR44 Erect Thin Joint Masonry Structures
VR40 Erect Masonry Structures	VR45 Place & Finish Non-specialist Concrete
VR41 Set Out Masonry Structures	VR46 Plaster & Render Surfaces
	VR47 Maintain Slate & Tile Roofing

Source: CiTB-Construction Skills Apprenticeship Employer Pack

[272] http://www.cskills.org/sectorskills/qualsstandards/index.aspx

Role of enterprises in the apprenticeship type schemes and description of company based training

Enterprises play a critical role in the delivery of apprenticeships, and the National Apprenticeship Service has determined that all Apprentices will be employed in order that they have the opportunity to undertake a significant level of work-based learning to ensure their competencies are developed in an applied setting. Both the CiTB-Construction Skills and Skillsmart Retail clearly state the employer's responsibilities in their information targeted at employers. For example, CiTB-Construction Skills requires that employers appoint at Work-based Recorder who will support and guide the apprentice in the collection of evidence of work-place application ie of competence, and who will verify the evidence. The Skillsmart Retail documentation notes that in this sector, typically apprentices require less supervision than in traditional apprenticeship sectors, leading to more rapid productivity. Their document also highlights that company trainers, if appropriately qualified, may lead the teaching input required by apprentices. The goals to be pursued in work-based and school-based activities are determined by the apprenticeship framework and the demands of the NVQ, technical certificate, Key Skills and employment rights and responsibilities elements within it. Good practice dictates that apprentices are mentored and supported in the work place and that employers assess their own health and safety, equal opportunities etc. policies in addition to the teaching inputs that Apprentices receive.

The delivery of the school-based element can vary from workplace to workplace to some degree and depends on the apprenticeship sector. Teaching input may be based upon one-day per week release of the Apprentice to attend college or the training provider may visit the workplace (eg see Maguire and Newton, 2010; Newton et al., 2009; 2008). The remainder of the Apprentice's time is spent within the workplace, undertaking tasks under the supervision of a more experienced employee (or mentor/work based recorder). The training continues over the period necessary to achieve all elements of the apprenticeship framework (see typical durations for different sectors in section 2.1)

The companies involved in apprenticeships can be considered to self-select. Apprenticeships are subject to significant marketing with the aim to increase the volume available. Government bodies and agencies in England undertake a range of activities to encourage the provision of Apprenticeships. Some companies have a long history of involvement whereas the concept is newer to others. There are no particular obligations on employers beyond ensuring the appropriate level of support will be offered to an Apprenticeship to underpin their work-based learning; and that policies and practices related to the employment rights areas are in place and operating effectively. There is no requirement that businesses are of a particular size or scale, nor that they operate their own personnel or training departments. However, they will be supported to ensure they issue an appropriate employment contract to the apprentice. Indeed the expansion of Apprenticeships will depend on the engagement of a far broader range of employers than is currently involved. Beyond this, there is a requirement that businesses provide a safe working environment and training providers should assess health and safety provisions before training commences[273].

There are a range of routes into apprenticeships for workers. For example, the employer may start from the point of wishing to employ an apprentice, however it may also be the case that they identify a worker requires training and at that point contact a training provider, a skills broker, sector body, or National Apprenticeship Service to explore options. Finally they may have an existing relationship with a training provider and ask the provider to recruit on their behalf ie place a young person who has recently been in relevant college-based training (see Maguire and Newton, 2010).

[273] This builds on a series of studies conducted into work place safety and training by Miller et al. on behalf of the Learning and Skills Councils (now the Skills Funding Agency)

Evidence shows a higher likelihood of medium and large sized firms to engage with apprenticeships. For example, research into apprenticeship expansion (LSC, 2008) identifies that, overall, 25 per cent of medium or large employers (50 or more employees) use apprenticeships whereas only five per cent of micro businesses (fewer than five employees) do so[274]. Large employers typically take on ten apprenticeships each year, while small employers (fewer than 25 employees) take on one in the same period. The report considers that finance may be a key reason for this, although note that this factor interacts with others such as knowledge of the apprenticeship.

> 'For smaller organisations there are significant issues around the financial risk of taking on an apprentice. They are less likely to have the flexibility of cash flow to make funding available short term for the employee and do not have the volumes of administration staff to minimise the additional cost of dealing with paperwork. As shown, smaller companies are likely to take fewer apprentices on per year, but many costs are fixed so it is more expensive per trainee than for a larger organisation.' *LSC, 2008*

Other factors that influence employers' decisions to recruit and train an apprentice include:

- Tradition of apprenticeship engagement
- Awareness of apprenticeship offer
- Presence of skills gaps and shortages
- Qualification profile of the sector
- Availability of an appropriate framework
- Employment trends
- Wage returns
- Policy focus (and investment of resources) (LSC, 2008).

Specific role of the company trainer

While there is no specification of the role for a company trainer, there is a need to provide the apprentice with someone to guide and supervise them in the workplace and to collect and verify the evidence that they collect of their competency (eg CiTB-Construction Skills, Employer Pack). There is no specification for the employee which would carry out this task since much depends on business size, however typically it would be the apprentice's line manager. The Work Based Recorder will typically have their own responsibilities in the workplace which extend beyond their apprenticeship mentoring role. It is expected that the role is undertaken by someone with experience who can ensure the apprentice is competent to the company's quality and industry standards. Depending on the sector, training may be supplied to ensure that Work Based Recorders fully understand the requirements of their role. For example, CiTB-Construction Skills can offer funding towards employees attending a relevant training input (CiTB-Construction Skills, Employer Pack).

Description of school based training

School-based training for the apprenticeship is determined by the requirements of the Apprenticeship framework, and more specifically the National Vocational Qualification which relates to the National Occupational Standard, Key Skills, and technical/knowledge based element.

The training typically takes place throughout the apprenticeship for example, through the employer releasing the apprentice for one-day of school-based input each week. However, it may be the case that off the job training is delivered in the first year of the apprenticeship after which on the job assessment of competence is completed. The Specification of Appren-

[274] There may be variation by sector depending on composition by employer size eg there may be larger numbers of small employers in some sectors than in others

ticeship Standards in England (BIS, 2011) sets expectations for guided learning hours and off the job training. Its requirements in this regard, are as follows:

- "An Intermediate Level Apprenticeship framework must specify the number of Guided Learning Hours (GLH) that an apprentice must receive to complete the framework. This must be a minimum of 280 GLH of which at least 100 GLH or 30% (whichever is the greater) must be delivered off-the-job and clearly evidenced. The remaining GLH must be delivered on-the-job and clearly evidenced. Guided learning relates to training which is designed to achieve clear and specific outcomes which contribute directly to the successful achievement of the Apprenticeship framework… An Intermediate Level Apprenticeship framework must specify that, after 12 months of starting a framework an apprentice must receive a minimum of 280 GLH in each subsequent 12 month period.' (BIS, 2011)

Typically apprenticeship training inputs are led by Colleges of Further Education or Private Training; as a category they are known as Work-Based Learning Providers. They fall within the regulatory remit of OFSTED. In terms of their national representation, Association of Learning Providers is the largest association of Work-based Learning Providers in England.

