

**OECD Reviews of Vocational
Education and Training**

**A SKILLS BEYOND
SCHOOL COMMENTARY
ON ICELAND**

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A Skills beyond School Commentary on Iceland

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Summary: strengths and challenges

In summary, the OECD assessment of the strengths and challenges of the Icelandic VET system is as follows:

Strengths

- Building on current experience in the occupational councils, the Icelandic social partners are clearly willing to further engage with the VET system.
- The system is highly diverse, with many options, programmes and modes of study serving the needs of many different groups.
- There is a strong apprenticeship system associated with the regulated trades, with an effective balance of on and off the job training, and clear options for further upskilling as master craftsman or through other routes.
- Outside apprenticeships, most upper secondary vocational programmes make use of workplace training. Additional incentives have recently been created to provide such placements.
- In sites throughout Iceland, combined with distance learning, vocational programmes are made available to a widely dispersed population in rural areas.
- There are effective adult learning arrangements in place. Arrangements to offer second chances so that dropouts can return to education and training are strong.
- Good use is made of recognition of prior learning, helping adults to re-engage with education.

Challenges

- Dropout is a major challenge, particularly affecting vocational programmes. Although many dropouts return to education and training later on, this still represents delay and inefficiency in initial education and training.
- Despite the creation of the occupational committee, it may not have the right composition to assist in the overall steering of the VET system.
- The strong apprenticeship system is not used outside the traditional trade professions. This may be a missed opportunity.

- The mix of provision in VET primarily reflects student preferences, and gives inadequate weight to labour market needs.
- Transitions between upper secondary vocational programmes and higher education are sometimes obstructed or difficult to navigate.
- Articulation between postsecondary VET and university education is often lacking, so that credit is not portable.
- Career guidance may retain an academic bias, and is sometimes lacking.

The commentary on Iceland and its place in the wider OECD study

This commentary is one of a series of country reports on vocational education and training (VET) in OECD countries, prepared as part of an OECD study (see Box 1). The series includes *reviews*, involving an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. The *commentaries* are simpler exercises, largely descriptive but also including an assessment of strengths and challenges in the country system. The commentaries are designed to be of value as free-standing reports, but are also prepared so that they can become the first phase of a full review, should a country so wish. In the case of Iceland, this commentary looks at the upper secondary as well as the postsecondary level.

Box 1 Skills beyond School: the OECD study of postsecondary vocational education and training

Increasingly countries look beyond secondary school to more advanced qualifications to provide the skills needed in many of the fastest growing technical and professional jobs in OECD economies. The OECD study, *Skills beyond School*, is addressing the range of policy questions arising, including funding and governance, matching supply and demand, quality assurance and equity and access. The study will build on the success of the previous OECD study of vocational education and training *Learning for Jobs* which examined policy through 17 country reviews and a comparative report. The study also forms part of the horizontal OECD *Skills Strategy* (OECD, 2012a).

Full country policy reviews are being conducted in Austria, Denmark, Egypt, Germany, Israel, Netherlands, Korea, Switzerland, the United Kingdom (England), and the United States (with case studies of Florida, Maryland and Washington State). Shorter exercises leading to an OECD country commentary will be undertaken in Belgium (Flanders), Canada, Iceland, Romania, Spain, Sweden and in Northern Ireland and Scotland in the United Kingdom. Background reports will be prepared in all these countries, and in France and Hungary.

See: www.oecd.org/education/vet

This commentary describes the context of the wider OECD study, outlines the main features of the Icelandic VET system, and compares its main features with those of other countries. It also sets out a number of key statistical indicators comparing Iceland with other OECD countries. These cover both the education system and the labour market. It then provides a brief assessment of the main strengths of the system, and the policy challenges which needs to be addressed in Iceland.

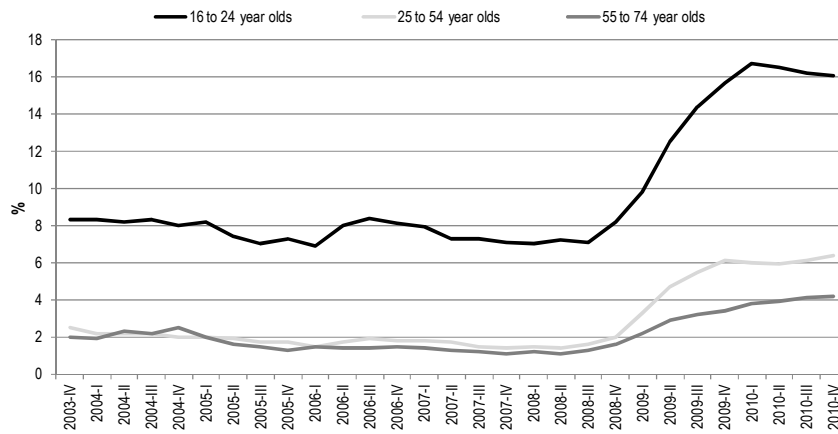
This commentary was prepared using a standard methodology. The Icelandic authorities provided a background report (Ministry of Education, Science and Culture, 2012) following which an OECD team made a visit to Iceland on 27 – 29 August 2012, where the team discussed issues arising with a range of policy makers, stakeholders and staff and students in training institutions.

The background: education, training and the labour market in Iceland

The labour market

In the 1990s and in the 2000s, Iceland enjoyed rapid economic growth, but entered a recession during the second half of 2008. Although the economy has partly recovered, unemployment is still high in relation to its pre-crisis level. Workers with lower skills and young workers have been the worst hit by the crisis (see Figure 1). The relatively less-skilled occupations of clerks, plant and machine operators, and elementary occupations accounted for more than 60% of the job losses between 2007 and 2009, despite being only 20% of the workforce (OECD, 2011a).

Figure 1 Unemployment by age group in Iceland



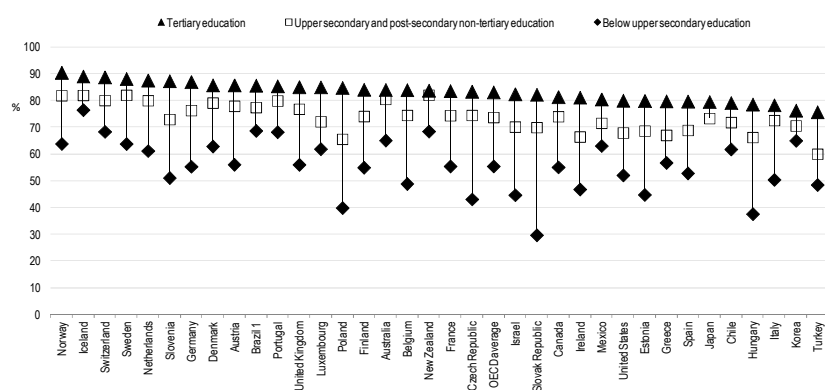
Note: The Roman numerals correspond to the semesters in the respective year.

Source: OECD (2011a), *OECD Economic Surveys: Iceland 2011*, OECD Publishing.
doi: http://dx.doi.org/10.1787/eco_surveys-isl-2011-en

There is some risk that high unemployment will linger in Iceland. During the recession queues developed for individuals attempting to re-enter the traditional educational system to finish off upper secondary education. Obstacles to re-entry to education could increase the share of Icelanders who are stuck in low-skilled jobs or unable to find work (OECD, 2011a).

