

**OECD Reviews of Vocational
Education and Training**



A Skills beyond School Review of Austria

**Pauline Musset, Simone Bloem, Mihály Fazekas
and Simon Field**



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Please cite this publication as:

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

ISBN 978-92-64-20041-8 (PDF)

Series: OECD Reviews of Vocational Education and Training
ISSN 2077-7728 (print)
ISSN 2077-7736 (online)

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ACKNOWLEDGEMENTS

The review visits to Austria took place in January and March 2012. The OECD is grateful to the national co-ordinator Reinhard Nöbauer and his colleagues for their work in providing information and advice and organising the visits and meetings. We would also like to thank the many people in different parts of Austria who, during our visits and meetings, gave their time to welcome us at their schools and other institutions and answered our innumerable questions. We are also heavily indebted to the authors of the Austrian background report in providing the essential foundation for our work.

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Summary: strengths, challenges and recommendations

Strengths of the Austrian system of postsecondary vocational education and training

- The system is highly diverse with different programmes and institutions offering access for a wide range of social groups and different modes of provision. A range of pathways have been developed to allow graduates of vocational programmes to access further and higher education. These are substantial achievements.
- In vocational education and training (VET) colleges, student numbers have continued to grow. Graduates of the VET colleges can expect relatively high earnings in the labour market, but can also continue studying through entry to bachelors programmes – and they are doing so in increasing numbers.
- Launched in the early 1990s, the *Fachhochschulen* have proved extremely popular, with student numbers tripling in less than ten years. Relatively quickly, the sector has built a high reputation amongst students, employers and the general public.
- Professional examinations present an effective system for upskilling graduate apprentices, offering a route to higher earnings and more senior positions in enterprises, and a way to independence, as owners of small business.
- The social partners have high levels of engagement in the postsecondary VET system, notably through the Economic Chamber and the Chamber of Labour – both bodies also running their own training arms. The social partners are also active members of many commissions and co-ordination councils and have substantial influence on the VET system.

Challenges and recommendations

- In Austria, the postsecondary VET system is composed of many different institutions, subject to different and uncoordinated governance systems. This diversity has many strengths, allowing innovation and entrepreneurial approaches, as well as accommodating the needs of many different groups of students. The challenge is to ensure that this diversity is adequately managed and co-ordinated, recognising that it is, by and large, funded from the public purse.
 - *Building on recent initiatives by the government and the social partners, establish a national advisory body on VET, involving all the key stakeholders. Its objective would be to ensure more strategic coherence and co-ordination in the VET system without damaging its vibrant diversity.*
- Given the rising aspirations of young people and increased demand for higher level skills, the issue of access to further learning opportunities is critical. There are two key challenges. First, although many graduates of VET colleges go on to *Fachhochschulen*, they often fail to receive adequate recognition for their VET college qualifications in terms of exemptions from course requirements. Second, although pathways have been created for apprentices and others without the Matura qualification to enter tertiary education, they are little used.
 - *To improve access to Fachhochschulen and universities: establish a commission to develop an effective articulation arrangement between VET colleges and Fachhochschulen; take steps to improve the access of apprentice and vocational school graduates into tertiary education.*
- Workplace training is an exceptionally effective means of vocational training. While workplace training in different forms is very widespread in VET college programmes, it is not mandatory.
 - *Workplace training should be a substantial and mandatory part of VET college programmes; learning objectives for workplace training should be built into the curriculum and into the quality assurance arrangements.*

- The mix of training provision (as between different fields and contents) in postsecondary VET is mainly driven by student preferences, and may therefore not fully reflect the needs of the economy.
 - *Building on existing initiatives, institutional mechanisms should be developed to ensure that the mix of provision in Fachhochschulen and VET colleges takes account of employers' needs alongside student demand.*

Chapter 1

Introduction and initial assessment

This chapter describes the OECD policy study of postsecondary vocational education and training (VET), the review of Austria which forms part of that exercise. It summarises the main features of the Austrian system and provides some comparisons with other countries. It then sets out an assessment of its main strengths. (The challenges are addressed in later chapters.)

The review of Austria and its place in the OECD study

This review is one of a series of country reports on postsecondary vocational education and training (VET) in OECD countries, prepared as part of an OECD study (see Box 1.1). 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.

Box 1.1 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, Korea, the Netherlands, 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 review was prepared using a standard methodology. The Austrian authorities provided a background report (Schneeberger, Schmid and Petanovitsch, 2011) following which an OECD team made two visits on 23-27 January 2012 and again on 12-16 March 2012, to meet and discuss with a wide variety of individuals involved in different ways in the Austrian postsecondary VET system. The review deals with a deliberately limited set of issues where it could draw on international experience or could otherwise usefully add value to the domestic policy debate.

The structure of the report

This chapter describes the context of the wider OECD study, outlines the main features of the Austrian postsecondary VET system, and compares its main features with those of other countries. It also sets out a number of key statistical indicators comparing Austria with other OECD countries. These cover both the education system and the labour market. It then provides an assessment of the main strengths of the system.

Later chapters advance policy recommendations, set out as:

- *The challenge* – the problem that gives rise to the recommendation.
- *The recommendation* – the text of the recommendation.
- *The supporting arguments* – the evidence that supports the recommendation.

A snapshot of the system

Upper secondary education

Four fifths of the adult population of Austria have at least upper secondary qualifications, above the OECD average of 73%. Among younger cohorts, participation is higher still, with nearly 90% of 25-34 year-olds having upper secondary qualifications (OECD, 2011a, Table A1.2a.).

Of those entering upper secondary education, one fifth pursue a general academic track while four-fifths enter different types of vocational education and training, about half of these taking up an apprenticeship (OECD, 2011a, Table C1.3). The remainder enter either shorter vocational programmes, or five-year VET college programmes.

15 % of upper secondary students enter the shorter vocational (two to four-year) programmes, in intermediate schools (*Berufsbildende mittlere Schule*). The three and four-year courses in VET schools lead to a diploma (*Diplomprüfung*).¹ Skills and competencies obtained can be credited in further examinations (e.g. entrepreneurship examination, master craftsperson and qualifying exams). For graduates of three or four year programmes a special exam, the *Berufsreifeprüfung* allows access to tertiary education. Attendees of VET schools can continue in special add-on courses which lead to VET college degrees and also offer access to tertiary education.

VET college programmes

Postsecondary education is an educational level that follows the completion of secondary education (International Standard Classification of Education - ISCED 4, 5). It is difficult to have a globally-acceptable definition of postsecondary vocational education and training because the range of institutions varies widely between countries, as do programme features. The *Skills beyond School* study has adopted a pragmatic definition of these programmes: one to four year programmes (full-time equivalent) that prepare students for direct entry into the labour market in a specific profession.

In Austria, the five-year VET college programmes are (at least partly) at postsecondary level, and are therefore directly examined in this exercise. 27% of upper secondary students enrol in a VET college (*Berufsbildende höhere Schule*), where after five years they can acquire a double qualification, a VET diploma and the *Reifeprüfung* giving access to university.²

After several years of professional experience and following a procedure initiated by the responsible ministry, graduates from technical and agricultural VET colleges are granted the title “Engineer”. The VET colleges are also accessible for graduates from other upper secondary programmes. There are 19 600 graduations annually and a large number of programmes for adults with currently some 3 600 graduations a year (Schneeberger, Schmid and Petanovitsch, 2011). The Federal Ministry for Education, the Arts and Culture (*BMUKK*) is responsible for most VET colleges.

VET colleges have remained attractive: the number of students has increased steadily from almost 124 000 students in 2000/2001 to almost 140 000 students in 2010/2011³ (Statistik Austria, 2012). Increasingly VET colleges provide an important route into tertiary education: one in four university students, and almost one in two *Fachhochschulen* students are now VET college graduates (See Table 3.1 on the background of students in *Fachhochschulen* and universities).

VET college graduates in Austria are classified as ISCED 4A. Almost 20% of the cohort graduate at this level, which is after the Czech Republic (26%) the highest level in the OECD (OECD, 2011a, Table A2.3). This reflects the fact that the VET college programmes, straddling the upper secondary and postsecondary levels, have few international parallels.

Fachhochschulen

In common with a number of other European countries, Austria introduced a new tier of tertiary⁴ institutions designed to provide vocational education at higher-education level leading to a degree. Such institutions in the Germanophone countries have been called *Fachhochschulen*, in Finland “polytechnics”, and in Denmark and some other Nordic countries “university colleges”. In Austria there are 21 *Fachhochschulen*, providing bachelors and masters level qualifications. Just over 40% of the 350 *Fachhochschulen* programmes were in technology and engineering sciences in 2010/11, and one third in economic sciences. 14% were in health sciences, with the remainder being in design and art, natural and other sciences. Programmes follow a more “school-like” structure than universities with limited alternatives for optional subjects and stricter timetables. Programmes are modularised.

Student numbers have grown fast. In 2010/11 37 030 students were enrolled at Austrian *Fachhochschulen*. More than half of all students (56%) that complete a bachelor programme continue at master level. 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% (OECD, 2011a, Table A3.2). A lot of this growth is attributable to the *Fachhochschulen*.

There were three applicants on average for each study place in 2010/11. Demand varies significantly between programmes, with over eight applicants per place in health sciences programmes (FHR, 2011).

With the implementation of a new law on Higher Education, a new central agency for quality assurance and accreditation (*Agentur für Qualitätssicherung und Akkreditierung*) will deal with quality assurance and accreditation for all tertiary educational institutions, including public and private universities as well as *Fachhochschulen* from March 2012.

