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# Making skills transparent

RECOGNISING VOCATIONAL SKILLS ACQUIRED THROUGH WORKBASED LEARNING

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Making Skills Transparent: Recognising Vocational Skills Acquired through Work-Based Learning

**OECD Education Working Paper No. 180** 

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#### Abstract

This paper looks at the importance of mechanisms that give formal recognition to vocational skills acquired through work-based learning and how such mechanisms might be developed. It describes how skill recognition can benefit individuals, employers and society as a whole, and identifies in which contexts skill recognition has the highest potential to bring benefits. The focus is on three tools that are commonly used to shorten the path to a formal qualification: admission into a programme, reduced programme duration and qualification without a mandatory programme. For each of these tools, this paper sets out country approaches, discusses common challenges that arise in their implementation and advances policy messages to support policy design and implementation.

#### Résumé

Ce document de travail examine l'importance des mécanismes de reconnaissance officielle des compétences professionnelles acquises dans le cadre de formations en milieu professionnel, ainsi que les moyens de développer ces mécanismes. Il décrit comment la reconnaissance des compétences peut être avantageuse pour les individus, les employeurs et la société dans son ensemble, et il détermine dans quelles circonstances la reconnaissance des compétences peut être le plus utile. L'accent est mis sur trois instruments couramment utilisés pour accélérer l'obtention d'un titre de formation : admission dans un programme, raccourcissement de la durée du programme, et obtention d'un titre de formation sans suivre de programme obligatoire. Pour chacun de ces instruments, le document présente les différentes approches nationales, analyse les problématiques communes auxquelles les pays doivent faire face, et formule des recommandations d'action visant à soutenir l'élaboration et la mise en œuvre des politiques publiques.

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#### **Executive Summary**

#### The focus of this paper

This paper looks at the importance of mechanisms that give formal recognition to vocational skills acquired through work-based learning. Developing effective mechanisms for skill recognition becomes increasingly important, as workers need to learn throughout their careers in the light technological progress, new forms of work (e.g. Uber) develop potentially useful occupational skills and migration flows create a pool of workers with skills that often remain unrecognised.

Skill recognition is defined here as a process designed to verify and provide recognition of a set of skills held by an individual but not reflected in a formal qualification. It may yield one of the following three benefits, speeding the path to formal qualification: access to an education or training programme; reduced programme duration; qualification without a training programme. Some of the approaches considered in this report are not usually described as "recognition of prior learning", which usually refers to processes adopted by educational institutions. This report also dedicates much attention to skill recognition in the context of apprenticeships, qualifications that are typically obtained through apprenticeships and more broadly vocational qualifications that are delivered at least partly in recognition of work experience. These do in fact involve recognition of prior learning.

#### Skill recognition can benefit individuals

Skill recognition can shorten the path to a qualification, reducing costs for learners. This can be particularly helpful to low-qualified adults, leading them to a first qualification. More broadly, the prospect of receiving formal recognition may motivate workers to learn at work. In terms of accessing jobs, qualifications can open access to occupations where access is regulated (e.g. through licensing). For non-regulated occupations, qualifications can signal the skills of potential recruits to employers. Obtaining a formal qualification can lead to higher wages, especially when the person develops new skills on the way (e.g. filling skill gaps). Some of the benefits may be non-monetary benefits, like higher self-esteem.

#### Skill recognition can benefit employers

Often when a person benefits from skill recognition, they also develop new skills and improve their productivity, generating benefits for employers. Workers who qualify through skill recognition can fill vacancies – particularly valuable in regulated occupations. When employers support an employee through a skill recognition process, employees may show increased loyalty. Some of the benefits of skill recognition fall on employers collectively only (e.g. an economic sector), as a sector has an interest in having

a pool of skilled and qualified workers and the risk of poaching associated with more visible skills is less problematic for a sector than for an individual employer.

#### Skill recognition can benefit society as a whole

Qualifications make skills more transparent, which should make the labour market more efficient by allocating skilled workers to positions that make the fullest use of their skills. By shortening the path to a qualification, skill recognition can encourage lifelong learning and increase efficiency in skills development (e.g. avoiding spending resources to teach some skills they already have). Skill recognition may also foster equity, by providing a bridge into formal education and training, particularly helpful to adults with no or low-level qualifications.

### The impact of obtaining a qualification will vary with individuals, occupations and country contexts

Skill recognition has particularly high potential to add value in occupations where holding the right qualification is required or widely expected to obtain jobs or promotion. This depends on labour market characteristics, such as the extent of occupational regulation, the use of collective bargaining and employment regulation. Also, skill recognition has major potential benefits where there is untapped potential of partially skilled labour and where "traditional" pathways to skills do not satisfy the demand for skilled labour.

#### Skill recognition in practice: drawing out policy lessons

#### Tool 1: Admission into an education or training programme

A person may be able to access to an education or training programme, in recognition of pre-existing skills (e.g. a person who did not complete upper secondary education may access a postsecondary programme). Those most likely to benefit from this are adults who have acquired the skills needed to start a training programme, and can therefore reasonably share a classroom with others who have more formal entry qualifications. This can widen access to further learning opportunities. One challenge is that potential beneficiaries may have weaknesses in some areas (e.g. learning in academic settings, literacy or numeracy). To address this challenge, a number of countries have implemented initiatives that offer targeted support to students who might otherwise struggle.

#### **Tool 2: Reduced programme duration**

The duration of a programme may be reduced in recognition of pre-existing skills. This route is suited to learners who already hold some of the skills targeted by the qualification. Several OECD countries have apprenticeship schemes that allow for reduced duration. Sometimes employers may be reluctant to support reduced duration, if it means they lose financially. But they may support it if there are no negative financial implications for them or apprentices compensate for higher wages through higher productivity. In the context of school or college-based programmes institutions sometimes have inadequate incentives to recognise skills through course exemptions (e.g. because it means lower tuition income) – reforming funding arrangements can help

remove barriers. More broadly, artificial incentives for or against skill recognition should be avoided.

#### Tool 3: Qualification without a required training programme

This route is suited to individuals who have most or all of the skills required by the targeted qualification. The key feature of this approach is that there are no formal programmatic requirements, although those pursuing this route will often engage in coursework (e.g. preparatory courses). This is typically implemented in one of two ways:

- Direct access to the final qualifying examination allows a person to take the examination without following the standard preparatory programme. For example, several countries allow access to the final examination in apprenticeships for candidates with relevant work experience. This option can serve as an alternative to regular apprenticeships or offer second chances to low-qualified adults. In the context of higher level skills, a similar approach is used in professional examinations, which offer a pathway to higher level skills to individuals who already have an initial qualification and several years of work experience.
- Validation of learning outcomes also leads to a qualification without a required training programme. In the context of vocational education and training (VET) its take-up remains limited in many countries, although there has been much policy interest in facilitating it. One challenge is that undertaking validation is demanding, as it depends on the capacity of a person to identify and articulate their existing skills and prove them. This may be particularly hard for disadvantaged adults even though the potential benefits of validation would be particularly large for them. In addition, validation may sometimes receive little support from employers.

#### **Rigorous assessments underpinning qualifications**

Qualifications delivered on the basis of skill recognition only will only be credible if underpinned by valid and reliable assessments. Skilled jobs require a very wide range of skills and knowledge, including theoretical knowledge (the science of the profession), practical skills such as how to use particular bits of equipment, and many social skills such as how to communicate, and persuade, and handle conflict with colleagues and clients. One challenge is that assessing technical skills is often costly because of the material and equipment involved. Socio-emotional skills are crucial to many jobs, and increasingly so, but have often been neglected in examinations. Encouragingly, there are promising practices in these areas. For example, some countries use role-playing to assess occupation-specific socio-emotional skills or use technology-based tools to reduce the costs of assessing vocational skills.

This report advances the following policy messages:

- 1. Identification of the different benefits of skill recognition to different stakeholders should inform the allocation of public and private funding in support of skill recognition measures. Key messages include:
  - Individuals who seek a first vocational qualification or those who must change careers (e.g. following a job loss because of automation) should be supported through public and private funding.

- For mid-career workers in search of career progression there are arguments for them to cover much of the costs.
- Employers can be expected to contribute to the extent that they benefit from the qualification delivered at the end of the skill recognition process.
- Better empirical data on current and potential target groups, and analysis of the costs and benefits of skill recognition could inform policy making.
- 2. The impact of obtaining a qualification through skill recognition will vary according individual characteristics, occupations and country contexts. The following pointers should underpin priorities for policy development and implementation, taking into account the country context:
  - Policy efforts may be guided by the targeted policy objective(s). Two common objectives are addressing skills shortages and fostering equity – each are associated with different sets of priorities for implementation and policies may target one or both of these.
  - The potential benefits of skill recognition measures will be highest in countries with a high share of jobs for which access and progression is linked to qualification requirements.
  - In countries with less developed skill recognition measures, pilot measures should focus on regulated occupations that face skills shortages.
  - Skill recognition can add value in a wide range of contexts through its outcome-driven focus, allowing for flexibility and innovation in approaches to learning.
- 3. Flexibility in the duration of vocational programmes, in recognition of preexisting skills, should be encouraged. Taking full advantage of the potential benefits requires providing arrangements that are attractive to all the parties involved.
  - In apprenticeships with flexible duration, the wages of apprentices, their tasks and time allocation need to be defined based on careful consideration of the cost-benefit implications for employers to ensure that employers are open to the flexibility.
  - In school or college-based programmes funding arrangements (e.g. per capita funding, tuition fees) may need to be adjusted to ensure institutions have adequate, but not excessive incentives to grant exemptions in recognition of pre-existing skills.
- 4. One attractive and flexible way of offering qualifications is to allow candidates to proceed directly to an assessment that will demonstrate the relevant skillset. This may be either a specially devised assessment for those who have acquired skills through work-based learning or an examination which is used for all those seeking the qualification, including those who have followed a formal programme. Such routes to qualifications should be encouraged, supported by rigorous professional assessments:
  - When final examinations at the end of an education or training programme (e.g. apprenticeship) tests the full skillset required by the qualification, access to the examination should be allowed to candidates who did not pursue the

programme but can plausibly succeed at the examination – such as those who have acquired all or most of the skillset through work-based learning.

- Take advantage of professional examinations and certifications to recognise higher level or specialised vocational skills (e.g. at tertiary B level), including those acquired through work-based learning.
- Establish standards and procedures for assessment that support clear, valid and reliable qualifications. These should incorporate valid tests of the full range of skills required in the target occupation, including where relevant practical technical tests and assessments of soft skills.

#### Introduction

#### What this paper aims to achieve

Learning is too often identified with formal settings and environments like schools, colleges and, if it takes place in the workplace, with highly structured work placements (i.e. with a pre-defined duration and learning content). This holds particularly for vocational skills, which by their nature are closely connected to an occupation and workplaces. But in fact, many vocational skills are developed more informally through work experience. There has been increasing awareness among policy makers that learning outside classroom and other formal settings is a rich source of human capital, and making that stock of human capital more visible can bring various benefits (Werquin, 2010).

Ultimately what makes someone productive and able to adapt to changing circumstances is a skillset and readiness for lifelong learning, not how and when those skills were acquired. Reflecting this logic, many countries are seeking to move away from traditional 'time-based' forms of education and training with strict curricula and programmes of study, towards an approach in which learning outcomes, rather than the means by which they are realised, become central. This raises the question of how such outcomes can be recognised.

Against that background, this paper looks at the potential importance of mechanisms that give formal recognition to vocational skills acquired through work-based learning and how such mechanisms might be supported and developed. The paper will:

- Identify the political and economic arguments for skill recognition
- Set out mechanisms through which vocational skills can be recognised and reflected in qualifications
- Identify the barriers, and the policy tools and good practices that help make the most of effective skill recognition

The first part of this paper sets out why giving formal recognition to vocational skills acquired through work-based learning matters. It identifies potential benefits to different stakeholders and sets out contexts in which it has particularly high potential added value. The second part of this paper looks at the implementation of skill recognition processes, setting out common mechanisms, identifying barriers to its fuller use and potential policy solutions.

#### The growing need to focus on skill recognition

### *Workers will need to adapt to changing requirements in response to technological change*

Technological progress has profoundly changed skill requirements in the labour market. The digital revolution is replacing humans in many tasks, across a wide range of occupations. Estimates suggest that on average, across the OECD, less than 10 percent of workers are in jobs that are at risk of being fully automated. But a quarter are in jobs where a high percentage of the component tasks could be automated (Arntz et al., 2016), with the share of workers in jobs with high risk of replacement by automatic devices varying across countries (Figure 1). The implication is that success in 21st century labour markets will require the capacity to learn and adapt to fast-changing requirements (OECD 2016c), so that workers can learn to perform new tasks that cannot, at least as yet, be performed by machines. More broadly, throughout their careers workers need to learn as new competence requirements emerge because of changes in the technical, legal and social environment.

#### Figure 1. The share of workers in jobs with high automatibility



Source: Arntz, M., T. G. and U. Zierahn (2016), "The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis", *OECD Social, Employment and Migration Working Papers*, No. 189, Paris http://dx.doi.org/10.1787/5jlz9h56dvq7-en.

### *Workplaces are well-placed to develop many of the skills required in 21st century labour markets*

Learning through work may play a particularly important role in helping workers cope with the threat of automation. One reason is the profile of learners: the need to continue learning throughout careers means that learners will increasingly include mid-career adults, who are likely to find it easier to learn while at work, rather than taking time off and returning to college. The second reason concerns the nature of the skills needed – workplaces are well-placed to develop many of both the hard and soft skills needed in the labour markets of the future. Based on economic history and an analysis of modern labour markets, Bessen (2015) argues that the effective blend of technical knowledge and problem-solving capacity needed to implement rapidly evolving technologies is non-standardised and hard to develop – and it is better learnt through work experience than in the classroom. Work-based learning can also usefully develop soft skills increasingly needed in the labour market, including strong socio-emotional skills, like autonomy, coordination and collaborative skills, which complement ICT skills (OECD 2015b). Workplaces provide a powerful environment in which to acquire socio-emotional skills – learning how to deal with a complaining client is harder in a classroom than in a real

work environment, by watching more experienced colleagues (OECD 2010). The resulting challenge for skill recognition is partly a matter of scale (i.e. more learning at work, thus more skills that are unrecognised) and partly a matter of finding effective ways of verifying those skills. Socio-emotional skills play an important role in many future jobs, but they are particularly hard to measure. But work experience on its own does not prove that the person has the right skills – a person might have worked in childcare but that is no guarantee that they are effective in that role.

#### New forms of work are increasingly used in modern economies

While policy makers in many countries are still grappling with finding effective ways of recognising skills developed in standard work settings, non-standard forms of work (i.e. temporary employment, part-time employment and self-employment) play an increasing role in modern economies, raising additional challenges. Rapidly growing online platforms have created flexible and accessible opportunities to work. With the help of Internet, employers who provide services can increasingly break up jobs into a set of mini-tasks and allocate them to workers. This has led to a flourishing gig economy ("ondemand", "sharing" or "platform" economy) (OECD 2016a), which is largely based on independent work facilitated by online intermediaries. In many OECD countries the share of non-standard work is significant (see Figure 2) and growing (i.e. work arrangements that do not involve full-time dependent employment with an indefinite contract). Data from the United States provide a glimpse at the growth of the gig economy (Farrell and Greig 2016). The US online gig workforce (e.g. those working through an online intermediary), although it is still currently small (about 0.5 percent of workers), has experienced extraordinary growth. The participation of earners in labour platforms, which connect customers with workers who perform discrete assignments (e.g. Uber, TaskRabbit), has grown rapidly: annual growth in participation ranging between 300 percent to 440 percent in 2013 and 2014 - by far the fastest growing segment of the labour market.



#### Figure 2. Non-standard forms of employment as a percentage of total employment

2013

*Note*: Sample restricted to paid and self-employed (own account) workers aged 15-64, excluding employers, student workers and apprentices. For Australia, 42.6% of full-time temporary contract are casual; and 85.2% of part-time temporary employees are casual

Source: OECD (2015a) In It Together: Why Less Inequality Benefits All, https://doi.org/10.1787/9789264235 120-en.

### Skill recognition can help build on learning through non-standard forms of work

Working in the gig economy workforce can develop useful occupational skills. They include both the relatively simple skills involved in physical tasks or digital services (data entry or administrative support) to higher level skills in activities such as programming or business consulting (OECD 2016b). In these contexts many of the "traditional" tools of training and skills recognition will not apply – there is no employer to reward a fast-learning employee with higher hourly wages or testify that the worker has acquired a specific set of skills. There is no one to approach if a worker would like to negotiate an apprenticeship or training contract. This poses new questions about how to give credit to skills developed in the gig economy. This is likely to matter particularly for younger workers, where a job in the gig economy can either be a stepping stone into new and better jobs or a trap. Ensuring that the skills they developed through the gig economy are visible to other potential employers can help achieve the former, more desirable outcome.

### Migration flows create a pool of workers with skills that often remain unrecognised

Migrants represent an important and growing share of the labour force across OECD countries. Over the period 2000-2010 migrants represented 47 percent and 70 percent of the increases in the labour forces of the United States and Europe respectively. But they tend to take up lower skilled jobs: almost half of low-skilled jobs are taken up by migrants on average and sometimes low-skilled jobs become nearly the exclusive domain of migrants (OECD 2012).

Most arriving migrants across OECD countries were not recruited from abroad by employers, but instead arrive for family, economic or humanitarian reasons. Many enter the labour market with qualifications and experience that are not easily transferable to the host country (OECD 2012). Across OECD countries about two thirds of immigrants hold a foreign qualification and research shows that they struggle to make use of their full potential: they are more often jobless and when they have a job, they are more often overqualified (OECD 2017a). Research evidence shows that giving recognition to migrants' skills and qualifications improves their chances in the labour market – those who obtain formal recognition have better outcomes than those whose applications failed or who did not apply (OECD 2017a).

#### **Methodology**

This report was prepared based on analytical work, an international workshop and a study visit. The analytical work involved a desk-based literature review and new data analysis drawing on the OECD Survey of Adult Skills. An international workshop was held in Bern (Switzerland) on 28 April 2016. During the workshop a discussion paper presented the initial analytical work, representatives from various OECD countries shared their policy experience in the area and participants observed a mock examination in the field of property management, as an illustration of how assessment methods are used in practice. The OECD team conducted study visits to Germany and Switzerland to conduct further interviews with stakeholders involved in the skill recognition processes. This report presents findings based on analytical work, the workshop and study visits.