Figure 2 Employment by education attainment¹

25-64-year-olds, 2010



Notes: 1. year of reference 2009. Countries are ranked in descending order of the employment rate of tertiary-educated individuals.

Source: OECD (2012b), *Education at a Glance 2012: OECD Indicators*, OECD Publishing. doi: <http://dx.doi.org/10.1787/eag-2012-en>

Education and training for young people

Compulsory education

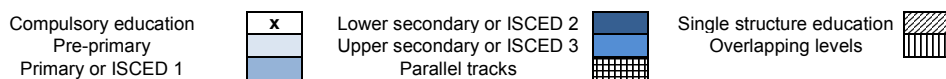
Education is free and obligatory for children aged 6-16 years old. The first ten years of education take place within the same school, with no formal barrier between primary and lower secondary school. Children automatically progress from one year to the next. There are 175 compulsory schools in Iceland, ten of which are private schools. The compulsory system is financed and operated by the municipalities. The government monitors the implementation of regulations and laws, the publication of educational materials and manages the organisation of the national examinations (Ministry of Education, Science and Culture, 2012).

Upper secondary education

After compulsory education, at age 16,² students have the right to enter upper secondary education and most do so (Ministry of Education, Science and Culture, 2012). Upper secondary schools are operated and funded by central government, with municipalities contributing 40% of the cost of new buildings. There are no tuition charges for upper secondary schooling, although vocational students pay part of their material costs.

Upper secondary academic education typically involves a four-year programme, taking students to the age of 20 at least, significantly more than in other OECD countries (see Table 1).

Table 1 Structure of education in OECD countries



The “x” denotes the number of years where education is compulsory. For example, in Austria compulsory education ranges between the ages 6 to 15 years old. Primary education ranges from 6 to 10 years old and lower secondary education from the ages of 10 to 14 years old. The first year of upper secondary education is also compulsory.

Country	Age and duration of primary and secondary education															
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Australia			x	x	x	x	x	x	x	x	x	x				
Austria			x	x	x	x		x	x	x	x	x				
Belgium			x	x	x	x	x	x	x	x	x	x	x	x	x	
Canada			x	x	x	x	x	x	x	x	x	x	x			
Chile			x	x	x	x	x	x	x	x	x					
Czech Rep.			x	x	x	x	x	x	x	x	x	x	x			
Denmark			x	x	x	x	x	x	x	x	x	x	x			
England			x	x	x	x	x	x	x	x	x	x	x			
Estonia			x	x	x	x	x	x	x	x	x	x	x			
Finland			x	x	x	x	x	x	x	x	x	x	x			
France			x	x	x	x	x	x	x	x	x	x	x			
Germany			x	x	x	x	x	x	x	x	x	x	x			
Greece			x	x	x	x	x	x	x	x	x	x				
Hungary			x	x	x	x	x	x	x	x	x	x	x	x	x	
Iceland			x	x	x	x	x	x	x	x	x	x	x			
Ireland			x	x	x	x	x	x	x	x	x	x	x			
Italy			x	x	x	x	x	x	x	x	x	x	x			
Israel			x	x	x	x	x	x	x	x	x	x	x			
Japan			x	x	x	x	x	x	x	x	x	x	x			
Korea			x	x	x	x	x	x	x	x	x	x	x			
Luxembourg		x	x	x	x	x	x	x	x	x	x	x	x			
Mexico	x	x	x	x	x	x	x	x	x	x	x	x	x			
Netherlands			x	x	x	x	x	x	x	x	x	x	x			
New Zealand			x	x	x	x	x	x	x	x	x	x	x			
Norway			x	x	x	x	x	x	x	x	x	x	x			
Poland			x	x	x	x	x	x	x	x	x	x	x			
Portugal			x	x	x	x	x	x	x	x	x	x	x			
Scotland			x	x	x	x	x	x	x	x	x	x	x			
Slovak Rep.			x	x	x	x	x	x	x	x	x	x	x			
Slovenia			x	x	x	x	x	x	x	x	x	x	x			
Spain			x	x	x	x	x	x	x	x	x	x	x			
Sweden			x	x	x	x	x	x	x	x	x	x	x			
Switzerland			x	x	x	x	x	x	x	x	x	x	x			
Turkey			x	x	x	x	x	x	x	x	x	x	x			
United States		x	x	x	x	x	x	x	x	x	x	x	x	x		

Notes: Years of reference between 2006 and 2010. Ages may also vary in different areas inside countries.

Source: OECD (2011b), *Reviews of National Policies for Education: Improving Lower Secondary Schools in Norway 2011*, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264114579-en>

Students can attend three types of upper secondary (*framhaldsskóla*) schools:

- *Grammar schools* provide four-year academic programmes, leading to the university entrance matriculation examination. They usually offer four different study programmes in social sciences, natural sciences, languages and business.
- *Vocational schools* offer vocational programmes. Most of the programmes are 3-4 years but some of them are shorter (1-2 years).
- *Comprehensive schools* offer both academic and vocational programmes. They were established in the 1970s in an attempt to give the same status to both academic and vocational programmes and in order to merge small schools into larger ones.

Currently, over 100 branches of study of varied lengths are offered, including 80 vocational programmes. A modular credit system allows students to change programmes and institutions, and allows them flexibility in the length of studies. Students can often choose part- or full-time, day or night classes as well as distance learning. Two thirds of students enrol in general academic upper secondary education.

Many students first enrol in general academic programmes, complete those programmes or drop out, but then quite often begin vocational programmes later on. So relatively few students enrol in vocational programmes immediately after their compulsory schooling at the age of sixteen. Those graduating with vocational qualifications thus tend to be older than those who graduate with general qualifications, e.g. 29 for journeymen versus 21 for the academic matriculation examination (Stefánsdóttir, 2001).

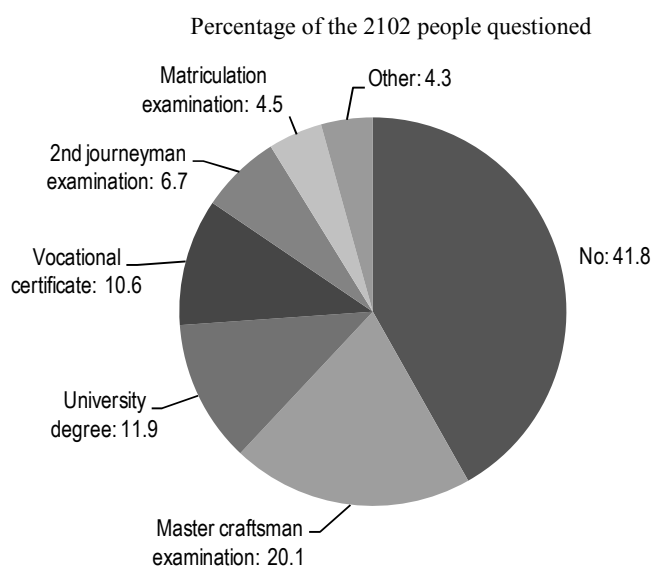
The vocational programmes include three to four year apprenticeships in the traditional regulated trades,³ as well as school-based programmes in a variety of different fields.⁴ Some of the vocational training qualifications also grant a legal license to do particular work, for instance to work as an auxiliary nurse. In the school-based programmes, schools have since 2008 had the authority to devise their own programmes upon accreditation by the Ministry and may determine the balance and time budget between subjects. Some programmes have very few students and are found in only one locality. Each school can set specific admission requirements for entry to individual branches of study.