The professional examinations and comparisons with other countries

Austria, like many other countries with strong apprenticeship systems, (particularly the Germanophone countries), has a range of professional examinations designed to deepen or widen the professional skills of graduates of the apprentice system. These include the “master craftsperson examinations” for those who intend to run their own business in their trade or craft sector and upgrade their skills, (the *Meisterprüfung* for those who work in a regulated trade and the *Befähigungsprüfung*, in regulated non-craft trade). The examinations are found in the commercial, manufacturing and

service-related sectors. Graduates from vocational tracks can also pursue two-year programmes to obtain the *Werkmeisterprüfung* (“industrial master” or foreperson qualification) to deepen their technical skills and attain middle-management positions.

There are around 3 500 graduates annually in part-time programmes for industrial master and master craftsman certificates (Schneeberger, Schmid and Petanovitsch, 2011). Usually master craftsman examinations (*Meister- und Befähigungsprüfungen*) are taken after several years of professional experience.

Annex A compares the Austrian postsecondary professional examinations with the somewhat similar arrangements in Germany and Switzerland. Austria and Germany both have Master’s craftsman examinations (*Meisterprüfung*) which entitle individuals to run a business and train apprentices and to facilitate promotion at the labour market. The *Befähigungsprüfung* in Austria and the *Fortbildungsprüfung* in Germany offer examinations in regulated non-crafts sectors. In Austria, it is a qualifying examination, entitling the graduate to run one’s own business in regulated professions.

In all three countries preparation courses are not mandatory but attended by the majority of examinees. Financial support schemes exist for preparatory courses in all three countries. Financial support for preparatory courses from employers is common. Successful completion of the *Meisterprüfung* can grant entry to *Fachhochschulen*.

Statistical overview

Table 1.1 offers a statistical overview of postsecondary VET in Austria.

Table 1.1 The postsecondary VET sector in Austria: number of institutions and students per sector

	Number of providers/ institutions	Number of students
VET colleges for:	306	137 602
engineering, arts and crafts	111	62 272
business administration	109	42 781
management and service industries	89	28 730
agriculture and forestry	12	3 819
tourism	22	7 089
artistic design	9	2 485
fashion and clothing	14	2 321
nursery school teachers	29	8 109
social pedagogy	2	421
health professions	23	1 034
Teacher training colleges	34	10 487
Fachhochschulen	21	37 564
Technology, engineering sciences		13 947
Economic sciences		15 633
Health sciences		2 834
Social sciences		3 488
Design, art		430
Natural sciences		840
Military and safety sciences		392
CVET courses at universities	33	4 985

Table 1.1 The postsecondary VET sector in Austria: number of institutions and students per sector (*continued*)

Continuing training courses	134	15 484
Schools of engineering, arts and crafts		
Master craftsperson courses	8	308
Industrial master courses	47	2 884
Builder craftsmen courses	8	545
Add-on courses	3	109
Preparatory courses for professionals	12	303
Gymnasium for professionals	8	3 524
VET colleges of business administration for professionals	19	3 427
VET Colleges for engineering, arts and crafts for professionals	28	4 351
Total	494	195 635

Source: Statistik Austria (2012), *Bildung in Zahlen*, Tabellenband, Verlag Österreich GmbH, Wien.

Notes: Master craftsperson courses are also offered by private providers. These are not included in this table.

The system in international context

This section looks at some indicators comparing Austria with the experience of other countries. Comparisons of a statistical indicator for any one country with the OECD average are useful, but must always be interpreted with caution. Few indicators are unequivocally positive in one direction and there can be no presumption that convergence with the average is desirable.

Indicators of education and training

Participation in adult learning

Adult participation in education and training reveals the extent to which later on in life, adults can catch up in response to missed opportunities in initial education, and augment basic skills with additional qualifications.

In 2007, 42% of 25-64 year-olds participated in formal and/or non-formal training in Austria; around the OECD average (OECD, 2011a, Table C5.3a). Those with higher existing qualifications participate more. In

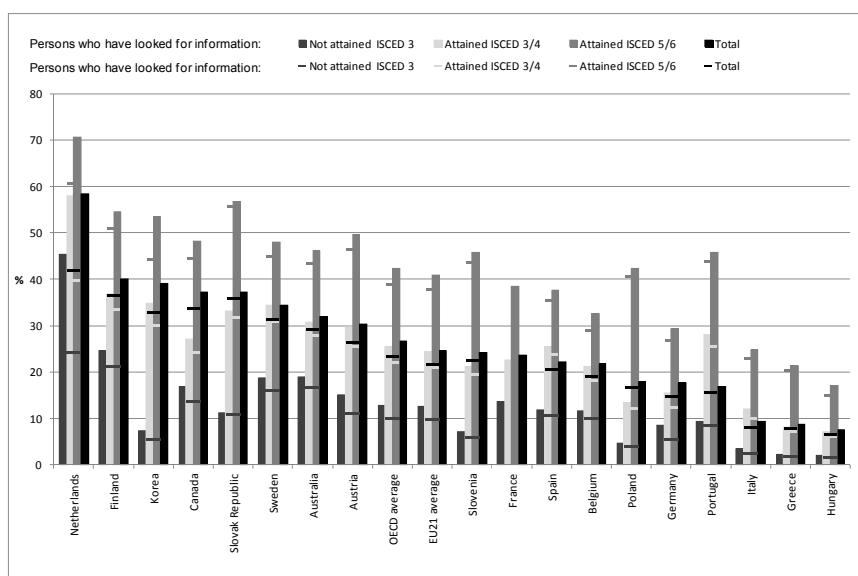
2007, 57% of those with ISCED 5/6 level (OECD average 43%) participated in job-related non-formal training, compared to 31% with ISCED 3/4 level (OECD average 26%) and only 13% of people below ISCED3 level (OECD average 13%) (OECD, 2011a, Table C5.1b). The younger the adults, the higher their participation rate in formal training (Statistik Austria, 2009).

According to a survey, in Europe employers bear 51% of the costs of continuous and adult education on average, and in Austria 57%. The share of costs that has to be paid by the Austrian participants is at 35%, well above the European average of 26% (Dohmen and Fischer, 2010).

An indicator for interest in job-related formal training and/or non-formal training is the share of persons that have looked for information on training opportunities (see Figure 1.1).

Figure 1.1 How many individuals have looked for and found information?

2007



Source: OECD (2011a), *Education at a Glance 2011, OECD Indicators*. OECD Publishing, Table C5.4a. doi: <http://dx.doi.org/10.1787/eag-2011-en>

Labour market indicators

Most indicators suggest that overall the transition from school to work in Austria is relatively smooth. Unemployment rates for persons with upper secondary or tertiary education level were 4% or lower in 2009

(OECD, 2011a, Table A7.2a). Youth unemployment is low by international standards. Less than 5% of those aged 15-29 were not in education and unemployed (OECD, 2011a, Table C.4.3).

The earnings returns from VET colleges appear to be relatively good, with earnings similar to those who have tertiary B qualifications. Men aged 25-64 with postsecondary non-tertiary education (VET college diplomas) earn more than those from tertiary type B programmes. The opposite is true for women, where graduates from tertiary Type B programmes earn on average almost one-third more than those women with postsecondary non-tertiary education level (OECD, 2011a, Table A8.1).

Previous OECD analysis and recommendations

Recent OECD work on Austria includes a review of VET at the upper secondary level (Hoeckel, 2010), two Economic Surveys of Austria in 2009 and 2011, and a Review on Jobs for Immigrants (OECD, 2012b).

The 2011 OECD Economic Survey (OECD, 2011b) acknowledges Austria's good vocational training system but raises concerns about the provision of more generic skills, noting that Austrian 15-year-olds, particularly those of migrant origin, perform below the OECD average in the PISA test. Student performance is particularly strongly driven by students' socio-economic background in Austria, partly as a result of early tracking.

The 2009 Economic Survey characterises the labour market as containing a favoured core of skilled prime-age workers, but also more vulnerable groups, particularly unskilled, older and female workers with family responsibilities (OECD, 2011b). The recent economic crisis has increased unemployment rates of low-skilled workers, underlining the importance of up-skilling. Austria has followed recommendations to strengthen up-skilling and has increased the number of low-skilled persons trained to become skilled workers. The Survey stresses the importance of addressing employability problems notably of older workers via better education and training. It also notes that the majority of expenditure on active labour market programmes currently goes on training measures (55% compared with 25% in the average OECD country as of 2008) and recommends that this proportion should not be further increased.

The *Review on Jobs for Immigrants (Vol.3), Labour market Integration in Austria, Norway and Switzerland* from 2012 (OECD, 2012b) notes that the good labour market integration outcomes for immigrants in Austria reflect the fact that many migrants to Austria come from developed countries. The Austrian labour market attaches importance to formal qualifications posing particular challenges for less educated migrants.

Young migrants now entering the labour market are four times more likely than the native born to find themselves among the low-educated who are neither in employment nor in education. Immigrants with qualifications from their countries of origin find them undervalued on the Austrian labour market. The Review recommends improved tools for the recognition of prior learning, enhanced skills- and vocation-specific language training and special measures for young immigrants to make sure that they obtain an Austrian qualification that is recognised and valued in the labour market.