Role of students in the apprenticeship type schemes

Routes for workers into apprenticeships equate to the routes through which employers take on an apprentice (see above). Some may be recruited direct, while others may have recently been involved in learning with a training provider who then brokers their employment.

Access requirements, beyond the employers' contractual and sector's requirements, are determined by prior qualification level. Ideally students study at a level that is higher than they have already achieved. There is also a sectoral dimension to the likely level of apprenticeship that will be studied, noted in section 2.1 (Hasluck and Hogarth, 2008). The National Apprenticeship Service acknowledges that entry requirements for Apprenticeships vary by scheme however some minimum requirements are mandatory (the following reflects requirements in England):

- Not taking part in full-time education.
- Aged 16 or over.
- If GCSEs (general secondary) qualifications were taken more than five years ago and a candidate did not gain a top grade (A or A*), or possess good (A*-C) GCSE grades in Maths and English they will be required to take a literacy and numeracy test.

In addition to the obligations of their training ie completing the competence, knowledge and Key Skills training, and fulfilling the terms of their employment contract, apprentices have employment rights and responsibilities (ERR), on which they gain input as part of their apprenticeship. The Specification of Apprenticeships in England (BIS, 2011) sets these out as follows:

'To achieve the ERR national outcomes the apprentice must demonstrate that he/she:

- **a**. nows and understands the range of employer and employee statutory rights and responsibilities under Employment Law. This should cover the apprentice's rights and responsibilities under the Employment Rights Act 1996, Equality Act 2010 and Health & Safety legislation, together with the responsibilities and duties of employers;
- **b**. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health & Safety and Equality & Diversity training must be an integral part of the apprentice's learning programme;

- **c**. knows and understands the range of sources of information and advice available to them on their mployment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme;
- **d**. understands the role played by their occupation within their organisation and industry;
- **e**. has an informed view of the types of career pathways that are open to them;
- **f**. knows the types of representative bodies and understands their relevance to their skill, trade or occupation, and their main roles and responsibilities;
- **g**. knows where and how to get information and advice on their industry, occupation, training and career ;
- **h**. can describe and work within their organisation's principles of conduct and codes of practice;
- **i**. recognises and can form a view on issues of public concern that affect their organisation and industry. (BIS, 2011).

The competence and knowledge of students is assessed as part of the qualifications and work-based learning they undertake. The NVQ typically uses a continuous assessment method with evidence of competency gathered in the work place and verified by the Work Place Recorder. There are typically two assessments within the Key Skills provision – one led by the training provider (and typically through an evidence portfolio) and one externally verified by the awarding body[275] (an examination)[276]. The technical certificate (knowledge component) if delivered as separate from the NVQ will typically involve continuous assessment methodologies, in common with most vocational qualifications in the UK.

Existence/non existence of contractual relationships between enterprises/students/VET schools

A contractual arrangement exists between the employer and the apprentice since the apprentice must be employed to undertake their training. It is considered by government and other bodies, critical that apprentices have a close and formal link to a work place to ensure their opportunity to gain opportunities to practice, gain competence and gather evidence. Through the employment contract, the employer signifies their role and responsibilities in developing the apprentice worker. The contract is typically the employer's work contract.

There is no formal contract between the employer and the training provider although there an exists an expectation that a partnership emerges to support the apprentice's training. To some degree, the training provider and employer (line manager or Work Place Recorder) work together since externally verified assessment complements the internally verified evidence gathered so that assessors may attend the employer's workplace in order to externally verify an apprentice's competence. At the outset of training, and under the ideal conditions, employer apprentice and training provider work together to establish the Individual Apprenticeship Plan (see CiTB-Construction Skills Employer Pack).

The apprentice 'enrols' with the learning provider since this registration determines the provider receives the training fees from government. The employer benefits since they do not have to pay the training costs associated with the apprenticeship.

[275] There are 120 awarding bodies in the UK, regulated by the three government-appointed statutory education bodies: the Qualifications and Curriculum Authority (QCA) in England, the Council for the Curriculum, Examinations & Assessment (CCEA) in Northern Ireland, and the Qualifications, Curriculum and Assessment Authority (DELLS) in Wales.

[276] Information drawn from the QCDA website (downloaded June 2011): http://www.qcda.gov.uk/qualifications/6133.aspx

Financing-related information

As noted in section 2.1, differential levels of government funding are available for the training costs of apprenticeships which vary by age. Full funding is available to cover the training fees of 16-18 year old apprentices. For those aged between 19 and 24 years, employers are expected to contribute 50 per cent of the training fee. Where apprentices are over 25 years old, typically employers fund the full costs of training (NAS website).

For the employer, who is responsible for the wage of the apprentice there is a lower national minimum wage (NMW) rate for apprentices than other workers. From October 2011, the NMW for apprentices is £2.60 per hour whereas for workers aged between 16-17 it is £3.68, for those aged 18-20 it is £4.98, and for those aged over 21 it is £6.08. However the National Apprenticeship Service reports that most employers pay above the apprentice NMW. The employment contract is subject to national regulatory standards and the social partners have oversight either directly (in unionised workplaces) or indirectly (non-unionised workplaces).

A government-funded trial was established in 2010, as part of trials to test approaches to Apprenticeship Expansion, which offered an incentive to employers to take on an apprentice. This involved payment of a small one-off payment to employers not already involved in apprenticeships to take on an unemployed 16 or 17 year old into an apprenticeship position. The Skills Funding Agency commissioned an evaluation of the scheme, which is due to be published shortly (2011).

The training costs of apprenticeship vary by sector and qualification. The funding rate for apprenticeships (and other employer responsive training) varies by age, for example, the Skills Funding Agency provided £2,732 for Apprenticeships 19-24, £2,186 for Apprenticeships 25+ in 2010-11 (BIS/SFA, 2009). The overall budget made available by Government within this academic year, for employer responsive training which included Apprenticeships, was c.£1.3m.