All vocational students must take a certain number of credits in general academic subjects (Icelandic, modern languages and mathematics), but the mix of theoretical and practical vocational subjects and the extent of

practical training vary depending on the branch of study. The matriculation exam – allowing entry to university – may also be taken through additional programmes.

According to a 2011 survey of more than 2 000 qualified tradesmen and women in 17 trades about 60% of the participants had continued their education, 20% had finished the master of trade exam and 12% a university degree (see Figure 3) (Maskína, 2011 in Ministry of Education, Culture and Science, 2012).

Figure 3 Progression of journeymen to further education and training



Source: Maskína (2011), “Vinnuumhverfi fagmanna - Apríl 2011”, Reykjavík, Iðan fræðslusetur.

Nearly 75% were interested in learning about novelties in their trade, a third of the group had attended courses in continuing education during the past two years, but only 31% were content with the provision of courses in continuing education in their field of work.

Postsecondary education

At the postsecondary level, a large variety of programmes are available, in different types of institutions and of different lengths: at upper secondary schools, at universities, at specific and often very small postsecondary institutions, and through the training arms of the social partners.

Postsecondary VET programmes in 64 different fields, requiring upper secondary education to enter, take place in upper secondary schools (e.g. marine engineering, doctors' receptionists).

Four universities (out of a total of seven) offer postsecondary VET programmes, in 13 different fields (Ministry of Education, Culture and Science, 2012). These are mostly programmes that were upgraded from the upper secondary level (e.g. nursing). While the number of students entering tertiary education in Iceland has more than doubled in the last ten years to 64 % of the cohort,⁵ the proportion in VET programmes has fallen (Ministry of Education, Culture and Science, 2012). Some caution with these statistics is necessary: it is difficult to know how many students are following VET programmes in universities (some programmes work with secondary school credits and are therefore not officially counted in the statistics; other programmes were transferred to universities but remain included only in upper secondary education statistics).

As indicated above, in the apprenticeship trades, "Master craftsman" examinations allow apprentices the option of higher level qualifications in their trade.

A great deal of continuing professional education also takes place non-formally in upper secondary schools, art schools and universities, adult learning centres, private providers, and in the workplace: in 2010, nearly one third (31%) of the adult population (between 16 and 74-years old) attended some kind of non-formal continuing and VET education, sometimes leading to professional qualifications. Participation has risen steadily since 2003, possibly as a consequence of the crisis (Ministry of Education, Culture and Science, 2012).

Box 2 Conclusions of the *Althingi* task group on education and employment

A task group on education and employment under the auspices of the Prime Minister reported back to Parliament in November 2012. The report contains many reform proposals of high interest for vocational education and training including:

- An action plan for strengthening vocational education and training at upper secondary and higher education levels.
- A campaign to promote vocational education and training.
- Increased emphasis on technical and vocational subjects in compulsory schools.
- Enhanced guidance and counselling in compulsory schools and upper secondary schools.
- The development of new vocational study programmes.
- A comprehensive analysis of industry's future needs for human resources and education.
- Increased education and industry co-operation to define a new emphasis in education.
- Enhanced workplace learning in vocational education and increased links with industry.

Source: Forsætisráðuneyti (2012), “Allir stundi nám og vinnu við sitt hæfi - Tillögur um samþættingu menntunar og atvinnu”, Stjórnarráðshúsinu við Lækjargötu, www.forsaetisraduneyti.is/media/Skyrslur/Menntahopur-tilloguskjal-121112.pdf

Previous OECD analysis and recommendations

There have been several previous OECD reviews bearing on the Icelandic education system.⁶

Since those most affected by the crisis have been workers with the lowest skills, the less educated, and the young, the OECD's most recent economic survey encouraged Iceland to pay specific attention to labour market shifts and movements and to increase the size of on-the-job training programmes. This survey notes that active labour market policies are in part responsible for Iceland maintaining relatively low unemployment levels. More than 20% of the unemployed are enrolled in occupational courses, more than 7% in apprenticeships, internships or “provisional contacts”, and 18% in other labour market programmes. It recommends increasing investment in job training targeting low-skilled workers, aiming to get them into jobs quickly, with long term returns since this target group is mostly

young, and could play an important role in filling future skills needs (OECD, 2011a).

The OECD review of tertiary education in Iceland (Neave et al., 2008) notes that the freedom granted to tertiary institutions, while promoting flexibility, also means that institutional objectives are not always coordinated with political priorities. The review points to the enduring challenge of low status in the VET sector, particularly at the upper secondary level,⁷ leading to skills shortages. Weak articulation between upper secondary school and higher education is also a concern; unlike some European countries, upper secondary vocational tracks in Iceland lack clear links with vocational tertiary programmes.

An earlier OECD economic survey (OECD, 2006) reported a lack of communication between schools and the employment sector. It suggested that the elevated dropout rates may in part reflect the emphasis placed on academic studies rather than vocational training.

A special OECD report looking at dropout in Iceland suggests that one reason for dropout is inadequate quality in vocational education and training, and lack of connection with labour market needs. Low wage differentials between unskilled and skilled workers may also be a problem, since the short run costs of dropout may look small (OECD, 2012c).

Strengths and challenges

This section of the commentary provides an assessment both of the strengths of the Icelandic VET system and the challenges it faces. These strengths and challenges draw on those identified in the Icelandic background report.

Strengths

Willingness of social partners to be engaged

Across OECD countries, evidence shows that the engagement of social partners – both employers and unions is necessary to ensure that the organisation and the content of vocational programmes meet the need of employers and the wider economy. At the national level, social partner engagement in policy development is essential if policy is to be successfully implemented (OECD, 2010a). But the level of engagement varies markedly among countries. organised social partnerships and strong apprenticeship systems often support high levels of engagement. At postsecondary level, additional challenges emerge because postsecondary institutions often have

high levels of autonomy, and missions that may leave local employer requirements somewhat marginal.

In Iceland, social partners have several roles in the design and steering of the system, in particular through the occupational councils and the occupational committee. Twelve occupational councils in 12 fields of study⁸ advise the Ministry of Education on labour market needs and the provision of courses in VET at upper secondary level. Each occupational council includes five to nine representatives out of which two to four are nominated by federations of employers, two to four by federations of employees from the relevant occupations and one representative jointly nominated by the Association of Icelandic Upper Secondary Schools and the Icelandic Teachers' Union.

These councils deal with curriculum projects and participate in quality assurance initiatives, such as improvements of the work of the journeymen's examination committees and apprenticeship committees, the development of handbooks and students' logbooks for workplace training (Ministry of Education, Science and Culture, 2012).