The OECD's previous *Learning for Jobs Review of Vocational Training and Education* (Hoeckel, 2010) identified as strengths in the upper secondary VET system, the strong dual apprenticeship system; a high level of social partner involvement; the capacity of the system to cater for a broad range of needs and offer different progress routes at various levels; avoiding dead-ends; and linking VET to general tertiary education. It notes that the teacher workforce seems to be well-prepared with industry experience and that completion rates in upper secondary education are high by international standards.

In response to different challenges, the review recommends, among other matters: improved quality standards in apprenticeship training; a stronger focus in the *Überbetriebliche Ausbildung* (workshop) courses on leading students into regular apprenticeships; good quality career guidance available to all; and enhanced emphasis on literacy and numeracy in the VET system.

Strengths of the postsecondary VET system in Austria

A diverse system with provision for a wide range of social groups

Across OECD countries, postsecondary VET systems serve diverse purposes for different client groups. They can provide higher level job-specific training for young upper secondary graduates (such as in teacher training and nursing programmes in university colleges in Denmark); upskilling for working adults in mid-career (for example, industrial master examinations in Austria and Germany, which prepare skilled workers to be foremen); “second chances” for working adults who dropped out of earlier education or training programmes (the US community colleges with open access policies serve this function among others); and opportunities for career shifts or to support a return to the labour market. An effective system should be able to meet all of these needs.

In Austria the system provides a strong blend of VET college provision, professional examinations and, at higher level, *Fachhochschulen* and university programmes, with different modes of provision, including

through the training arms of the social partners. Although there may be some gaps, most needs appear to be being met. In addition, a range of pathways have been developed to allow graduates of apprenticeships and school vocational programmes to access further and higher education. These are substantial achievements.

Attractive and successful VET colleges

The VET colleges (*Berufsbildende höhere Schule*) are specific to the Austrian system, as they overlap upper secondary and postsecondary levels. Graduates from VET colleges can expect relatively high earnings on the labour market, and can continue studying through entry to bachelors programmes in *Fachhochschulen* and universities.

Student numbers have continued to grow in recent years and many of their graduates enter tertiary education (see Chapter 3).

Graduates from VET colleges enjoy relatively high labour market returns. Unemployment is very low (3.6%) (2010 Microcensus data in Schneeberger, Schmid and Petanovitsch, 2011). In enterprises with at least ten employees the median income is EUR 14 per hour – close to the earnings of persons holding a foreman degree and industrial master diploma. Those holding a lower VET degree (VET school qualification or apprenticeship diploma) earn less – with a median income of EUR 12.

Popular and successful Fachhochschulen

Across OECD countries postsecondary education has changed significantly over the past 30 years, and much tertiary education is now provided outside universities. Many countries have sought to widen access to postsecondary education in response both to rising student aspirations and attainment and labour market demand for higher level skills (OECD, 2010). Governments have created clear alternatives to universities, as a means of meeting the increasingly diverse needs of the labour market, and expectations of students (Kyvik, 2004). This second sector of higher education has been named in various ways: short-cycle education, the college sector and *Fachhochschulen* (Teichler, 2004). This sector differs from university in various ways – less involvement in research, a vocational emphasis and in most cases, shorter programmes.

In Austria the *Fachhochschulen* were introduced in 1993/1994, to provide academically-based vocational education and training, shorter programmes and to provide upskilling for those vocationally trained. Since only seven out of nine Austrian provinces have universities (five of them are located in Vienna), one of the goals was to improve the regional distribution

of higher education institutions (Pfeiffer et al., 2000). In 1993, at the time of their establishment they were in many respects regarded as a model for universities because of their innovative management structure (Pechar, 2005) (see Chapter 2 for more information about governance arrangements).

Fachhochschulen have been extremely popular, and the number of students has tripled from 10 000 in 1999/2000 to more than 30 000 in 2007/2008.⁵ The most popular tracks are technology and engineering sciences (42% of all offered programmes in 2010/2011), followed by economic sciences (33%), but all study fields have experienced steady growth in student numbers. Although they were introduced as recently as 2005/2006, health studies are already the third most attractive field of study (FHR, 2011).

Fachhochschulen have a very different learning environment from that of universities. Their structured programmes, (with limited options) and supportive environment have proved conducive to student completion: fewer students drop out than at universities (Pechar, 2005, Pfeiffer et al., 2000). Unlike universities, *Fachhochschulen* select their applicants. Relatively quickly, the sector has built up a high reputation amongst students, employers and the general public.

Professional examinations are effective at upskilling graduates from the vocational track

Across OECD countries many professions organise examinations designed either to allow initial access to a profession or to achieve a higher level within the profession. While such industry-led examinations are regulated in the Germanophone countries, they are quite unregulated in the United States, where such exams (or “certifications”) are very common. In some cases the examinations are linked to licensed professions, such as electricians, where passing the exam is legally required to work in the profession, or to run a small business. Typically those examinations are tests of competence. While examinees very commonly pursue a course designed to prepare for the exam, such courses are not usually obligatory. Examinations of this type therefore have the attractive quality of avoiding the normal constraints of educational programmes of requiring fixed “seat time” to acquire the qualification. They can also provide a practical means of recognising prior learning. Recognition of prior learning is the process of “certifying” pre-existing skills and knowledge, including those acquired informally, and on the job. Its many potential benefits are well-known: by making acquired skills more transparent, it improves the efficiency of the labour market; and it supports adults in the advancement of their careers.

In Austria professional examinations are offered in the areas of business, industry and trade and are mainly pursued by graduates of apprenticeships and VET schools, in particular the master craftsperson examination (*Meisterprüfung*) and “industrial master” (*Werkmeisterprüfung*). These examinations present an effective system for upskilling for these groups, a route to higher earnings and more senior positions in enterprises, and a way to independence, as owners of small business.

Each year more than 3 500 people sit master craftsperson and “industrial master” exams. Since 2004, master craftsperson examinations and qualifying examinations have been newly regulated in the form of modular exams. The only requirement is that candidates are at least 18 years-old but they do not need to furnish proof of any specific qualification. Modularisation allows students to take different parts of the exam at different points in time, individually adjusted according to the needs of exam takers. Although preparatory courses are not mandatory, many of those involved need to pursue these courses – of variable lengths and costs. Students have to pay tuition fees but grants are available in all *Länder*.

There is a good level of engagement of the social partners notably through the Economic Chamber and the Chamber of Labour

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 needs of employers, the wider economy and students. Policy development in vocational education and training offers particular challenges because of the wide range of different stakeholders involved. Alongside the students, teachers and parents that play a role in all education systems, labour market actors such as employers and unions are critically important. Nationally and regionally the involvement of the social partners helps to ensure that the overall design of the system, the content of programmes, and the mix of training provision meet labour market needs. But the level of engagement in VET policy varies markedly among countries. At the national level social partner engagement in policy development is essential if policy is to be successfully implemented: social partners that buy into policies during their development will be much readier to collaborate in their implementation (OECD, 2010).

In Austria the social partners have high levels of engagement in the postsecondary VET system, notably through the role of the Economic Chamber (*Wirtschaftskammer Österreich, WKO*) and Chamber of Labour (*Arbeiterkammer, AK*). This participation is strong,⁶ even compared to other countries where social partners are also traditionally very engaged according

to Trampusch (2009). The social partners are active members of many commissions and co-ordination councils and have substantial influence on the VET system.

Some of the participation is very direct in that social partners have their own training institutions. The education and training programmes of the Economic Promotion Institute (*Wirtschaftsförderungsinstitut, WIFI*, employers' side) of the Economic Chambers serve apprentices, skilled workers and executives. Course topics range from management and corporate leadership, personal development and languages, to training for specific sectors. The *WIFI* also acts as a provider of *Fachhochschulen* programmes, part-time industrial master programmes, courses preparing for other professional exams, and professional in-service training for many trades.

The Vocational Training Institute (*Berufsförderungsinstitut, bfi*) is the training institution of the Chambers of Labour and of the Austrian Trade Union Federation. Its programmes mainly include personal development and management, short courses, office and business administration, languages, courses for social and healthcare occupations, preparatory courses for examinations and educational measures for unemployed people and those threatened by unemployment. In addition, *bfi* also provides *Fachhochschulen* programmes.

Notes

1. Students from Hauptschule who want to attend three or four-year programmes have to sit an entrance exam in German, English or mathematics.
2. The *Matura* is the common name given to the upper secondary school leaving exam, which gives access to tertiary education. The *Reifeprüfung* is another term for *Matura*.
3. Whereas colleges of business administration experienced stagnation in student number in the last decade, colleges of management and service industries and colleges for engineering, arts and crafts could attract a growing number of students. Also the quantitatively less important colleges of agriculture and forestry with less than 4 000 students in 2010/11 have experienced steady growth since the 1950s.

4. In Europe, through the Bologna process, countries have adopted a Qualifications Framework of three cycles of higher education qualifications. Tertiary education is usually considered to include the 1st cycle (usually awarding a bachelor's degree) to the 3rd cycle (doctorate degree).
5. The share of women has increased continuously since 1994/1995 and is now at 46.1%. More than half of all students (56%) that completed a bachelor programme continue at master level.
6. This is because all firms in the Austrian Federal Economic Chamber's domain are legally obliged to be members; and similarly for the Chamber of Labour in respect of employees.

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Chapter 2

A better co-ordination of diversity

In Austria, the postsecondary vocational education and training (VET) system is very diverse. Although this diversity is valuable in many ways, the institutions are subject to different and unlinked governance systems, leading to fragmentation, lack of transparency and distorted competition. This chapter recommends the establishment of a national advisory body on VET, with the objective of ensuring more strategic coherence and co-ordination in the Austrian VET system without damaging its vibrant diversity. It argues that this body would allow strategic planning and more co-ordination throughout the system, and identify scope for potential mergers and collaboration. It points to examples of similar bodies in other countries.

