

Chapter 2

Enhancing the profile of professional education and training

This chapter looks at ways of strengthening the profile of what we awkwardly call “post-secondary vocational education and training”. It proposes first, that the sector should be described as “professional education and training”; second, that the scale of the sector needs to be adequate in each country and this depends on an effective institutional and funding structure; and third, that better data are needed to measure and evaluate the sector and compare it internationally.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Establishing clear international terminology

This section argues that the diverse vocabulary used to describe the different programmes and institutions of post-secondary vocational education and training needs to be augmented, and in some cases replaced, by internationally accepted terminology. This should be “professional education and training”, building on the language used in Switzerland. This common terminology should act to clarify and enhance the status of programmes in this sector.

Issues and challenges: Confusing terminology

Marketing experts know that a good name for a product or service wins half the battle. Yet the words used to describe post-secondary vocational programmes and the institutions that deliver them are confusing, especially when compared internationally. Among qualifications, there are certificates, certifications (often associated with industry qualifications), diplomas, associate and foundation degrees, “professional” and other bachelor degrees. Among institutions there are colleges, academies, polytechnics and universities of applied science. Different expressions in different languages add to the ramifications. While the vocabulary may be understood by insiders familiar with local systems, it will often be obscure to prospective students or employers, undermining the value of the programmes, particularly across national boundaries.

To make matters worse, these programmes often sit awkwardly across boundaries: between higher education and other presumably lower forms; between academic and non-academic; between education and training; between degrees and qualifications of lower status; between tertiary and non-tertiary (but post-secondary) education, and between universities and other sorts of institution. These boundaries are often contested, not least because they are more attractive to those on the favoured side of the boundary than to those left out in the cold. Post-secondary vocational education and training, uncomfortably straddling these contested boundaries, inevitably finds it hard to define its own territory.

In an increasingly globalised labour market, this tangle of nomenclature obstructs the establishment of a clear brand to compete with others, such as academic bachelor degrees, which have a clearer and better-recognised international identity. The unintended and undesired effect is to discourage some good quality but less well-recognised vocational programmes and

qualifications. International branding matters not only to those who wish to use their qualifications in other countries, but also in international enterprises where the nuances of national qualifications will be obscure to expatriates in the management tier.

Recommendation: Professional education and training

“Professional education and training” should become the internationally accepted description for substantial post-secondary vocational programmes (equivalent to more than six months full-time).

Explanation and country approaches: Developing terminology based on country experience

A good name for the sector would improve its profile and status and make it easier to compare across countries. Few countries have clear terminology to describe the entire sector (as opposed to particular programmes and qualifications). One exception is Switzerland, where “professional education and training” describes both programmes in professional colleges, and the set of examinations that corresponds to Swiss federal diplomas and advanced federal diplomas. The expression has therefore been road-tested in Switzerland with translations¹ into French, German, and Italian. It is not anticipated that countries would change their domestic usage – but at least in discussion across countries, this terminology would provide a common point of reference, supporting international recognition of national vocational qualifications.

Excluded from this description are the shorter vocational programmes (less than six months), that often respond to highly specific employer needs. The definition also includes higher level professional training, including at bachelor, masters and Ph. D. level.

From this point forward, this report will use this terminology. It will also refer in a more abbreviated way to “professional programmes” and “professional training”. “Short-cycle” professional education and training will be used to describe vocational programmes at ISCED level 5, and at EQF level 5, below bachelor level.

Strengthening the institutional and funding base

Developing professional programmes depends on strong institutions and effective funding. This section argues that while short-cycle professional programmes need a location in non-university institutions, vocational bachelor programmes can sometimes be developed very effectively in dedicated professional or technical universities. Funding criteria need to avoid any biasing of post-secondary programme choices.