The chairs of the occupational councils together constitute a special occupational committee. According to the law, the committee should advise the Minister of Education regarding policy making and implementation of vocational education as well as offering a platform for collaboration and co-ordination for the occupational councils (Ministry of Education, Science and Culture, 2012).

A highly diverse system

Across OECD countries, VET systems serve the diverse purposes of different student groups. Initial VET can provide job-specific training for young upper secondary students preparing them for jobs through apprenticeships and other forms of vocational training and facilitate smooth transition to the labour market. Postsecondary provision can offer upskilling opportunities for adults in mid-career (master examinations in the Germanophone countries), "second chances" for working adults who dropped out of earlier education or who got on the wrong track. An effective system should be able to meet all of these needs.

In Iceland, the VET system provides a strong blend of options. It has a large number of institutions and programmes, for a relatively small population. Schools are also granted a high degree of autonomy, which allows for innovation and entrepreneurial approaches.⁹

Thanks to institutional autonomy and alternative patterns of ownership – private versus public, institutions can respond to unmet needs in the labour

market (e.g. the development of a drawing course at the Reykjavik School of Visual Arts (private), oriented to the video game industry). The University of Reykjavik (private) has very close ties to industry and has developed short two-year courses in industrial operation, teaching and computer science for graduates of vocational upper secondary education.

Apprenticeships and professional examinations

Across OECD countries, apprenticeships combine education and training in schools or other VET institutions with workplace training. Apprenticeships are common in many countries but particularly strong systems are found in the Germanophone “dual system” countries where half or more of young people may enter apprenticeships (OECD, 2010a).

The blend of school and workplace learning offered by apprenticeships is a powerful and effective method of preparing young people for jobs and careers. They are very effective at securing smooth initial transitions into the labour market particularly (but not only) where labour markets are relatively regulated. The design is highly variable: on-the-job and off-the-job components are alternated within a week (e.g. Austria, Belgium-Flanders, Germany) or in blocks of several weeks (e.g. Ireland, Canada). In Norway, two years of off-the-job training are followed by two years on-the-job training. Quintini and Manfredi (2009) discuss different transition patterns from school to work across OECD countries. They note that in countries with regulated labour markets and strong apprenticeship systems, such as Germany, about 80% of school leavers succeed in rapidly integrating into the labour market.

In Iceland, there is a strong apprenticeship system in the regulated trades at the upper secondary level. Apprenticeships last three to four years, in general three years in the workplace and one year at the school. There is a big difference between programmes within the regulated trades. The two extremes are between the food and catering programs with 54 weeks in school and 126 weeks in industry on one hand, and in the electrical trades and tailoring programs with 126 weeks in school followed by 24 weeks in industry on the other. Apprentices have a study contract with a master craftsman or an industrial firm.

While the sequencing of the workplace and school-based training may vary, the school remains responsible for basic education and the theoretical part of the course while practical training takes place in the workplace. During the workplace segments, students receive payment from the employer according to wage agreements. At the end of the apprenticeship, they pass a journeyman examination granting them the qualifications to pursue the trade. A committee with members from industry and the trade

unions (employers and employees) manage the examination, which consists of a practical and a theoretical part.

As in many other apprenticeship systems, graduate apprentices have opportunities to learn entrepreneurial skills and how to run their own business, through the master craftsman examination (after a certain period of work – one year in most fields). In 2010, 566 students were registered in master craftsman courses (Ministry of Education, Culture and Science, 2012). These programmes are taught mostly in upper secondary schools, but also in two universities. The courses are usually in the evening. They include general academic subjects, management subjects, theoretical vocational subjects and practical vocational subjects.

Workplace training

Across OECD countries, workplaces provide a strong learning environment in which to develop hard skills on modern equipment, and soft skills through real work experience of teamwork, communication and negotiation. Workplace training facilitates recruitment by allowing employer and potential employees to get to know each other, while trainees contribute to the output of the training firm. Workplace learning opportunities are also a direct expression of employer needs, a employers will be keenest to offer those opportunities in areas of skills shortage. The benefits of workplace learning depend on its quality. In the absence of quality control, workplace training opportunities for young people can degenerate into a masked form of cheap labour, or involve very narrow and firm-specific skills.

Outside apprenticeships, the use of workplace training in vocational programmes is highly variable, but in a number of countries, such as Spain and Denmark, and more recently Sweden, a substantial period of workplace training is a mandatory part of the curriculum. The mandatory principle is important because it binds training provision to employer requirements.

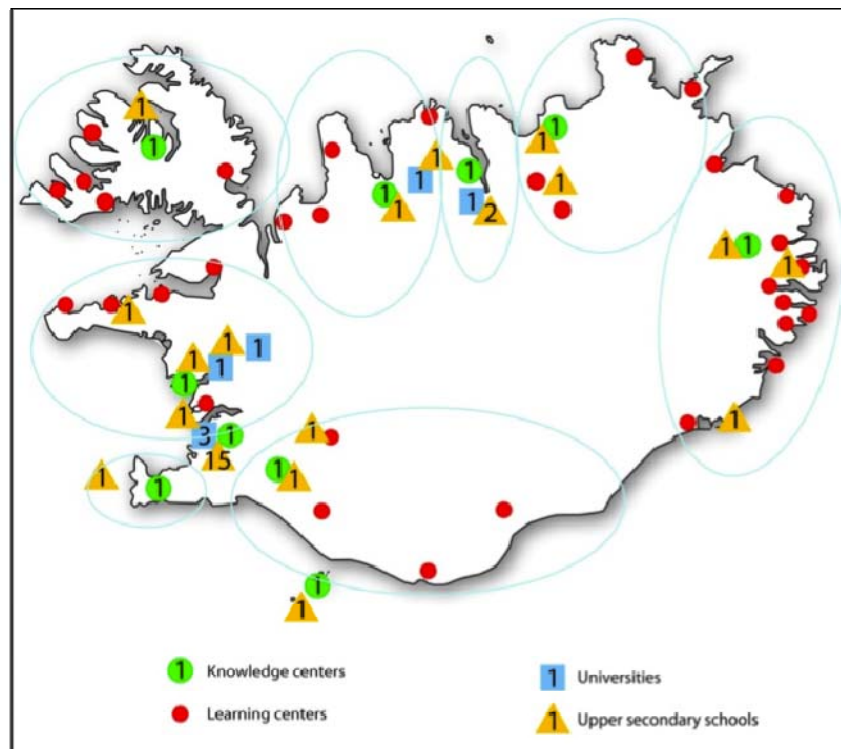
In Iceland most upper secondary programmes include a workplace training period, of extremely variable length¹⁰ (from three to 126 weeks) with the longer periods often associated with some form of apprenticeship. Workplace training is a prerequisite for the journeyman's exam. The occupational councils devise criteria for the division of study between school-based and workplace learning. They are also responsible for defining the competence requirements for each occupations in their fields and for ensuring that the work placement arrangements are designed to be closely linked to learning outcomes. They keep a record of companies and workplaces that fulfil the requirements for providing workplace learning (Ministry of Education, Culture and Science, 2012).