Challenge: a highly diverse sector

In Austria, the postsecondary VET system is composed of many different institutions, subject to different and unco-ordinated governance systems. Historically, five-year VET colleges (*Berufsbildende höhere Schule*) and courses offered by social partners formed the core of postsecondary VET in Austria. VET colleges are found in nearly every locality.¹ *Fachhochschulen* were created to develop greater responsiveness to labour market needs (see Chapter 5) and to improve access to postsecondary education for apprentice graduates (see Chapter 3). Educational offerings within institutions have multiplied greatly: VET colleges have expanded the number of programmes they offer. The number of *Fachhochschulen* programmes grew from ten in 1994/1995 to more than 300 programmes in 2010/2011 (FHR, 2011). Private provision has expanded: since 2002,² universities have developed postsecondary VET courses.

This diversity has many strengths, allowing innovation and entrepreneurial approaches, as well as accommodating the needs of many different groups of students. The challenge is to ensure that this diversity is adequately managed and co-ordinated, recognising that it is, by and large, funded from the public purse.

Many different governance systems

Responsibility for postsecondary VET is distributed among the individual *Länder* and the federal ministries for education, the arts and culture (*Bundesministerium für Unterricht, Kunst und Kultur (BMUKK)*) (for VET colleges), science and research (for *Fachhochschulen* and university continuing vocational education and training courses), Ministry of Economy, Family and Youth (for apprenticeships and employer-based training) and Labour. Other ministries are also involved (e.g. the Ministry for Agriculture, Forestry, Environment and Water Management, and the Ministry of Health). The Economic Chamber (*Wirtschaftskammer*) is responsible for *Meister* examinations and managed at the *Länder* level. Examination regulations are prepared by experts in professional associations of the Austrian Federal Economic Chamber and approved by the Federal Ministry of Economy, Family and Youth. Industrial master examinations (*Werkmeisterprüfung*) are organised by part-time industrial master college (*Werkmeisterschule*) and approved by the *BMUKK*.

VET colleges (both five-year *BHS* programmes and *Kollegs* two-year programmes) and part-time industrial master colleges (*Werkmeisterschulen*) at postsecondary level fall mainly under the responsibility of the *BMUKK*

(Tritscher-Archan and Nowak, 2011). *BMUKK* decides the curriculum and the main features of their organisation (e.g. admission prerequisites, training times; qualifications; number of students per class; teachers and school leadership policy). VET colleges in agriculture and forestry, and colleges in healthcare and nursing professions fall under different and separate legislation³ and therefore ministries: respectively the Ministry of Agriculture, Forestry, Environment and Water Management and the Ministry of Health, in co-operation with the *BMUKK*.

Regional Education Boards (*Landesschulräte*) are responsible for executing national legislation at state level and supervising schools. Institutions are often entangled in a web of local and political interests (Lassnigg, 2011; Leitner, 2006).

The creation of the *Fachhochschulen* in 1994 involved new governance mechanisms. *Fachhochschulen* have more independence than VET colleges and universities (Pfeiffer et al., 2000). The tasks of the national authorities are limited to external quality assurance⁴ and financing.⁵ A wide range of bodies are permitted to run *Fachhochschulen*.⁶

Weak co-ordination leads to problems

Potential problems arising from a fragmented system are:

- Unclearly for potential and actual students in the face of multiple pathways and competing offers.
- Unclearly for employers about the function and value of different qualifications.
- Difficulties in articulation and transitions between different institutions and programmes.
- Distorted incentives arising because funding support is stronger for some parts of the system than others.
- Obstacles in developing a strategy to address the overall needs of the labour market.
- Competition distorted by variable incentives, failure to realise the benefits of collaboration.

The OECD review of tertiary education argues that a fragmented system in which diversity is not complemented with co-ordination lacks an overall “steer” which would optimise the benefits of the entire system to society (OECD, 2008). The Austrian VET governance system has been said to be inefficient relative to other countries by some observers (Tritscher-Archan

and Nowak, 2011). Both researchers and practitioners have argued that the different sectors have evolved independently and display little co-operation or shared purpose (Lassnigg, 2009). One example of the problems which arise because of fragmented governance is nursing and related professions (see Box 2.1).

Box 2.1 The training of nurses

In Austria, all programmes for advanced level medico-technical services and for midwives - previously offered at postsecondary VET courses - have been converted into *Fachhochschule* bachelor programmes since 2006, requiring a *Matura* exam to enter (FHR, 2011), but this is not yet the case for nurse training.¹

While some *Länder* have introduced Bachelor programmes at *Fachhochschulen*² (with the Professional Bachelor of Science in Health Studies) from the academic year 2008/2009, traditional schools for healthcare professions at upper secondary level remain the dominant form of provision. As a consequence, training to become a nurse is now currently offered at the upper secondary level, in nurse schools, and at the tertiary level in *Fachhochschulen*, an inconsistency which carries risks of inefficiency and that some nurses will be seen as “higher” than other nurses although nominally they have the same qualification (Schneeberger, Schmid and Petanovitsch, 2011).

The “Gesundheit Österreich GmbH” research centre, on behalf of the Ministry of Health (Rappold, et al., 2011) has ascribed the slow process of reform of nurse education in Austria to a lack of consensus among stakeholders in the health field. There is resistance to locating nurse education at *Fachhochschulen* from several *Länder* that fear increasing costs, as hospitals currently finance schools for healthcare and nursing professions through municipal funding arrangements, whereas costs of bachelor programmes of health fall on the *Länder*, as the Ministry of Science and Research does not give any financial support as for other fields of study.

An amendment of the law of health and nursing in 2008 raised nurse training to tertiary level by increasing admission requirements from 10 years to 12 years of schooling. In April 2012, the Austrian Minister of Health agreed to the EU directive to make 12 years of general schooling the admission requirement for nurse education. There is agreement among stakeholders to plan training places at the national level and to improve data collection.

Several challenges still lie ahead, notably the future role and status of the existing nursing schools. One option would be to keep the schools for nurse assistant and extended care training. While training for qualified nurses takes place at *Fachhochschulen*, the more practically oriented modules could be offered in collaboration with the schools that closely co-operate with hospitals. Such a restructuring would be accompanied by a decrease in student numbers so that the smaller institutions might be merged.

Box 2.1 The training of nurses (*continued*)

Another option is the transformation of existing schools into *Fachhochschulen*, helping to ensure a strong practically oriented focus of Bachelor programmes. However, it is not clear where nurse assistants and other care personnel should be trained. It is also questionable if all existing schools would meet the requirements to be granted the title *Fachhochschule*, such as the requirement to offer at least 1 000 hours of study places within five years (FHR, 2011).

1. The Green Paper “Modernising the Professional Qualifications Directive” of the European Commission from June 2011 proposes that admission requirements for nurses and midwives should be increased from 10 to 12 years of general education.
2. Currently, there are four Bachelor programmes at *Fachhochschulen* and one Bachelor programme at universities. The BA programmes for general healthcare and nursing at *Fachhochschulen* are currently held in three pilot projects, with one financed by the federal government and two by the provincial governments of Salzburg and Lower Austria.

Source: FHR (2011), “Bericht des Fachhochschulrates 2010” (FHR-Jahresbericht 2010) www.fhr.ac.at/fhr_inhalt/00_dokumente/Jahresbericht/FHR_JB2010_Bericht.pdf; Rappold, E. et al. (2011), *Bildungslandschaft der Gesundheits- und Krankenpflegeberufe – Reformansätze*. Im Auftrag des Bundesministeriums für Gesundheit. GÖG/ÖBIG, Wien; Gesundheit Österreich GmbH (2011), “Konferenz Wende in der Pflegeausbildung”, www.goeg.at/de/GOEG-Veranstaltungen/Konferenz-Wende-in-der-Pflegeausbildung.html accessed on 25 October 2011.

Stakeholders throughout the system now acknowledge that reforms in governance are needed: in July 2011 the Council of Ministers accepted the “Strategy for Lifelong Learning in Austria” which implies more strategic governance (BMUKK, 2011). This strategy was formulated in a broad discussion process with the involvement of major institutions and stakeholders (including the social partners) and it acknowledges the current lack of co-ordination and co-operation (Tritscher-Archan and Nowak, 2011).⁷ The *Wirtschaftskammer Österreich* (WKO) has already signalled that in their view, a change in the organisation of the postsecondary VET system and in its governance is needed and advanced its own proposal (see Box 2.2). The Chamber of Labour also expressed some concerns to the OECD team on the way diversity is now managed in the system.

Box 2.2 The *Berufsakademie* proposal

This proposal by the *WKO* (Austrian Federal Economic Chamber) was put up for discussion in 2012. It aims to establish a college of advanced vocational studies (*Berufsakademie*) and to offer a common umbrella for all Austrian VET programmes and professional qualifications, at both upper secondary and postsecondary level, covering training institutions of the *WKO*, universities and *Fachhochschulen*.

One of its objectives is to increase the attractiveness of existing VET qualifications, particularly apprenticeships, and contribute to more horizontal permeability between programmes and institutions, and with tertiary education. It is expected that the number of apprentices could decrease by almost half in the next 15 years, because of demographic changes and the increased appeal that both VET colleges and *Fachhochschulen*; which could lead to a lack of skilled workers in the future. The *Berufsakademie* aims to counterbalance these trends by attracting more students to the dual system, by guaranteeing seamless progression to tertiary education if students wish.