Hasluck et al. (2008) have calculated the net benefits of apprenticeships within different sectors reviewing the costs of training, benefits obtained over the training period, information about the benefits obtained over the longer-term (eg accepting values of the company, creating a stock of skilled and qualified workers), and the extent to which the employer's training costs are recouped. The National Apprenticeship Service publishes this data on its website[277]. Taking the two sectors that have been used as an illustration within this paper, Construction and Retail, their analysis shows:

Table E.107 Analysis of the costs and returns of apprenticeship by sector

Costs in Retail	Costs in Construction
For the Retail sector it noted that training;	**The study showed that in the Construction sector;**
Completed within a year with training mainly on-the-job,	Employers train to meet their own skill needs and those of their sub-contractors,
Training costs relatively low at £2,300, and that	Training tends to be highly structured and relatively costly compared to other sectors: £22,000 although there is variability between employers, and
Employers' costs are recouped quickly	Employers' costs are recouped two years after completing the Apprenticeship.

Source: National Apprenticeship Service

[277] http://www.apprenticeships.org.uk/Employers/IER-Research.aspx

Quality assurance mechanisms

OFSTED (Office for Standards in Education, Children's Services and Skills) has responsibility for the regulation and quality assurance of work-based learning, including Apprenticeships, up to Level 3 (ISCED 4). The QAA (Quality Assurance Agency for Higher Education) quality assures Apprenticeships and other provision from Level 4 (ISCED 5). The awarding bodies for the qualifications within the Apprenticeship framework also provide quality assurance to their awards.

For each sector, the Apprenticeship Framework must comply with the demands of the National Apprenticeship Framework and this ensures uniformity across sectors. Each Sector Skills Council determines the framework and this ensures national consistency within each sector. The qualifications approved for inclusion within each sector's framework address the content specified by the Sector Skills Council and meets the demands of the relevant regulatory authority (ie OFSTED/QAA) As noted earlier, the duration of training is determined by the level of qualification and the sector.

The Sector Skills Council sets the standards for employers participating in Apprenticeships and develops the template Employer Agreement. An example of one of these agreements is provided in the CiTB-Construction Skills Employer Pack (undated). This covers: the provision of work (including on-the-job training, guidance and mentoring); working conditions and right to time off, conforming to employment standards such as the Working Time Regulations 1998; attendance records and absence; equal opportunities; health safety and welfare; grievance procedures; termination of contract and some general requirements such as pay rates and membership of a trades Union. The SSCs monitor the employer with support from the training provider who may be in more regular direct contact.

Information published by the Confederation for British Industry (CBI) indicates that while employers' have considerable concerns over regulatory burden on industry in general terms in the UK, a key concern for Apprenticeships was for no specification of time to be spent off the job in training since this would deter smaller businesses from becoming involved (CBI, 2009). Further concerns expressed included that quality should be measured by outcome (ie successful completion rates), enabling employers to have control over the recruitment criteria in contrast to the SASE minimum entry requirement (in order that they can assess attitudes, motivation and employability attributes in relation the company's needs in addition to prior qualification levels); and allowing enterprise to input to the employability skills that are required by industry. Further concern, expressed elsewhere by the CBI, relates to the national minimum wage rate and the affordability for small businesses. It has cautioned against any rapid increase in the pay rate if Apprenticeship expansion is to be supported[278].

Changes and perspectives in the national apprenticeship-type schemes, geographical mobility issues

Recent (last 1-5 years) or planned changes in the national apprenticeship type schemes

The critical change has been the establishment of the Apprenticeship Framework (in 1994). This set in place a focus on the demonstration of competency and clearly identified the need for holistic provision in that knowledge and key skills, as well as employment rights and responsibilities would be covered.

Since that time, there has been increasing interest in expanding the volume of Apprenticeships delivered, with the Leitch Report providing the key impetus to this (HM Treasury,

[278] http://www.smebusinessnews.co.uk/dont-deter-smes-from-offering-apprenticeships-says-cbi/412/

2006). This report identified an increasing need for technician level skills. Adding momentum is the policy to raise the participation in age in education and training, confirmed in the Education Bill 2010, which makes statutory a proposal that all young people who want one, should have access to an apprenticeship as a means to continue their studies post-16. The Schools White Paper (2010) has an ambition that 131,000 young people would start an apprenticeship in 2010/11.

Since this target has been set, policy makers are concerned with the challenge of how to increase the volume of apprenticeships. As a result a number of pilot initiatives have been introduced which have been funded by the Skills Funding Agency, which sits within the Department for Business, Innovation and Skills. These pilots, which were all introduced in 2010, include:

- The Apprenticeship Grant to Employers which offered a small, financial incentive (£2,500) as a recruitment subsidy to employers to take on a young, unemployed person (aged 16 or 17) as an apprentice. The grant was available to 5,000 employers and in part targeted at small and medium-sized employers. Its aim was to counter the negative effects of the recession on the employment and training of disadvantaged young people. It was intended as a one-off trial rather than a longer term programme;
- The ATA/GTA model which provides greater flexibility and reduces the risk to employers of taking on an apprentice by sharing an apprentice across multiple organisations. 16 Pilots were established.
- The Apprenticeship Expansion Pilots which enabled businesses that had a proven track record in offering high-quality apprenticeships to train additional Apprentices - over and above those they already employ. Nationally, it was intended that 3,000 additional Apprenticeships would be created with 60 per cent targeted at 16-18 year olds.

Evaluation of these pilots has been commissioned by SFA and NAS (National Apprenticeship Service) and two evaluation reports had been published in time for inclusion here. NAS (2011) reports the evaluation of the ATA/GTA model. This shows that 16 pilot providers received funding. The ATA/GTA covered different configurations of organisations for example, colleges, third sector organisations and National Skills Academies. However, only modest impact in terms of increasing volume of apprenticeship had resulted from their implementation although significant variation in impact between pilots was noted: one pilot reporting 51 Apprenticeship starts under the one year funding period, while another reported 1,300. The evaluation does not report an overall assessment of impact although notes that barriers encountered by the pilots included the time needed to get employers new to Apprenticeships on board. This has involved changing attitudes and sometimes cultures towards the provision of training to young (and old) workers.