In 2011, Iceland, as a consequence of the 2008 crisis and the inability of many firms to offer training places, developed a framework providing incentives for companies to train and support students in the workplace. 54 companies were allocated IKR 54.4 million (around EUR 470 000) to train 182 students. In the years 2012-2014, an additional IKR 450 million (EUR 2.8 million) will be allocated to the workplace training fund.

Geographical coverage and distance learning opportunities

In OECD countries, the expansion of distance learning and regional learning centres is often a key means of delivering higher skills in rural and sparsely populated regions (OECD, 2008). Distance learning is also often seen as more cost-effective than traditional forms of delivery. It remains important that distance learning should be driven by learner needs, rather than by technological possibilities (Dumont, Istance and Benavides, 2010).

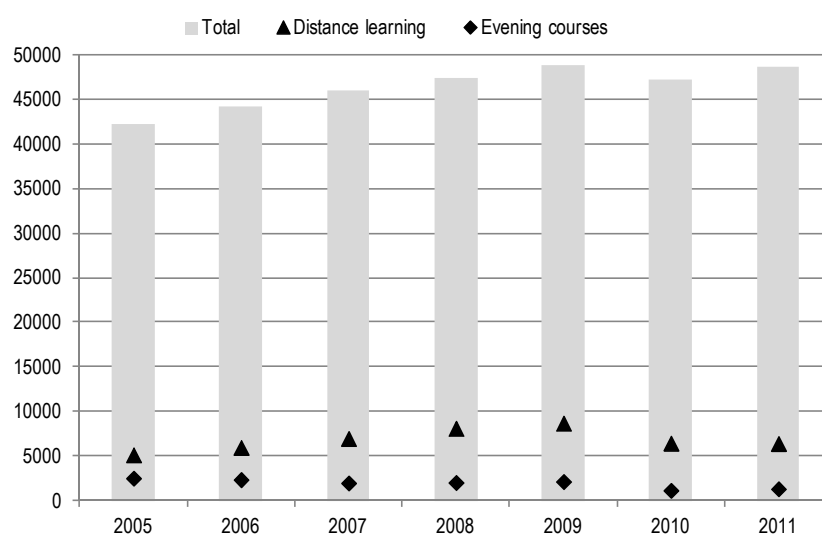
Figure 4 Geographical distribution of institutions in Iceland



Source: Ministry of Education, Science and Culture (2012), "National Background Report: Iceland", *Skills beyond School*, OECD Reviews of Vocational Education and Training.

In Iceland, the distribution of upper secondary schools around the country ensures general accessibility, but access to specific vocational programmes sometimes requires students to move, often to the Reykjavik area (Ministry of Education, Science and Culture, 2012). Opportunities for distance learning and distributed learning exist at both upper secondary and postsecondary levels, and are increasingly popular.¹¹ There is an emphasis on making distance education more cost-effective by increasing the number of students involved and extending the range of courses (Rennie, Jóhannesdóttir and Kristinsdóttir, 2011).

Figure 5 Number of students in distance learning education



Note: Some students in blended study are counted by more than one mode.

Source: Statistics Iceland (2012), *Registered Students at the Upper Secondary and Tertiary Level in Autumn 2011*, Statistical Series, January 2012.

Flexibility and adult learning opportunities

In many OECD countries, a demographic downturn means that fewer young people will be entering the labour market: the relative importance of adults and therefore adult learning in skilling the labour force is therefore increasing. Good quality adult learning can have a strong positive impact on productivity, innovation and employment chances of individuals. Flexible systems can contribute to both equity and efficiency by providing an opportunity for those who missed out the first time around to gain skills

(OECD, 2010a). The common challenge is that adults with the fewest skills and with the greatest needs often participate little in adult learning.

In Iceland, net in-migration is expected to keep the population growing slowly, so that the demographic challenge will be smaller than in many other countries. In terms of lifelong learning, the system is very flexible: Icelandic students have multiple opportunities to enter and re-enter the education and training system, providing a large array of lifelong learning activities.

Upper secondary vocational programmes can play an important role in retraining for adults seeking work, whether because they are unemployed or are seeking to change careers. Students can choose how many courses they want to follow by semesters, and earn credits as they go. Students keep these credits when they drop out and can build on them when they return to education.

The form of distance education depends on the school involved and what type of distance studies are being offered. The development of distance education is practiced separately within each school and university (and can even be very different between departments).

Recognition of prior learning (RPL)

Across OECD countries, RPL – a process of certifying pre-existing skills and knowledge is used to make skills visible to other actors, such as employers and education and training institutions. It has numerous potential benefits:

- Through course exemptions it reduces the direct and opportunity costs of formal learning.
- It improves the efficiency of the labour market, by making acquired skills transparent.
- It helps adults with limited formal education to re-enter education and advance their careers.
- It rewards and therefore encourages learning in informal settings (Field et al., 2012).

At the same time there are many barriers to its effective use. Education institutions and professionals are often unwilling to accept that competences can be acquired in different learning contexts, and even informally, while employers are sometimes reluctant to make the skills of their own employees too transparent for fear of poaching. Assessing prior learning is also a significant challenge since informal learning is almost by definition

undocumented. Credible and professional assessment of skills itself consumes resources.

In Iceland the Education and Training Service Centre (ETSC) has co-ordinated the development of a national strategy: both the 2008 Act on Upper Secondary Schools and the 2010 Act on Adult Learning contain provisions on individual entitlement to the validation of non-formal and informal learning at the upper secondary level (Ministry of Education, Science and Culture, 2012). It is seen as a means of combating dropout. The centre has, through pilot projects, developed an RPL methodology with the main target group being people with poor formal education. Adults who wish to return to upper secondary school can use RPL to shorten the length of the required programme. The 12 lifelong learning centres around the country and the two centres for certified trades co-operate in pursuing RPL projects.

On average a participant going through a validation process within the certified trades ends up with 28 units of credit recognised through RPL (the carpentry programme for example involves 100 units in total). Over the period 2007-2009 492 individuals had their competences recognised in this way, the majority within the certified trades (Lárusdóttir, 2010).

Challenges

In Iceland a set of challenges were identified, where the OECD also has relevant international experience and evidence. These are as follows:

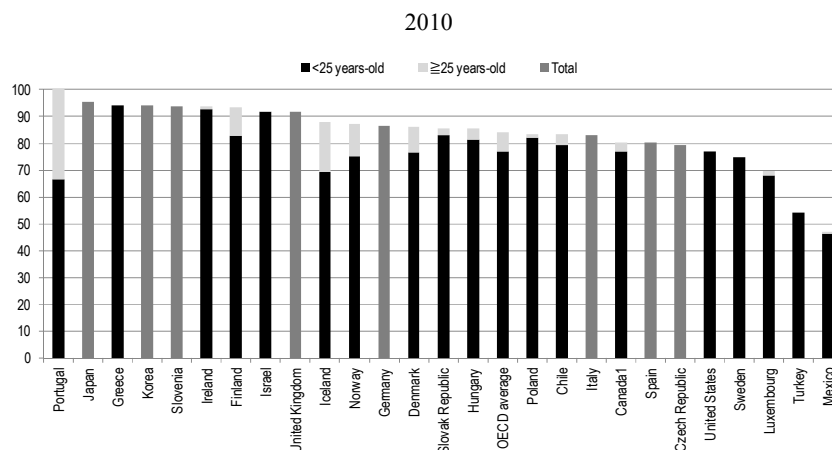
High dropout rates

Across OECD countries, almost one of every five students does not reach a basic minimum level of numeracy and literacy to function in today's societies. The economic and social costs of school failure and dropout are very high. Dropout is caused by a mix of factors, including both institutional factors, (which demotivate and discourage some students), and individual factors, (including social background and family resources) which may undermine engagement (OECD, 2010a; Lyche, 2010). Efforts to reduce dropout aim to address both types of factor, recognising that education policies may need to be aligned with other government policies, such as housing or welfare, to ensure student success (OECD, 2012d).