The *Berufsakademie* would become a “third column” in tertiary education (alongside universities and *Fachhochschulen*). It proposes to put postsecondary VET qualifications, notably the industrial master and master craftsman examinations, on the same level as bachelor degrees, allowing direct entry to professional masters’ degree.

Source: WKO (2013), WKO website, http://portal.wko.at/wk/startseite_th.wk?sbid=3994&dstdid=0, accessed on 19 February 2013.

Potentially distorted competition

Competition is sometimes argued to be a key driver of efficiency in education institutions (OECD, 2008). In Austria, the recent introduction of *Fachhochschulen* and the possibility for universities to offer VET courses in the postsecondary VET system⁸ made it possible for public and private actors (including social partners) to be entrepreneurial and develop their own programmes and institutions, introducing competitive pressures in the education system. Barriers to entry in this market are relatively low. Competition among institutions for students is also becoming tougher in the face of declining numbers of young people and growing numbers of *Fachhochschulen* programmes.

At present, there are few assessments of whether new programmes overlap with existing ones (see Chapter 5 for more detailed discussion of this point) and limited tests of their labour market relevance. The OECD

visiting team were told by some stakeholders that competition between schools is very intense and leads to some inefficiencies. Institutional autonomy of providers and the funding arrangements allows cross-subsidisation potentially allowing inefficient forms of competition; notably between VET colleges and fast-growing *Fachhochschulen*.

Recommendation: establishing a steering body for VET in Austria

Building on recent initiatives by the government and the social partners, establish a national advisory body on VET, involving all the key stakeholders. Its objective would be to ensure more strategic coherence and co-ordination in the VET system without damaging its vibrant diversity.

A national advisory body should be established to steer the entire VET system. It should build both on the government's "Strategy for Lifelong Learning", and the WKO's *Berufsakademie* proposal. It should have responsibility for giving policy advice to government and include relevant ministries, representatives of the regions, the social partners, and key providers including the *Fachhochschulen* and vocational colleges.

While it would be possible to limit the role of the body to postsecondary VET, a broader role would be preferable in order to ensure co-ordination between the sectors, and a more seamless progression from upper secondary to postsecondary levels for students. Such a body might have sub-groups organised regionally or sectorally.

Supporting arguments: reaping the benefits of better co-ordination

This recommendation is supported by three arguments: first, this body would support more strategic planning and better co-ordination. Second, such umbrella bodies have been found to be useful in other countries. Third, it could explore the scope for mergers and more collaboration to possibly reduce fragmentation.

The role and value of the advisory body

While social partners and different VET stakeholders come together in many different contexts,⁹ there are few *strategic* fora where all the stakeholders can come together to discuss and plan the system. Lack of such fora has been identified by Austrian researchers as an obstacle to the further development of the VET system (Lassnigg, 2009).

Later chapters of this review offer recommendations for strategic reform of the system – among other matters better articulating the relationship of

VET colleges to Fachhochschulen, improving access to tertiary education for apprentice graduates (Chapter 3), and improving the mix of provision overall to meet the needs of the Austrian economy (Chapter 5). But implementation of these reforms (or indeed any strategic reform) will be very difficult without the support of a body with an overarching role linking the different silos in which Austrian postsecondary VET is currently managed and delivered. In that sense the implementation of this recommendation underpins later recommendations in this review and indeed the capacity for strategic policy development and implementation more broadly. Some current bodies that already exist (such as the body in Lifelong Learning strategy) should be incorporated into this one joint advisory body.

Such a body could address issues including:

- Developing a strategic assessment of Austrian skills needs in the future and using that assessment to guide the strategic development of VET.
- Improving the classification of education and training qualifications in line with the European Qualifications Framework and the Bologna process, working on the forthcoming National Qualifications Framework.
- The need to develop a more coherent financing framework using common principles.
- Improved access for apprentice graduates to pursue postsecondary programmes.
- Improved recognition of prior formal and informal learning.
- Effective articulation between vocational colleges and *Fachhochschulen* (see Chapter 3).
- Help to implement mandatory workplace training in VET colleges (see Chapter 4).
- Ensure that the mix of provision reflects not only student preferences, but fits future labour market needs, through more co-ordination (see Chapter 5).

Some countries have such mechanisms

The development of a strategic body in Austria should draw on international experience, recognising that each country has somewhat different needs. A number of other OECD countries have co-ordination

bodies for the VET system, and they often play a key role. Box 2.3 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 UKCES in the United Kingdom does not build on strong and traditional industrial bodies, but involves high profile representatives of large and small employers (including CEOs of large companies), as well as other stakeholders.

Box 2.3 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).

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.

Box 2.3 National strategic bodies steering VET policy (*continued*)

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; *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. The 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: 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>; Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Switzerland*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264062665-en>; UK Commission for Employment and Skills (UKCES) (2013), *OECD Review: Skills beyond School. Background Report for England. Briefing Paper February 2013*. www.ukces.org.uk/publications/oecd-skills-beyond-school-england

Such a body could explore the scope for mergers and collaboration

Fachhochschulen were created as separate, autonomous and completely new bodies in parallel to the existing institutions (Lassnigg, 2009; Pfeiffer et al., 2000). Many other countries opted to use existing institutions as an organisational basis, and upgrade or merge them to create the new bodies (see Box 2.4).

Box 2.4 The creation of postsecondary VET institutions through mergers of professional training bodies

In Finland, schools of higher vocational education were established in the 1990s mainly by merging existing technical and business colleges, plus other institutions formerly at secondary level. In Norway, the 26 university colleges were formed in 1994 through mergers of 98 existing colleges offering mainly teacher training, nurse training and general engineering (Kyvik, 2002).

In Denmark, until the late 1960s, the VET system was composed of professional schools (covering areas such as engineering, business studies, veterinary science and dentistry) and many smaller specialised schools and colleges, and it was highly fragmented. Many schools are small and thus vulnerable to fluctuations in budgets, staff and student intake. In 2000, the act on medium-cycle higher education created a common framework for all of these programmes and institutions. Postsecondary vocational education was redesigned in two sectors: nine academies of professional higher education, providing two-year degrees, and seven university colleges, providing three-year bachelors' programmes. 25 standard programmes replaced the previously existing 70 short-cycle programmes of varying content and length (Danish Agency for Higher Education and Educational Support, 2012). Their creation was surrounded by much controversy as professional groups and local interests feared for the independence of "their" educational institutions, but now the majority of the stakeholders seem to be satisfied with the new system (Rasmussen, 2004).

In the Netherlands, mergers between research intensive universities and universities of applied science (*hogescholen*) have become a chief mechanism for creating flexibility and sustaining growth. Australia and the United Kingdom have also used mergers in major restructuring efforts to build larger and more comprehensive institutions (OECD, 2008).

Kyvik (2002) discusses the merger of 98 vocationally-oriented colleges into 26 state colleges in Norway. The mergers, which took place in 1994, have in many ways proved to be a successful reform. The colleges now have more competent administration and professional leadership, and they have become far more visible and have acquired a higher status.

Source: 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>; Kyvik S. (2004), "Structural changes in higher education systems in Western Europe", *Higher Education in Europe*, Vol. 29, No. 3; Kyvik, S. (2002), "The merger of non-university colleges in Norway", *Higher Education*, Vol. 44, N° 1; Rasmussen P. (2004), "Towards Flexible Differentiation in Higher Education? Recent Changes in Danish Higher Education" in Fägerlind I. and G. Strömqvist (Eds.) *Reforming higher education in the Nordic countries – studies of change in Denmark, Finland, Iceland, Norway and Sweden*, International Institute for Educational Planning, UNESCO, 2004.

In 2005 the decision was taken to merge 51 academies of teacher training (*Pädagogische Akademien*) and the pedagogical institutes (*Pädagogische Institute*) in tertiary institutions, of bigger size, into nine public university colleges of teacher training (*Pädagogische Hochschule*) and these started to function in 2007. These mergers were planned by a commission composed of eight members of the Ministry of Education, Arts and Culture and the Ministry of Science. The reform challenges for the reorganisation of teacher training have been similar to those that occur now for nurse education, notably the question of merging existing institutions and the academisation of the training.

The implication is that there may remain scope in Austria to merge existing institutions and combine their programmes- especially the ones which are very small. The optimal size of education and training institutions needs to reflect a balance between the need to minimise travelling times for students, synergies due to having different fields within the same institution and the economies of scale realisable in larger institutions (OECD, 2008). These strategic issues would be addressed by the advisory body.

Notes

1. Between 1970 and 1990 the number of VET college sites in Austria increased from slightly more than 100 to some 300 with the aim of increasing regional equity of access (Schneeberger, Schmid and Petanovitsch, 2011).
2. The university sector in Austria went through two reform waves, in 1993 and 2002, which gave them more institutional autonomy, more powerful rectorates, university councils and new steering instruments. However, the university reform did not benefit from any cross-fertilization from the successful implementation of *Fachhochschulen* (CHEPS, 2007).
3. This division leads to congruencies: for example, in agriculture the schools have been formally adapted to the overall VET structure, and they are also included in the common education statistics, whereas in healthcare this is not the case (Lassnigg, 2009).
4. Previously, quality assurance and accreditation were under the responsibility of two different agencies (the *Fachhochschul*-council for *Fachhochschulen*, and AQA for public and private universities) which

have now been merged. The “Qualitätssicherungsrahmengesetz” (QSRG), an independent quality and accreditation agency (Agency for Quality Assurance and Accreditation Austria) has become responsible for external quality assurance in higher education from 1st March 2012 (Public and private universities, *Fachhochschulen*).