This report is one of a series on work-based learning, prepared as part of a broader OECD project (see Box 1). The series includes in-depth analyses of specific topics (modules) leading to a set of policy pointers backed by analysis. This paper contributes to the module on recognising skills acquired through work-based learning. It has been funded by Germany and Switzerland

### Box 1. Work-based learning in vocational education and training: The broader OECD project

The OECD launched this study in 2015 with the aim of delivering policy messages about how to use work-based learning in vocational education and training (VET) to achieve better economic and social outcomes. It builds on in-depth analytical work on six topics and a series of workshops held in 2016. Six reports will be published:

- Striking the balance: The costs and benefits of apprenticeship
- Incentives for apprenticeship
- Work, train, win: Work-based learning design and management for productivity gains
- Work-based learning for youth at risk: Getting employers on board
- Recognising skills acquired through work-based learning
- Work-based learning and career guidance.

A synthesis report drawing together all six modules will be published in 2018. All publications are available at the following website: <u>www.oecd.org/edu/skills-beyond-school/work-based-learning.htm</u>.

Australia, Canada, Germany, Norway, Scotland (United Kingdom), Switzerland, the United Kingdom (Department for Education, England/UKCES, UK Commission for Employment and Skills), the United States and the European Commission have provided voluntary contributions towards the work, either through sponsoring specific modules or contributing to the project as a whole.

#### **Scope of this report**

This report is concerned with processes that give formal recognition to vocational skills regardless of how they were acquired. The primary focus is on vocational skills acquired through work-based learning, reflecting the fact that, very often, people seeking to benefit from such processes have acquired skills through working, but not tied to a formal education or training programme. These same processes can also benefit others with unrecognised vocational skills, such as workers with a foreign qualification not recognised in the host country. The focus is on processes that lead to a vocational qualification at upper secondary or postsecondary level – this report does not cover issues related to recognition of prior learning (RPL) in academic postsecondary and tertiary education.

Skill recognition can occur at different stages on the route towards a qualification. The traditional route starts with an entry qualification, followed by a defined learning programme, including a period of study at an institution. This traditional model defines not only what is learnt, but how it is learnt, and ends with a final examination, following which successful candidates obtain a qualification. Skill recognition can accelerate the process in different ways. Box 2 provides a definition of skill recognition and sets out

three approaches commonly used in the context of vocational education and training. Each of these approaches will be looked at in detail in Chapter 1 with country examples.

#### Box 2. Definitions of skill recognition based on prior learning

Skill recognition: a process designed to verify and provide recognition of a set of skills held by an individual but not reflected in a formal qualification. Skill recognition may yield one of the following three benefits, speeding the path to formal qualification:

- Access to education or training programme: A person gains admission into the training programme despite not holding the normally required formal entry qualification.
- Reduced programme duration: A person may be granted exemption from part of the coursework or on-the-job training. Typically this means the person follows an adjusted version of a regular programme with reduced coursework requirements or training time.
- Qualification without a required training programme: A person earns a full qualification upon demonstrating that they have already realised the targeted learning outcomes. For these purposes the person usually needs to pass a final qualifying examination or prove that they have achieved the targeted learning outcomes in other ways (e.g. through a dossier demonstrating working skills). Coursework is not mandatory, though in practice candidates often take optional preparatory courses.

Some of the approaches considered in this report are not usually described as recognition of prior learning, as this terminology tends to be used in respect of processes adopted by educational institutions. This is found for example in the Unevoc definition of RPL as "the set of standards and procedures put in place by education institutions to assign advanced standing to prospective students" in recognition of skills acquired through nonformal and informal learning or in formal settings (in which case it is often called credit transfer) (Unevoc, 2017). Reflecting the focus on vocational qualifications, this report also dedicates much attention to skill recognition in the context of apprenticeships, qualifications that are typically obtained through apprenticeships and more broadly vocational qualifications that are delivered at least partly in recognition of work experience. These do in fact involve recognition of prior learning.

#### Part I. Why does skill recognition matter?

#### What are the potential benefits of skill recognition?

While not all of the skills learnt at work are reflected in formal qualifications, individuals, employers and society may sometimes gain from ensuring that those skills are recognised. This section sets out the potential benefits of recognising skills obtained through work-based learning in formal qualifications. It looks at the perspectives of different stakeholders: individual workers, employers and society. In the light of how benefits are distributed, it aims to identify the rationale for public support for skill recognition. The costs and barriers associated with skill recognition processes will be discussed in Part II, in the context of different approaches to skill recognition.

#### Potential benefits to individuals

Skill recognition can benefit individuals because it encourages learning and makes it less costly for individuals to obtain a qualification. It provides an incentive for workers to learn informally at the workplace by holding out the prospect of eventually offering formal recognition for that learning, as well as encouraging additional formal learning by recognising the skills already acquired, which may form part of the qualification. This is important because holding a qualification that reflects a particular skillset has potential benefits to individuals. A qualification may improve employment prospects through two channels, suggested by economic and social theory: it can open access to occupations that are inaccessible to those not holding a specific qualification (credentialism) (Berg, 1970; Collins, 1979); it signals the person's higher productivity to potential employers (human capital theory) (Becker, 1964). Finally, obtaining a qualification may generate nonmonetary benefits to individuals.

### Skill recognition shortens the path to a qualification and reduces costs for learners

Giving recognition to existing skills, regardless of how they were acquired, can shorten the path to a qualification. It reduces the costs associated with completing a training programme, including direct costs (e.g. fees) and opportunity costs (time spent in classrooms away from work) to the individual. A cheaper and quicker path to a qualification increases the economic return to training. For example, adjusting entry qualification requirements in postsecondary programmes avoids the need for some VET graduates to obtain a general upper secondary qualification, which might involve substantial costs. When the process leads to course exemptions, the costs of education or training to the individual are reduced, as the person will need to spend less time off work and may have their tuition fees reduced. Finally, when a person has nearly all the skillset required by the target qualification, and can obtain it just by passing an examination, the direct and opportunity costs are greatly reduced compared to pursuing a full training programme.

#### Skill recognition can encourage learning at work

The possibility of receiving formal recognition for work-based learning may motivate workers to learn at work. Given, typically if not invariably, the large benefits of holding a qualification, the prospect of acquiring a vocational qualification may motivate adults to invest time, energy and money in learning, which they may be less keen to do in the absence of some credit for the skills acquired. Research suggests that lack of motivation is a common reason why adult employees are not willing to participate in extended continuing training (Canduala et al. 2012, Fouarge 2013).

#### Skill recognition can help low-qualified adults achieve a first qualification

Skill recognition may encourage further learning indirectly. In some countries an initial vocational qualification is a key stepping stone, without which many pathways remain inaccessible. So obtaining a first vocational qualification can open access to higher level education or training programmes. In Switzerland, for example, a study of adult VET found that this is viewed by social partners as a key issue for migrants, who without an initial VET qualification struggle to integrate in the country's education and training system and labour market (Beeli et al. 2016).

### *Obtaining a qualification can allow access to occupations where access is restricted to holders of particular qualifications*

As discussed in further detail in section 2, in licensed occupations it is illegal to pursue an occupation without the relevant qualification. In this case the individual benefits of obtaining a qualification are very clear. Even in non-licensed occupations there are barriers to skilled but unqualified workers. For example, collective agreements between employers' organisations and unions may restrict access to skilled occupations to those holding a particular qualification. Qualifications are also often vital in facilitating access to jobs with less stringent forms of regulation. For example, a recent study of VET for adults in Switzerland found that a key benefit for adults was that obtaining a qualification granted access to the benefits of a collective agreement negotiated with the social partners (Beeli et al. 2016).

#### Qualifications can signal the skills of potential recruits to employers

When a person has developed occupational skills through work experience, those skills may be observable to their current employer, but not to others. This means that if the person seeks to change employers or becomes unemployed, accessing jobs that require their skillset is likely to be more difficult than for qualified peers, even if there are no system-level arrangements for closure like licensing or collective agreements regulating access. Employers have limited information on the skills of potential recruits and they screen applicants based on signals (e.g. Arrow, 1973; Stiglitz, 1975; Wolpin, 1977). Research has found evidence of "sheepskin effects" (i.e. individuals with a degree have better employment outcomes than those with the same number of years of education but without a degree), e.g. Olneck (1977), Hungerford and Solon (1987), Belman and Heywood (1991), Card and Krueger (1992), Jaeger and Page (1996)). Other elements (e.g. relevant work experience described in a CV) may also signal the applicant's skills, as well as, or instead of qualifications. The added value of a qualification in terms of signalling will vary (see section 2 on contexts in which skill recognition has the highest potential to add value).

#### Some workers may access jobs despite not holding the required qualification

Sometimes workers may be able to obtain a job even if they do not hold the usually required qualification, either because their qualification is too low or because it is not in the right field o -study. This is possible in non-regulated occupations only and is more likely to happen in tight labour markets where some employers have no choice but hire unqualified workers. Figure 3 shows the share of workers in OECD countries whose highest qualification is lower than the one typically required for their job. The figure also shows the highest qualification held by underqualified workers

#### Figure 3. The incidence of under-qualification



Adults aged 16-65, by level of highest qualification

*Note:* A person is identified as underqualified if their highest qualification is lower than the one typically required for their job. Sample restricted to adults in OECD countries whose current situation is best described as full-time or part-time employed, excluding armed forces occupations *Source:* Author's calculations based on the Survey of Adult Skills (PIAAC)(2012,2015),<u>www.oecd.org/skills/piaac/publicdataandanalysis</u> following methodology and coding used to identify qualification mismatch described in Montt (2017).

#### But they tend to earn less than their peers with the right level of qualification

Figure 4shows the wage penalty that underqualified workers face (11 percent on average across OECD countries for which data are available). It compares the wages of underqualified workers with those well-qualified holding a similar job: for example it compares workers with lower secondary education in jobs that typically require an upper secondary qualification, with workers with an upper secondary qualification in similar jobs. Controls were included for age, gender and numeracy skills to ensure that the results are not driven by these factors. The figure shows that in some countries there is a large wage penalty for being underqualified – in ten countries the penalty is above 15 percent. At the other end in some countries there is a small or even statistically not significant wage penalty. Some of the differences are explained by differences in wage dispersion across countries – for example Denmark, Norway and Sweden are among the countries with the lowest earnings dispersion among OECD countries OECD (2017b). But some countries (e.g. Spain, Slovenia, France) have below OECD-average wage dispersion and above-average wage penalties for under-qualification.



#### Figure 4. The wage penalty associated with under-qualification

Adults aged 16-65

*Note:* Estimates from regression model on log (wages). Reference category is workers well-matched by level of qualification. The model includes controls for gender, age, age squared, numeracy skills and dummies for required level of qualification. Statistically significant coefficients are marked in darker tone. Sample restricted to adults in OECD countries whose current situation is best described as full-time or part-time employed, excluding armed forces occupations

*Source*: Author's calculations based on the Survey of Adult Skills (PIAAC) (2012, 2015),<u>www.oecd.org/skill</u> <u>s/piaac/publicdataandanalysis</u> following methodology and coding used to identify qualification mismatch described in Montt (2017).

#### Filling skill gaps and obtaining a qualification may lead to wage gains

One potential explanation for wage penalties described in Figure 4 is that underqualified workers may be less productive because of skill differences (e.g. technical skills, soft skills) compared to well-qualified workers – they might have developed many skills on-the-job but may still have some skill gaps. Another potential explanation is that being underqualified creates a ceiling in terms of career progression regardless of worker skills, if a higher level qualification is expected for higher level jobs. The wage penalties give an indication of potential wage gains if underqualified workers were to obtain the required level of qualification, building on their existing skills and complementing them to fill any gaps.

#### Obtaining a qualification may generate non-monetary benefits

Another potential benefit of skills recognition is that the qualification obtained can increase self-esteem (Beeli et al. 2016), through pride in what has been achieved through work, and explicitly situating that achievement at the same level as school or college achievements. Wolf et al. (2009) explored the validation pilot projects in Switzerland and found that candidates had higher self-esteem and motivation when their existing skills were taken into account within the VET context. These non-monetary benefits appear particularly important for those who quit formal education early (Werquin 2010), and for low-skilled participants (Wolf et al, 2009).

#### One challenge is that benefits are often distant and uncertain

The benefits set out above are theoretical possibilities; their realisation in practice will vary (section 2 discusses when skill recognition has the highest potential to add value).

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The costs are certain and at least partly immediate. Immediate costs include the initial effort to start the procedure, such as seeking information and preparing documentary evidence. Pursuing skill recognition often implies paying application or tuition fees, buying books, working reduced hours and therefore earning less. The expected benefits are distant – for example a validation process can take years to complete. The expected benefits are also uncertain, as success at the end of the process and getting a better jobs afterwards are both uncertain. The more advanced individuals are in their careers, the more this barrier is likely to be important: older workers have less time left to reap benefits that could compensate for costs (Muehlemann forthcoming). As a result, the perceived added value of using skills recognition to obtain a qualification will not always be high enough to justify the costs involved, especially when the person has a job and even more so if they are satisfied with their job. Research from Switzerland (Schmid, Schmidlin, and Hischier 2016) found that a lack of expected benefits was a major barrier to take-up of skill recognition opportunities.

#### **Potential benefits to employers**

#### The benefits employers expect will affect their level of support

Employers can help their employees to pursue further training and qualifications; they may offer time off work, or contribute to tuition or examination costs. What do employers gain (or lose) when a person develops skills through work-based learning that lead to a qualification? Will an employer have incentives to encourage their employee to undertake a process that recognises skills developed at work? Economic theory suggests that the benefits of skill recognition for employers tend to be more limited than those for workers and sometimes employers gain nothing from skill recognition. Many of the benefits described below are similar to the benefits of training.

#### Skill recognition combined with new learning can increase productivity

Often when a person benefits from skill recognition, they acquire new skills – perhaps by topping up existing skills to obtain the qualification. The additional skills increase productivity (e.g. through capacity to use new techniques or tools, better management or production processes), like other forms of training do. While skill recognition makes skills visible through a qualification, some gaps will persist – not all of the skills of a person will be captured by a qualification. The employer of a person who pursued skill recognition will have good knowledge of the person's productivity because they can directly observe them at work. To the extent that at least some of the employee productivity is observed only by the employer, the employer can benefit from the newly developed skills by extracting rent, because the employee's skills are not fully visible to other potential employers and changing employers is costly for the employee (this argument about information asymmetry and job search costs has been made in the context of firm-supported training (Acemoglu and Pischke 1998, 1999a, b; Stevens 1994). Sometimes the qualification may lead to a promotion within the firm. In this case the employer may gain by filling an important higher level position within the company with a tried and trusted employee. Better trained employees may also be better at training apprentices (Beeli et al. 2016), which in turn can generate benefits for the company through the productive work of apprentices and the prospect of retaining the best apprentices upon completion (see (Muehlemann 2016) on the long-term benefits of apprenticeship).

#### Workers qualified through skill recognition may fill vacancies

When the qualification is legally required to practice a profession, an employer may gain from skill recognition, as thanks to the qualification, they will be able to field the employee in a role for which the employee might have had the right skills (or most of them) but not the required qualification. This potential benefit is particularly large in regulated occupations where there is a shortage of qualified labour.

### *Workers who receive support towards skill recognition may show increased loyalty*

When an employee obtains a qualification for skills acquired in the workplace, one potential reason for an employer to offer support to their employee in the process is the expectation of increased loyalty. This may in turn reduce turnover or lead to higher effort by the employee, thus increased productivity. Research in Switzerland found that increased loyalty was a potential benefit for employers, particularly important in sectors that face a large number of workers leaving the sector (Beeli et al. 2016). Similarly, the evaluation of the "Train to Gain" programme in the UK, which involved much accreditation of existing skills, found that employers saw increased loyalty as a source of benefit to them (Ofsted 2008). Employers in retail and hospitality in particular supported their semi-skilled employees in the process leading to a qualification to build loyalty and reduce turnover (BIS, 2012).

#### Some benefits are realised by employers collectively

Theory suggests that some of the benefits of skill recognition fall on employers collectively only (for example employers in an economic sector), and not on the individual employers of those seeking skill recognition. An economic sector has an interest in having a good pool of skilled and qualified workers, as skills increase productivity and qualifications make skills more visible, reducing information asymmetry and improving efficiency in the sectoral labour market (see the discussion under benefits to the state). Skills shortages in niche areas can be very expensive for employers, either because they have to pay very high wages or cope with the absence of key workers. Collectively for an economic sector, the risk of poaching associated with more visible skills is less problematic: if following skill recognition a worker goes to work for another firm within the same sector, there is a loss firm that loses their employee but at the sectoral level this is compensated by the benefit of the firm that successfully recruits an employee. Empirical research is consistent with this. For example, a study based on interviews with employers in Switzerland suggests that individual employers perceive that most benefits of a qualification awarded to an adult worker fall to that worker, with fewer (if any) benefits for employers. Social partners, which represent the collective interest of economic sectors, tend to see more benefits in skills recognition – in particular increased loyalty and better skilled workers (Beeli et al., 2016).

#### **Potential benefits to society**

Procedures that make skills visible have various potential benefits to society as a whole, over and above the benefits to individuals and their employers.

#### Qualifications can help reduce frictions in the labour market

Qualifications make skills more transparent, and this should, in principle, make the labour market more efficient by allocating skilled workers to positions that make the fullest use of their skills. Economic theory suggests that one cause of unemployment is imperfect information – potential employers cannot observe workers' skills directly and workers lack information on jobs and skill requirements. The result is frictional unemployment, as workers spend time looking for jobs (see search and matching theory by Mortensen and Pissarides (1999)). While some frictional unemployment is inevitable, qualifications can reduce it by improving information in the labour market: a qualification can signal an individual's skills to potential employers, and firms may use qualification requirements to signal skill requirements for their vacancies (of course this will only happen if qualifications are updated when necessary and are perceived as credible proofs of competences). More broadly, better skilled and qualified workers will be more employable and productive, benefitting the state in terms of lower expenditure on unemployment benefits and higher tax income (Muehlemann forthcoming).