Many countries look to vocational programmes to help tackle school disengagement – the idea being that less academically oriented adolescents and teenagers can be re-engaged by giving more emphasis to the practical dimensions of learning. This notion lies behind the Spanish VIP programmes – which introduce vocational programmes early on to school

pupils deemed at risk (Field, Kis and Kuczera, 2012). To help re-engage adults, the IBEST programme in Washington State in the United States has achieved remarkable results by linking basic academic and vocational skills.

Figure 6 How many students finish secondary school?



Notes: 1. year of reference 2009. Only first-time graduates in upper secondary programmes are reported in this chart.

Source: OECD (2012b), *Education at a Glance 2012: OECD Indicators*, OECD Publishing. doi: <http://dx.doi.org/10.1787/eag-2012-en>

In Iceland, there is a serious dropout challenge. Students in vocational programmes and those in rural areas are particularly at risk (Blondal, Jonasson and Tannhauser, 2011). Successful completion of upper secondary education within four years is 45% while the OECD average is 68% (OECD, 2012b). Although many dropouts return to education and training in their late twenties and thirties, this represents an important weakness of the education system.

An OECD study (OECD, 2012c) looked into the issue of dropout and developed specific recommendations (Box 3). Falling enrolment after the first year of upper secondary education suggests that students do not find the education provided to them appealing. The long duration of studies, lack of relevant curricula, and jobs available outside school all combine to cause dropout. Vocational tracks are unfortunately often not perceived as a suitable alternative to academic education.

Box 3 Policy suggestions to tackle dropout in Iceland

- Evaluate the organisation and structure of upper secondary education to explore its attractiveness, efficacy and capacity to balance student guidance and choice.
- Suggested points for analysis include: *i)* the capacity to assess students' needs and learning gaps once they reach upper secondary; *ii)* the broad variety of programmes available; and *iii)* whether the ease of exiting and re-entering the education system through education and adult learning can actually challenge completion of upper secondary education.
- Ensure that vocational education is relevant to labour market needs. Improve the quality of VET and its attractiveness for students and for employers.
- Support teaching quality: With recent teacher training reforms the quality of teachers will be strengthened, but further work is needed to support more stability in the teaching career, including continuing professional development of teachers.
- Improve the capacity of schools to assess students' needs and provide guidance to help identify students at risk of dropping out or struggling, and help to prevent them from leaving the school system.
- Explore the effect of incentives in the labour market to reduce dropout or late completion.
- Promote a governance system focused on support and capacity building for schools.

Source: OECD (2012c), "Towards a Strategy to Prevent Dropout in Iceland", OECD-Iceland Improving Schools Review, www.oecd.org/iceland/49451462.pdf

Weak management and co-ordination of the system

Across OECD countries, managing multiple vocational institutions and programmes to deliver strategic coherence and co-ordination without damaging diversity and innovation is a major challenge. Institutional autonomy, while promoting local innovation, can add to the challenge of coherence and co-ordination. There are particular challenges for vocational programmes because of the additional need to engage social partners with their different agendas. Potential problems include:

- Unclarity for potential and actual students in the face of multiple pathways and sometimes competing offers.
- Unclarity for employers about the function and value of different qualifications.
- Difficulties in articulation and transitions between different institutions and programmes.

In the face of these challenges, OECD countries often maintain co-ordination bodies designed to provide an overall steer for the VET system. Box 4 provides some examples of institutional arrangements. The frameworks in Denmark and Switzerland build on strong industrial bodies (employer organisations and trade unions) and a long tradition of engagement in VET. The industry-led UK Commission for Education and Skills (UKCES) involves high profile representatives of large and small employers (including CEOs of large companies), as well as other stakeholders.

Box 4 National strategic bodies steering VET policy

In Denmark the Council of Academy Profession Programmes and Professional Bachelor Programmes (i.e. short and medium cycle postsecondary VET) was set up in 2008. The board has up to 21 members, including those appointed by the Minister of Science, Innovation and Higher Education after nomination by various employer organisations (8 members), trade unions (2), the organisation of Danish regions (1), organisation of local governments (2), student organisations (2), University Colleges (1) and Academies of Professional Higher Education (1). The Council meets six times a year and advises the Minister about the development of new programmes, the mix of provision, quality assurance and improvement. It also provides a yearly report, which reviews existing programmes and describes new initiatives.

In Switzerland, the involvement of professional organisations in VET policy making is required by law. The term “professional organisations” in Switzerland refers to trade associations, employer associations and trade unions, and includes both companies and business people. Professional organisations have the leading role in the content and examination process of both secondary and postsecondary VET programmes (in Switzerland postsecondary VET is referred to as “professional education and training”, PET).

Box 4 National strategic bodies steering VET policy (*continued*)

Professional organisations in postsecondary VET, as in secondary level VET, draft core curricula for PET college degree programmes, which are then approved by the Swiss authorities (Confederation). National examinations leading to a federal diploma are also led by professional organisations. They ensure those federal PET 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 UK, the UK Commission for Employment and Skills (UKCES) was launched in April 2008 with the aim of increasing the employer voice in the United Kingdom's VET system and promoting investment in skills to drive enterprise, jobs and 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 the Devolved Administrations. Its strategic objectives are: *i*) to provide world-class labour market intelligence which helps businesses and people make the best choices for them; *ii*) to work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills; and *iii*) to maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base. UKCES works with government departments and agencies, as well as with researchers across the UK to develop an evidence base and pool expertise. The UKCES also funds and manages the Sector Skills Councils and oversees their relicensing process. As a UK-wide body, it helps ensure a strategic approach to skills development that covers all four nations (with devolved administrations for education and training policy) of the UK.

A recent shift in the approach to employer engagement encourages employers to own their skills agenda and develop their own initiatives, rather than relying on a policy agenda set by government with incentives for employers to join in. In 2011 the Prime Minister announced a fund of up to GBP 250 million to test out approaches that empower employers to take control of skills development. The UKCES is working closely with government to develop this approach.

Source: Staatssekretariat für Bildung, Forschung und Innovation (SBFI) (2013), SBFI website, www.bbt.admin.ch; UKCES (2013), UKCES website, www.ukces.org.uk; OPET (Federal Office for Professional Education and Technology), (2011), Facts and Figures. Vocational and Professional Education and Training in Switzerland; Danish Agency for Higher Education and Educational Support (2012), Skills beyond School: OECD Review of Post-Secondary Vocational Education and Training – National Background Report for Denmark, <http://en.fivu.dk/publications/2012/oecd-review-skills-beyond-school/oecd-review-skills-beyond-school-denmark.pdf>.