5. Finance for *Fachhochschulen* is provided for a specified number of study places based on a decision of the Ministry of Science and Research and a multi-year development plan advanced by the *Fachhochschulen* (the *Fachhochschulplan*). The ministry funds about EUR 7 900 per student in technical programmes and about EUR 6 500 in other programmes representing about 90% of the actual cost.
6. According to the *Fachhochschule* Studies Act any provider can deliver *Fachhochschulen* degree programmes if: *i*). at least two courses are recognised as a bachelor degree programme with a consecutive master's degree or diploma course; *ii*). there is a plan for the expansion of the institution by a minimum number of 1 000 student places within five years; *iii*) a “*Fachhochschul* council” is established responsible for the implementation and organisation of teaching and examinations.
7. Key points of the Strategy include: better co-ordination between institutions (schools, libraries, adult education centres, youth centres, etc.), co-ordination of social and educational policy actions at regional and local level. A “Task Force” should be established: one representative from each ministry (BMUKK, Ministry of Science and Research, Ministry of Labour, Ministry of Economy, Youth and Family) to co-ordinate and elaborate actions of the LLL strategy.
8. The participating educational institutions need to conclude an agreement about implementation, in particular the responsibilities (admission, issuing of certificates, recognition of exams, etc.). The study plan comprises the objectives, duration and structure of the CVET university course as well as prerequisites for admission.
9. For example, social partners are represented in advisory committees of VET colleges.

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Chapter 3

Better access to further learning

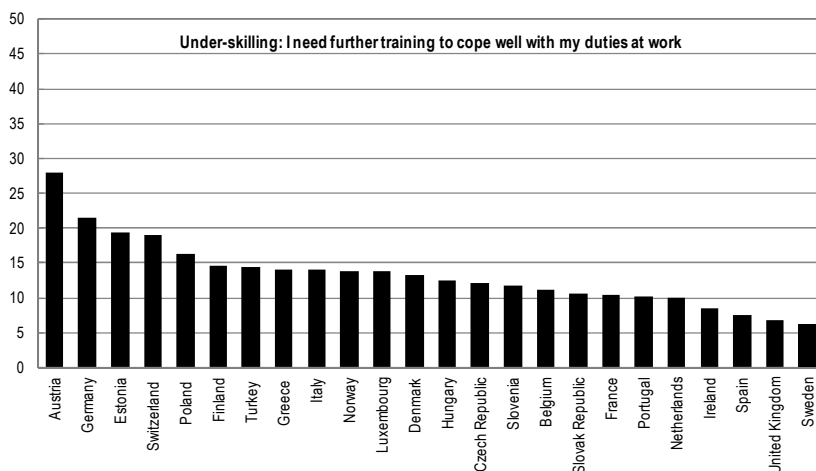
Although many graduates of vocational education and training (VET) colleges enter Fachhochschulen, they often do not receive adequate recognition for their VET college qualifications in terms of exemptions from course requirements. Also, although pathways to tertiary education have been created for apprentices, they are little used. This chapter recommends steps to address both challenges: improving articulation between VET colleges and Fachhochschulen, and measures to smooth the transition into tertiary education for apprentices and others without the Matura.

Challenge: obstacles to further education and training

In one self-report survey¹ almost 30 % of Austrian respondents said that they need more training to cope well with what is expected from them, more than in any other country surveyed (see Figure 3.1) (Quintini, 2011). Self-report measures could be capturing the desire rather than the need to participate in further training, but they may suggest some unmet need for skills development in Austria including among graduates of VET schools and colleges and the apprenticeship system. While there are many ways of pursuing further training, one of them might be through an appropriate vocational qualification at tertiary level.

Figure 3.1 Self-reported skill mismatch

Percentage of employed and self-employed, data from European Survey of Working Conditions (2005)



Source: Quintini, G. (2011), “Right for the Job: Over-Qualified or Under-Skilled?”, *OECD Social, Employment and Migration Working Paper*, No. 120, OECD Publishing, Paris.

Notes: On average, in the 24 OECD countries included in the ESWC, under-skilling affects 13.3% of workers. Trainees and apprentices are excluded.

More broadly, there is overwhelming evidence that labour markets in OECD countries are making increasing demands on the skills of the workforce. So the issue of access to further learning opportunities for all participants in the VET system is critical.

Against this background, there are two key challenges. First, although many graduates of VET colleges go on to *Fachhochschulen*, they often fail to receive adequate recognition for their VET college qualifications in terms of exemptions from course requirements. Second, although pathways have been created for apprentices and others without the Matura qualification to enter tertiary education, they are little used.

Fachhochschulen are not well articulated with VET colleges

Around one in five graduates from VET colleges enter *Fachhochschulen*, where they represent nearly one in two entrants. But although this route is heavily travelled, students find difficulty in obtaining recognition of their VET college qualifications in the form of course exemptions in *Fachhochschulen* bachelor programmes (Schneeberger, Schmid and Petanovitsch, 2011).

According to the law, VET college graduates can start relevant study programmes at *Fachhochschulen* in the second or third semester after receiving recognition of their qualification (Prokopp and Luomi-Messerer, 2009). Since these regulations are general and permissive, graduates from VET colleges can be found starting in the second semester in one *Fachhochschule* but in the third semester in another, depending on individual agreements between institutions and sometimes local connections² (Prokopp and Luomi-Messerer, 2009). The OECD review team were told that most *Fachhochschulen* are reluctant to give course exemptions and students are therefore required to wastefully repeat courses (Schneeberger, Schmid and Petanovitsch, 2011). The reluctance may partly reflect financial incentives. *Fachhochschulen* may prefer to have a full complement of students for the kind of introductory courses which duplicate those in VET colleges. Popular programmes are apparently more restrictive in granting course exemptions (Prokopp and Luomi-Messerer, 2009).

VET colleges' curricula are determined by the federal ministry, whereas *Fachhochschulen* can determine their own curricula and they are not always keen to organise curricula that mesh with those of feeder institutions. Curricula in VET colleges are not clearly defined in terms of learning outcomes and are only partially modular (Tritscher-Arcan and Nowak, 2011), making it harder to identify specific components which are duplicated in *Fachhochschulen*.

Repeating courses is wasteful, costly and potentially demotivating for students. Both the Chamber of Commerce and the Chamber of Labour have argued that this challenge needs to be addressed and the Chamber of Commerce has set out proposals to do so through an umbrella body, the *Berufsakademie* (see Box 2.2).

In response to these difficulties, many VET colleges have developed partnerships with tertiary institutions outside Austria, to allow students, with around one extra year of tuition, to earn a professional bachelor's degree, a much swifter route than any available in Austria. Examples of this are the co-operation with the Hochschule Mittweida in Germany and the University of Central Lancashire in the United Kingdom. Such arrangements reinforce the view that some of the obstacles within Austria to more effective articulation are artificial.

Access to tertiary education is needed to sustain apprenticeship

Apprenticeship needs to have an implicit guarantee of opportunities for upskilling, partly because that is what students want and expect, and partly because that is what the modern labour market will need and demand from apprentice graduates. In the medium and longer term, this is also likely to have an impact on the student's choice between academic upper secondary schools and VET colleges. Prospective students would be more willing to engage in shorter VET programmes if they know that such programmes provide an effective basis for more advanced studies (Dunkel and Le Mouillour, 2009).

In Austria, there are some possibilities in principle for students from VET tracks without Matura to enter tertiary education: those with a *Meisterprüfung* and a *Werkmeisterprüfung* examination can enter bachelors' programmes in *Fachhochschulen* and universities, and students without Matura from the dual system and VET schools can apply to *Fachhochschulen*, where their case is treated on an individual basis (FH Guide, 2012). But in practice very few such students enter *Fachhochschulen* and universities (see Table 3.1). The share of apprentices accessing higher education (both universities and *Fachhochschulen*) has even decreased from the 1990s', from 5.5% in 1994/1995 to 2.2% in 2010/2011. Similarly, the same decrease can be seen in VET schools graduates³ (FHR, 2011).

Table 3.1 The background of students in universities and *Fachhochschulen*

Students that have enrolled in Austrian public universities and *Fachhochschulen* in 2010/2011, by previously attended institution or obtained qualification

	Public Universities	<i>Fachhochschulen</i>
Total student number = 100%	36 481 = 100%	15 443 = 100%
	% of students	% of students
Students' educational background		
General academic upper secondary school (AHS: Allgemeinbildende höhere Schule)	39	30
VET college (BHS: <i>berufsbildende höhere Schulen</i>)	25	44
% of which from colleges of business administration	9	14
% of which from colleges for engineering, arts and crafts	9	20
% of which from colleges of management and service industries	7	10
% of which from colleges of agriculture and forestry	1	1
<i>Bildungsanstalt/Akademie</i>	1	1
<i>Berufsreifeprüfung</i>	2	6
University entrance certificate from abroad	25	10
Postsecondary VET from abroad	5	
Without <i>Matura</i>	1	8
Miscellaneous	2	1

Source: Statistik Austria (2012), *Bildung in Zahlen 2010/11*, Tabellenband, Wien: Verlag Österreich GmbH, pp. 316, 380.

Graduates of the dual system and three and four year VET schools can also enter universities and *Fachhochschulen*, by completing special *Matura*-type exams. There are three options.