#### Skill recognition can facilitate lifelong learning

Skill recognition reduces the costs associated with training for and obtaining a qualification. Economic theory suggests that this is particularly important for adults, as adults face higher economic costs of training and gain fewer lifetime benefits(Muehlemann forthcoming). First, the opportunity costs are higher for adults, as the alternative to training is often employment and in many cases a person can earn higher wages with unskilled work than while in training (earning no wages or apprentice wages). Second, the expected benefits in terms of improved career opportunities are lower for adults than for young people, as the future career for an adult is shorter than for a younger person. Third, short-term financial constraints are more important for adults, as they typically need to cover living costs and often have family responsibilities. In addition, as explained earlier, the prospect of obtaining a qualification in recognition of skills developed while working creates stronger incentives for individuals to engage in learning at work as they can reap benefits in terms of better employment outcomes. This is particularly important given the increasing importance of lifelong learning, in the face of rapid technological progress that changes skills requirements.

#### Skill recognition can increase efficiency in skills development

Skill recognition, by shortening the path to a qualification, yields efficiency gains to society as a whole through two channels. First, when a training programme receives public funding (e.g. funding of school-based programmes, subsidies given to employers who take on apprentices), reducing or abolishing the need for coursework while maintaining the same outcome in terms of skills acquired leads to savings for the public budget without compromising quality. Second, skill recognition can reduce the time spent on off-the-job training, reducing disruptions for the firm in the production process, benefitting the economy as a whole.

#### Skill recognition may foster equity

Giving a second chance for adults wanting to return to education or training is extremely important as young people mature at different rates, both intellectually and emotionally (Field, Kuczera, and Pont, 2007). Some may miss the academic targets presented at key stages of their initial education or training. Skill recognition may be particularly helpful in giving qualifications and open access to further learning to those who dropped out of school or have low-level qualifications (Werquin, 2010). It can also provide a bridge, encouraging those with good practical skills but limited formal education, the incentive to return to education – again, serving equity, as well as efficiency objectives. Skill recognition measures may also facilitate the integration of migrants, making their existing skills visible, providing bridges into formal education and training programmes, while limiting the costs involved and helping them integrate into the host country's society and labour market (OECD, 2017a). This issue will be explored in-depth in a new OECD project focusing on how VET can help integrate migrants (see Box 3).

#### Box 3. Unlocking the potential of migrants through VET

A new OECD project will aim to produce new insights about how VET systems could adapt to successfully integrate migrants into their host countries, so as to achieve better outcomes for migrants and for economies as a whole. The study will document and analyse the recent experience of OECD countries in using vocational and professional education and training systems to integrate migrants. The work will also:

- facilitate peer-learning within and between countries;
- identify promising practices and innovative approaches used by countries; and
- identify policy levers that could help vocational and professional education and training systems play a stronger and more effective role in the integration of migrants.

The findings, including policy messages and promising country practices will be summarised in reports, expected to be published in early 2018.

#### **Policy messages**

Identification of the different benefits of skill recognition to different stakeholders should inform the allocation of public and private funding in support of skill recognition measures. Key messages include:

- Individuals who seek a first vocational qualification or those who must change careers (e.g. following a job loss because of automation) should be supported through public and private funding.
- For mid-career workers in search of career progression there are arguments for them to cover much of the costs.

- Employers can be expected to contribute to the extent that they benefit from the qualification delivered at the end of the skill recognition process.
- Better empirical data on current and potential target groups, and analysis of the costs and benefits of skill recognition could inform policy making.

#### **Rationale for the policy messages**

Skill recognition requires valid and reliable assessments of a person's skillset, identifying skills they have already acquired. This can be very costly, creating a barrier to a fuller use of skill recognition. Evaluating a portfolio takes time and resources, while the assessment of practical technical skills requires potentially expensive materials and equipment. Soft skills like dealing with clients are not readily assessed by paper and pencil tests and while promising initiatives in this area exist (e.g. role-playing), they require substantial resources. This raises the question of who should cover the costs. Identifying the benefits of skill recognition can help by underpinning the rationale for how the costs should be shared between stakeholders, in particular the state (and other public funding sources), industry and individual employers and individuals.

For the unqualified, and those struggling to find a job with their current qualification, there are strong equity arguments to offer public funding. First, giving low-qualified adults a second chance may be a policy priority: allowing them to earn a qualification that is often perceived as a "minimum" needed to succeed in society and the labour market. Second, the short-term financial burden of skill recognition might be particularly hard to bear for low-qualified adults and those without jobs. This creates an argument for implementing support measures, like offering financial support to those undertaking skill recognition to offer short-term help with the costs. Finally, public spending on skill recognition for low-qualified individuals should be compared to the cost of alternative outcomes, such as spending on unemployment benefits. This means that for this target group, the benefits of skill recognition to the state and society may be particularly large.

Workers in mid-career with good jobs may seek a qualification that exploits skill recognition as part of their career progression, as in many higher level certifications or professional examinations. Many of the benefits of such mid-career upskilling go to individuals, so it is reasonable for adults to pay for a good qualification that is going to enhance their careers and salaries. Some of the benefits fall to their employer and they may be expected to contribute to tuition costs or giving their employee time off. There is also an argument for offering public support to professional examinations in the context of support given to alternative pathways. For example if college-based postsecondary education and training receives public funding, it makes sense to offer public funding to work-based learning pathways leading to the same or a similar qualification.

Employer support for skill recognition will be higher when the process yields higher benefits to them. This means that it may vary across the different vehicles of skill recognition described in this report. Employers will benefit from new skills acquired on the path to a professional examination or certification, but validation processes often yield limited benefits (or even disbenefits) to employers when the target occupation is not regulated, as their employee is already in a job and the qualification obtained can mean that they may move more easily to another employer.

Better data could inform policy making, by identifying current and potential target groups, and evaluating the direct and opportunity costs for current and potential participants. Data and evaluations could also help assess to what extent skill recognition

delivers benefits in practice, and where public funding has the highest added value. In many countries little is known about how those who benefit from skill recognition perform afterwards (for example whether they complete the programme, obtain the qualification, and get a good job as a result). Available evidence suggests that sometimes the intended benefits are not always realised – the evaluation of Train to Gain in the UK, which involved much recognition of existing skills, found no employment benefits (Ofsted 2008). Data and analysis in this field could inform policy making, similarly to the way research has contributed to apprenticeship policy (e.g. cost-benefit analyses in Austria, Germany and Switzerland (for an overview see Kuczera, 2017; Mühlemann 2016).

#### Where does skill recognition have the highest potential to add value?

### The impact of obtaining a qualification will vary with individuals, occupations and country contexts

This section identifies contexts in which skill recognition has the highest potential to bring benefits. These contexts might therefore be policy priorities. Some of the factors identified concern differences between countries, others are specific to different types of job, and some concern differences between individuals. Policy priorities will need to reflect the country context, but also perhaps be adjusted to reflect the needs of particular individuals or industrial sectors. This section argues that options allowed by skill recognition for individuals and firms in terms of their choices need to be considered in the context of alternative pathways leading to the same skillset. Skill recognition has great potential to add value in occupations where holding the right qualification is required or widely expected to obtain jobs or promotion. This depends on labour market characteristics, such as the extent of occupational regulation, the use of collective bargaining and employment regulation. Also, skill recognition has major potential benefits where there is untapped potential of partially skilled labour and where "traditional" pathways to skills do not satisfy the demand for skilled labour.

#### Skill recognition needs to be considered in the context of alternative options

The take-up of skill recognition measures reflects choices made by different stakeholders - in the context of their goals, and the alternative means available of realising their goals. Figure 5 describes the choices made by individuals and employers. For example for an individual may choose to pursue a formal training programme or to learn through work experience and obtain (or not) a qualification. Similarly, employers may offer apprenticeships, recruit skilled workers trained elsewhere or offer training on-the-job, with or without a qualification. Focusing on individual and employer choices is important because there is a rationale for public policies to satisfy their needs – the needs of individuals seeking better skills reflected in qualifications; and the needs of employers seeking a better skilled and more transparently skilled workforce. The perspective of individuals is essential because they are most likely to initiate the process, for example by trying to pursue a shortened apprenticeship programme, requesting course exemptions or enquiring about validation opportunities. Education and training institutions also often play an important role in making skill recognition happen – for example by giving access to their training programmes, granting course exemptions and delivering direct access to qualifications. Their choices and the incentives they face are therefore also very relevant.



Figure 5. A simplified view of pathways to skilled labour – choices for employers and individuals



*Source*: Kis, V. (2016), "Work, train, win: work-based learning design and management for productivity gains", *OECD Education Working Papers*, No. 135, OECD Publishing, Paris, <u>https://doi.org/10.1787/5jl26rbns1g1-en</u>.

# Where holding a qualification is particularly needed for access and promotion in the labour market

#### The potential benefits of skill recognition are high in regulated occupations

A specific qualification is required to practice a regulated occupation (this is also referred to as licensing). Regulation is commonly used in occupations to protect the health and safety of consumers, or to ensure a high level of product or service quality (Kleiner 2015). Occupations like electrician or healthcare assistant are commonly regulated – Figure 6 shows the distribution of regulated occupations by sector across countries of the European Free Trade Area. At the same time regulation sometimes also exists in occupations where health and safety are less relevant. For example some states in the United States require hair braiders or ballroom dance instructors to hold a state license. Training requirements are also varied – for manicurists ten states require four months or more of training, while Alaska demands three days. Such inconsistencies suggest that licensing may sometimes be about reducing competition and raising revenue for the state rather than consumer protection (Carpenter et al. 2012).



#### Figure 6. Distribution of regulated professions by sector

#### The prevalence of occupational regulation varies across countries

Figure 7shows estimates of the share of employed individuals in regulated occupations across countries. Occupations where there are compelling health or safety concerns are widely subject to regulation. Countries and regions vary a lot in respect of certain occupations (e.g. in the United States across states) regarding the need to hold a particular qualification to practice. For example, a car mechanic is a regulated profession in Croatia, Germany, Italy, Poland and Slovakia but is not regulated in most other EU countries. In countries where a large share of employment is in regulated occupations, effective mechanisms for skill recognition are likely to be particularly helpful. The extent of employment regulation also affects the opportunities available for those with foreign qualifications – if these are not recognised in the host country, individuals will not be able to access jobs, even if they have the required occupational skills.

*Source*: European Commission (2017) Database of regulated professions website, <u>https://ec.europa.eu/growth/single-market/services/free-movement-professionals/regulated-professions-database</u> (accessed 5 September 2017).



Figure 7. The prevalence of occupational regulation

Estimates of the share of employed individuals in regulated occupations, OECD member countries of the EU

*Note:* The figures provide upper and lower bound estimates of the proportion of employed individuals in regulated occupations. The lower bound represents occupational codes that match occupations that can be clearly identified as regulated. The upper bound represents occupational codes that cover both regulated and unregulated occupations [e.g. ISCO (The International Standard Classification of Occupations) code 2432 incudes "Librarians and related information professionals". Librarians are regulated in some countries (e.g. Greece, Poland, Slovenia)] but other information professionals are not, therefore the proportion of workers affected by regulation cannot be determined.

*Source:* Koumenta et al. (2014), *Market Impacts of Occupational, Regulation in the EU*, pp. 36-37 based on data from the European Labour Force Survey 2012.

#### Collective agreements may also stipulate qualification requirements

Access requirements for jobs may also be established through collective agreements between social partners, as a result of collective bargaining. Collective bargaining is a process of decision-making between parties representing employer and employee interests (with or without government involvement) (OECD 2017c). The practical implications for individuals are similar – a specific qualification may be needed to access an occupation, despite low levels of government-driven occupational regulation. Collective agreements may regulate not only access but also promotion criteria, making a specific qualification necessary to reach the next step in the career ladder (e.g. wage categories linked to qualifications). Table A1 in annex provides data for the European Union on collective bargaining.

### Sometimes a qualification is widely viewed by employers as needed to perform the job

Sometimes a qualification may not be formally required but is expected in practice, or perceived as the minimum to progress to the next career stage. For example in Switzerland in professional examination qualifications are widely expected in audit and consulting companies for senior positions (holders of senior management positions in PWC, BDO, Ernst & Young and KPMG hold such a qualification, for example as fiscal expert, auditor, expert accountant).

# Those holding a required qualification often have incentives to limit entry into the profession

Economic theory suggests that by restricting labour supply, workers in particular occupations can obtain an economic "rent" (e.g. higher wages, better working conditions, lower unemployment) (Kleiner 2006, empirical evidence is described below). Researchers have also argued that, through artificial restrictions on occupations, elites can limit the supply of workers and restrict access to those from preferred social backgrounds (Brown, 1995; Bills, 2005; Collins, 1979 in van de Werfhorst 2011). Empirical studies from various countries have shown that licensing and unionisation can both restrict labour supply and generate to a wage premium for licensed or unionised workers (see Kleiner and Krueger (2013), Bol and Drange (2017), Bol and Weeden (2015), Bills (1988)). These same incentives may motivate opposition to the recognition of skills acquired through work-based learning on the part of existing qualified workers. This matters because frameworks for skill recognition are often negotiated with the involvement of trade unions, who are commonly a channel for such incentives.

### *Employment regulation can also increase hiring standards, making a qualification particularly valuable*

Stringent employment protection makes initial recruitment riskier for employers, because of the difficulty or cost of firing those who turn out to be less suited to the job. When regulation is most stringent for permanent jobs, employers may be particularly demanding when hiring for permanent jobs. Economic theory suggests that employment protection raises the hiring standards firms will use to take on employees (Blanchard and Landier 2001) and empirical evidence is consistent with this (Kahn 2016). Those hiring standards often take the form of expecting a given qualification (Breen 2005). Research suggests that signals sent by qualifications about the productivity of potential recruits will be clearer in education systems with a stronger emphasis on specific skills (more VET) and a closer link between schools and employers (Breen 2005).

#### These factors are often combined in practice in individual country contexts

The factors listed above – extensive use of collective agreements, high levels of employment regulation and employment protection are often, though not always, combined. Taken together they make qualifications and therefore skill recognition, substantially more important. Researchers have drawn a distinction between "co-ordinated" market economies and "liberal" market economies, recognising that not all economies fall neatly into one or other category. In co-ordinated market economies issues like training, wage bargaining and protection are covered by negotiations involving the social partners and the state (Hall and Soskice, 2001). These economies tend to give more prominence to formal vocational education and training in skills development (Bol and van de Werfhorst 2011).

### *Vocational qualifications have particularly high value in co-ordinated market economies*

Theory suggests that in these economies there is likely to be more regulation regarding vocational qualifications required for access to occupations and employment protection – more closure through qualifications. As mentioned above, those with vocational qualifications have incentives to regulate access to their occupation (Weeden 2002). Also, individuals who have invested in vocational skills (which are industry-specific) have

particularly strong incentives to support social policies that protect their jobs (more than those with general education). One reason is that losing a job is likely to hit workers with industry-specific vocational skills particularly hard because the specificity of skills reduces the range of occupations accessible to them (Iversen and Soskice 2001). Empirical evidence from a range of countries supports this theory. Research based on data from 15 European countries (Bol and van de Werfhorst 2011) suggests that vocational qualifications lead to higher job status in co-ordinated market economies, relative to liberal market economies. It also found qualifications have a particularly positive effect on occupational status in countries with strongly vocationally oriented and differentiated schooling systems (Bol and van de Werfhorst 2011).

### Where there is untapped potential of partially skilled labour without recognised qualifications

This includes individuals with pre-existing and unrecognised occupational skills, who would benefit from obtaining a qualification, in particular:

- Individuals who do not hold a VET qualification: This group includes those who never pursued VET or who dropped out from a school-based programme or apprenticeship, and through a combination of formal education and training and learning at work have acquired some or most skills needed for a qualification.
- Individuals with a VET qualification seeking a career change in a field related to their initial training: This group includes, for example, mid-career workers whose jobs disappear and may need re-training to access a related, emerging occupation.
- Migrants with skills not recognised in qualifications in the host country: Some might have developed skills through formal training and hold qualifications that are not recognised in the host country. Others might have learnt through work experience and have no documentation of their training. The skills requirements for a particular occupation may vary between countries, so some will need training to complement their existing skillset. A study of firms' and social partners' views on adult VET in Switzerland (Beeli et al. 2016) found that in most occupations workers who lack the required qualification and are ready to obtain that qualification are migrants.



### Figure 8. Migrants with foreign qualifications are more likely to be overqualified or mismatched by field of study than natives, even controlling for literacy

Adjusted odds ratios, adults aged 16-65 with at least upper secondary education

*Note*: Migrants include foreign born adults who obtained their highest qualification abroad. Reference category is workers born in the host country who obtained their highest qualification in the host country.

Estimates from logistic regression models. The models include controls for gender, age groups and literacy level. Coefficients that are statistically significantly different from 1 are marked in darker tone. Sample restricted to adults whose current situation is best described as full-time or part-time employed, excluding armed forces occupations. Countries with less than 40 migrants in the analytical sample were excluded from the analysis. For the right hand side panel, legislators and senior officials, refuse workers and other elementary workers were excluded and data were not available for Australia.

*Source*: Author's calculations based on data from the OECD Survey of Adult Skills (PIAAC) (2012, 2015),<u>www.oecd.org/skills/piaac/public.dataandanalysis</u> and methodology and coding used for the identification of mismatch described in Montt (2016).

Figure 8 shows that in most countries migrants with a foreign qualification at upper secondary level or above are more likely to be overqualified for their job than native peers even when they have similar literacy skills. They are also more likely to be mismatched by field of study than their native peers with similar literacy skills. Higher rates of mismatch among migrants with foreign qualifications may reflect that foreign qualifications are as well suited to the needs of the host country as native qualifications. But mismatch may also point to occupational skills held by migrants that are not fully exploited.

#### **Policy messages**

The impact of obtaining a qualification through skill recognition will vary according individual characteristics, occupations and country contexts. The following pointers
should underpin priorities for policy development and implementation, taking into account the country context:

- Policy efforts may be guided by the targeted policy objective(s). Two common objectives are addressing skills shortages and fostering equity each are associated with different sets of priorities for implementation and policies may target one or both of these.
- The potential benefits of skill recognition measures will be highest in countries with a high share of jobs for which access and progression is linked to qualification requirements.
- In countries with less developed skill recognition measures, pilot measures should focus on regulated occupations that face skills shortages.
- Skill recognition can add value in a wide range of contexts through its outcomedriven focus, allowing for flexibility and innovation in approaches to learning.