Wiseman et al. (2011) report the outcomes from the Evaluation Apprenticeship Grant to Employers, which was commissioned by NAS. These are somewhat mixed. The pilot was found to be well implemented and well managed however, it was also found that it could have been more closely targeted at the smallest employers for whom the barriers to Apprenticeship are greatest. It was also found that the grant could have been smaller and just as effective in terms of stimulating demand for apprentices. The pilot was less successful in creating a new pathway for the most disadvantaged young people. Since employers wished to conduct a selection process in order to recruit their Apprentice, this led to 'a cohort of AGE Apprentices who, in ability and motivation, were fairly typical of young Apprentices in general'.

Effect of the recent economic crisis on the national apprenticeship type schemes

In an international study of the effects of recession upon the delivery of Apprenticeships, Brunello (2009) cites a study by Felstead and Green (1996) which examined the impact on training of the recession experienced in the UK in the 1990s. The study analysed data from

the Labour Force Survey and found that 'the total number of apprentices declined from 367,000 in the spring of 1989 to 312,000 in the spring of 1992, a 15 per cent decline. The percentage of employees on an apprenticeship scheme was mildly pro-cyclical, hovering around 1.5 percent, not far from the value taken in the mid to late 1980s. Considering the severity of the recession, the decline in the proportion of employees receiving training was a small one.' Concluding the review, Brunello (ibid.) notes that empirical data on the effects of recession are scarce although typically the number of apprenticeships appears to decline within a recession (although this does not always hold true). However, the message is not as simple as it might seem. Brunello also concludes that when recession hits, there may be incentives for employers to train existing workers eg through apprenticeships while reducing the number of young workers they recruit to the organisation.

Various commentators have come forward in the current recession to speak of the effects for young people, businesses and Apprenticeships. For example, Summit Skills is the Sector Skills Council for building services engineering and has published a report on the effects of the recession within its sector (Summit Skills, 2009). It notes that '[t]he postponement or cancellation of projects and reduction in workforce may also lead to apprentices being made redundant. SummitSkills has estimated the potential numbers that may be affected in this area, working to an assumption that 3.5 per cent of the total workforce are apprentices' which is illustrative of the knock-on effects of recession – and contraction within employing organisations – on young workers. Its estimates suggest that at best 2,343 apprenticeships will be lost across occupations within the sector it represents and at worst the number will be 5,415.

Similarly the Institute of Motor Industry which represents the retail arm of the automotive sector anticipates, in its study into the impact of the recession, that employers will stop taking on new apprenticeships. More specifically its study found that '[a] higher proportion of apprentices are now unemployed than was the case when they completed their programmes. 65 per cent of employers surveyed reported negative effects of the recession on their business. 63 per cent did not expect to take on any new apprentices in the new year, over half of which cited the recession as the reason'.

While there may be sectoral variation, it is apparent that apprenticeships are at risk during the recession. Felstead et al (2011) provide an aggregated analysis of the effects of the current recession on training at work. Their findings are based on secondary analysis of employer surveys, the national skills surveys, the quarterly Labour Force Survey and qualitative interviews, and they note some variation between sources on the impacts experienced. Overall, the authors conclude that there has not been the dramatic decline that businesses feared at the outset of the recession. They also note that employers recognise that it is critical to continue training in certain areas such as 'compliance with legal requirements; meeting operational needs; countering skills shortages; addressing market competition; fulfilling managerial commitments; and satisfying customer demands' which they describe as 'Training Floors'. In order to meet these needs, some employers have changed their training approach and shifted to lower cost mechanisms such as e-learning. Felstead et al. (ibid.) note that during 2009 there was a significant fall in the number of employers reporting their engagement with apprenticeships. Adding to this, Cox et al. (2009) in their analysis of the effects of the recession in the South East of England, found that expansion in Apprenticeships was largely among the older age group (aged over 25) and opportunities for young people (aged between 16 and 18) had been limited. However they also noted that funding arrangements for post-19 Apprenticeships meant that those aged over 19 experienced difficulty in accessing training. Overall, young men were felt to be particularly negatively affected since the 'recession was affecting industries with male-dominated low-skilled occupations such as manufacturing and construction.' (Cox et al. ibid.).

Public policy response to the impacts of the economic crisis on Apprenticeship training has been to continue marketing the opportunities and the benefits to business. As noted earlier, successive governments have noted a commitment to increasing the numbers of Appren-

ticeships delivered. This has entails committing an expanded public resource to cover the training costs of apprentices. Overall this continued support has been welcomed by the social partners however the TUC has warned of the need to provide outplacement opportunities to apprentices at risk of redundancy as a result of the recession (TUC, 2009).

Student geographical mobility issues

There appears to be no national strategy in the UK to support Apprentices to undertake aspects of their training in other EU members or elsewhere internationally. There has been opportunity funding available in recent years to support Apprenticeships and other iVET/VET learners to undertake training in international settings through Leonardo. However a monitoring report produced by Ecotec (2008) does not suggest that high numbers of Apprentices have moved through the programme and placements were typically short-term eg of two week duration. Data available from the 2007 call about applications and approved places is shown in Table E.108 below.

Table E.108 Applications and approvals for Leonardo mobility funding

	UK	Northern Ireland	Scotland	Wales	Total
Number of applications	119	14	39	5	177
and %	67%	8%	22%	3%	100%
Number of Applications approved	110	13	25	4	152
and %	72%	9%	16%	3%	100%

Ecotec, 2007

Ad hoc opportunities might be available depending on the employers' business – should a business be international and it is critical that employees understand the different contexts in which the organisation operates, then the employer might consider the delivery of apprenticeship training in different nations.

Future perspectives and other possible relevant issues

The key directive for Apprenticeships in the UK is their expansion and along with this the concern for the high proportion of young people who are currently unemployed. While not all in this group would benefit from an Apprenticeship (ie there are an increasing number of graduates from Bachelors degrees and other higher education studies now unemployed) many would benefit and Apprenticeships are being seen as a critical route into the labour market. Among the group of young people unemployed is a group who are educationally disadvantaged and who may not yet be work-ready. To address this concern, the Government announced a new programme in May 2011, which is to be known as Access to Apprenticeships and will provide a pathway programme for 10,000 disadvantaged 16 to 24 year olds. The scheme, which will be supporting by £60m in public funding, is aimed at helping those who want to pursue an Apprenticeship but who cannot find an employer to take them on since they lack the skills or experience.