- Since 2008, apprentices have had the option of pursuing the *Lehre mit Matura*: they attend preparation courses during their apprenticeship and can take three of the four parts of the exam in the course of their apprenticeship, finishing both the apprenticeship and the special exam (the *Berufsreifeprüfung*) simultaneously at around the age of 19. The *Berufsreifeprüfung* examination includes three general and one vocational subject-specific exam, and gives the right to study in all disciplines at universities and *Fachhochschulen*. These parallel courses are offered free of charge. This option has been developed with the support of the social partners, in particular

of the *Wirtschaftskammer Österreich* (WKO) (Nikolai and Ebner, 2011).

- Older candidates, including graduate apprentices can also pursue the *Berufsreifeprüfung* exam. Candidates usually attend preparatory courses run by *Wirtschaftsförderungsinstitut* (WIFI) or *Berufsförderungsinstitut* (Bfi) for these exams, requiring tuition fees typically in the range EUR 2 000 – 2 500.
- For the *Studienberechtigungsprüfung* exam students must be at least 22 years of age (or 20 with four years vocational training). It gives access only to a particular type of study programme. Prior examinations, like the master craftsman or qualifying examinations (*Meister- und Befähigungsprüfungen*) replace the elective subject.⁴

These pathways are used to only a limited extent

It would be reasonable to expect that a high quality VET system, such as in Austria, including a dual system training apprentices for demanding technical professions, would yield many people fully capable of studying at a higher level in *Fachhochschulen* and/or universities, even without the Matura or the *Berufsreifeprüfung*.

But the pathways for VET graduates to tertiary education are little used. In total, students from VET schools, the dual system, graduates from part-time industrial master colleges and master craftsman examination holders – with or without the *Berufsreifeprüfung* Matura represented only 11 % of students in 2010/2011. Modest growth since the mid 90s is mainly attributable to the rising number of students with *Berufsreifeprüfung*, now representing 5 % of students.⁵ The percentage of students without the *Berufsreifeprüfung* has decreased in recent years (FHR, 2011). Of those passing the *Berufsreifeprüfung*, 60 % continue to further studies: 45% start a university programme, 23% go to a *Fachhochschule*, about 10% a university college of education and 20% a VET college (Klimmer, Schlögl and Neubauer, 2009).

One potential explanation is that *Fachhochschulen* have discretion over the criteria they use to select students, and as there are on average three applicants for each study place in *Fachhochschulen*, and even up to eight in health sciences (FHR, 2011), they are able to hand-pick their students, through selective exams, and interviews. Even if the OECD review team heard that some *Fachhochschulen* saw benefits in enrolling students from VET backgrounds, they face stiff competition from more academically prepared students. *Fachhochschulen* may face more difficulties in the future in recruiting students, especially since they have expanded so quickly, given

the demographic downturn. The review team heard that more and more institutions have difficulties finding students (especially *Fachhochschulen* in traditional engineering sciences).

Recommendation: improving articulation and encouraging transitions

To improve access to Fachhochschulen and universities: establish a commission to develop an effective articulation arrangement between VET colleges and Fachhochschulen; take steps to improve the access of apprentice and vocational school graduates into tertiary education.

Supporting arguments: concrete tools to support transition

There are three supporting arguments for this recommendation. First, Austria needs more systematic arrangements on credit transfer and exemption between VET colleges and *Fachhochschulen*. Second, barriers that may hinder the progression of dual system graduates to *Fachhochschulen*, including lack of support, have to be addressed. Third, all students should be made aware of the different routes to *Fachhochschulen* and universities.

Develop and implement systematic arrangements to improve articulation between VET colleges and Fachhochschulen

Given that nearly one in two students in *Fachhochschulen* comes from a VET college, the weak articulation between VET colleges and *Fachhochschulen* is a serious problem. To that end it is proposed that a commission should be established by the federal government, with representatives of the key stakeholders charged with establishing guidelines for articulation and semester exemptions. The commission should also develop effective incentives, to ensure that institutions adhere to the guidelines. Adherence to the guidelines should be linked to accreditation or government financial support.

The general principle should be that if, on the face of it, there are common modules in the vocational college programme and the *Fachhochschulen* programme, there should be an automatic exemption from that course for the VET college graduate. Exceptions to the rule would need a strong justification. Conversely, it is not a sensible use of public funds to provide for the tuition of a first year programme in a *Fachhochschulen* which is slightly different from that already taught to VET college graduates. Instead, the *Fachhochschulen* course should be aligned with the VET college curriculum and automatic exemptions be offered for VET college graduates. Box 3.1 describes articulation arrangements in some other OECD countries (See Box 3.1).

Box 3.1 Short programmes as stepping stones towards higher tertiary qualification in OECD countries

In France, it is possible for *institut universitaire de technologie* (IUT) students after the first two years of study to be admitted by the *grandes écoles*, whose masters-level graduates may in turn, do their doctorate at universities (Dunkel and Le Mouillour, 2009).

In Norway, where credit recognition between institutions has been mandatory since 1981, between 10 and 20% of students change institutions during the course of their studies, mostly from universities to university colleges during the first three years, while the flows reverse afterwards (OECD, 2008).

In the United Kingdom, legislation allows two-year foundation degree students to progress to an honours degree (which otherwise would be a three year full-time programme) through one additional year full-time, or two years part-time. Access or bridging courses are organised to prepare the transition from short-cycle to degree programmes but they are neither compulsory nor always available or needed. Professional experience is taken into account and facilitates the transition. In 2007-08, 59% of students who studied full-time for their foundation degree went on to study for an honours degree in 2008-09. Fewer part-time qualifiers progressed to an honours degree (42 %). Most students who continued their studies did so at the same institution at which they were registered for their foundation degree.

Source: EURASHE (2011), “Short cycle Higher Education in Europe Level 5: the missing link”; Dunkel and Le Mouillour (2009); OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1 and Volume 2*, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264046535-en>

Breaking up qualifications into smaller identifiable units/modules can make credit transfer easier, particularly when there are some common elements in programmes alongside others that are more qualification-specific. VET college curricula are only partly modular but are becoming more so (Tampusch, 2009). A modular approach would also allow individuals to spread their study effort out over longer periods of time, and could contribute to attracting more non-traditional students. In the US state of Florida, a course numbering system allows modular elements to be identified and reflected in articulation arrangements.

Encourage the access of dual system graduates to Fachhochschulen

Rather limited numbers of apprentice graduates and graduates from the three and four year vocational schools are currently entering *Fachhochschulen* and universities despite the creation of a number of new

avenues designed to widen access. While it is not realistic or desirable to imagine that a large proportion of this group might follow this route, the steady increase in the level of skills required in modern labour markets imply that efforts should be made to open up this route to higher skills to the greatest extent possible. *Fachhochschulen* in Austria need to be more welcoming to apprentices, and should systematically offer bridging courses and induction programmes, following the good examples of certain *Fachhochschulen*. *Fachhochschulen* will need additional incentives to pursue such an approach through their financial support arrangements, but this would be reasonable given that at present *Fachhochschulen* are not fully delivering on their legislative mandate.

Students with a VET background that enter universities and *Fachhochschulen* may have limited academic preparation and therefore may be particularly at-risk of dropping out, especially if they do not receive adequate support. The dropout rate in *Fachhochschulen* is 23 % (FHR, 2011), and is higher for those with a VET background. Depending on the competences required in any particular degree programme, students may have to sit supplementary examinations (for example, in mathematics, German and English) in the first year of study. But without specific support, it may be difficult for students that do not come from an academic background to be successful. Some *Fachhochschulen* offer preparation courses for graduate apprentices, or persons with other VET qualifications specifically designed to provide access to study programmes in these institutions.⁶ This seems to be the case especially in regions where there are fewer students (not in Vienna) or in study programmes where a certain share of students with professional experience is considered desirable.

Switzerland, for example, has been relatively successful at opening *Fachhochschulen* to graduates from the dual system, through the creation of the *Berufsmaturität*,⁷ an optional general education qualification to be completed in parallel to the dual system and that provides access to tertiary education, similar to the *Lehre mit Matura*. The proportion of dual system students obtaining the *Berufsmaturität* has increased steadily, and is now very significant, around 12 % of all VET graduates and they represent half of the students in *Fachhochschulen* (Hoeckel, Field and Grubb, 2009). In Austria only 2 % of apprentices have obtained the *Berufsreifeprüfung* (BMUKK, 2011). In Switzerland, *Fachhochschulen* were created by transforming and upskilling former vocational institutions (Fazekas and Field, 2013), and may therefore be more oriented toward VET students.

To better understand the reasons why young people are making limited use of the new routes of access, a survey of VET students should be considered. This would provide better information on what students need in order make a successful transition, and how much students know about the

availability of pathways and subsequent career prospects, and the extent of any perceived barriers in the path of entry to tertiary education.

Ensure that all students are aware of the different routes to Fachhochschulen and universities

Culpepper (2007), comparing transition from VET to tertiary education in Austria, Germany and Switzerland, suggests that the low participation rate might be because some students, in particular apprentices, are unaware of the possibility of entering *Fachhochschulen* and university, and about the existence of the *Berufsreifeprüfung* and the *Lehre mit Matura*.

The different examination routes that allow apprentice graduates to access tertiary education are all relatively new. By international standards, Austria has a relatively complex system of postsecondary VET in several sectors (VET colleges, *Fachhochschulen*, universities, social partners' organisation, etc run by different providers). As argued in Chapter 2, the diversity of the Austrian provision is an asset, but it may also be confusing. Poorly educated parents may have particular difficulties in helping their child navigate through the full range of programmes available to them. Career guidance is needed (OECD, 2012). Chapter 5 argues for more effective career guidance in Austria. But apprentices have a specific need – most logically provided in the part-time vocational schools - regarding the different routes into tertiary education which are now available to them.