Issues and challenges: Barriers to provision

Professional education and training is found in diverse institutional settings

The autonomy and distinct missions of post-secondary institutions, and sometimes dedicated funding streams, all influence programme development. Professional programmes have diverse institutional settings, including:

- Training institutions dedicated to short-cycle programmes – such as professional academies in Denmark, much of the college system in Canada and the United States, and professional colleges in Switzerland.
- Institutions that offer both upper secondary and post-secondary programmes – for example further education colleges in the United Kingdom, post-high schools in Romania and similar institutions in Spain.
- Specialised university-like institutions offering professional and technical bachelors qualifications – for example *Hogescholen* in the Netherlands, *Fachhochschulen* (universities of applied science) in Austria and Germany, university colleges in Denmark and Sweden, and universities of technology (former *Technikons*) in South Africa.
- Universities, for example in the United Kingdom, offering some bachelor degrees that are more (or less) vocational, as well as some short-cycle provision (such as foundation degrees).
- The workplace – for example post-secondary apprenticeships in France.
- Non-specific locations, in the context of professional examinations with no mandatory prior learning requirements – for example in the United States, Israel and Austria.

Short-cycle professional education and training rarely flourishes in universities or similar institutions

In the United Kingdom, the former polytechnics used to provide an extensive range of one and two-year HNC and HND vocational qualifications, but since their transformation into universities in 1992 provision of these programmes has dropped substantially, and the foundation degree programme that was intended to replace them remains limited in scale (Parry et al., 2012; UKCES, 2013). In the Netherlands, in the *Hogescholen* (institutions where the main activity is the provision of professional bachelor degrees) a pilot programme has sought to develop two-year foundation degrees. Although this has been a pilot, and there has been some recent growth in numbers, after several years' enrolment in bachelor degrees remains around one hundred times larger than enrolment in foundation degrees (Fazekas and Litjens, 2014). In Denmark, the social partners saw a planned takeover of professional academies by university colleges as threatening to short-cycle professional training (Field et al., 2012). In South Africa, the transformation of the *Technikons* into universities of technology was associated with falling provision of one year higher certificates. The upshot,

visible in Figure 1.1, is that the scale of short-cycle professional training is smaller in countries like the United Kingdom and the Netherlands where it is dependent on universities or university-like institutions.

Why do university institutions fail to nurture short-cycle professional training? One reason is that it is not usually in the interests of institutions providing longer and more expensive programmes to promote shorter and less-expensive programmes that could undermine their primary market. Status effects are also important, with the missions of university institutions and incentives on their staff experiencing academic drift towards the provision of longer more academic programmes and research and away from shorter and more vocational programmes, and local partnership with industry (Neave, 1979; Kyvik 2007, 2004). This could be good for some academic and research outputs but bad for the quality of practical training.

Recommendation: A firmer institutional foundation

Professional education and training needs an institutional base that: a) offers short-cycle professional programmes in a tier of institutions separate from universities; b) makes use where relevant of the successful model of universities of applied science; c) consolidates training providers into institutions of adequate size; and d) provides a consistent framework of public funding for professional education and training, avoiding distortions and backed by quality assurance.

Explanation and country approaches: Measures to enhance the system

Short-cycle professional training requires non-university institutions

Given the barriers to short-cycle professional programmes in university institutions, a separate tier of institutions is normally required to develop provision effectively. Examples include vocational colleges in Austria, *Fachschulen* in Germany, professional colleges in Switzerland and community colleges in the United States. Two distinctive features of all these institutions are: first, that their missions are clearly distinct from universities; and second, that short-cycle professional training is the highest status qualification they provide. These two characteristics minimise the risk of drift towards a more academic mission which could marginalise professional programmes.

In the light of this finding, alongside other considerations, the OECD review of Denmark recommended that the planned merger of the professional academies (which provide most of the short-cycle professional programmes) into the university colleges, should not go ahead (Field et. al., 2012). It argued that such a merger would threaten the health of an important sector of provision by submerging it into a set of university institutions. This recommendation was accepted by the Danish government.