Working Links, an organisation which promotes social inclusion and focuses on employability issues within the UK, has provided details of what its Access to Apprenticeship programme will offer. According to its website[279], the pathway will comprise a four-week programme which will deliver the skills and qualifications necessary for an apprenticeship. The course that Working Links will offer will include generic work skills certification such as Food Hygiene, Health and Safety and First Aid as well as the Key Skills and the Technical Certificate that would be completed for a Level 2 (ISCED 3) Apprenticeship. This would mean that participants of their Access to Apprenticeships programme will have achieved approximately 40

[279] http://www.workinglinks.co.uk/training/apprenticeships/become_an_apprentice.aspx

per cent of the Apprenticeship Framework prior to being taken on by an employer. It is clearly important that the Access to Apprenticeship programme is monitored and evaluated to ensure it meets it targets.

There are further approaches to the support of vulnerable young people in the labour market which focus on the transition into and through Apprenticeships, and these also merit attention. These include the Apprenticeship matching service which is run by the National Apprenticeship Service and its partners and provides brokerage between young people and employers. Furthermore, there are examples of Local Authority initiatives to address the needs of vulnerable young unemployed adults and prepare them for apprenticeships (for example, see Kent County Council's initiative[280]).

Evaluation of existing apprenticeship-type schemes

Based on interviews with:

- Public official involved with apprenticeships schemes – National Apprenticeship Service (NAS)
- ***Representative of a training association of iVET providers*** - Association of Learning Providers (ALP) - an association of 600 mainly apprenticeship training providers.
- National Expert on iVET
- Representative of employers' and enterprise organisations involved in iVET – Confederation of British Industry (CBI)

Qualitative Assessment of the National Apprenticeship Type Schemes (Please differentiate your answer by different types of schemes and groups of stakeholders)

Importance of the combination of work based and school based training in the national IVET context

The ALP identified historical lack of parity-of-esteem between vocational and academic routes, and the skills and educations fields. These informants (and the CBI) felt the Wolf report had re-ignited tension in this respect and as a result is perceived as 'education seeking to reclaim the skills and training sector'. In the view of the ALP, while over the past 20 years skills and training have gained status with employers, the Wolf review recommendations undermine this since they seek to introduce a greater emphasis on general education studies within training (demonstrated for example, by the recommendation that a requirement be implemented that all Apprentices achieve a grade of A* to C in the GCSE[281] in mathematics and English – either before commencing their framework ie as part of compulsory education or if not, during Apprenticeship training). The ALP reported that employers resent having to compensate for the failures of the general education system (ie the pre-16 education system).

The ALP was also concerned that the Wolf proposals recommends variance in the requirements of the Apprenticeship Framework by age when in their view the all-age model has become accepted and is effective. The differences in the frameworks proposed by Wolf would apply to the 16-18 year range and Apprenticeships post-19. Concern was also expressed by NAS about the proposed restructuring of vocational qualifications and the phasing out of National Vocational Qualifications since employers and individuals have become accustomed to these. Despite this, NAS also reported that the Apprenticeship brand has now gained considerable strength, which should overcome perceived challenges.

[280] http://www.kenttrustweb.org.uk/communication/comms_docs/010311%20-%20Apprentice%20flyer.pdf
[281] General Certificate of Secondary Education

NAS reported that the combination of work-based learning with day release for training input is attractive to both employers and young people. In illustration of this, it was reported that the volume of Apprenticeships has doubled in the last five years. CBI agreed that the growth in Apprenticeship was illustration of the esteem in which they are held by employers and young people. NAS also reported that demand among young people for Apprenticeships far outstrips supply: it was reported that national records demonstrate that 800,000 young people have registered on their brokerage system (the Apprenticeship Matching Service) whereas employers have created only 500,000 positions. As a consequence, NAS reported that young people see Apprenticeships as an attractive route to the labour market, and it may become more attractive since the Government plans to significantly increase fees associated with the higher education route which may cause students to reconsider the training route. Furthermore, since employers have been long concerned that young people leaving education are not sufficiently prepared for the labour market, Apprenticeships recognise the investment they make when taking a young person on.

The National Expert, while not disagreeing with these perspectives, felt that some additional context was required. Among 16 to 18 year olds, it was reported that Apprenticeships provide a route for a very small proportion of the cohort – around six per cent. However, this commentator agreed with NAS in respect that this does not represent any lack of demand among young people, rather reflected a lack of supply among employers.

However, the National Expert highlighted that while much national skills policy emphasises the ambition for the development of higher level skills, the majority of Apprentices are registered for Level 2 (ISCED 3) qualifications. While the volume of Apprenticeships has grown, there are considerable challenges ahead in terms of meeting demand and policy aspirations for higher level skills development which have yet to be resolved.

The National Expert also highlighted that new Apprenticeships, Skills and Learning Act (2009) enacted a minimum requirement for 100 Guided Learning Hours to take place off-the-job to complete the apprenticeship framework, although noted that this does not have to take place within a college or school, rather the training must take place away from the employee's work station.

The access to the labour market related to the combination of work based and school based training

In contrast to other EU member states, the ALP believed that UK Apprenticeship has had little impact to date in facilitating young people's access to the labour market. Rather, the expansion of Apprenticeships which has been seen in recent years, has reflected training that has been brokered for those young people already in work. ALP reported that employers recruit a school leaver to a low paid role requiring low level skills and only following recruitment is persuaded by a training provider of the benefits of Apprenticeship training (a route identified by Maguire and Newton, 2010, in a study about young people in jobs without nationally accredited training). This point was confirmed by NAS, which reported that the large majority of Apprenticeships created in recent times have been targeted at existing employees. NAS believes that employers have turned the Apprenticeship market inwards through this approach, although it was hoped that, as a result of the green shoots of an economic recovery begin to show through, employers would look toward creating increased opportunities to recruit directly to apprenticeship training. The literature suggests that this behaviour might be typical during a recession. The CBI however disagreed that employers had turned the market inwards – rather their analysis of the Apprenticeship 'start' data was that around half of recent starts were in the 16 to 18 age range and the majority of these young people would not have been in work prior to the Apprenticeship. The national expert was able to confirm that 40 per cent of new Apprenticeship starts were in the 16 to 18 age range, however was not aware of data which showed that these had been targeted at new, rather than existing, employees.

Other data show that few employers recruit young workers: Shury et al. (2010) show that a minority of employers recruit young people direct from education, whether that is following compulsory, tertiary or HE. For example, six per cent of employers had recruited a school leaver, 11 per cent had recruited a young person aged 17 or 18, and 10 per cent had recruited a graduate aged under 24 to their first job. However contraction of recruitment and enhancement of training to those existing workers may explain this finding.