In Iceland, the challenge is to ensure that the wide range of vocational programmes and institutions is adequately managed and co-ordinated, especially in the light of the 2008 reform which gives more autonomy to upper secondary schools.

At the upper secondary level, the occupational committee is supposed to act as a co-ordination platform for different industry sectors and an advisory body on VET policy. The composition of the committee may need re-examination - representing the different sectoral councils is a very different job from representing the social partners (and the OECD review team heard that, though some councils worked well, others were less effective). The committee is also limited to upper secondary VET, preventing it from looking at co-ordination between sectors and the key issue of progression from upper secondary to postsecondary level.

Postsecondary VET also lacks a clear legal, institutional basis, often appearing as no more than an “add on” of upper secondary education. Many postsecondary programmes take place in upper secondary schools and translate into upper secondary credits, not recognised by universities, which leads to problems for students’ progression for one stage to another. This contrasts to the arrangements in many other countries, where the postsecondary level of VET is embodied in a well-defined set of programmes or institutions that typically provide a visible definition for the sector. For example community colleges and associate degrees in the United States, TAFE institutions in Australia, professional colleges in Switzerland, *Fachschulen* in Germany, Academies and University Colleges in Denmark.

Apprenticeships are restricted to a narrow range of trades

In some OECD countries, apprenticeships are used not only in the traditional trades, but are also train apprentices in sectors such as the civil service, and tourism. Apprenticeships are also increasingly used to train for technical areas, such as laboratory and hospital technicians. In Norway, apprentices are found in public administration. In Switzerland, for example, a new “IT engineer” occupation was designated in the 1990s with an associated apprenticeship. In Germany for example, dual VET programmes are offered in 349 trades and have variable length (between two and three and a half years) according to the field and technical difficulty. The powerful structures of the dual system have been applied successfully to higher level technical trades which would involve tertiary education in other countries (Hoeckel and Schwartz, 2010). (Other countries are more like Iceland – in the United States and Ireland the apprenticeship systems are dominated by the construction trades).

In Iceland, even though the system is strong and highly regarded in the traditional trades, it is not very visible. The number of journeyman's examinations has decreased (from around 820 in 1980 to 539 in 2000). There is no essential link between apprenticeship and legally regulated professions - apprenticeships could be developed in other fields to make use of its strong learning model.

The system is not responding sufficiently to labour market needs

Across OECD countries, countries use different mechanisms to determine the mix of vocational provision – for example the right numerical balance between training places for chefs and training places for IT professionals. While student preferences are very important in determining the mix, some reflection of labour market requirements is also desirable, particularly when provision is publicly subsidised. In this case, it should reflect the wider interests of society, including labour market actors. These wider interests are different from those of students, because students may choose programmes which are intrinsically enjoyable to study, or lead to attractive professions with high status, rather than because they provide the kind of skills which are most needed on the labour market and might therefore drive economic growth. While individual students' preferences are important, their choice may not adequately respond to skill needs (and to signals such as high wages in shortage areas) in the labour market, as students are often inadequately informed.

Countries use three main types of approach when balancing student preferences with employer needs in the mix of provision. First, in apprenticeships and other programmes in which a substantial element of workplace training is mandatory, employers can influence the mix of provision through their willingness to offer workplace training. Second, an assessment of skills needs, involving employers, can be used to inform VET provision. Third, career guidance can be used to inform students about changing labour market requirements, aligning student preferences more closely with employer needs. In practice, these approaches are often blended together with more or less weight given to one or the other. Anticipating future skill needs, both regionally and by occupational sector, and defining the necessary VET output, is also a difficult task for forecasters. These difficulties in anticipating future skills reinforce the case for equipping young people with strong general skills, as these underpin lifelong learning and the ability to adapt to changing requirements (OECD, 2010a).

Box 5 An innovative regional approach in Austria

Lower Austria has initiated an anticipatory approach (the *Netzwerkstatt*) in order to better match the structure of VET to regional labour market development in 2003.

The “*Netzwerkstatt*” has been set up with the following objectives:

- Develop a qualitative mechanism of anticipation of skill needs in addition to forecasts.
- Create a regional “think tank” of actors from employment innovation systems.
- Analyse relevant issues in a framework combining research and practice.
- Provide feedback to the *Fachhochschulen* and the regional education and training system.

Workshops are organised twice a year on selected topics. Around 60 regional actors with two thirds coming from strategic enterprises from different sectors and sizes representing about 5 % of employees of the region have been participating in the workshops. In 2011, the workshop has been conducted the first time in collaboration with the Economic Chamber of Lower Austria and the Industrial Association of Lower Austria.

Source: Lassnigg, L. (2006), “Approaches for the Anticipation of Skill Needs in the “Transitional Labour Market” Perspective – the Austrian Experience.” www.siswo.uva.nl/tlm/confbuda/papers/papers_files/anticipation%20of%20skill%20needs-lassniggfinal.pdf; NÖ Forschungs- und Bildungsges.m.b.H. (NFB) (2013), *Netzwerkstatt*, www.noefb.at/DE/Die%20NÖ%20Forschungs-%20und%20Bildun6/Netzwerkstatt/Netzwerkstatt.aspx?&jsCheckDone=true&hasJs=true, accessed January 2013.

In Iceland, reports of skills shortages in many – perhaps in most professions served by the VET sector, suggest the system is not responding sufficiently to labour market needs. It has been argued that the share of upper secondary students that opt for a vocational track ought to be twice as high as it currently is (Suppanz, 2006), with shortages most severe in the service industry and public services, such as in the education and health sector (Blondal et al., 2011). Even though data are generally good in Iceland, there are very little data available on labour market outcomes and few institutions seem to gather such data systematically.

The mix of provision (as between different fields and contents) in VET is mainly driven by student preferences. By the same token, employers play an extremely limited role in determining the number of training places. They are involved in determining their content through the occupational councils for the programmes in upper secondary schools, but their role at the postsecondary level is less clear. The number of places in training programmes is therefore fixed by the amount of resources, itself determined by negotiation and bargaining between the ministry and the institutions. The core curriculum is developed by the Ministry of Education. There is a risk that if provision is not shaped by labour market needs, it will be more likely to reflect the capacity of VET institutions (often biased towards existing and cheaper programmes) and uninformed student preferences.

Pathways beyond upper secondary vocational programmes

Across OECD countries, VET systems face the challenge of ensuring that graduates of the initial VET system have access to further learning opportunities. Such opportunities are desirable because growing technological complexity is increasing the demand for higher level skills, because students themselves are aspiring to higher level qualifications and because the absence of such opportunities tends to leave initial VET pathways as low status dead ends. There is evidence that students are more willing to pursue shorter VET programmes if they know that such programmes offer a route to more advanced studies (Dunkel and Le Mouillour, 2009). In different countries graduates of upper secondary vocational programmes often pursue two sorts of upskilling – first higher level or more specialised professional training, such as the master craftsman qualifications often offered to qualified apprentices and linked to the ability to run a small business and manage staff; second, more academic qualifications at bachelors or master level that may open up different or wider career opportunities.