Many countries have successfully established technical and professional university institutions

Recent decades have witnessed the establishment of new types of higher education institutions with the mission of providing vocational bachelor degrees in technical and professional fields. Sometimes called universities of applied science, they include the *Fachhochschulen* in Austria and Germany, university colleges in Denmark and Sweden, polytechnics in Finland, and *Hogescholen* in the Netherlands. Such institutions have often been extremely successful and have grown rapidly, frequently concentrating their research efforts on applied topics, and with a different teaching style from universities (see Box 2.1).

Box 2.1. *Fachhochschulen* (universities of applied science) in Austria

Since 1994/1995 graduation rates in tertiary-type A programmes (a measure of the proportion of a population cohort gaining tertiary qualifications) have nearly trebled, rising from 10% to 29% between 1995 to 2009, still well below the OECD average of 38%. A lot of this growth is attributable to the rapid development of *Fachhochschulen* where in 2010/11 37 030 students were enrolled.

The 21 *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. More than half (56%) of the graduates from bachelor programmes continue at master level. There were three applicants on average for each study place in 2010/11 (eight applicants per place in health sciences).

Source: Musset P., et al. (2013), *A Skills beyond School Review of Austria*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264200418-en>

In many countries, mergers have encouraged institutions of efficient size

In pursuit of both higher quality and greater efficiency, a number of countries have pursued institutional mergers. While there is sometimes resistance from local communities or individual professions to the loss of “their” training institutions, experience has shown that mergers can be managed successfully, particularly when it does not involve closure of campuses. Sometimes these have involved the merger of training institutions with specialised functions focused on particular professions. Sometimes these mergers have been driven by or accompanied by, raised or standardised expectations regarding the level of qualifications expected in professions, for example in the training of nurses or teachers. Often countries report benefits from these consolidations in terms of synergies and economies of scale.

Examples include:

- In **Northern Ireland**, 16 colleges were merged to establish six further education colleges each serving a regional community. The colleges employ their own staff and have the right to charge fees where necessary (Álvarez-Galván, 2014).
- In **Egypt**, the Ministry of Higher Education, with support from the World Bank, re-grouped their 45 middle technical institutes into eight technical colleges that, together, provide most professional training in Egypt (Álvarez-Galván, forthcoming).
- In **South Africa**, 152 colleges, many of them dating from the apartheid era, have been merged into 50 larger technical and vocational education and training (TVET) colleges, with over 260 campuses (Department of Higher Education and Training-Republic of South Africa, 2013).
- In **Denmark** mergers of smaller institutions yielded seven university colleges primarily serving public sector professions, such as nursing and teaching, through professional bachelor qualifications, and nine academies of professional higher education offering short-cycle programmes in technical and mercantile fields (Field et al., 2012).

Funding needs to be even-handed between professional programmes and other options

Funding for professional education and training is often a complex mix, and includes support both for students and for institutions (for example, student grants and direct funding for colleges in South Africa), or a mix of central government and regional support (for example, both federal and cantonal support in Switzerland). Such arrangements should sit consistently alongside other flows of public support for post-secondary education – particularly tertiary education; but this is not always the case, often because funding arrangements have developed separately. For example, in Israel, the level of state funding per student is lower in practical engineering programmes than in comparable engineering programmes in universities: in colleges under the Ministry of Economy, the average annual governmental spending per student is NIS 8 500 (EUR 1 780) and NIS 6 370 (EUR 1 330) for programmes under the Ministry of Education, compared with NIS 27 500 (EUR 5 750) for academic engineering programmes in universities (Musset, Kuczera and Field, 2014).

As general principles, funding needs to:

- Be consistent to avoid distorted incentives (where students choose programmes or modes of study on grounds of the level of funding support available rather than intrinsic suitability).
- Support part-time as well as full-time provision (an issue further addressed in Chapter 3).
- Provide consistent levels of support between short-cycle professional programmes and bachelor degrees.