All respondents reported differential entry requirements by sector, and different training experiences by sector – which determine longer term outcomes for young people. Those industries with a long history of apprenticeship, such as Engineering and Construction, typically require higher skills at the outset and deliver improved outcomes in terms of employment sustainability and pay. However the ALP contextualised this with the point that Apprenticeships in most other sectors were moribund until the reforms of the 1990s and NAS confirmed that raising the profile of Apprenticeships had been a key strand of activity when it was established.

None of the interviewees compared access to the labour market between Apprenticeships and other routes (including vocational education in schools and in higher education) although Apprenticeships were viewed as quite different from these. However, the point about the overall (small/limited) scale of the Apprenticeship route noted by the National Expert above, should be borne in mind.

Adaptation of contents and methods to technological, social and economic progress

The CBI provided some limited information on this point; specifically that it was seen as not particularly relevant. Since the Apprenticeship Frameworks are linked to National Occupational Standards (NOS) they are adaptive so far as the NOS allow. It was noted that there would always be some time lag between the implementation of new technologies and new NOS being introduced due to the time needed to develop and quality assure NOS. This was felt to be unavoidable.

Transferability of acquired skills among different enterprises

Interviewees did not provide particular information on mobility although it was felt that since training met National Occupational Standards, trained Apprentices were mobile within their sectors. Furthermore, it was noted that Apprentices trained by certain, prestigious employers (such as Rolls Royce or BT) would be in high demand in their sector once training completed. Mobility was felt to be further enhanced by the policy to allow larger employers to train in order to meet the skill demands of the supply chain.

NAS reported that despite some reports to conference (IoE, 2010) between 70-80 per cent of Apprentices continue in the employ of the employer with whom they trained, a point which other interviewees confirmed. This may reflect the necessity in the UK of apprentices having a contract of employment while training, and the organisation of the Apprenticeship such that work and training are completed in tandem, rather than sequentially. The CBI reported data which showed 90 per cent of Apprenticeships are either employed or self-employed following training.

The CBI commented that the mobility of apprentices within the sector was supported by the Apprenticeship since frameworks are designed to National Occupational Standards. The ability to move to other sectors and occupations would be no different for Apprentices than any other worker.

Progression from apprenticeship type schemes towards further education

The desk research indicated that progression by Level within the Apprenticeship framework and within further education is highly dependent upon the sector of the Apprenticeships.

Some sectors have greater need and expectation of higher level skill development, which is illustrated by the time spent training (for example, see section 2.1, Hasluck et al., 2008)

The national expert confirmed this view and highlighted the challenge that surrounds progression to the next level with Apprenticeships. In essence, in order to complete a higher level qualification as an Apprentice, it is necessary to be in a job role that demands higher level skills in order to demonstrate application and competency. Should a job not demand higher level skills or allow for the performance of tasks at a higher level than that already achieved it will not be possible to progress further in work-based training.

The national expert also noted that barriers and complications existed to the progression from Apprenticeships to higher education since the awards available within the Apprenticeship Frameworks at Level 3 (ISCED 4) may be 'small qualifications' ie not equivalent in formal academic terms to the traditional HE access route via general study A Levels, and often do not accrue sufficient points on the access tariff to allow entry to higher education. While this does not prevent progression to higher education, it may provide some challenges to Apprentices wishing to participate in higher education since they may have to top up their qualifications in order to gain sufficient points to enter HE.

Strong/negative elements associated with the financing mechanism

In the view of the ALP, which represents providers who have direct relationships with employers and who encourage the uptake of training, employers believe that the hourly training rate (set as a National Minimum Wage standard at £2.50 per hour) is too high. Apprenticeships, in their view, required a higher standard of skills than acquired at school and this presented challenges in terms of access. Young people do not possess the level of functional skills (literacy and numeracy) that employers required, nor employability/soft skills (teamworking, communication etc.). In contrast, the national expert reported concern over the low pay rate of Apprenticeship particularly within those frameworks which would be considered 'restrictive' rather than 'expansive' (this latter approach is considered as good practice and the full assessment model is provided in appendix 2). Furthermore, the expert expressed concern about the number of work (and therefore paid) hours available through the new model of Apprenticeship delivery – the Apprenticeship Training Agency (ATA; see section 3). The expert highlighted that Apprentices could be hired out at a very low pay rate by their agency, and they might gain work hours of between 16 and 30 hours per week (rather than the 30+ hours that Apprentices might more usually work). Associated with it, a lower quality of work-based training might be gained via this route. This practice raised significant concern over the equity of these ATA Apprentices compared with those who train through the more traditional route.

The ALP further asserted that employers do not understand the level of funding that government contributed to the training of young people (through covering the training fee) and, as a consequence, feel they are being asked to make up for the failures of the education system. The ALP reported that employers believe there is a requirement for pre-employment training for vulnerable young people, and is therefore pleased that the Access to Apprenticeship route is being introduced to address this need.

Other interviewees provided further perspectives on the financial elements of Apprenticeship. The CBI for example, identified the level of investment made by employers which was far higher than the fees associated with training (see section 2.3.7 for examples of this, based on Hasluck et al. 2008). The costs to the employer and bureaucracy involved in the Apprenticeship model of training could be viewed as limiting their expansion. The national expert explained this further noting that the training fee is paid to the training provider (and not the employer who covers the wage costs).

Student geographical mobility issues

The ALP reports that there are challenges surrounding the differing requirements and delivery and support arrangements between the nations within the UK. However, overall, in their view, geographic mobility is not an issue.

NAS acknowledged that the differing systems (including support and brokerage as well as framework and financial, employment support systems) within the UK nations can present particular challenges for large employers since it is not possible to implement one scheme across the UK and they may have to deal with a range of intermediaries (this reflects finding of the Learning Agreement Pilot evaluation, a trial which aimed to re-engage young people in jobs without training – and their employers – in England; see Maguire et al. 2010). The CBI felt that the bureaucracy associated with training (in whichever of the UK nations) was the greater issue.

Apprenticeship type schemes as a source of cheap labour

The ALP reported that despite the Apprenticeship national minimum wage being set at £2.50 per hour (compared with the adult (21 years and above) rate of £5.93[282]), businesses still resent the level of investment that Apprentices require and so question whether the NMW rate is set appropriately.

NAS notes that the NMW is seen as problematic and there is tension in the views of employers and the social partners. In addition, in sectors where pay frameworks apply, such as health, there are particular challenges involved in recruiting workers to the Apprenticeship wage. It reports that recent work has overcome some of these.

The CBI reported that the low rate applied only to a certain period of the training (around 12 months) and that employers invested significantly in Apprenticeship training to a value far beyond the fee paid to the training provider. Consequently, they reported that any view that apprentices represented a cheap source of labour for employers was incorrect.