## **Rationale for the policy messages**

Skill recognition may help address specific skills shortages. Particular attention should be paid to occupations where access and progression is linked to particular qualifications, either because of licensing or collective agreements or because it is common practice in hiring procedures. Employers will have stronger incentives to support skill recognition, for example by taking on adult apprentices in shortened programmes or giving their workers time off so that they can pursue validation, in fields where other pathways do not satisfy demand for skilled labour. Of course even in such cases, as described in Figure 5 at the beginning of this section, approaches that involve skill recognition will only be one of the many options for dealing with skills shortages. For example employers may increase youth apprentice wages to recruit more through "traditional qualifications" (e.g. regular apprenticeships), they may offer more informal or non-formal on-the-job training to their employees or recruit on the external labour market, including for example workers from abroad.

Skill recognition can serve as a tool to foster equity and social cohesion. When these are the key objectives, policy efforts should be driven by the needs of individuals in the target group. This may include, for example, individuals with few or no recognised qualifications, those who have limited work experience or have lost their jobs in midcareer, and migrants without recognised qualifications and poor labour market prospects. The added value of skill recognition will be particularly high where the two main objectives overlap: skill recognition may yield a qualification to individuals who struggle in the labour market, while tackling skills shortages in the economy – for example offering opportunities for low-qualified adults to obtain a qualification in caring for the elderly may help fill labour shortages in the sector.

The institutional context of individual countries affects the potential benefits of skill recognition. The benefits are likely to be highest in countries where access to and progression in a large share of jobs is formally linked to qualifications and employment regulation is stringent. In such country contexts there are stronger grounds for giving priority to designing and implementing effective skill recognition measures. Countries with less developed skill recognition initiatives should focus pilots on occupations that face skills shortages and where access is restricted to those holding a particular qualification. Where access is linked to a particular qualification, skill needs are likely to

be clearly articulated and skill shortages will encourage employers to support skill recognition measures and ensure high expected benefits to individuals.

In all country contexts the focus on learning outcomes creates room for new approaches to learning. Skill recognition with its focus on learning outcomes and their measurement through rigorous assessment, can add value to systems of skills development by freeing up alternative ways of realising the same learning outcomes. Allowing for flexibility in how the skills are acquired can stimulate innovation in approaches to learning, ranging from learning through work experience, through non-formal preparatory courses to online learning.

# Part II. Skill Recognition in practice: drawing out the policy lessons

This section describes three common ways of giving recognition to skills – with different target populations, and different implications for individuals and training institutions. It discusses how each process works, which individuals are most likely to benefit from them and describes relevant country practices. Table 1 below provides an overview of the major elements of costs and benefits to different stakeholders of different pathways with skill recognition, as well as of regular education and training programmes. The analysis in the sections below will draw on this table.

## Admission into an education or training programme

## Skill recognition may take the form of granting access to a programme

Skills recognition may lead to a person receiving access to a training programme, waiving some of the standard entry qualification requirements. For example a person who did not complete lower secondary education may be given access to an apprenticeship programme at upper secondary level, or a person with a vocational upper secondary qualification that does not provide access to postsecondary education may be granted admission. Box 4 describes some country practices in this area.

# Potential beneficiaries include low-qualified adults and graduates of some vocational programmes

Those most likely to benefit from this option are adults who have acquired the skills needed to start a training programme, and can therefore reasonably share a classroom with others who have more formal entry qualifications. This may benefit adults with low qualifications (e.g. school drop-outs) or migrants with no or little formal schooling or unrecognised qualifications, and those with a vocational qualification that does not normally allow access to postsecondary or tertiary programmes. Waiving the entry qualification will reduce total training time, by avoiding the need for a preparatory programme prior to entry.

Stakeholder	Potential costs	Potential benefits	Potential costs	Potential benefits	Potential costs	Potential benefits	Potential costs	Potential benefits
Individual (worker)	Direct costs (relatively high)	Improved employability	Direct costs (relatively high)	Improved employability	Direct costs (medium)	Improved employability	Direct costs (relatively low)	Improved employability
	Opportunity costs (relatively high)	Higher wages	Opportunity costs (relatively high)	Higher wages	Opportunity costs (medium)	Higher wages	Opportunity costs (relatively low)	Higher wages
		Non-monetary benefits		Non-monetary benefits		Non-monetary benefits		Non-monetary benefits
Education or training institution	Training costs (full)	Tuition income (full)	Training costs (full)	Tuition income (full)	Training costs (reduced)	Tuition income (reduced)	No training costs.	No tuition income.
Employers	Costs incurred during training period (full).	Benefits yielded during training period (full)	Costs incurred during training period (full)	Benefits yielded during training period (full)	Costs incurred during training period (reduced)	Benefits yielded during training period (reduced)	No costs incurred during training period.	Employee motivated to train (if training included)
	Losing qualified employee (for individual firms)	Higher productivity	Losing qualified employee	Higher productivity	Losing qualified employee (for individual firms)	Higher productivity	Losing qualified employee (for individual firms)	Higher productivity (if training included)
		Reduced turnover		Reduced turnover		Reduced turnover		Reduced turnover
				Better matching of workers to jobs		Better matching of workers to jobs		Better matching of workers to jobs
State		Better matching of workers to jobs (reduced unemployment benefits, higher tax revenue)		Better matching of workers to jobs (reduced unemployment benefits, higher tax revenue)		Better matching of workers to jobs (reduced unemployment benefits, higher tax revenue)		Better matching of workers to jobs (reduced unemployment benefits, higher tax revenue)
	Public funding towards training costs		Public funding towards training costs		Public funding towards training costs (potentially reduced)		No training costs.	

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## Table 1. An overview of costs and benefits of pathways leading to a qualification

#### Box 4. Admission in recognition of skills acquired through work-based learning

#### Admission "sur dossier" in Switzerland

Adults without the required entry qualification may pursue a postsecondary VET programme in recognition of their pre-existing skills. The precise admission procedure is defined by individual institutions. In professional colleges (höhere Fachschulen) adults aged 25 or more lacking the required qualification (vocational or general baccalaureate) may be admitted to postsecondary programmes if they can prove that they have acquired the skills needed to pursue studies through work experience, personal experience or training. Admission may be granted through a conditional offer (subject to success at a test or tests designed to check if the person is ready for the programme) or an unconditional offer. Colleges often offer guidance and support (e.g. individual interviews, workshops) to candidates seeking admission "sur dossier". Similarly, in higher education a person may be admitted to a bachelor programme despite not holding the required entry qualification if they can prove that they have the skills needed to successfully complete the programme. Finally, admission "sur dossier" also allows access to professional examinations and candidates may also be exempted from part of the examination in recognition of pre-existing skills.

### Norway

Two pathways allow access to higher education without an upper secondary qualification. First, under the "23/5" pathway applicants aged 23 or above with at least five years of work experience, or a combination of education and work experience and who passed the course in six key subjects (Norwegian, English, mathematics, natural sciences, social sciences, and history). Second, the "recognition of prior learning" pathway allows access based on individual assessment to applicants aged 25 or above. Applications are processed locally at each institution.

*Source*: Le portail officiel suisse d'information de l'orientation professionnelle, universitaire et de carrière we bsite, <u>www.orientation.ch;</u> ( accessed 30 September 2016); Swissuniversities website, <u>www.swissuniversities.</u> <u>ch</u> (accessed 15 January 2017); ASD Villari website, <u>www.asdvillari.ch;</u> <u>www.hesge.ch</u> ( accessed 15 February 2017); for Norway *Norwegian Directorate for Education and Training (2017), Skoleporten website,* <u>https://skoleporten.udir.no,(accessed 16 September 2016).</u>

# Relaxing entry qualification requirements in recognition of skills acquired through work can widen access to further learning opportunities

Entry qualification requirements help ensure that only those embark on the programme who have the profile needed to succeed, to avoid wasting time and resources. Entry requirements may also indicate to potential entrants how they need to prepare for the programme. But they may also create artificial barriers, excluding those who do not meet formal criteria, but who in fact, by virtue of their working experience, could succeed in, and benefit from the programme. In many countries graduates of upper secondary vocational programmes face a range of barriers, with different levels of justification, when seeking access to postsecondary or tertiary education. Allowing work-based learning to be recognised for the purposes of entry can help remove dead ends for graduates of some vocational programmes. This matters for equity in tertiary education, as disadvantaged youth tend to enrol in larger proportions in vocational tracks (OECD 2008). Also enhancing further learning opportunities for vocational graduates plays a key role in enhancing the attractiveness of vocational tracks in the first place (OECD 2014).

# This approach recognises a person may be prepared for a qualification in different ways

This does not mean lowering standards, instead it is about recognising that a person may be prepared for a qualification in different ways – learning through work being one of them. Adapting entry requirements to better fit the profile of adult learners is an important step towards ensuring that professional programmes are an effective tool for lifelong learning. Adults may pursue vocational programmes to deepen their technical skills, make a career change or return to work after unemployment or inactivity (OECD 2014). There is an important point of principle, for vocational education and training as a whole, for it to be accepted that those who have learnt their skills through working do indeed have high level skills, which deserve celebration and recognition in academic programmes.

# Potential beneficiaries may have weaknesses in some areas, including literacy and numeracy

Adults who pursue an education or training programme following some years of work experience and without the required entry qualification, will have different learning requirements to those who enter through traditional routes. Their work experience might have developed valuable soft skills, they are likely to show more maturity and will be in a better position to relate their learning to the world of work. But they may also face difficulties, as having spent some years away from classrooms they will need to refresh their academic skills. Others may have had negative experience with schooling and struggled with the academic skills they now need to successfully complete an education or training programme (OECD 2014). Data from the Survey of Adult Skills show that on average nearly one in five students in postsecondary vocational programmes have weak literacy or numeracy skills or both (Figure 9).



The share of current students in postsecondary VET with literacy or numeracy skills below level 2



*Source:* Kuczera, M. (2017a). *Building Skills for All in Australia. Policy Insights from the Survey of Adult Skills*, http://www.oecd ilibrary.org/docserver/download/8717051e.pdf?expires=1508230503&id=id&accnam e=guest&checksum=13DF044512F983845440C1679965D5F2.

# But restricting access to those with sound basic skills creates another barrier to learning opportunities

One approach is to test entrants and restrict entry to those who already have the basic skills needed for successful completion. But this may exclude adults who, with a modest amount of targeted support, could improve their basic skills and succeed in the programme. In response, countries where access to professional programmes is relatively open, extensive efforts are sometimes devoted to the basic skills of entrants. OECD (2014) has argued that basic skills need to receive attention within professional programmes. This means administering literacy and numeracy tests upon entry to identify those with weak basic skills and offer them targeted help (OECD 2014). For example, community colleges in the United States allow anyone to enrol for programmes and address basic skill weaknesses in college: following a test on entry for basic skills, colleges offer developmental (or remedial) education to tackle weaknesses (Kuczera and Field 2013). While this approach has obvious attractions, it must be acknowledged that the effectiveness of many initiatives has been limited. Colleges allocate scarce resources to remediation activities, while students commonly use federal grants and subsidised loans to cover the cost of remedial education. This leaves them fewer resources for their postsecondary studies and increases the chance of dropout, and financial distress (Kuczera and Field 2013).

## Integrating basic skills into vocational programmes has many advantages

One promising approach is to integrate basic skills with vocational training, so that literacy and maths skills are acquired in meaningful practical contexts. While research evidence (e.g. Jenkins, Zeidenberg and Kienzl, 2009; Kamil, 2003; NCTE, 2006) shows that integrating academic and vocational content can be effective, implementing such an approach is demanding. It requires careful planning, adequate resources and preparation. A study of maths and vocational training (Stone et al., 2006) identified factors that teachers considered key to success, such as allowing sufficient time away from teachers'

regular tasks, and effective partnerships between maths and vocational teachers. An example is given in Box 5.

### **Box 5. I-BEST Integrated instruction in the United States**

The Integrated Basic Education and Skills Training (I-BEST) provides a strong example of a programme designed to improve labour market outcomes and entry rates to professional training among adults with low basic skills. Developed in Washington State, it has proved successful (e.g. Wachen et al., 2010) and is now being introduced in other parts of the United States. The programme combines basic skills teaching with professional training that yields college credits and contributes to a credential. Courses are provided in occupations in high demand. In Washington State combining basic skills with vocational content is facilitated by the availability of both types of programme at community and technical colleges, and I-BEST programmes are available in every college in the state. Individuals must score below a certain threshold on an adult skill test and qualify for adult basic education to participate. In practice, this translates to around 2% of basic skills students. I-BEST students earn more credits and were more likely to complete a programme than a comparable group of students not participating in the programme. Evidence on the link between participation in I-BEST and earnings is less conclusive.

Source: Kuczera, M. and S. Field (2013), A Skills beyond School Review of the United States, OECD Reviews of Vocational Education and Training, <u>http://dx.doi.org/10.1787/9789264202153-en</u>.

# Classroom-based learning environments might be particularly challenging for those who are more comfortable about learning through work

The capacity to succeed in a school or college-based programmes also requires study skills, which enable students to learn effectively and efficiently in academic environments. This can be a challenge, particularly for adults with low qualifications – data from the EU show that they tend to prefer learning in an applied setting than in abstract or independent ways (Hoeckel and Schwartz 2010). Some institutions have recognised the distinctive needs of adult learners and offer targeted support in "study skills", for example by offering workshops at the start of the year in note-taking, academic writing or time management.

## VET needs to be both inclusive and demanding in terms of quality

It is sometimes suggested that there is tension between the goal of promoting excellence in an education or training programme and that of inclusiveness – both key aims for education and training systems (Schleicher 2014). Excellence in VET implies demanding standards in terms of skills targeted by programmes. Inclusiveness requires leaving no one behind, ensuring that all have the skills needed to function successfully in society and giving second chances (Field, Kuczera, and Pont 2007). This requires targeted support for those who might otherwise struggle in education and training, while maintaining high standards in terms of expected learning outcomes.

## **Policy messages**

The possibility of admission in education or training programmes in recognition of relevant work experience can remove barriers to further education and learning. Its effective use should be encouraged by:

- Creating options that allow for students without the required entry qualification to be admitted, if have developed the skills needed to complete the programme through other means, such as work-based learning.
- Identifying any specific gaps in the skills of such students at the start of programmes and offering targeted help to support successful completion of the programmes.
- Ensuring that potential students and institutions are fully aware of existing possibilities to recognise work experience as part of the admission process.

## **Rationale for the policy messages**

Entry qualification requirements are designed to ensure that only those start the programme who have high chances to succeed. If no exceptions are allowed, there is an implicit assumption that the skills needed to succeed can only be acquired by pursuing certain formal education or training programmes. Relaxing entry qualification requirements in recognition of pre-existing skills can help remove some barriers to learning, as such options acknowledge that a person may also be prepared for the programme through work experience. Depending on the level at which entry qualification requirements are set, this may require adjustments in the legal framework regulating admissions into programmes or at the level of individual institutions. This can be particularly helpful for those with no or low qualifications (including migrants without recognised qualifications but sufficient language skills) and individuals with vocational qualifications that do not open entry to postsecondary and tertiary education. Flexibility in entry requirements needs to be complemented with measures that ensure that students have the right skills to start the programme and can fill any gaps in their skillet during the programme, so that they have a good chance to successfully complete.

Realising the full potential benefits of admission in recognition of relevant work experience may require additional measures. Some of the potential beneficiaries of admission in recognition of work experience face challenges to successfully complete the programme. Many will have spent some time away from academic learning environments and may be less comfortable in classroom-based learning or have difficulties with academic subjects. To help realise the full benefits of admission in recognition of work experience, measures should be taken to identify any gaps in the skills at the outset of programmes through diagnostic assessments and offer targeted help. Addressing weaknesses in literacy numeracy skills is sometimes necessary: international experience shows that integrating basic skills development into vocational programmes can be an effective tool to fill gaps.

Barriers may also result from lack of awareness of the legal possibility to grant or obtain admission without the usually required entry qualification. Information about existing possibilities should be shared through career guidance provided to students in education or training, as well as workers and jobseekers in search further learning opportunities. Similarly, efforts should be made to ensure that education and training institutions are aware of existing possibilities and they have the capacity to offer support to students admitted based on work experience, and help ensure successful completion.

## **Reduced programme duration**

# Programme duration may be reduced in apprenticeships, as well as school or college-based programmes

Individuals may have the duration of a training programme reduced, in recognition of their pre-existing skills. Overall training duration may be reduced through course exemptions in the case of school or college-based programmes or in the school-based part of apprenticeships, or through reduced time spent in on-the-job training. 'Competence-based' progression or completion in apprenticeship is another way of allowing for reduced duration. This allows an apprentice to progress through apprenticeship or complete it faster or slower than the usual length, based on the competences acquired, and not on the time spent.

# This route is suited to learners who already hold some of the skills targeted by the qualification

Potential beneficiaries of this approach include individuals who acquired some but not all of the skills needed to obtain the qualification. This includes, for example, adults with relevant work experience or those seeking a career change from their initial field of training to a different but related field. Migrants may also benefit, for example if their qualification is not recognised in the host country and they need complementary training, or if they hold no formal qualifications but have relevant work experience.

## **Reduced programme duration in apprenticeships**

## Many countries have apprenticeship schemes with some flexibility in duration

A number of OECD countries have apprenticeship schemes that allow for reduced duration if the apprentice proves they already have the required skills, either because they have developed them through prior learning (e.g. work experience or school-based programme) or because they are fast learners. Box 6 describes some examples. Data on take-up across countries are scarce. In Switzerland nearly a quarter of VET qualifications awarded to adults in 2015 involved shortened apprenticeships (SERI 2017).

### Box 6. The option of reduced duration in apprenticeship programmes

### Australia

Apprentices may receive course credits for skills they already have and their prior work experience, reducing training duration. The apprenticeship contract defines a nominal term, which can be reduced (or extended), as all apprenticeships are "competency-based". If an apprentice can demonstrate that they have acquired the required skill level, they may progress to the next stage of their training or complete the apprenticeship. Competency is assessed first by the "registered training organisation" (training provider). Then employers need to confirm that the apprentice is able to apply the same skills in the workplace.

### Denmark

Adults aged 25 and above may complete an apprenticeship through two alternative pathways, in addition to the regular apprenticeship programme. They first undergo individual competence assessment (which lasts between half a day and ten days), which determines which pathway they may follow. Those with at least two years of relevant experience are exempted from the basic course (which includes school-based vocational training), and follow a shortened main course (which normally combines school-based and company-based training) and do not need on-the-job training. Those with some relevant work experience or prior education and training may follow a shortened basic course (up to 20 weeks), a shortened main course and up to two years of on-the-job training.