- As a principle of accountability, quality assurance of institutions and programmes should be tied to funding (for the example of the United States, see Kuczera and Field, 2013).

Private providers, balanced by effective quality assurance, can play a useful role

Very often, private providers (both for and not-for-profit) occupy a particular niche in provision, particularly where no public funds flow to these private providers. Sometimes they fill a gap in public provision – for example, in the Netherlands, the public sector faces barriers in delivering part-time programmes to adults, and as a result these are mostly offered through private providers (Fazekas and Litjens, 2014). In Austria, Germany and Switzerland, private providers offer many of the preparatory courses leading to professional examinations. In Canada and the United States there is an extensive private, for-profit, career college sector. Where private providers are eligible for public support, as in Israel or Sweden, their role is more mainstreamed. While private providers very often play a useful role, issues of quality assurance arise. Of course quality assurance is important for the public sector too, but while in the public-sector the risk is uninspiring programmes run in the interest of the institutions and the teaching profession, the risk in the private sector is of training providers devoting their energies and their innovative capacity to profit-seeking – so a different type of quality assurance is necessary.

Clearly, quality assurance needs to be linked to the level of public funding. Where government money flows to private providers, there are, or should be, accountability arrangements to ensure that government money is supporting good quality provision. In England, the government inspection body, Ofsted, inspects provision funded by government regardless of whether it is delivered by a private or a public training provider or indeed an employer (Musset and Field, 2013). Where no government money is involved, the quality assurance issues are different, but they remain relevant, given that quality in education and training is so often invisible. In the reviews of Switzerland and Germany, enhanced quality assurance was recommended for preparatory courses for professional examinations, even though the level of government support for such courses is quite limited (Fazekas and Field, 2013a, 2013b).

Funding may be channelled to providers in partnership with employers

While the conventional approach is to define a set of institutions to deliver professional training, a radical alternative is pursued in the Swedish system of higher vocational education (HVE) (see Box 2.1). A national agency offers funding to partnerships of training providers and employers, throughout the country. Many countries attribute their difficulties in engaging employers to the lack of any historical tradition of such engagement. Swedish HVE may therefore be a model applicable in these contexts, and possibly more exportable than other

models whose success in national contexts depends heavily on well-established expectations regarding the role of employers (see Box 2.2).

Box 2.2. The Swedish system of higher vocational education (HVE)

Higher vocational education (previously called advanced vocational education and training) was established in 2001 with enrolment increasing rapidly to reach 31 000 (compared with 140 000 enrolments in professional bachelors and masters programmes). Most programmes require between six months and two years of full-time study with 70% of programmes lasting two years. There appears to be demand from students, support by employers, and interest among bodies wishing to run courses. Eighty-ninety per cent of graduates report being in work one year after graduation. Many different bodies can provide HVE if they comply with the established requirements. In 2011, out of 242 institutions providing HVE, roughly half were private while the rest belonged to local and regional authorities. All HVE programmes are publicly funded, with no tuition fees.

The model fosters a bottom-up and entrepreneurial approach within a publicly funded framework. Workplace training is obligatory in two-year HVE programmes and represents one-quarter of the programme duration. This structure builds partnership with employers into the design of the system, since it is only possible to seek funding for an HVE programme when a partnership with employers willing to offer the workplace training is already in place. Each HVE programme in every institution has a steering group including employers; employers provide training to students and also advise on provision and programme content. To launch a programme an education provider has to show that there is labour market demand for the skills provided by the programme, and that it has a framework to engage employers. The National Agency for Higher VET is responsible for the sector, and the social partners are part of a council that advises the Agency on the future demand for skills and on how this might be met.

Source: Kuczera, M (2013), *A Skills beyond School Commentary on Sweden*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf; Ministry of Education and Research Sweden (2013), *Skills beyond School. OECD Review of Vocational Education and Training. Background Report from Sweden*, www.oecd.org/edu/skills-beyond-school/SkillsBeyondSchoolSwedishBackgroundReport.pdf.