Social considerations

Given that the growth in Apprenticeships among existing employees, the social circumstance of young people who are unemployed has become a key concern for policy. Both NAS and ALP reported that this is where attention should now be focused and both highlighted the Access the Apprenticeship route announced by Government in 2011. Other studies (such as one exploring Flexicurity for the European Foundation for the Improvement of Living and Working Conditions), may be able to provide more information in this regard.

NAS reported that the achievement rate and retention in the workplace of Apprentices has improved in recent years. The literature suggests that this may be the result of tightened entry criteria – which illustrates the need for better preparation of the more vulnerable in the eligible cohort.

Both respondents welcomed the Access to Apprenticeship and other schemes aimed at vulnerable young people, although indicated that the outcomes of these should be monitored.

Challenges imposed by the current economic crisis?

Respondents were at present unclear on this point since both reported respondents that growth in apprenticeships is among the existing employees of a company rather than as a result of taking on a new staff member.

[282] NMW is set at £4.92 for 18-20 year olds, and £3.64 for 16-17 year olds who are above school leaving age but under 18 – therefore the Apprenticeship rate is already considerably lower than the standard that young workers might expect

NAS identifies the challenges to Apprenticeship growth imposed by the recession – they hope that the economic cycle will ameliorate for this – in time and that employers will be able to support expansion.

Main benefits/problems for students.

ALP reports benefits to students surrounding: (i) they acquire a skill level that is directly relevant to employer/labour market needs, and as such, is transferable, ie it makes it easier for them to get a job; (ii) they enjoy greater employment security because of the labour market relevance of their skills and the employer investment in their training; (iii) their overall employability is enhanced; (iv) Apprenticeships can serve as a good platform for onward/upward mobility, eg apprentices can progress into further/higher education; (v) apprentices also receive some pay while getting trained; (vi) because their cost is fully covered by the employer/government, apprentices do not have to pay back any student loans (which is view of the fact that student fees have been trebled by the current Government to up to £9,000, this issue has become very critical at present).

NAS noted that government funding arrangements may need to change in respect of higher level Apprenticeships in order to be equal with the costs of higher education. The concern surrounds whether it is equitable that HE students pay up to £9,000 per year for their qualification whereas Apprentices do not pay. They anticipate a change in funding arrangements since they do not believe the government can finance expansion without a new financial arrangement. The concern for parity of esteem may lead to parity of cost to the individual.

ALP also notes that employers can use Apprenticeships to ensure that their workforce has updated skills as well as ensure that, thanks to young people, they have access to new ideas and creativity. They can use Apprenticeships to invest in a very cost-effective way in their up-skilling of their workforce, while also ensuring that they tailor the training and skills development to the actual needs of their company.

However, the ALP notes significant challenges which affect employers' participation in Apprenticeship: although quite a large number of employers have now embraced Apprenticeships (as opposed to what was the case in the 1960s and 1970s when most Apprenticeships were moribund, since employers saw them as overhead cost rather than investment), a significant proportion of employers continue to resist them because they cannot understand this. This is despite that there is ample evidence that Apprenticeships give quick and demonstrable returns to employers (although, that there has been a considerable rise in the offer/take-up of Apprenticeships shows that more and more employers are convinced of their benefits). Another related challenge is the fact that because of the perceived failure of the educational system and the ensuring need for employers to fund remedial training for young recruits, employers can be sceptical as to the full benefits of Apprenticeships.

Main benefits/problems for enterprises

ALP report that employers can use Apprenticeships to ensure that their workforce have updated skills and thanks to young people they recruit, they have access to new ideas and creativity. They can use Apprenticeships to invest in a very cost-effective way in their up-skilling of their workforce, while also ensuring that they tailor the training and skills development to the actual needs of their company. However, this has to viewed in light of challenges which surround seeing Apprenticeships as overhead cost rather than investment. According to the ALP, a significant proportion of employers continue to resist Apprenticeships because they cannot understand the cost-benefit relationship. This is despite the evidence that Apprenticeships give quick and demonstrable returns to employers (although the fact that there has been a considerable rise in the offer/take-up of Apprenticeships shows that more and more employers are convinced of their benefits). Another related challenge is the fact that because of the perceived failure of the educational system and the ensuring

need for employers to fund remedial training for young recruits, employers can be sceptical as to the full benefits of Apprenticeships.

The CBI reported that Apprenticeships are seen as bureaucratic and this organisation was consulting with Government to assess how bureaucratic demands on the provision of training might be reduced. The CBI highlighted particular concerns among large employers who in essence acted as the training provider fo the Apprentice (since their own training provision had been validated for inclusion with the Apprenticeship framework). The training fee paid to these employers did not cover the cost of the administrative systems for certifying and awarding qualifications with the Apprenticeship framework. However, it was viewed as essential that large employers were able to propose their in-house training programmes for validation as part of the Apprenticeship framework in order that they would continue to engage with the Apprenticeship brand. Should this opportunity not be available there was a risk that these employers would revert to offering what have been classified as 'Jobs Without Training' which in essence is a category which identifies young people employed in jobs which do not offer nationally accredited training.

Main elements for discussion/agreement amongst social partners

The CBI reported that the social partners are highly supportive of the Apprenticeship since it links to their own agenda to increase the provision and uptake of training at work. The Trades Union Congress was felt to be concerned that sufficient opportunities were available to workers as a priority, although this body would also be concerned for the terms and conditions of the work and training among apprentices.

Most controversial is the NMW rate for Apprenticeship training which social partners express significant concern about, despite enterprise belief that it is too high. The ALP believed that the amount of government investment in the training costs of apprenticeship requires greater promotion to employers in order to overcome this view. It should be noted that this review was unable to uncover consistent evidence of the costs of training and the proportion of this which is government funded.

Identification of specific aspects of the national apprenticeship type schemes and/or particular experiences at sectoral/regional level that are regarded as good practices /bad practices

The national expert highlighted the expansive-restrictive framework for evaluating the quality of apprenticeships and learning environments, and promoted to the review a good practice document backed by the NAS and Skills Funding Agency which aims to encourage and embed the expansive apprenticeships (see Fuller and Unwin, 2010). The document contains recommendations for the improvement of Apprenticeships which include that Apprentices should receive a holistic view of the workplace, that they gain opportunities to be rotated around jobs (if the employer is large enough) in order to gain this insight; and that they have opportunities to pursue knowledge-based qualifications which have a broader value than simply the job being performed as an Apprentice. It was also seen to be critical that the employment of an Apprentice should form part of a wider workforce development strategy to ensure opportunities to continue training and developed can be supported. An extract of the good practice framework is appended to this country case study.