While it is not realistic or desirable to imagine that a large proportion of initial VET graduates will enter academic tertiary education, the steady increase in the level of skills required in modern labour markets imply that efforts should be made to open up tertiary institutions to the greatest extent possible. In Germany, access to university for students without the normal higher education access qualification was substantially opened up in 2009.¹² Switzerland has been relatively successful at opening Fachhochschulen to graduates from the dual system through the creation of a specific vocational matriculation examination (the *Berufsmaturität*), to be completed in parallel to the VET track and that provides access to tertiary education. Today, around 12 % of all VET graduates obtain the *Berufsmaturität* and they represent half of the students in the Universities of Applied Science

(Hoeckel, Field and Grubb, 2009). Austria, similarly, has introduced the *Lehre mit Matura* in 2008. In Denmark, throughout 2005-2007, 8-11% of graduates from academy professional programmes started an academic higher education degree within 27 months (Danish Agency for Higher Education and Educational Support, 2012).

For Iceland, apart from the well-established master craftsman examinations, transitions from upper secondary vocational programmes to postsecondary education are often hard to navigate; vocational progression routes can be unclear, and some vocational programmes do not naturally allow further studies. This may discourage students from pursuing VET programmes in the first place. Graduates from upper secondary VET seem to face various obstacles. First of all, although it is possible for students to follow additional modules preparing them for the matriculation exam – necessary to enter university, it seems that the majority of them do not pursue this exam. Second, the OECD team heard anecdotal evidence that some universities could be reluctant to accept students from VET programmes. Access to these institutions is in theory open to any students with a matriculation but institutions can also organise their own selection procedures, which may include entrance examinations.

Weak articulation and credit transfer at postsecondary level

Many OECD countries report problems with articulation, whereby graduates of shorter postsecondary vocational programmes (typically one to two years) can enter higher level programmes (such as three to four years in university with the learning outcomes from the lower level programmes being recognised through access to the higher level and course exemptions. Often the problem is a lack of transparency in terms of how different programmes relate to one another, but it may also reflect inadequate incentives for higher level institutions to offer course exemptions. The effect can be multiple inefficiencies: for the students because they have to repeat course material, for funding bodies that pay for such repetition and for institutions that often have to laboriously negotiate articulation agreements on a programme by programme and institution by institution basis.

Even if access routes into academic higher education are open for postsecondary VET graduates and a range of supporting instruments are in place (such as career guidance and preparatory courses for non-traditional entrants), weak credit transfer arrangements can impose unnecessary costs on students and hence lower transition rates. These challenges have been an issue in a range of OECD countries reviewed in the course of the *Skills beyond School* exercise including Austria, Canada, Germany, Israel and the United States.

The potential solutions pursued by countries are, first, measures to improve transparency in course content so that overlaps can be rapidly identified and addressed through course exemptions and, second, co-ordination mechanisms to try to simplify and regulate articulation arrangements and encouraging the articulation of curricula. For example, in the US state of Florida, a course numbering system is used systematically to identify overlapping course content that would lead to a course exemption. Credit transfer mechanisms should be systematic, to avoid the costs of negotiating on a case-by-case basis for institutions: where there are common modules there should be automatic course exemptions.

Iceland also faces a problem of articulation: students that have completed postsecondary vocational programmes sometimes find it difficult to use these programmes to obtain credit in subsequent university programmes – for example postsecondary marine engineering programmes overlap with university practical engineering programmes but students find it difficult to get course exemptions. In Iceland, as in other countries, some institutions find it easier to collaborate with foreign institutions to ensure that their students' credits are recognised when studying towards a higher degree.

Career guidance arrangements

Across OECD countries, more complex careers, with more options in both work and learning, are expanding opportunities. But they are also making decision-making harder for students. Helping young people to make these decisions is the task of career guidance. But in many countries career guidance faces a number of challenges. Most of the career guidance is provided in schools, by counsellors and/or teachers. While they might be well prepared to help students with learning difficulties and other personal challenges and problems, they are not necessarily well equipped to deliver sound career advice and may lack up-to-date knowledge of the labour market. Guidance services can be fragmented and under-resourced, so that those who need guidance most may fail to obtain it. The evidence of “what works” in careers guidance is too weak (OECD, 2010a). Students need to be well informed of wages in different occupations, to encourage convergence between student preferences and skills needs.

In Iceland, the OECD team heard that career guidance has often had an academic bias, perhaps because it has been delivered by academically trained teachers with little knowledge and experience of industry. When career guidance services are not available, students rely on informal sources, such as family, which may lack reliability and impartiality. The OECD review team heard that VET has low status, and that student reliance on informal sources may perpetuate this bias – visible in the low enrolment

rates for upper secondary VET. The team also heard reports that students did not always have access to career guidance, especially in compulsory schooling. PISA 2006 results show that only 52% of secondary schools had career guidance formally scheduled into the students' time (OECD, 2010b).

A related challenge is that relevant labour market information – for example expected labour market returns for different qualifications, fields and institutions are not available. In the US for example student labour market outcomes are often available by institutions.

Notes

1. 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.
2. Schools are no longer allowed to set entry requirements for grades. Students who do not possess the minimum grades in Icelandic, mathematics and language can attend special preparation courses or enter special education programmes.
3. Printing, construction and woodwork, tailoring, vehicle and transport, food-related industries, metalwork, electricity and cosmetics. Approximately 50 different trades of which 35 are active, i.e. there are usually some trainees in them. There are important differences across the different fields in the amount of on-the-job training.
4. Marine engineering, commerce, dental assistants, technical drawing, computer studies, travel industry, pharmaceutical assistants, auxiliary nurses, social service, horse breeding, market gardening and greenhouse cultivation.
5. The graduation rate from tertiary education has increased since 1995 and is now higher than the OECD average. The graduate rate from tertiary-type A programs is 51%, above the OECD average of 31%. The graduation rate for tertiary-type B programs is 2% compared to the OECD average of 10%, and only 0.6% are below the age of 30 (OECD, 2012b).
6. Here we draw mainly from four documents: two OECD economic surveys for Iceland (OECD, 2006 and OECD, 2011b), one OECD review of

tertiary education in Iceland (OECD, 2008), and one recent OECD recommendation on improving schools to address dropout (OECD, 2012c).

7. Two arguments: that the proportion of students enrolled is under what would be considered as optimal, and that dropout rate in these programmes is high.
8. The different fields are: building and construction; transportation, vehicle and logistics; health and welfare, pedagogical and leisure services; crafts and design; culinary, hospitality and tourism; metal, engineering and manufacturing; electro techniques, electromechanical and electrical trades; fisheries and navigation; business and commerce; beauty therapy and hairdressing; environment and agriculture and graphic media.
9. Although some concerns have been expressed about the capacity of small schools to make effective use of their freedom to develop their own curriculum.
10. However, no information is available for postsecondary programmes.
11. However, there is almost no co-operation between institutions about what programmes are offered by such methods.
12. New regulation permits those who pass an advanced vocational examination (e.g. *Meister*) a general entrance to academic higher education and holders of vocational qualifications without such qualification a subject-specific higher education entrance qualification.

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OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing.

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