Sustaining coherence in a diverse system

Often, the governance of post-secondary professional training involves a complex network of agencies, and the ensuing proliferation of programmes and qualifications can sometimes cause confusion for both students and employers. This section argues that co-ordination mechanisms are needed to engage key stakeholders, including employers and organised labour, and ensure coherence in the system.

Issues and challenges: Balancing coherence and diversity**Country systems need both coherence and diversity**

Fragmentation of professional education and training into different subsectors often reflects the division of responsibilities between different ministries and agencies, the relative autonomy of post-secondary institutions, and the roles played by private-sector providers, employers and trade union organisations in delivering training provision (see for example Musset et al., 2013 for Austria; Kis and Park, 2012 for Korea; Musset, Kuczera and Field, 2014 for Israel). Decentralised governance may support diversity, innovation and competition, but the downside is that it can also create confusion for students in the face of multiple pathways and awkward transitions, while employers find engagement in multiple contexts too burdensome; there may also be duplication of tasks, such as curriculum design and quality assurance.

Recommendation: Stronger frameworks for co-ordination

Ensure that there is an institutional framework to co-ordinate professional education and training, engaging employers and organised labour, so that programmes and qualifications are comprehensible and accessible to key stakeholders.

Explanation and country approaches: Different ways of consolidating the system**Some countries have strong co-ordination mechanisms**

A body with responsibility for co-ordination can link the different sectors of the system, and engage the social partners, without damaging local innovation. The frameworks in Denmark and Switzerland build on strong industrial bodies (employer organisations and trade unions) and a long tradition of engagement in VET. Conversely the employer-led UK Commission for Employment and Skills is a recent creation, but involves high-level representatives of large companies and smaller employers, as well as trade unions and other stakeholders (see Box 2.3).

Policy development depends on policy co-ordination

Many of the recommendations in this review, set out in the different chapters, (on a simple qualification system, on co-ordination to manage articulations and transitions, on the implementation of work-based learning, and on the preparation of vocational teachers), would need to be discussed, developed and implemented at the national level, in consultation with the social partners and other stakeholders. This requires the existence of appropriate steering arrangements.

Box 2.3. **Bodies for co-ordination: National approaches**

In **Switzerland**, the involvement of professional organisations (trade and employer organisations and trade unions) in VET policy making is required by law. Professional organisations have the leading role in the content and examination process of both secondary and post-secondary programmes; they also draft core curricula for professional college programmes, which are then approved by the Swiss federal authorities. National examinations leading to a federal diploma are also led by professional organisations who ensure that diplomas are relevant to the needs of the profession and the labour market. Professional organisations draft examination rules, which cover admission requirements, occupational profiles, the knowledge and skills to be acquired, qualification procedures and the legally protected title. They also conduct examinations. The role of Swiss authorities (at Confederation level) includes approving examination rules, supervising examinations and issuing federal diplomas.

In **the United Kingdom**, the UK Commission for Employment and Skills (UKCES), launched in April 2008, aims to increase the employer voice in the United Kingdom's VET system and promote investment in skills to drive growth. It is led by commissioners from large and small employers, trade unions and the voluntary sector. It also includes representatives of further and higher education institutions and from Northern Ireland, Scotland and Wales. Its strategic objectives are: to provide world-class labour market intelligence which helps businesses and people make the best choices; to work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills; and to maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base.

See also Box 4.2, for a description of the role of the Council for Academy Profession Programmes and Professional Bachelor Programmes in **Denmark**.

Source: Staatssekretariat für Bildung, Forschung und Innovation (SBFI) (2013), SBFI website, www.bbt.admin.ch, accessed January 2013; UK Commission for Employment and Skills (UKCES) (2013), UKCES website, www.ukces.org.uk, accessed January 2013; OPET (Federal Office for Professional Education and Technology), (2011), *Facts and Figures. Vocational and Professional Education and Training in Switzerland*.