Based on the foregoing analysis there is some inevitability that the government in England will seek to change some aspects of the Apprenticeship system, in part based on the recommendations of the Wolf review. There were mixed views of this within the consultation with some concern that changing vocational qualification will cause some confusion among employers who had come to understand the current NVQ system. More than this, there was concern that implementing different criteria by age (pre- and post-19) for the Apprenticeship framework would be detrimental to the Apprenticeship brand. However, there was strong indications that progression between interim, tertiary and higher level learning could

be improved and would benefit from some review. This might include brokerage to help employers to understand the potential for higher level skills within their business (cognisant that the business strategy can support these) but also greater consideration of the higher education 'exchange value' of qualifications within Apprenticeship frameworks for individuals who wish to progress through other routes.

The key challenge facing Apprenticeships in England is their expansion although ensuring opportunities to progress between initial, tertiary and higher levels of skill development should also been seen as critical.

Recommendations

While they receive support from all main political parties, and funding has been expanded by recent and current administrations, it is critical that mechanisms are found which raise awareness of the Apprenticeship model among employers (in order to support their expansion), assist employers to consider ongoing training and development needs linked to their business strategy, as well as considering of the pipeline of employees into their businesses (eg age legacy management approaches), and which help identify the benefits of Apprenticeship training to long-term competitive particularly within a global economy which is demanding of higher level skills.

UK Data tables

Table E.109 Number of students in Secondary education

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Total Secondary education (ISCED3)	636,771[1]	648,833	655,146	653,083	634,496	639,744
▪ % students achieving 5+ A*-C GCSEs or equiv	56.8%	59.0%	61.4%	65.3%	70.0%	75.4%
Contribution to achievement of 5+ A*-C GCSE or equivalent made by[2]						
▪ General education (GCSEs)	51.7%	52.1%	52.6%	54.7%	55.7%	56.3%
▪ GCSEs in Vocational Subjects	1.3%	1.6%	1.7%	1.8%	1.8%	1.5%
▪ Full GNVQs	3.4%	4.1%	3.4%	0.2%	-	-
▪ BTECs	0.1%	0.5%	1.6%	4.2%	6.7%	10.2%
▪ All other qualifications	0.3%	0.8%	2.0%	4.4%	5.8%	7.4%

Notes: Students are counted within academic years which run September-August.

At Key Stage 4 students may study a mix of general and vocational qualifications. They are measured on the achievement of 5 GCSE or equivalent qualifications at grades A*-C Level 2 (which equates to ISCED3) or 5 GCSE or equivalent qualifications at grades A*-G Level 1 (which equates to ISCED4)

Sources: [1] SFR28-2008 KS4; remaining from SFR 01/2011; [2] contribution reproduced from the Wolf Report (2010)

Table E.110 Number of students in Secondary education

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Total Secondary education (ISCED4) Population	1,963.3	1,993.6	2,012.7	2,017.1	2,017.5	1,989.9
▪ Full-time education	57.9%	59.7%	61.4%	62.8%	64.7%	67.5%
▪ Work-based learning	7.7%	7.3%	6.7%	6.8%	6.6%	6.4%
▪ Employer Funded Training	4.8%	4.6%	4.5%	4.4%	3.9%	3.1%
▪ Other Education and Training (inc part-time learning or training)	5.4%	5.1%	4.7%	4.6%	4.6%	5.3%
▪ Not in any education or training	24.3%	23.5%	22.9%	21.6%	20.3%	17.9%

Source: PARTICIPATION IN EDUCATION, TRAINING AND EMPLOYMENT BY 16-18 YEAR OLDS IN ENGLAND SFR 18/2010, DFE

Table E.111 Number of students 16-18 starting Apprenticeships

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Total 16-18 starting Apprenticeship		99,500	105,600	107,600	99,400	116,800
▪ Apprenticeship (Level 2/ISCED3)		77,100	80,800	82,000	74,200	89,400
▪ Advanced Apprenticeship (Level 3/ISCED4)		22,400	24,800	25,500	25,100	27,200
▪ Higher Apprenticeship (Level 4/ISCED5)		-	-	-	-	100

Source: Post-16 Education & Skills: Learner Participation, Outcomes and Level of Highest Qualification Held DS/SFR11, SFA

Table E.112 Number of students in Tertiary education

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Total Tertiary education (ISCED 5)						
▪ University education	261, 000	281, 000	223, 000	234, 000	248, 000	258, 000*
▪ Foundation degrees	37,820	46,780	60,580	72,000	87,025	99,475

Notes: columns 1 & 2, row 21 - Higher Education Initial Participation Rate (HEIPR) for English domiciled first time participants in Higher Education Courses at UK Higher Education Institutions and English, Welsh and Scottish Further Education Colleges: 1999/00 to 2006/07

Columns 3-6 Higher Education Initial Participation Rate for 17-20 year olds (HEIPR20) for English domiciled first time participants in Higher Education Courses at UK Higher Education Institutions and English, Welsh and Scottish Further Education Colleges 2006/07 – 2009/10

* provisional figure

Source: Row 2: PARTICIPATION RATES IN HIGHER EDUCATION: ACADEMIC YEARS 2006/2007 – 2009/2010 HESA (Provisional); Row 3: Foundation degrees - Key statistics 2001-02 to 2009-10

Table E.113 Brief explanation of existing VET types

VET Types (Name in original and in English)	Distribution of school and work-based training (total training hours)	Is this VET type regarded as an apprenticeship training in your country?
Apprenticeship	▪ 30 hours (min) per week working; ▪ 5-7 hours per week off-the-job training	Yes
Advanced Apprenticeship	▪ 30 hours (min) per week working; ▪ 5-7 hours per week off-the-job training	Yes
Higher Apprenticeship	▪ 30 hours (min) per week working; ▪ 5-7 hours per week off-the-job training	Yes
Foundation Degree	▪ Varies by subject	No

Source: National Apprenticeship Service (NAS) website; Directgov website

Sources of information: United Kingdom

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The present study is intended to provide an overview of the supply of apprenticeship-type schemes in the EU Member States. For this purpose, the study discusses the effectiveness of these schemes in raising employability and facilitating labour market transitions of apprentices in the EU. Also, the study provides a number of recommendations for improving the functioning and performance of this type of Vocational Education and Training schemes. This publication is available in electronic format in English only with a French and German summary.

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