### Germany

Apprenticeships typically last three or three and a half years. Reductions in training time may be granted to those with prior qualifications or adults aged 21 and above. Those with a secondary qualification (Mittlere Reife) can obtain a reduction of six months. Duration may be reduced by up to 12 months for those with a general upper secondary school leaving exam (Abitur), adults aged 21 and above and those already holding a vocational qualification. An apprentice may take the final qualifying examination earlier than set out in the standard duration if both the training firm and the vocational school attest above-average performance of the apprentice.

### Switzerland

Apprenticeships typically last three or four years (leading to a federal VET diploma) or two years (leading to a federal VET certificate). The duration of apprenticeship may be reduced for those who have prior qualifications (e.g. general upper secondary qualification, vocational qualification) or skills that allow them to acquire the targeted skillset faster (e.g. work experience with validated learning outcomes). Typically duration may be reduced by one or two years. In Switzerland such reduced duration pathway accounted for 20% of apprenticeship graduations among adults aged 25 and above in 2015.

For example, in canton Vaud the following options are available:

Supplementary apprenticeship: When a person holds a vocational qualification in a related field, training duration may be reduced by one or two years. e.g. cook to dietitian cook (one year training), electrician to specialist in telecommunication networks (two year training). Cases where supplementary apprenticeships are allowed are set out in federal regulation of occupations (*ordonnances de formation professionnelle*).

• Accelerated apprenticeship: Those holding a general education qualification (*Certificat de culture générale or certificat de maturité gymnasiale*) may pursue an accelerated pathway lasting two or three years (depending on the occupation), offered in about 15 occupations. In addition, in the remaining occupations (where accelerated apprenticeship are not regulated), reductions in training time may be granted on a case by case basis.

## **United States**

Registered apprenticeship programmes range from one to six years depending on the complexity of the occupation, with the majority of programmes taking four years. Some of the programmes are competency-based or hybrid (others are time-based). In competency-based schemes apprentices may complete faster or take extra time to develop the required competences, though these schemes still have to comply with certain requirements regarding time spent on each major process. Hybrid apprenticeship programmes combine time-based and competency-based elements.

Source:forAustraliaAustralianApprenticeshipswebsite,www.australianapprenticeships.gov.au/employers;www.education.vic.gov.au/training/learners/apprentices/Pages/competency.(accessed 30 August 2017);for Denmark Ministry of Higher Education and Sciencewebsite,https://ufm.dk/en/education-and-institutions/recognition-and-transparency/recognition-guide/admission-vet;http://eng.uvm.dk/upper-secondary-education/vocational-education-and-training--vet(accessed 30 August 2017);for Switzerland Le Conseil Fédéral Le portail du Governement Suisse website,ww.admin.ch/opc/fr/classified-compilation/20001860/index.html(accessed 30 August);UnitedStatesDepartmentUnitedStatesDepartmentofLabourEmploymentwww.doleta.gov/oa/apprentices.cfm(accessed 30 August 2017).

# In countries with mostly adult apprenticeships, recognition is mostly given to occupational skills

The characteristics of apprentices influences the role of reduced apprenticeship duration. In countries where the majority of apprentices are adults (e.g. Australia, Canada, United States) apprenticeships are designed around their profile and apprenticeships build on initial schooling. For example, in the United States most apprenticeship programmes require individuals to be at least 18, in Israel firms are legally prohibited to hire apprentices below 18 (though some exceptions are allowed) (Muehlemann forthcoming). In this context the possibility of reduced duration is about occupational skills, recognising prior learning through work experience or allowing fast learners to progress at their own rhythm.

# *While in countries with strong youth apprenticeships exemptions may also be granted from basic schooling*

In countries where apprentices are predominantly young people (e.g. Austria, Denmark, Germany, Switzerland), apprenticeship includes a substantial component of academic education. Apprenticeships are a pathway within initial education and training and include what is typically considered basic schooling: literacy, maths and other general education courses. In this context skill recognition for adults may also serve an additional purpose: exemptions may be granted from basic education to adults who already have the required basic skills (e.g. exempting an upper secondary graduate from maths courses). In

Australia regular apprenticeships last three or four years, but more than half of adult apprentices complete their program within two years (Muehlemann forthcoming).

# *Employers may be reluctant to support reduced duration if it means they lose financially*

The level of apprentice wages at different stages of training, public subsidy levels and tasks carried out by the apprentice affect the cost-benefit balance of apprenticeship to employers. As a result, employers may be keen, neutral or reluctant accept reduced training duration. For example, research from Australia (Clayton et al. 2015) found that lack of employer support was a major barrier to the implementation of competence-based completion. Money seemed to be a major issue – faster progression through the scheme means faster wage rises and early completion means paying skilled worker wages instead of apprentice wages. Competence-based completion removes or reduces the period when apprentices are highly productive but receive an apprentice wage. But that period is essential for employers, as the benefits of this period compensate for the costs incurred at the beginning, when apprentices were mostly learning and producing little. In that context firms have few incentives to make use of the possibility of early completion based on competences.

# But they may support it if wages are not higher or apprentices are more productive

The situation is different if early completion does not have wage implications. This is the case, for example, of some registered apprenticeships in the United States. An apprentice who passes the qualifying exam continues to receive the wage set in the initial apprenticeship contract, i.e. a wage lower than a qualified worker wage. In this case there are no incentives for the employer to oppose reduced training duration – but some of the benefits to individuals (a fast track to skilled worker wages) also disappear. Sometimes employers might support reduced training duration despite higher costs – for example an adult apprentice may learn faster, be more mature and therefore more productive at work, compensating for the higher costs. Also employers may be keen to fill a skilled worker vacancy and faster completion can help them achieve that earlier.

## **Course exemptions in school or college-based programmes**

### Course exemptions shorten the time to graduation and encourage completion

Skill recognition may also reduce overall programme duration in school or college-based vocational programmes. This is more common in postsecondary rather than upper secondary vocational programmes, and is akin to academic postsecondary and tertiary education (which will not be discussed here). Empirical research provides evidence of the benefits. A large-scale survey in the United States found that in two-year postsecondary programmes, around 13 percent of students who received recognition of prior learning obtained an associate degree compared with 6 percent of non-RPL students. The higher the number of credits granted on the basis of recognition, the shorter the average time to graduation. While selection bias might affect these results, their size suggests that RPL may be causing at least part of these documented benefits (Council for Adult and Experiential Learning, 2010).

# Institutions sometimes have inadequate incentives to recognise skills through course exemptions

For several reasons, recognition of prior learning is more often praised than practised (OECD 2014). The assessment of applications for skill recognition is demanding for education and training institutions: it takes time and money to consider documentary evidence and conduct interviews and tests. Course exemptions may also reduce income for the institution: where public funding is based on contact hours. In addition, there may be cultural barriers: education and training institutions can be, understandably if not defensibly, reluctant to accept that the competences they teach can also be acquired in different learning contexts, and even informally (OECD, 2013). Some may view formal learning as superior to learning through work experience (Dyson 2005).

# Reforming funding arrangements can help remove barriers

There are different ways of addressing these challenges. First, course exemptions might be granted without reducing tuition fees. A study of recognition of prior learning in five English-speaking countries (Dyson 2005) found that courses for which recognition does not involve a reduction in tuition fees tend to be more flexible in its use. Such arrangements still yield benefits to students, who do not need to spend time on coursework they do not need. But no efficiency savings are made in terms of tuition costs for students and/or the state. Second, institutions may receive compensation for lost income. For example, in Denmark institutions providing course exemptions on the basis of skill recognition receive compensatory payments. Despite this, the payments are seen as too low by the majority of institutions (Danmarks Evalueringsinstitut, 2010). In practice both approaches might be combined, accommodating funding arrangements to ensure that institutions are not discouraged from granting recognition. One such example was mentioned to the OECD team during the study visit to Switzerland: students with relevant work experience could enter the second year of the programme, paying tuition fees only for the semesters they pursued. While the institution missed out on income from the first year, they also benefited as entrants to the second year may fill places left empty by first-year drop-outs – the institution delivered second year courses, as it would have done anyway, and tuition income increased thanks to additional students. Finally, cultural barriers to skill recognition might be addressed by bringing staff in education institutions closer to the world of work in the target occupation. For example work placements for teachers are one option, while another would be to encourage practitioners who work in the targeted occupation to teach part-time.

## Artificial incentives for or against skill recognition should be avoided

Incentives should remove barriers and allow the realisation of the full potential of skills recognition, but should not allow those lacking relevant skills to acquire the target qualification. Ideally those deciding on course exemptions should not be part of an institution that stands to win or lose from the decision. Quality assurance is important to ensure that qualifications are delivered only if the person has acquired the full targeted skillset.

## Modularisation has some potential benefits in facilitating exemptions

Modularisation, or dividing programmes or qualifications into smaller building blocks, has gained ground in VET policy development over the past decades and has been part in policy discussions in many countries (OECD 2003). Some countries have had a system of

modularisation since the 1970s and 80s (e.g. France, the Netherlands, Scotland, England) while others are still in the process of developing one. Identifying a block or blocks of content that from which students with relevant work experience can be exempted can facilitate course exemptions. Modularisation is often linked to competence-based approaches to skills development Biemans et al. 2004) and has various potential benefits (Ertl 2002; OECD 2003). In the context of skill recognition it can help identify suitable supplements to a person's existing skillset and facilitate learning by allowing individuals to learn at their own pace, especially useful for adults. In an effort to encourage flexible modes of provision, a number of OECD countries have developed modularised vocational programmes (see Box 7).

### Box 7. Modular vocational programmes

## Austria

Fachhochschulen provide bachelors and masters-level qualifications. Just over 40% of the 350 programmes were in technology and engineering in 2010/11; one third in economic sciences; 14% in health sciences. Programmes follow a more "school-like" structure than universities with limited alternatives for optional subjects and stricter timetables. Programmes are modularised and each module prescribes competences that students should have obtained upon completion of the course. Each institution can develop curricula for the programmes it provides, but each programme must be accredited and the proposed curricula approved as part of the accreditation procedure. Similarly, each institution can set its own examination procedures, but these must be approved through accreditation. Students are tested typically after completion of the relevant module to check whether they have acquired the relevant skills.

## **Belgium (Flanders)**

Spread throughout Belgium (Flanders), centres for adult education provide second-chance education and basic skills programmes, and vocational programmes at upper secondary and postsecondary level. To facilitate the participation of working adults efforts have been made to make programmes (particularly associate degrees), flexible through modular provision.

*Source*: Musset P., et al. (2013), *A Skills beyond School Review of Austria, OECD Reviews of Vocational Education and Training*, <u>http://dx.doi.org/10.1787/9789264200418-en</u>, (OECD 2014), p.85;for Belgium (Flanders) Flemish Department of Education and Training website, <u>http://www.schoolleadership.eu/portal/partner/flemish-ministry-education-and-training</u>, (accessed in 2013).

## But it also has some downsides

Modularisation can be used as a cover for an incoherent vocational qualification which does not add up to the skills required for a recognisable job (OECD 2003). Designing and updating a modularised system involves costs and modules (or partial qualifications) may not be recognised in the labour market (Chiousse, 2001). There may also be worries that modularisation undermines the holistic notion of a profession, which in some countries is seen as lying at the heart of the VET system (Ertl 2002). In the context of apprenticeships

additional questions arise. Offering only some modules may not work for employers in cost-benefit terms. Research on the costs and benefits of apprenticeships shows that employers often incur net costs at the beginning of training, when apprentices are unskilled and spend much of their time learning (Kis 2016; Kuczera 2017b). The final stages compensate for this, when skilled apprentices make a productive contribution. One implication is that employers may be unwilling to offer less than the full package – offering only the initial modules would involve financial losses for them. Another question is whether modules or smaller sets of modules are or should be recognised in partial qualifications. Receiving a partial qualification may benefit those who dropout before completing the full programme. On the other hand, the availability of a partial qualification may in itself encourage dropout.

### **Policy messages**

Flexibility in the duration of vocational programmes, in recognition of pre-existing skills, should be encouraged. Taking full advantage of the potential benefits requires providing arrangements that are attractive to all the parties involved.

- In apprenticeships with flexible duration, the wages of apprentices, their tasks and time allocation need to be defined based on careful consideration of the costbenefit implications for employers to ensure that employers are open to the flexibility.
- In school or college-based programmes funding arrangements (e.g. per capita funding, tuition fees) may need to be adjusted to ensure institutions have adequate, but not excessive incentives to grant exemptions in recognition of pre-existing skills.

## **Rationale for the policy messages**

The principle of adjusting programme duration to the needs of individual learners is appealing, but implementation can be challenging. In the context of apprenticeships, an apprentice with relevant work experience may learn faster and it may be relatively easy to give them tasks that are typically given to apprentices at later stages. But the framework regulating apprenticeship or the contract usually specifies, for example, how much time the apprentice spends at work and at school and how much they are paid at different stages of the apprenticeship. Shortening apprenticeship duration means that adjustments need to be made on these fronts too. If an apprentice is exempted from some school-based time, they may be available to spend more time at work. Their higher productivity may justify higher apprentice wages. The precise arrangements concerning how much time apprentices spend at work, what they do at work and how much they are paid has financial implications for their employer. It is therefore essential that these arrangements are carefully built, based on an understanding of financial implications and resulting potential disincentives.

The potential of reduced duration apprenticeship will only be fully exploited if the associated practical arrangements work for all parties involved. One option is to let the apprenticeship market decide, allowing individual apprentices with relevant work experience to approach employers and negotiate a package (wages, time allocation etc.) that is different from the standard apprenticeship package. In countries where apprentice wages (or apprentice minimum wages) are defined collectively (e.g. by occupation at regional or national level), another approach is to define special conditions for

apprentices that have relevant work experience – this may involve a different apprentice wage scale over the shortened duration of the apprenticeship. Either way, the key objective is to ensure that the package associated with shortened apprenticeships is attractive to both employers and individual apprentices.

In the context of school or college-based programmes, skill recognition typically takes the form of course exemptions. Assessing whether a person should be granted exemptions is demanding for education and training institutions both technically and financially. This, together with financial disincentives and cultural barriers means that the full potential of recognition is often not exploited. Better incentives for education and training institutions may encourage the use of course exemptions. This means that sometimes funding arrangements need to be reformed to ensure that institutions do not lose money when they grant recognition for pre-existing skills. Ideally those who decide on course exemptions should not have anything to win or lose from the decision.

## Qualification without a required training programme

# This route allows to obtain a qualification without mandatory programme requirements

This mechanism allows individuals to obtain a qualification without completing any associated training programme – or at least any obligatory programme. In practice individuals seeking a qualification this way often pursue some coursework, such as courses that prepare them for an examination or courses that fill specific gaps in their skillset. The key feature of this approach is that there are no formal programmatic requirements. Reduced programme duration (as discussed in section 2) means an adjusted version of a standard training programme, while direct access to a qualification typically requires much less, if any mandatory coursework. A qualification may be obtained without an associated training programme in one of two ways: through access to a final qualifying examination or through validation of learning outcomes. These two possibilities are considered further below.

# *It is suited to the needs of individuals who have acquired nearly all the targeted skills*

Potential beneficiaries are individuals who have all or nearly all the skills required for a particular qualification, and for those who lack one very specific element of the skillset, and therefore require tailored preparation for the final examination. This includes individuals who dropped out from a training programme or failed the final examination, those who have developed their skills through work experience and migrants who have worked in the target occupation abroad but whose qualification is not recognised in the host country.

## Direct access to the final qualifying examination

Under this model, the person may take the final qualifying examination of a training programme, without following the standard preparatory programme. This is sometimes the same examination as taken by those who have pursued an associated formal training programme (for example an apprenticeship)– so there are two routes to the same qualification; in other cases, as in professional examinations, there is no formal training

programme, so there is a diversity of options for preparing an individual for the examination

## Several countries allow access to the final examination in apprenticeships

Some OECD countries allow for external access to the final examination in apprenticeships (see Box 8). It is mostly used in countries with a long-standing tradition of apprenticeships – one reason might be that these countries have a well-developed standardised assessment that underpins the credibility of this route. In Austria, 15 percent of apprenticeship completers obtain their qualification by directly proceeding to final examinations in 2012 (Dornmayr et al. 2013). In Norway 36 percent of apprenticeship qualifications (journeyman certificates) were delivered on the basis of an experiencebased examination in 2015/16. Among adults aged 25 and above experience-based examinations accounted for 47 percent of delivered qualifications (Bratsberg, Nyen, and Raaum 2017). Such examinations were most common in health and childcare and construction, which together accounted for over 60 percent of experience-based examinations (Norwegian Directorate for Education and Training, 2017). In Germany six percent of all apprenticeship examinations were awarded on following direct access to the examination in 2009. Over two-thirds of those who directly accessed the final examination were entitled to it in recognition of their work experience (BIBB, 2011). In Switzerland three percent of vocational qualifications were awarded following direct admission to the final examination in 2015, but among gualifications delivered to adults (aged 24 and above) direct admissions accounted for a quarter of qualifications (SERI 2017).

#### Box 8. Access to final qualifying examinations in apprenticeships

#### Austria

Individuals aged 18 or more may directly apply for the final apprenticeship examination without enrolling as an apprentice. The requirements are to demonstrate relevant work experience, so that there is a high probability that an individual has already acquired skills similar to that of an apprentice in the corresponding training occupation. Such skills can be acquired through internships, non-formal training in a company, other practical experience or enrolling in schooling that amount in total to at least half of the duration of a regular apprenticeship (§ 23 Abs. 5 lit.a BAG). Direct applications to the final examination accounted for 15 percent of awarded apprenticeship qualifications in 2012.

### Germany

Individuals may take an "external examination" (Externenprüfung), taking the final assessment of regular apprenticeship programmes without completing the programme itself. Access to this exam is limited to those who have worked in the target occupation at least for one and a half times as long as the duration of the apprenticeship, and they have been performing skilled tasks in their job. Relevant school qualifications may reduce or replace the required minimum work experience. Candidates may prepare for the assessment by themselves (e.g. taking tests from past years, reading the technical literature as proposed by websites that advise potential candidates) or following preparatory courses. In 2009 candidates who took the external examination accounted for about 6% of successful apprenticeship final examination candidates.