Vocational education and training needs to be linked to other strands of skills policy

Co-ordination of the vocational education and training system also involves linking it to wider policies bearing on skills and the broader context of economic development. The OECD's *Skills Strategy* (OECD, 2012) looks at the inter-relationship of different policies that bear on skills in education and training systems, and their maintenance and development in the labour market. While

very often these policies are linked to different government departments, with different objectives and agendas, countries can benefit by co-ordinating the work of these different entities (see Box 2.4).

**Box 2.4. Co-ordination with wider elements of skills policy:
The Northern Ireland Skills Strategy**

The Northern Ireland Skills Strategy sets out a vision for skills development in the province, focusing on those entering the labour force for the first time; upskilling the existing workforce; and ensuring that those currently excluded from the labour force are provided with the skills to gain and keep jobs. Its aim is to enable people to access and progress up the skills ladder, in order to: raise the skills level of the whole workforce; raise productivity; increase levels of social inclusion by enhancing the employability of those currently excluded from the labour market; and secure Northern Ireland's future in a global marketplace. By 2020, it aims to:

- Increase the proportion of employed persons with Level 2 skills and above to 84-90%; with Level 3 skills and above to 68-76%; with Level 4-8 skills and above to 44-52% (levels defined by reference to the UK qualifications framework).
- Increase the proportion of those qualifying from Northern Ireland higher education institutions with graduate and postgraduate level courses in science, technology, engineering and mathematics (STEM) subjects by 25-30%.

Source: Álvarez-Galván, J.-L. (2014), *A Skills beyond School Commentary on Northern Ireland*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnNorthernIreland.pdf

Better data

At present, it is difficult to identify post-secondary vocational programmes in international data. This section argues that this problem should, in principle, be alleviated with the introduction of ISCED 2011 – provided that it is consistently implemented by countries. Better national data collection on professional examinations will also be important.

Issues and challenges: Weaknesses in the current ISCED framework

ISCED does not yet adequately distinguish post-secondary vocational programmes

The International Standard Classification of Education (ISCED) identifies a sequence of levels of education, supporting comparison across countries – for example a comparison of upper secondary completion rates according to common definitions. But current (ISCED 1997) categories do not adequately separate vocational programmes at the post-secondary level. Shorter vocational

programmes are sometimes treated as ISCED 4 (for example, US certificates and Austrian vocational college programmes) and sometimes as ISCED 5B (for example, professional college programmes in Switzerland). Vocational bachelor degrees (such as the HBOs in the Netherlands or the university college degrees in Denmark) are typically classified as ISCED 5A, and are therefore assimilated to academic bachelor's degrees. This means that the rapid growth of vocational bachelor qualifications cannot be adequately measured in an international context.

In addition, ISCED 4 and ISCED 5B do not adequately distinguish between academic and vocational programmes. For example, in Germany and Flanders (Belgium), some upper secondary vocational graduates pursue a wholly academic preparatory programme to enter higher education, and this is classified as ISCED 4 alongside fully vocational programmes, such as certificates in the United States or training for nurses in Austria. Similarly, in the United States, more than one-third of the associate degrees awarded are academic, but they are classified as ISCED 5B, alongside many vocational qualifications in the United States and elsewhere.

Recommendation: Strengthen international and national data

Ensure that implementation of ISCED 2011 delivers a consistent and accurate classification of vocational programmes. Develop new indicators to evaluate the effectiveness of professional education and training. Improve the collection of data on industry-led professional examinations.

Explanation and country approaches: Reform of ISCED and national data initiatives

ISCED 2011 should offer better data on professional education and training

The new ISCED 2011 classification, to be introduced from 2014 (see Box 2.5) should, in principle, improve the identification of professional training. But this depends on whether countries use consistent means to classify their national programmes, recognising that for some post-secondary programmes, the distinction between vocational and general programmes can be difficult to make.

ISCED 2011 also presents other advantages. Recognition that all tertiary education up to a master's degree can be professionally oriented may help to improve the status of professional education. Better definitions offer an opportunity to improve the evaluation of vocational/professional programmes and qualifications in the future, e.g. by collecting data on the extent to which programmes include work-based learning.

Box 2.5. **ISCED 2011 and how it will classify professional education and training**

The new ISCED 2011 classification (UNESCO, Institute for Statistics, 2012) should in principle improve the comparability of professional training. In particular, it offers a framework in which programmes at Levels 4, 5, 6, and 7 can be divided between vocational/professional and general/academic. Levels 5, 6 and 7 in ISCED 2011 together correspond to Level 5A and 5B in ISCED 1997, and Level 8 in the new classification to Level 6 in ISCED 1997. Post-secondary non-tertiary education remains at Level 4. In the new classification professional education and training would include vocational programmes at the following levels:

- ISCED 4 post-secondary non-tertiary education prepares graduates for the labour market as well as for entry to tertiary education. The content is not sufficiently complex to be regarded as tertiary education, although it is clearly post-secondary, and includes programmes such as certificates in the United States and short courses in Higher Vocational Education in Sweden.
- ISCED 5 typically prepares graduates for the labour market and some other tertiary education programmes. It has a minimum duration of two years and is typically shorter than three years full-time. It may cover technician training, advanced higher vocational training or associate degrees.
- ISCED 6 provides participants with intermediate academic and/or professional knowledge, skills and competencies, and is normally offered by universities and other tertiary institutions.
- New ISCED 7 will correspond to Masters degrees, and ISCED 8 to PhD's.

Better data on professional examinations are sometimes needed

Professional examinations can play a major role in country skills systems, but because they are usually industry-led, and sometimes unregulated by government, they can be invisible to the “official” skills system. Chapter 4 addresses the policy issues that arise. In some countries, professional qualifications awarded by industry associations based on an exam are not included in national educational statistics and thus in international counts. In Austria, Germany, Israel and Switzerland these professional examinations are regulated and recognised by educational authorities within the national qualification system. Conversely, in the United States they form a system apart that has not been included in national statistics (see Box 2.6). These different approaches to industry qualifications can bias comparative international measures of the skills of the adult labour force.

Box 2.6. **Better data on professional examinations (industry certifications) in the United States**

Despite the growing importance of industry qualifications in the US skills system, reliable data are limited. Nationally, no data have been available on the number of individuals with industry certifications, and state and local government issued licences and those who have received non-credit instruction.

The federal Interagency Working Group on Certificates and Certifications was mandated to address these gaps in the data, and develop measures of the prevalence of certifications, licenses, and educational certificates. This led to the Adult Training and Education Survey (ATES) Pilot Study, a national household survey of non-institutionalised adults aged 18 and over. This study suggested that around 30% of the US workforce (65 million people) have either a licence or an industry qualification (certification). Kleiner (2006) estimates that approximately 20% of the US workforce is in licensed occupations implying that between 10% and 30% of adults in the United States hold an industry certification.

Source: Kleiner, M. (2006), *Licensing Occupations. Ensuring Quality or Restricting Competition?*, W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan; National Center for Education Statistics NCES (2012), *The Adult Training and Education Survey (ATES) Pilot Study. Technical Report*, NCES, <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013190>

Note

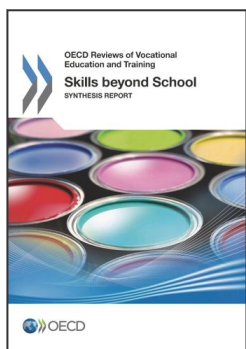
1. *Formation professionnelle supérieure; Höhere Berufsbildung; formazione professionale superiore.*

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