# Norway

The Education Act (sections 3 to 5) gives candidates for experience-based trade certification (praksiskandidat) the right to take the trade or journeyman's examination without an apprenticeship. The candidate must demonstrate comprehensive competence in the field, and cover the objectives in the curriculum (apprenticeship training). The length of the candidate's work experience in the field must be equivalent to the length of the apprenticeship period plus 25 per cent (normally five years of practice) and the candidate must pass a theoretical exam. Relevant previous education is recognised as practical training, according to established rules. About a third of journeyman certificates were awarded on the basis of experience-based certification in 2015/16.

#### Switzerland

Adults with relevant work experience may access the final qualifying examination of apprenticeships and obtain a federal VET diploma or federal VET certificate. Five years of work experience are required, including minimum three years in the targeted occupation. This pathway does not require the conclusion of an apprenticeship contract and is open to employed adults. Cantons provide advice to applicants about how to prepare for the examination. In some occupations preparatory courses for adults are available. In all occupations adults may pursue additional training by attending vocational schools or intercompany training centres.

Source: For Austria: Muehlemann, S. (forthcoming), 'Apprenticeship Training for Adults: Theoretical Considerations and OECD Empirical Evidence for Selected Member Countries, Education Working Papers. OECD.;Dornmayr, H., et al. . (2013), 'Lehrabschlussprüfungen in Österreich", Österreichisches Institut for Berufsbildungsforschung, Institut für Bildungsforschung der Wirtschaft, Zwischenbericht. Vie nna, www.bmwfw.gv.at/Berufsausbildung/LehrlingsUndBerufsausbildung/Documents; for Norway: Norwegian Directorate for Education and Skills website, https://cumulus.cedefop.europa.eu/files/vetelib/2016/201 (2017), 2017); Switzerland: SERI 6 CR NO.pdf( accessed in for 'Vocational and Professional Education and Training in Switzerland Facts and Figures 2017.' Bern: State Secretariat for Education, Researc h and Innovation, https://www.sbfi.admin.ch/dam/.../2017/...BB2017.../Fakten\_Zahlen\_BB2017\_en.pdf.

# Direct access to final examinations can serve as an alternative to regular apprenticeships

Direct access to final examinations offers the possibility of a highly flexible route to an apprenticeship qualification. For example, a person might hold a regular (not special apprenticeship) contract with their employer and prepare for the examination through a set of tailored learning on-the-job and off-the-job (e.g. preparatory courses). This arrangement might suit the profile and needs of adult learners and their employers: if training an adult under the apprenticeship framework is unattractive to employers (see section 2 above), it may be preferable to offer access to the final examination supplemented by some preparatory courses. This might particularly suit the needs of adults in search of a vocational qualification in countries where the apprenticeship system is designed around the needs of young apprentices. This alternative pathway to an apprenticeship qualification is based on similar dynamics to regular apprenticeships in countries where most apprentices are adults – where apprentices age 18 and younger, and equal to the minimum wage for apprentices older than 19 years in the UK, or may even exceed the going minimum wage in Canada (Muehlemann forthcoming)).

### Box 9. Accessing the final examinations - some cost-benefit implications in Switzerland

In Switzerland the wages of apprentices are determined by the market. Most apprentices are young and their wages are sometimes a small fraction of the wage of unqualified workers (Muehlemann forthcoming). By the end of the apprenticeship period employers draw a positive balance on average: the benefits obtained outweigh the costs. Apprentices wages are relatively low (less than 20 percent of the skilled worker pay, still they represent a large share of costs for employers (Muehlemann et al., 2013).

Offering an apprenticeship generates costs for employers, such as apprentice wages, trainer costs and material costs. Apprenticeships also yield two types of potential benefits to employers. First, they benefit from the productive contribution of apprentices. Second, they can reap post-training benefits when they hire the qualified apprentice as skilled labour upon completion (Kuczera 2017b; Muehlemann 2016).

Taking on an adult as apprentice may sometimes be less attractive for employers in terms of costs and benefits. Adults often cannot accept wages as low as young apprentices, increasing costs for employers. The productive contribution of adult apprentices may help compensate for this, as adults may be more productive at work (e.g. because they are more productive at the outset and learn faster). But higher adult apprentice wages mean sometimes they may a stronger need for post-training benefits than in the case of youth apprenticeships, to make taking on an adult more attractive to employers.

Swiss apprenticeship contracts do not allow for the inclusion of payback clauses, which ensure that upon completion the person does not leave the firm for a certain amount of time. But regular (i.e. not apprentice) employment contracts do allow for this possibility. As a result firms may hire adults, pay them unskilled worker wages, take them up to the qualifying examination through training and preparatory courses, and obtain post-training benefits when they retain them as skilled workers upon completion thanks to the payback clause included in the contract.

# Access to the final examination may offer second chances to low-qualified adults

In Norway two-thirds of those who obtained a VET qualification based on experiencebased examination between 1998 and 2015 lacked an upper secondary qualification at the outset. Research also found that those pursuing experience-based examinations had similar socio-economic background to adults without upper secondary education. Conversely, adults who pursued a regular apprenticeship programme had similar socioeconomic background to young people who complete an apprenticeship. Data analysis drawing on nearly 20 years of register data suggests that experience-based examinations serve as a tool to reduce educational inequalities (Bratsberg, Nyen, and Raaum 2017).

# Professional examinations are also be used to certify higher level or specialised vocational skills

Sometimes, free-standing examinations, without specific coursework requirements, are used to provide vocational qualifications. They involve assessments of occupational competence yielding a qualification in that occupation. For example, an estate agent might seek to be a qualified property manager, or electricians may receive a qualification allowing them to open their own business. Relevant experience is sometimes a prerequisite for candidates. In practice such examinations represent a way of recognising skills acquired through work-based learning, since they consolidate skills emerging from working experience, typically supplemented by additional education on some more theoretical aspects of the profession. Higher level examinations of this type offer a pathway to higher level skills to individuals who already have an initial qualification and have several years of work experience. It is suited to skilled and qualified mid-career individuals who have a job and seek to progress in their careers.

# Professional examinations may be nationally uniform and implemented with government involvement

These examinations exist in one form or another in many countries (see Box 10), with two broad approaches to implementation – recognising that not all countries fall neatly into one category and both approaches may co-exist in a country. In some countries, such as Israel and Estonia, the examinations are subject to considerable central government organisation, although industry is consulted closely. In Austria, Germany and Switzerland industry-driven professional examinations integrated into the education and training system offer a pathway for career progression for graduates of the initial VET system (and sometimes also of academic education) and are implemented with light-touch regulation. For example, in Switzerland qualifications delivered through this route are developed primarily by industry representatives with the co-operation of federal authorities, with nationally uniform requirements regarding relevant work experience, required skills, assessment methods. Successful candidates obtain a federal qualification.

### Box 10. Professional examinations and certifications across OECD countries

### Austria

Candidates may take a master's craftsman examination (Meisterprüfung or Befähigungsprüfung). The examinations are organised by regional economic chambers. Preparatory courses are not regulated and optional, and are offered mainly by Institutes of Economic Promotion) and Chambers of Commerce. The examination includes practical skills assessment, an oral examination, a written examination, as well as modules focusing on the candidate's skills to be an entrepreneur and to be an instructor for apprentices. Candidates must pay an examination fee (EUR 2329 in 2010). Candidates who successfully pass the examination can enter Universities of Applied Sciences (Fachhochschulen) and universities.

### Germany

Master craftsman examinations (Meisterprüfung) have traditionally been offered in areas of trades and crafts, but increasingly commerce, manufacturing, agriculture, and services are now covered (Fazekas and Field, 2013). Some examinations are federally regulated and are consistent across the whole country. Others are managed within federal states (Länder) by the chambers of commerce and crafts. The Federal Ministry of Education and Research is responsible for approving new qualifications and examinations. Preparatory courses are optional, but are attended by most candidates. Many candidates only attend some of the course modules depending on their prior knowledge and experience (Fazekas and Field, 2013). Courses are not subject to regulation and are offered by the chambers or private providers (sometimes courses in universities of applied sciences also prepare students for examinations). The examination includes a practical assessment, tests of theoretical knowledge (including for example on economic and legal issues), as well as pedagogical skills. Candidates must pay an examination fee of EUR 200-2500 and candidates who pass with distinction may continue their studies at universities of applied sciences.

### Iceland

Master craftsman examinations prepare apprenticeships graduates for running their own business. Preparatory courses focus on developing entrepreneurial skills and are offered in upper secondary schools or universities. Courses are typically taught in the evening and cover general academic subjects, management, vocational theory and vocational practice.

### Romania

Foreman schools are organised by the Ministry of Education, rather than by the professions themselves. They offer part-time programmes to technicians with at least three years of work experience, preparing them to assume more extensive responsibility, take up management roles or teach in vocational schools. Such a qualification is often required if the person wishes to start their own business. Programmes are offered mostly in technical fields, with over half of students in engineering. The precise content of programmes can be adapted to local needs – some focus primarily on management skills, others on pedagogical skills.

### Switzerland

All examinees of federal examinations receive a "Federal Diploma of Higher Education" or "Advanced Federal Diploma of Higher Education". The governance of the federal examination system rests on a partnership between the federal government and labour market organisations (employer organisations, professional associations, and trade unions). The federal government is responsible for strategic planning and development and quality assurance. It approves rules for professional examinations. The federal certification process ensures that there is no overlap between examinations and that the stakeholders reach a consensus regarding course content.

The qualification required for accessing federal examinations depends on the occupation (often apprenticeship qualification, but in some fields Bachelor or Master degree). Preparatory courses are optional but are taken by most candidates. Preparatory courses last on average three semesters and cost about CHF 9000 for federal diplomas and CHF 12000 for advanced federal diplomas. Courses are offered in flexible ways, including week-end and evening classes and distance learning. The components of the examination depend on the field and include practical skills assessments. Holders of professional examination qualification in certain professions are entitled to enrol in a Master's degree programme at universities of applied sciences.

*Source*: SERI (2017), 'Vocational and Professional Education and Training in Switzerland Facts and Figures 2017.' Bern: State Secretariat for Education, Research and Innovation, <u>https://www.sbfi.admin.ch/dam/../201</u>7/...BB2017.../Fakten\_Zahlen\_BB2017\_en.pdf.; Fazekas, M. and S. Field (2013), A Skills beyond School Review of Switzerland, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264062665-en.</u>

# Nationally uniform professional examinations require a national framework for industry involvement

Industry-led professional examinations, as in Austria, Germany and Switzerland offer a neat pathway to higher level vocational skills, with a qualification that is standardised and unique at national level. Developing and implementing such examinations and associated qualifications presuppose the capacity of the concerned industry to act collectively at national level so as to express the need for a qualification, and agree on content and assessment methods. The institutional framework for such negotiations involving social partners and government tend to be strong in countries with a tradition of apprenticeships – indeed without a framework for social partner engagement apprenticeships are hard to develop successfully.

# *In some countries industry-led certifications play a similar role without public involvement*

Industry-led certifications play a similar role to professional examinations but they are relatively unregulated and separate from the formal education system. For example, in the United States, numerous non-state organisations take charge of certifying examinations for master plumbers and electricians (Kuczera and Field 2013). Some certifications are developed by large companies or groups of companies (e.g. certification by Cisco or

Caterpillar). The result is that in some occupations, multiple certifications are available – for example in the US chemical industry, technicians can choose between 22 certifications (US Department of Labor, 2013).

# Industry-led certifications may be usefully linked to formal qualifications

Industry-led certifications and professional examinations may also co-exist. Sometimes they cover different occupations - for example in Switzerland in project management private certification is perceived as sufficient and no federal qualification has been developed. In other cases certifications and formal qualifications may build on each other. For example, firm-endorsed may serve a very useful role in skills systems, and public policies aim to align formal education and training programmes so that they deliver the knowledge and skills required for certifications. In Israel, government encourages apprenticeship programmes not only to lead to a national qualification but also to prepare apprentices for international certification. For example, an apprenticeship programme in mechanics specialised in earth digging may prepare apprentices for the relevant Caterpillar certification. Similarly, in the United States, postsecondary institutions often seek to ensure their programmes are aligned with industry-recognised credentials, in particular certifications (Kuczera and Field 2013). In Switzerland in some occupations candidates obtain both a Swiss qualification following the professional examination and international certification. For example in wealth management candidates may obtain a federal qualification (expert in wealth management) as well as international certification (certified international wealth manager), following one preparatory course and one examination for both (SFAA, 2017).

## Validation of learning outcomes

Validation consists of four phases, from identifying relevant experiences, documenting and assessing those, to the delivery of a partial or full qualification (Cedefop 2014). Box 11 describes practices in selected OECD countries. Some countries (e.g. Austria, Denmark, France, Switzerland) allow vocational qualifications to be obtained based entirely on a process of skills validation that verifies that they have achieved the targeted learning outcomes (Cedefop, 2017b). Other countries (e.g. Norway) use validation to recognise some skills but require the person to undertake the final examination in order to obtain the qualification.

### Box 11. Validation of learning outcomes in apprenticeships

### France

A 2002 law establishes an individual right to the recognition of professional experience (validation des acquis de l'expérience) in the acquisition of a qualification. This allows an individual to get part or all of the qualification based on professional experience. The candidate prepares an application, documenting their relevant professional experience which is then examined by a panel including both academic and professional members. The panel may then either grant the full qualification, or alternatively set out the courses which need to be followed by the candidate in order to complete the qualification. The qualification obtained is the same as that which can be obtained through academic study (Chaparro, 2012). In 2014 around 40 percent of the qualifications delivered on the basis of validation were at upper secondary level (CAP) (Le certificat d'aptitude professionnelle) cours or BEP (Le brevet d'études professionnelles).

#### Germany

The ValiKom initiative was launched in 2015 and will be funded until 2018 with the aim of making transparent vocational skills acquired through work experience. ValiKom is designed for German adults with low-level qualifications, those who have followed atypical pathways and seek learning opportunities, as well as newly arrived migrants'.

The initiative will be supported by the chambers of commerce and industry, develop and trial a consistent national process for validating vocational skills. ValiKom builds on existing training regulations and avoids establishing parallel rules on a formal examinations system. The process involves skills assessment and ideally leads to the identification of equivalence. It will use instruments provided under the Assessment and Recognition of Foreign Qualifications Act, oriented towards evaluating foreign qualifications. The outcome of the initiative will be guidelines for action, with suggestions regarding processes, accreditation criteria, instruments, a validation certificate and recommendations.

#### Switzerland

An apprenticeship qualification may be obtained through validation of learning outcomes in 20 occupations. Validation may be performed in specific areas (leading to course exemptions) or it may replace the whole education and training programme and the associated examination and allow the delivery on a qualification based on validation. This pathway is open to adults with at least five years of work experience, including minimum three years in the targeted occupation. The validation process documents relevant work experience and training pursued by the candidate. Examination experts compare the validation package to skill requirements in the targeted occupation and produce an evaluation report during an interview with the candidate. Based on the interview, the examination experts decide whether the targeted occupational and general skills have already been acquired. In 2015 seven percent of apprenticeship qualifications awarded to adults aged 24 and above were delivered following validation of non-formal and informal learning.

*Source*: France DARES (2017), La validation des acquis de l'expérience website, <u>http://dares.travail-emploi.gouv.fr/dares-etudes-et-statistiques/statistiques-de-a-a-z/article/la-validation-des-acquis-de-l-experience</u>, (accessed 27 August2017); for Germany BMBF (2016), "Report on vocational education and training", BMBF (Federal Ministry of Education and Research) <u>https://www.bmbf.de/pub/Berufsbildungsberi cht\_2016\_eng.pdf.;</u> for Switzerland SERI (2017), 'Vocational and Professional Education and Training in Switzerland Facts and Figures 2017.' Bern: State Secretariat for Education, Research and Innovation, <u>https://www.sbfi.admin.ch/dam/../2017/...BB2017.../Fakten\_Zahlen\_BB2017\_en.pdf</u>.

# Overall take-up of validation opportunities remains limited

While the arguments for making skills visible regardless of how they were acquired are convincing and there has been increasing attention among policy makers to procedures facilitating it, it has not translated into major shifts in practice and widespread take-up for validation opportunities (Dyson 2005). For example, in Switzerland seven percent of initial VET qualifications awarded to adults in 2015 were obtained through validation and alternative pathways (e.g. regular or shortened apprenticeships, direct access to qualifying examinations) accounted for a higher share of qualifications (SERI 2017). Validations are also more common in some fields – in Switzerland nearly two thirds of qualifications based on validation were awarded for two occupations (healthcare worker and logistician) (Salini and Voit 2016). At the same time validation applications have been increasing in some countries – for example European data show that in most countries where data are available the number of validation applications increased between 2010 and 2014 (Cedefop, 2017b).

# Evidence on the impact of validation on individual outcomes is scarce

Validation processes make existing skills visible, but do not in themselves develop new skills. One question is what benefits does it bring when it does not involve additional training. The UK experience with the "Train to Gain" programme illustrates some of the challenges. Much of the programme subsidised the assessment and accreditation of existing skills. While employees and employers were mostly satisfied with what they received through the programme, most employers participated because they were recruited by education and training institutions (training providers) and the programme was free of charge (Ofsted 2008). The programme did not improve employment outcomes for participants and evaluations failed to find firm-level benefits in terms of productivity. One implication is that 'pure' recognition, without additional training, may easily result in waste. In practice, validation is often accompanied by some education or training. An important question is whether the resulting qualification is recognised in the labour market in the same way as traditional qualifications. Research evidence is limited in this area, partly because data do not always distinguish between qualifications obtained through validation and those obtained traditionally.

# Undertaking validation is demanding, particularly for disadvantaged groups

The validation process may be demanding as it depends on the capacity of a person to identify and articulate their existing skills and prove them. This may be particularly hard for disadvantaged adults. According to the European Inventory on the validation of nonformal and informal learning (Cedefop 2017), low-skilled individuals, early school leavers, those without jobs and at risk of unemployed, older workers, migrants/refugees and people with disabilities do take up validation opportunities sufficiently. This is a striking finding, especially as the potential benefits of validation are particularly large for these groups. In addition, for someone who is not intending to change employer, the benefits of validation may sometimes be limited. Research from Switzerland found that the perceived added value of obtaining a qualification may not be high enough to justify the costs involved, especially when the person has a job and even more so if they are satisfied with their job (Schmid, Schmidlin, and Hischier 2016). The benefits will be larger for those who want to move to a new job with their employer or change employers - but employers, understandably, will not be keen to support the latter. In addition, seeking validation may also signal to their employer that they are thinking of leaving -afurther disincentive to the pursuit of validation.

## Validation may sometimes receive little support from employers

Validation is also a pathway which is least likely to attract the support of employers. When skill recognition involves no more than the recognition of existing skills, the employer of the person has incentives to support them if the qualification allows them to take up a new role in the firm (e.g. when the occupation cannot be practised without the qualification). Otherwise employers will be left with few benefits and a problem: the qualification will make the workers' skills more visible to the external world, which could heighten the risk of poaching by other firms or the workers might request wage increases. So in many cases employers have little interest in supporting (e.g. by giving time off work) a process that gives recognition to the existing skills of their own workers. This may create a barrier, as adults in work might struggle to negotiate time of work needed to put together the dossier needed for validation or attend preparatory courses. Research on adults interested in the validation of skills in Switzerland has found that most think they will not get support from their firm (Schmid, Schmidlin, and Hischier 2016). Interviews with Swiss companies revealed scepticism about the value of validation, as employers often find that the process develops no new skills and is therefore useless to them (Tsandev et al. 2017).

## A co-ordinated approach may help engage and support more vulnerable adults

The most vulnerable potential beneficiaries of validation may be the unemployed or those who receive help from social services. Some social barriers to take-up may be deepseated in multiple disadvantage, and therefore beyond the reach of the VET system in isolation. This implies that validation may need to be co-ordinated with policies and institutions in relevant areas may help reach out to a larger number of individuals who might benefit from validation. For example VET might be the responsibility of a national ministry while the adult literacy may be the responsibility of a different ministry or regional or local government. Some adults may be prevented from pursuing validation (or another route) by weak literacy skills – and if adult literacy is the responsibility of local governments there might be variation in the effectiveness of provision. Box 12 describes the approach to validation in healthcare in Geneva (Switzerland), including how individuals are supported through the process.

#### Box 12. Support individuals pursuing validation in healthcare (Geneva, Switzerland)

A foundation offers compensate for part of foregone earnings of people who pursue validation. Training needed to complement existing skills is also delivered free of charge to adults pursuing validation. A person interested in pursuing validation have to prepare a dossier, which identifies existing skills and potential gaps. They are entitled to about 20 hours of support from local skills assessment centre (Centre Bilan Genève). Individuals pursuing validation are supported by a mentor. Depending on the targeted occupation, a person is entitled to between 28 and 70 hours of mentoring. Mentors are professionals who work or have worked until recently in the field targeted by validation, with many of the mentors being recent retirees or people who work part-time in their occupation.

*Source*: Ortra Santé Genève, interview conducted during the OECD study visit to Switzerland, (11 September 2017).

## **Rigorous assessments underpinning qualifications**

Qualifications delivered on the basis of skill recognition only will only be credible if underpinned by valid and reliable assessments. Skilled jobs require a very wide range of skills and knowledge, including theoretical knowledge (the science of the profession), practical skills such as how to use particular bits of equipment, and many social skills such as how to communicate, and persuade, and handle conflict with colleagues and clients. The challenge is to design and implement rigorous assessments of the range of skills required by an occupation.

The principle of focusing on learning outcomes rather than how they are realised is very attractive, as it lends itself to the recognition of skills acquired through work-based learning, as well as for other reasons. But sometimes measuring all the relevant learning outcomes is very hard, so it is reasonable to give some attention to other tools that testify to a person's skills (such as the length and content of workplace experience and training courses pursued), at least as an adjunct to an examination which, inevitably will leave some things out.

## Direct assessments of technical skills can be very costly

Some technical skills can be adequately assessed through paper and pencil examinations (e.g. when theoretical knowledge is in the focus). But such tools are poorly adapted for the assessment of practical technical skills. Direct assessments of practical technical skills in an authentic working environment can be very costly, because of the material and equipment involved. For this reason in Canada, for example, the Red Seal apprenticeship examinations (which are used to confirm that an apprentice qualified in one province is recognised in another) are paper and pencil examinations in most trades, but there have been efforts to increase the use of practical tests as part of the examination (Alvarez-Galvan et al, 2015). At the same time the boundary of what is feasible in practical terms and affordable might itself be moving. Technology might create new and cheaper assessment ways of assessing practical skills – the skills of a would-be CNC technician, for example, might be tested on a CNC simulator, avoiding the high costs of using a real

machine and materials. A recent research initiative in Germany developed technologybased tools for the assessment of vocational skills, with encouraging results (see Box 13).

#### Box 13. Technology-based assessments in Germany

The ASCOT (Technology-based Assessment of Skills and Competences in Vocational Education and Training) research initiative was launched by the Federal Ministry of Education and Research in 2011. It aimed to develop valid methods for the technology-based assessment of vocational skills and competences at the end of VET. The initiative was carried out through several co-operative projects between experts in the fields of science and practice. It focused on five occupations: motor vehicle mechatronics technician, electronics technician for automation technology, industrial clerk, elderly care, and medical assistant.

Instruments for assessment were developed based on real-life situations. For instance, apprentices in mechatronics had to diagnose engine defects in computer-based simulations. Apprentices training to be medical assistants were confronted with a virtual doctor's office simulating real-life scenarios and interactions with patients. The instruments developed in ASCOT proved highly suitable for the assessment of large parts of occupational competences such as technical and professional competences, occupation-specific social and communication skills, and occupationally relevant literacy and numeracy skills. The instruments also increased the objectivity of assessments, improved the test motivation of examinees thanks to multimedia and interactive contents and were more efficient than traditional assessment instruments. This can contribute to savings in both time and costs in a long-term perspective.

The follow-up initiative ASCOT+ is anticipated to start in 2018. It should transfer the instruments developed in ASCOT into practice, for instance into teaching and learning processes or by giving evidence based recommendations for the development of competence-based training regulations and examinations. The transfer into practice is planned to take place in close co-operation with social partners, relevant authorities, bodies that develop examinations, companies and vocational schools.

*Source*: BMBF (2018) Technologiebasierte Kompetenzmessung in der beruflichen Bildung (ASCOT), Ergebnisse und Bedeutung für Politik und Praxis. BMBF, Bonn, <u>http://ascot\_vet.net/\_media/PDF\_ASCOT\_Br\_oschuere.pdf.</u>

# Socio-emotional skills are important but have often been neglected in examinations

Social skills are crucial to many jobs, including those requiring a vocational qualification. Traditionally the focus of vocational (and indeed academic) examinations has been on theoretical knowledge and technical skills, with little or no attention given to social skills. One reason for this is that social skills are hard to test with traditional paper and pencil examinations. Designing and implementing examinations that test how good a car mechanic apprentice is at handling awkward clients is much harder than testing their knowledge of mechatronics. Socio-emotional skills might carry more weight in the skillsets required for the vocational occupations of the future, so their assessment is

important. Data from the United States show that demand for non-routine interpersonal skills has strongly increased over the past decades (Figure 10).

### Figure 10. Change in the demand for skills



Trends in routine and non-routine tasks in occupations, United States, 1960 to 2009

Source: OECD (2013), OECD Skills Outlook 2013: First Results from the Survey of Adult Skills, OECD Publishing, Paris, https://doi.org/10.1787/9789264204256-en.

# There are promising practices in assessment of occupation-specific socioemotional skills

There are some promising initiatives in this area and various countries have developed and used assessments that focus on social skills, for example through role-playing. In Switzerland real estate agents aiming to pass the professional examination for property managers must pass an oral examination, where they might, for example, be required to negotiate with an elderly couple regarding their poorly kept building (see Box 14). Similarly, examinations in Germany often use various practice-oriented methods, including role-playing or discussing a scenario that may arise in a given occupation (Prüfungsportal, 2016).

### Box 14. Oral examination for property managers in Switzerland

Candidates for the professional examination in property management must pass an oral examination, which primarily aims to verify social and so-called 'methodological' competences, and to a lesser extent, technical competences. The examination includes a role-playing scenario, where the candidate shows how they would act in a particular professional situation. Examiners play the role of clients.

An example of a role-playing scenario

The candidate is meeting the owners of a building. The owners are retired and wish to delegate property management to an agency. There are various problems with the building (e.g. rusty swings in the playground, dirty cellar, no contract for the building custodian). The candidate is expected to make proposals for renovation and taking care of the building, as well as advising the owners about the possibility of transferring ownership to their children but continue to receive rental income.

Examiners evaluate the candidate following an assessment grid

The examiners use an assessment grid to evaluate the candidate's competences. The assessment grid covers social competences, methodological competences (both rated from 1 to 6) and technical knowledge.

Social competences include communicational skills, mannerisms and appearance. Obtaining grade 6 is communication requires good speaking and language skills, the candidate expresses him/herself clearly and intelligibly, is an active listener who also gives targeted replies and is a good conversationalist. Candidate obtain grade 3 if they have limited vocabulary, use cumbersome phraseology, interrupt others when they speak and are unable to see things from customer's perspective.

'Methodological' competences include integrative thinking, problem-solving techniques and negotiation techniques. Obtaining grade 6 in negotiation requires that the candidate negotiates successfully and uses plausible arguments to convince others. Candidates obtain grade 3 if their techniques are complicated, they do not understand customer needs, present poor arguments or none at all.

Finally technical knowledge is checked during discussion, for example asking the candidate to list main enforcement mechanisms in debt enforcement law or describe the legal basis concerning subletting of rental property.

Examiners are also observed during the examination

An observer is also present at the examination. They observe the examiners, checking whether they meet expectations regarding 13 issues (e.g. Discussion points, instructions and roles are clear; Assessment is based on the assessment grid; Examiner actively listens). Their performance is rated as very good, satisfactory or not satisfactory. Following the examination the observer gives feedback to the examiners. This element is particularly important if the candidate challenges the examination result through an appeal.

*Source*: Ortra Santé Genève, interview conducted during the OECD study visit to Switzerland, (11 September 2017).

## Entrepreneurial skills also need adequate attention

Higher level vocational qualifications often aim to prepare people to run their own business, for example, in many professional and master craftsman qualifications. Some examination procedures also include an assessment of entrepreneurship skills. In Germany, master craftsperson examinations were revised in 2001 to increase the attention paid to the skills needed to run a business, not only at present but also in response to changing workplace requirements (see Box 15).

#### Box 15. Reformed master craftsperson examinations in Germany

Master craftsperson examinations used to consist of two trade-specific parts (practical and theoretical) and two common parts across trades covering economic and legal knowledge and pedagogical skills. Since 2001 professional profiles and examination requirements have been revised in various occupations, putting more emphasis on candidates' capacity to lead their own business, train apprentices, and adapt to changing workplace requirements through continuous and further education.

Part I of revised master craftsperson exams now comprises a master craftsperson exam, a related expert discussion and optionally a situation-specific tasks. Candidates choose the focus of their craftsperson exam project themselves. The examination commission devises the exam project assignment, while leaving room for suggestions from the examinees. The project resembles a customer order, encompasses planning, implementation and documentation and an expert discussion with the examination board. In addition to the exam project, situation-specific tasks are used to check the candidates' skills in domains other than the one covered by the project work.

Part II of revised master craftsperson exams now requires the examinees to prove their capacity to identify, analyse and solve work-related problems. The new exam structure is even more oriented at the workplace requirements and includes components on trade-specific technical skills, order processing, business management and business organisation. In each of these components at least one case study must be included.

*Source*: ZWH (n.d.), "Geänderte Anforderungen in der Meisterprüfung im Handwerk", Zentralstelle für die Weiterbildung im Handwerk e.V. (ZHW), <u>http://www.qzwh.de/pruefer/index.php?id=42&tx\_ttnews[tt\_news]</u> =23&tx\_ttnews[backPid]=28&cHash=f19ae37d9e

## Training for assessors can help ensure valid and reliable assessments

In some countries, training for assessors in vocational examinations is obligatory to ensure consistency of assessment methods across regions, firms or training institutions. In Switzerland, training is mandatory for assessors in apprenticeship examinations and professional examinations and is recognised through federal certification (Felser, 2016). In Norway, assessors in the apprenticeship exam must attend training offered by the regional education authorities. In addition, they receive mentoring support and can pursue professional development courses set up in co-operation with higher education institutions (Ure, 2015). In Austria training to become a certified assessor is optional. In Germany various forms of optional training are offered (see Box 16).

#### **Box 16. Training for assessors of apprentices**

## Austria

Members of the examination commission for Lehrabschlussprüfung, LAP (final apprenticeship exam) ) can become a certified LAP assessor after attending a one day programme including at least eight 50-minute modules. The training covers the examination procedure, the distribution of roles, examination simulations, the handling of candidates' exam nerves, nervousness, performance evaluation and training in giving feedback. The training is offered by regional apprenticeship offices (IBW, 2016).

## Germany

The preparation of assessors can take various forms, such as exchange of experience, consultation of the exam and education and training regulations, teaching literature, preparatory seminars, Internet searches and exam shadowing (Prüferportal, 2015a). A survey of assessors found that the vast majority consider that the most important way of learning is the continuing exchange of experience. Such exchanges about relevant information, occupation-specific innovations and experience take place with apprentices, vocational teachers, apprentice supervisors and contact persons in the chambers of commerce, who may also organise "assessor days", which provide platform for discussions. When individuals start acting as honorary assessors, exam shadowing and preparatory seminars are the most used forms of preparation. When exam regulations are revised, 40% of the surveyed assessors attend seminars to learn about the implications of the revisions, the remaining 60% consult framework curricula and education and training regulations (Prüferportal, 2015b). The Federal Institute for VET (BIBB) provides an information and communication platform for assessors that can be found under the following link: www.prueferportal.org. It allows assessors to access up-to-date information on training seminars and to exchange experience.

*Source*: for Austria BW (2016), "Zertifizierter Prüferin für Lehrabschlussprüfungen", Institut für Bildungsforschung der Wirtschaft website, <u>http://lehrequali.m-services.at/lap-pruefer-zertifizierung</u> (accessed 28 June 2016); for GermanyPrüferportal (2016a), Prüfung website, <u>www.prueferportal.org/html/71</u> 9.php(accessed 23 May 2016); Prüferportal (2016b), Prüferin warden wesite, <u>www.prueferportal.org/html/146.</u> php (accessed 1 June 2016); Prüferportal (2016c), Meisterprüfungsausschüsse website, <u>www.prueferportal.org/html/1546.php</u> (accessed 23 May 2016).

## **Policy messages**

One attractive and flexible way of offering qualifications is to allow candidates to proceed directly to an assessment that will demonstrate the relevant skillset. This may be either a specially devised assessment for those who have acquired skills through work-based learning or an examination which is used for all those seeking the qualification, including those who have followed a formal programme. Such routes to qualifications should be encouraged, supported by rigorous professional assessments:

- When final examinations at the end of an education or training programme (e.g. apprenticeship) tests the full skillset required by the qualification, access to the examination should be allowed to candidates who did not pursue the programme but can plausibly succeed at the examination such as those who have acquired all or most of the skillset through work-based learning.
- Take advantage of professional examinations and certifications to recognise higher level or specialised vocational skills (e.g. at tertiary B level), including those acquired through work-based learning.
- Establish standards and procedures for assessment that support clear, valid and reliable qualifications. These should incorporate valid tests of the full range of skills required in the target occupation, including where relevant practical technical tests and assessments of soft skills.

# **Rationale for the policy messages**

Direct access to the final apprenticeship assessments can benefit adult learners with relevant work experience, it can also allow drop-outs from apprenticeship programmes to obtain the intended qualification and may serve individuals with foreign qualifications that are not recognised in the host country. Direct assessment is also a more straightforward, and therefore probably more reliable, way of measuring skills acquired through work-based learning than elaborate collections of portfolios and other evidence that skills have been acquired.

Professional examinations and certifications have the attractive feature of focusing on learning outcomes, avoiding the constraints associated with fixed "seat time" and allowing a practical way of recognising learning through work experience. Their use should be encouraged to give visibility to vocational skills. This may serve in as a pathway to higher level vocational skills, similarly to the way higher level academic skills are recognised in postgraduate qualifications. More broadly, examinations and certifications can also be used to verify and give credit to vocational skills regardless of how they were acquired. One of the challenges in such examinations is to find the right balance in terms of regulation – industry should be the key driving force behind these qualifications, but some regulation may be necessary to ensure transparency and avoid that qualifications proliferate (OECD 2014).

Assessment is the rock on which strong qualifications rest. When a qualification is delivered without programmatic requirements, its value in the labour market will depend on the quality and therefore credibility of the underlying assessments. Countries should establish standards and procedures for assessment that support clear, valid and reliable qualifications. The standards and procedures should cover issues such as what skills are assessed; how the assessment is conducted; and who will carry out the assessment. Mechanisms are necessary to ensure consistency in standards, in the use of the assessment in different parts of the country and at different points of time. There is a need to ensure that assessment standards and procedures are being properly applied, both through quality assurance mechanisms and feedback to support quality improvement. This may include, for example, having external observers participating in assessments and validating the work of assessors.

In the light of the wide range of skills required for many occupations targeted by vocational qualifications, assessments should incorporate, whenever possible, valid tests of the full range of skills required in the target occupation. This should include skills not

adequately measured by traditional written and oral assessments. Close attention needs to be paid to using appropriate techniques for assessing practical skills and social and emotional skills relevant to the occupation, incorporating, where relevant, techniques such as computer simulations, multi-faceted project assignments, scenarios, and roleplaying.
## Conclusion

The recognition of skills regardless of how they were acquired is hardly new – in Switzerland federal law in the 1930 established that workers who perform well in their job are not required to hold a qualification. In the United States skill recognition has historical roots in the experience of World War II veterans who were granted college credits in recognition of their military training. In the era of industry 4.0 and digitisation, as some jobs disappear, others emerge or morph into new ones, more than ever individuals need to learn, build on existing skills and complement them. New technologies may also create opportunities for skill recognition in the future, such as faster and cheaper tools for assessments or self-assessments. Skill recognition can help individuals, the economy and society more broadly by making skills visible regardless of how they were acquired. It can create room for more flexible and efficient ways of developing skills. Realising its full potential requires effective frameworks with clear standards, including rigorous assessments and arrangements that are attractive to all parties involved.

## References

- Acemoglu, D. and J.S. Pischke (1998), "Why do firms train? Theory and evidence", *The Quarterly Journal of Economics*, Vol. 113/1, 1 February 1998, pp. 79-119, https://doi.org/10.1162/003355398555531.
- Acemoglu, D. and J.S. Pischke (1999a), "Beyond Becker: Training in imperfect labour markets", *Economic Journal*, Vol. 108, pp.112-142, <u>https://doi.org/10.1111/1468-0297.00405</u>.
- Acemoglu, D. and J.S. Pischke (1999b), "The structure of wages and investment in general training", *Journal of Political Economy*, Vol. 107/ 3, (Jun., 1999), pp. 539-572, http://www.jstor.org/stable/2990782.
- Arntz, M., T. G. and U. Zierahn (2016), "The risk of automation for jobs in OECD countries: A comparative analysis", OECD Social, Employment and Migration Working Papers, No. 189, OECD Publishing, Paris, <u>http://dx.doi.org/10.1787/5jlz9h56dvq7-en</u>.
- Bailey, T. (2009), "Rethinking developmental education in community college", *CCRC Brief*, No. 40, <u>https://eric.ed.gov/?id=ED504329</u>.
- Becker, G. S. (1964), Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education, University of Chicago Press, Chicago.
- Beeli, S., et al. (2016), "Diplôme professionnel pour adultes: Besoins des employeurs, rapport intermédiaire", Institut Fédéral des hautes études en formation professionnelle IFFP, Zollikofen, <u>www.iffp.swiss/project/diplome-professionnel-pour-adultes-le-point-de-vue-des-employeurs</u>, /www.iffp.swiss/file/4337/download.
- Berg, I. (1970), Education for jobs: The Great training robbery, Praeger Publishers, New York.

- Bessen, J. (2015), Learning by Doing: The Real Connection between Innovation, Wages, and Wealth, Yale University Press, USA.
- BIBB (2011), Indicators for the 2011 VET Report website, <u>datenreport.bibb.de/html/3674.htm</u> (accessed 16 September 2017).
- Bills, D. B. (1988), "Educational credentials and promotions: Does schooling do more than get you in the door?" Sociology of Education, Vol 61/1, pp. 52-60, <u>https://doi.org/10.2307/2112309</u>.
- Bills, D. B. (2005), "Participation in work-related education: variations in skill enhancement among workers, employers, and occupational closure", *Research in Social Stratification and Mobility*, Vol.23 /1, pp. 67-102.
- BIS (2012), "Employer investment in apprenticeships and workplace learning: The fifth net benefits of training to employers study", *BIS Research Papers*, No. 67,: Department for Business, Innovation and Skills, London <u>www.gov.uk/government/uploads/system/uploads/attachment\_data/file/32306/12-814-employer-investment-in-apprenticeships-fifth-net-benefits-study.pdf</u>.
- Blanchard, O. and A. Landier (2001), "The perverse effects of partial labor market reform: fixed duration contracts in France", *National Bureau of Economic Research*, *Working Paper, No.* 8219, <u>http://www.nber.org/papers/w8219</u>.
- BMBF (2012), "Vocational skills and competencies made visible", The ASCOT research initiative, Federal Ministry of Education and Research (BMBF), Bonn.
- BMBF (2016), "Report on vocational education and training", BMBF (Federal Ministry of Education and Research) <u>www.bmbf.de/pub/Berufsbildungsbericht\_2016\_eng.pdf.</u>
- Bol, T. and H. G. van de Werfhorst (2011) "Signals and closure by degrees: the education effect across 15 European Countries", *Research in Social Stratification and Mobility, New Directions in Educational Credentialism*, Vol. 29 /1, pp. 119-32, https://doi.org/10.1016/j.rssm.2010.12.002.
- Bol, T. and I. Drange (2017), "Occupational closure and wages in Norway", *Acta Sociologica*, Vol. 60 /2, pp. 134–57, <u>https://doi.org/10.1177/0001699316659768</u>.
- Bol, T. and K. A. Weeden (2015), "Occupational closure and wage inequality in Germany and the United Kingdom", *European Sociological Review*, Vol.31/3, pp. 354-69, <u>https://doi.org/10.1093/esr/jcu095</u>.
- Bratsberg, B., T. Nyen, and O. Raaum (2017), "Fagbrev I voksen alder", *Søkelys På Arbeidslivet*, Vol.34 /01/02), pp. 24- 43, <u>https://doi.org/10.18261/issn.1504-7989-2017-01-02-02</u>.
- Breen, R. (2005), "Explaining cross-national variation in youth unemployment: market and institutional factors on JSTOR", *European Sociological Review*, Vol. 21 /2, pp.125-34.
- Brown, D. K. (1995), Degrees of control a Sociology of educational expansion and occupational credentialism, Teachers College Press, New York.
- Carpenter, D. M., L. Knepper, A. C. Erickson, and J. K. Ross (2012), License to Work. A National Study of Burdens from Occupational Licensing, Institute for Justice, Arlington, VA, <u>https://ij.org/report/license-to-work</u>.
- Cedefop (2014), Terminology of European Education and Training Policy, Cedefop European Centre for the Development of Vocational Training, Luxembourg, <u>www.cedefop.europa.eu/en/publications-and-resources/publications/4117.</u>
- Cedefop (2017a), European Inventory on Validation of Non-Formal and Informal Learning, Publications Office of the European Union., Luxembourg, <u>www.cedefop.europa.eu/en/events-and-</u> <u>projects/projects/validation-non-formal-and-informal-learning/european-inventory</u>.

- Cedefop (2017b), European database on validation of non-formal and informal learning website, <u>www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/european-database-on-validation-of-non-formal-and-informal-learning</u>, (accessed 5 September 2017).
- Chiousse, S. (2001), Pédagogie et Apprentissage des Adultes, An 2001: État des lieux et recommandations, Document prepared for the Thematic Review on Adult Learning, <u>www.oecd.org/edu/adultlearning</u>.
- Collins, R. (1979), The Credential Society. An Historical Sociology of Education and Stratification, New York: Academic Press, USA.
- Collins, R. (1979), The Credential Society: An Historical Sociology of Education and Stratification, Academic Press, New York.
- DARES (2017), La validation des acquis de l'expérience website, <u>http://dares.travail-</u> <u>emploi.gouv.fr/dares-etudes-et-statistiques/statistiques-de-a-a-z/article/la-validation-des-acquis-de-l-</u> <u>experience</u>, (accessed 27 August2017).
- European Commission (2017), Database of regulated professions website, <u>https://ec.europa.eu/growth/single-market/services/free-movement-professionals/regulated-professions-database\_en</u>,( accessed 5 September 2017).
- Dornmayr, H., J. Proinger, P. Schlögl, J. Wallner, and R. Wieser. (2013), "Lehrabschlussprüfungen in Österreich", Österreichisches Institut for Berufsbildungsforschung, Institut für Bildungsforschung der Wirtschaft, Zwischenbericht. Vienna, www.bmwfw.gv.at/Berufsausbildung/LehrlingsUndBerufsausbildung/Documents.
- Dyson, C. (2005), "Recognition of prior learning policy and practice for skills learned at work : Australia, Canada, New Zealand, South Africa, United States", *ILO Working Papers*, International Labour Organization, <u>https://ideas.repec.org/p/ilo/ilowps/993768053402676.html</u>.
- Ertl, H. (2002), "The concept of modularisation in vocational education and training: The debate in Germany and its implications", *Oxford Review of Education*, Vol. 28 /1, pp. 53-73, https://doi.org/10.1080/03054980120113634.
- Eurofund (2018), European Observatory of Working Life website, <u>https://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context?year%5Dvalue%5D%5Byear%5D=2014</u>, (accessed 26 February 2018).
- Farrell, D., and F. Greig (2016), Paychecks, Paydays, and the Online Platform Economy. Big Data on Inco.me Volatility. , JP Morgan Chase&Co. Institute, <u>https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-volatility-2-report.pdf.</u>
- Fazekas, M. and S. Field (2013), A Skills beyond School Review of Switzerland, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, https://doi.org/10.1787/9789264062665-en.
- Field, S., M. Kuczera and B. Pont (2007), *No More Failures: Ten Steps to Equity in Education*, Education and Training Policy, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264032606-en.</u>
- Hoeckel, K. and R. Schwartz (2010), OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Germany 2010, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264113800-en</u>.
- Iversen, T. and D. Soskice (2001), "An asset theory of social policy preferences", American Political Science Review, Vol. 95 /4), pp. 875-93.

- Kahn, L. M (2016), "Permanent jobs, employment protection and job content", *SSRN Scholarly Paper*, Rochester, NY: Social Science Research Network, <u>http://ftp.iza.org/dp9961.pdf</u>.
- Kis, V. (2016), "Work, train, win: work-based learning design and management for productivity gains", OECD Education Working Papers, No. 135, OECD Publishing, Paris, https://doi.org/10.1787/5jlz6rbns1g1-en.
- Kleiner, M. M. (2006), Licensing Occupations: Ensuring Quality or Restricting Competition? W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, <u>https://ideas.repec.org/b/upj/ubooks/lo.html</u>.
- Kleiner, M. M. (2015), "Reforming Occupational Licensing Policies", *Discussion Paper*. Brookings, https://www.brookings.edu/wp-content/uploads/2016/06/THP\_KleinerDiscPaper\_final.pdf.
- Kleiner, M. M., and A. B. Krueger (2013), "Analyzing the extent and influence of occupational licensing on the labor market", *Journal of Labor Economics*, Vol. 31 /S1, pp. S173–202, <u>https://doi.org/10.1086/669060</u>.
- Koumenta et al. (2014), Market Impacts of Occupational, Regulation in the EU, pp. 36-37 based on data from the European Labour Force Survey 2012.
- Kuczera, M. (2017), "Striking the right balance: Costs and benefits of apprenticeship", OECD Education Working Papers, No. 153, OECD Publishing, Paris, <u>https://doi.org/10.1787/995fff01-en</u>.
- Kuczera, M. and S. Field (2013), A Skills beyond School Review of the United States, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, https://doi.org/10.1787/9789264202153-en.
- Montt, G. (2017), "Field-of-study mismatch and overqualification: labour market correlates and their wage penalty", *IZA Journal of Labor Economics*, Vol.6 /1, pp. 2, <u>https://doi.org/10.1186/s40172-016-0052-x</u>.
- Mortensen, D. T., and C. A. Pissarides (1999), "Chapter 39 New Developments in Models of Search in the Labor Market", *In Handbook of Labor Economics*, Vol. 3, pp. 2567-2627, Elsevier, http://www.sciencedirect.com/science/article/pii/S1573446399300250.
- Mühlemann, S. (2016), "The Cost and Benefits of Work-based Learning", *OECD Education Working Papers*, No. 143, OECD Publishing, Paris, <u>https://doi.org/10.1787/5jlpl4s6g0zv-en.</u>
- Muehlemann, S. (forthcoming), "Apprenticeship Training for Adults: Theoretical Considerations and Empirical Evidence for Selected OECD Member Countries." *Education Working Papers*. OECD.
- Norwegian Centre for International Cooperation in Education (2016), Vocational Education and Training in Europe Norway., Cedefop ReferNet VET in Europe Reports, http://libserver.cedefop.europa.eu/vetelib/2016/2016 CR NO.pdf.
- Norwegian Directorate for Education and Training (2017), Skoleporten website, <u>skoleporten.udir.no/rapportvisning/fag-og-yrkesopplaering/laeringsresultater</u>, ( accessed 16 September 2016).
- OECD (2017b), OECD Income Distribution Database, <u>www.oecd.org/social/income-distribution-database.htm</u>, (accessed 1 October 2017).
- OECD (2017c), Glossary of Statistical Terms website, https://stats.oecd.org/glossary/detail.asp?ID=3553, (accessed 5 September 2017).
- OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1 and Volume 2*, OECD Reviews of Tertiary Education, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264046535-en.</u>

- OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264087460-en</u>.
- OECD (2012), "Renewing the skills of ageing workforces: The role of migration", in *International Migration Outlook 2012*, OECD Publishing, Paris, <u>https://doi.org/10.1787/migr\_outlook-2012-7-en</u>.
- OECD (2013), OECD Skills Outlook 2013: First Results from the Survey of Adult Skills, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264204256-en.</u>
- OECD (2014) *Skills Beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training. Paris: OECD Publishing. <u>http//dx.doi.org/10.1787/9789264214682-en.</u>
- OECD (2015a), In It Together: Why Less Inequality Benefits All, OECD Publishing, Paris, https://doi.org/10.1787/9789264235120-en.
- OECD (2015b), OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society, OECD Publishing, Paris, <u>https://doi.org/10.1787/sti\_scoreboard-2015-en.</u>
- OECD (2016a), "Automation and Independent Work in a Digital Economy." *Policy Brief on the Future of Work*, Paris: OECD. <u>https://www.oecd.org/els/emp/Policy%20brief%20-</u>%20Automation%20and%20Independent%20Work%20in%20a%20Digital%20Economy.pdf.
- OECD (2016), "New Markets and New Jobs", *OECD Digital Economy Papers*, No. 255, OECD Publishing, Paris, <u>https://doi.org/10.1787/5jlwt496h37l-en</u>.
- OECD (2016c), "Skills for a Digital World: 2016 Ministerial Meeting on the Digital Economy Background Report", *OECD Digital Economy Papers*, No. 250, OECD Publishing, Paris, <u>https://doi.org/10.1787/5jlwz83z3wnw-en.</u>
- OECD (2017), Making Integration Work: Assessment and Recognition of Foreign Qualifications, Making Integration Work, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264278271-en.</u>
- OECD (2017), Building Skills for All in Australia: Policy Insights from the Survey of Adult Skills, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/9789264281110-en.
- OECD (2003), Beyond Rhetoric: Adult Learning Policies and Practices, OECD Publishing, Paris, https://doi.org/10.1787/9789264199446-en.
- Ofsted (2008), "The Impact of Train to Gain on Skills in Employment", <u>http://dera.ioe.ac.uk/9204/1/The%20impact%20of%20Train%20to%20Gain%20on%20skills%20in%</u> 20employment.pdf.
- Salini, D. and J. Voit (2016), "Country Report: Switzerland", 2016 update to the European inventory on validation of non-formal and informal learning, *Cedefop European Centre for the Development of Vocational Training*, <u>https://cumulus.cedefop.europa.eu/files/vetelib/2016/2016\_validate\_CH.pdf</u>.
- Schleicher, A. (2014), Equity, Excellence and Inclusiveness in Education: Policy Lessons from Around the World, International Summit on the Teaching Profession, OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264214033-en.</u>
- Schmid, M., S. Schmidlin, and D. S. Hischier (2016), "Certification Professionnelle Pour Adultes: Enquête Auprès Des Personnes Concernées.", Rapport intermédiaire. Naters et Soleure. <u>file:///C:/Users/kis\_v/Downloads/rapport\_intermediaire.pdf.</u>
- SERI (2017), Berufsabschluss für Erwachsene website, www.sbfi.admin.ch/sbfi/de/home/bildung/berufsbildungssteuerung-und--politik/projekte-undinitiativen/berufsabschluss-und-berufswechsel-fuer-erwachsene/ (accessed 16 September 2016).

- SERI (2017), "Vocational and Professional Education and Training in Switzerland Facts and Figures 2017" State Secretariat for Education, Research and Innovation, Bern: https://www.sbfi.admin.ch/dam/.../2017/...BB2017.../Fakten Zahlen BB2017 en.pdf.
- SFAA (2017), Swiss Financial Analysts Association website, <u>https://www.sfaa.ch/en/CPD.asp?ref=nav-lang&</u> (accessed 10 October 2017).
- Stevens, M. (1994a). "A theoretical model of on-the-job training", *Oxford Economic Papers*, Vol.46 /4, pp.537-562.
- Tsandev, E., S. Beeli, B. Aeschlimann, I. Kriesi, and J. Voit (2017), "Certification professionnelle pour adultes: le point de vue des employeurs" Rapport final. Dossiers SEFRI. Bern: Secrétariat d'Etat à la formation, à la recherche et à l'innovation SEFRI (Secrétariat d'Etat à la formation, à la recherche et à l'innovation ), www.sbfi.admin.ch/sbfi/fr/home/bildung/.
- Unevoc (2017), Recognition of Prior Learning website, <u>www.unevoc.unesco.org/go.php?q=Recognition+of+Prior+Learning&context</u> (accessed 30 August 2017).
- Wachen, J., D. Jenkins and M. Van Noy (2010), How I-Best Works: Findings from a Field Study of Washington State's Integrated Basic Education and Skills Training Program, CCRC, New York.
- Weeden, K. A. (2002), "Why do some occupations pay more than others? social closure and earnings inequality in the United States", *American Journal of Sociology*, Vol, 108 /1, pp. 55–101, <u>https://doi.org/10.1086/344121</u>.
- Werfhorst, H G. van de. (2011), "Skill and education effects on earnings in 18 countries: the role of National Educational Institutions", *Social Science Research*, Vol.40 /4, pp. 1078–90, <u>https://doi.org/10.1016/j.ssresearch.2011.03.004</u>.
- Werquin, P. (2010), *Recognising Non-Formal and Informal Learning: Outcomes, Policies and Practices,* OECD Publishing, Paris, <u>https://doi.org/10.1787/9789264063853-en</u>.

## Annex A1

Country	Level of wage bargaining	Degree of co-ordination
Austria	Intermediate	Highly co-ordinated
Belgium	Centralised	Highly co-ordinated
Czech Republic	Decentralised	Medium level of co-ordination
Denmark	Intermediate	Medium level of co-ordination
Estonia	Decentralised	Low level of co-ordination
Finland	Centralised	Highly co-ordinated
France	Intermediate	Low level of co-ordination
Germany	Intermediate	Medium level of co-ordination
Greece	Decentralised	Medium level of co-ordination
Hungary	Decentralised	Low level of co-ordination
Ireland	Decentralised	Medium level of co-ordination
Italy	Intermediate	Medium level of co-ordination
Latvia	Decentralised	Low level of co-ordination
Luxembourg	Intermediate	Low level of co-ordination
Netherlands	Intermediate	Medium level of co-ordination
Norway	Intermediate	Highly co-ordinated
Poland	Decentralised	Low level of co-ordination
Portugal	Intermediate	Medium level of co-ordination
Slovak Republic	Decentralised	Medium level of co-ordination
Spain	Centralised	Highly co-ordinated
Sweden	Intermediate	Highly co-ordinated
United Kingdom	Decentralised	Low level of co-ordination

Table 2.	Level o	fwage	bargaining	and degree	e of co-o	ordination
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*Source:* Eurofund (2018)"Level of wage bargaining and degree of co-ordination", <u>https://www.eurofound.europa.eu/</u> (accessed 10 January 2018).