Notes

1. The measure of self-reported skill mismatch used in this paper is derived from the 2005 wave of the ESWC (European Survey of Working Conditions). The survey asked employees and self-employed workers to describe their skills at work by choosing among three options, namely: the need for training; the correspondence between skills and job requirements; or job requirements below the respondent's competences.
2. Credit granting is also handled differently in various courses of study, even at the same institution: some courses of study have precise rules. In others, it is based on individual agreements (Prokopp and Luomi-Messerer, 2009).
3. From 2.9% in 1996/1997 to 1.3% in 2010/2011.

4. Both the *Berufsreifeprüfung* and the *Studienberechtigungsprüfungen* are relatively well articulated with the others: credits can be obtained from examinations completed in a different context such as the *Meisterprüfung*.
5. Around two-thirds of people passing the *Berufsreifeprüfung* hold an apprenticeship diploma and almost one-third are graduates from intermediate technical and vocational colleges, notably from business programmes (Klimmer, Schlögl and Neubauer, 2009).
6. For example, FH Oberösterreich, FH Campus Wien. Cf. FH Campus Wien (2008), Land Oberösterreich according to Prokopp and Luomi-Messerer (2009).
7. The *Berufsmaturität* can be obtained either by attending courses during the apprenticeship (one day per week), in three-four semesters while working, or by attending a one-year full-time preparatory course after graduating from the VET programme (Nikolai and Ebner, 2011).

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Chapter 4

Strengthening workplace training in vocational education and training colleges

Workplace training is an exceptionally effective means of vocational training. While in different forms it is very widespread in vocational education and training (VET) college programmes, it is not mandatory. This chapter recommends that workplace training be developed as a mandatory element of the programmes, with learning objectives systematically integrated into the curriculum. This would have advantages in terms of programme quality, linkages with employers and cost-effectiveness.

Challenge: workplace training is too variable

In Austria, VET colleges make use of workplace training to varying degrees.¹ This presents three challenges. First, as workplace training is not always mandatory and its length and format are not regulated, equity and efficiency concerns arise. Second, there is no quality assurance system and connections between school curricula and workplace training are often weak. Third, as there is no systematic use of workplace training, VET colleges rely on workshops and practice firms to a great degree which is costly and ineffective in transferring some skills.

Workplace training is used in variable ways

Workplace training is a powerful tool for developing both hard skills on modern equipment and soft skills like teamwork and dealing with costumers and for transitioning students into employment. It can assume diverse forms, ranging from short periods of job-shadowing for school students, to full apprenticeships. In Austria, at the upper secondary level, workplace training plays a central role: the dual system has many commendable features, with well-structured apprenticeships that integrate learning in schools and workplace training. An apprenticeship can take between two and four years, but most last for three years. Approximately 75% of the time is spent in a training firm, the remaining 25% in a part-time VET school (this can vary across trades) (Hoeckel, 2010). Practical training is also mandatory in *Fachhochschulen* programmes.

However, the picture is more nuanced in VET colleges: while workplace training is mandatory in most fields (in particular tourism and many technical fields) in other areas such as business administration it is often voluntary.² According to a small representative survey (N=200), 82% of students in VET colleges and schools attended a course where workplace training was mandatory (Michenthaler, 2010). Workplace training typically takes the form of an internship during the summer or other holidays. Internships are usually at least four weeks³ and students spend on average 11 weeks in internships (Michenthaler, 2010). Mandatory work placements will be introduced for colleges of business administration as from 2014, and for a duration of eight weeks (320 hours).

Internships which last only a short period of time can raise efficiency issues. In addition to the costs of finding a work placement, students and employers face the transition costs of introducing themselves to the workplace and learning the basics of the tasks at hand. Hence, short internships are relatively costly and the net benefits to students and

companies are more limited (OECD, 2010), partly because low skilled tasks are often allocated to students (Heffeter, 2006).

Non-mandatory internship arrangements can cause equity problems. The most common means of finding an internship place is through relatives and friends, and those who find internships in this way report much less difficulty with finding a placement (Eichmann and Saupe, 2011). But students from less favoured backgrounds are much less likely to have the necessary connections to obtain a good quality internship.

Existing workplace training arrangements may lack sufficient quality assurance

In programmes with non-mandatory workplace training, quality assurance makes limited sense, since it only applies when an internship happens. In programmes with mandatory workplace training, efforts are made to assure quality and align learning objectives in the school and the workplace (see for example: BMBWK, 2002 or BMUKK, 2008), although even in this context quality assurance and links between workplace training and curriculum are weak as a number of interviewees reported to the OECD team. The few small-scale surveys available confirm this view: about half to three-quarters of students who completed an internship felt that they were treated as an unskilled worker and most of them saw no links between workplace training and the school curriculum (Eichmann and Saupe, 2011).

Experience from a range of countries reveals that when quality standards are not clearly set and links between workplace and classroom training are not explicitly made, it is harder to realise the full advantages of workplace training (OECD, 2010). Companies may be motivated to use interns and apprentices for productive purposes at the expense of training quality (Smits, 2006; Dionisius et al., 2008). Even when firms provide quality training they might be most interested in developing firm-specific skills, and neglect the transferable skills which the students need (Smits, 2006).

In-school training is sometimes less cost-effective than workplace training

VET schools and colleges in Austria rely extensively on workshops and (in the context of commerce programmes), practice firms (Neuweg et al., 2008); there were 910 practice firms in February 2012 (ACT, 2012). These practice firms attempt to simulate real-life firms in every respect, they are registered with tax authorities and government departments receive and respond to their invoices and tax declarations.

Maintaining workshops (often with expensive machinery) and practice firms results in significant costs for the schools as well as for the government agencies providing external support (e.g. keeping tax records of practice firms), even though, local businesses often provide machinery for workshops. The rapidly changing technological and organisational environment of the workplace implies that VET colleges may find it hard to keep up with the latest equipment (OECD, 2010).

In-school workshops and practice firms can develop some basic skills that are difficult to obtain at the workplace. But many soft skills highly valued by employers such as problem-solving and conflict management are more effectively learnt in the workplace (Aarkrog, 2005; Lasonen, 2005).

Recommendation: mandatory and integrated workplace training

Building on existing and developing good practices, make workplace training a substantial and mandatory part of all VET college programmes; learning objectives for workplace training should be built into the curriculum and into the quality assurance arrangements.

Supporting arguments: enhancing effectiveness and efficiency

This recommendation is supported by four arguments. First, more extensive reliance on good quality workplace training should increase training quality and drive costs down. Second, if workplace training becomes substantial and mandatory it will give employers more influence over the mix of provision. Third, workplace training can create a medium of communication between training staff in VET colleges and enterprises. Fourth, Austrian experience with workplace training, notably through the dual system, will support its more extensive use.

More reliance on workplace training should be more effective and less costly

As some skills are better taught in a workshop or practice firm, there needs to be a balance between skills taught in school and in the workplace (Robertson et al., 2000). However, the balance is fixed, it is not convincing to suppose that in a five year programme workplace training might be as limited as a few weeks. By way of comparison, the Danish two-year programmes in academies require three months of workplace training, and the four-year professional bachelors programmes a period of six months.

Increasing the amount of practical training in enterprises could cut the total costs of training if the learning goals in enterprises and schools are

aligned (OECD, 2010). Typically, the most up-to-date equipment and organisational structures are available in enterprises and student use of them causes little additional cost. Conversely in colleges and schools, investment needs to be continuous to keep equipment and organisational structures up-to-date.

If learning goals at the workplace are aligned with school curricula and a strong quality assurance system is in place workplace training can also contribute to increased training quality. High quality workplace training supports the acquisition of soft skills highly valued by employers (such as conflict management skills, entrepreneurship, and team-work), which are difficult to teach in a classroom or workshop setting (OECD, 2010). When learning from trainers working in enterprises using the most up-to-date equipment and organisational structures trainees can acquire the highest quality skills not necessarily available at VET colleges. Teachers in VET colleges typically have two years of work experience before they enter full-time teaching and relatively few part-time teachers also work in industry.

Mandatory workplace training gives employers more influence over provision

A number of countries, such as Spain and Denmark, and more recently Sweden have effectively transitioned their postsecondary VET systems to ones involving mandatory workplace training. The mandatory principle is important because it binds training provision to employer requirements. In Spain, in both upper secondary and postsecondary programmes, workplace training takes place through a compulsory three month module right at the end of the programmes (except for those who can accredit previous work experience and may therefore be exempt) (Field, Kis and Kuczera, 2012).

In Sweden, all two-year higher vocational programmes have a considerable amount of work placement (at least 25 % of total programme hours), usually in several blocks. This mandatory work-based component of all programmes allows good co-operation between education providers and employers. They are designed so that students apply concepts learned in the study programme at the workplace, with specific attention given to the links between theory and practice. The education provider is responsible for quality assurance of the selected workplace and many education providers choose to appoint a placement co-ordinator to facilitate the process (Ministry of Education and Research, 2013).

In Denmark, work placement has been mandatory⁴ in all programmes since August 2009, to make sure that all programmes were clearly professionally oriented and of relevance for the employers and thus the

students. All “academy” postsecondary two-year programmes include three months of workplace training and all “professional bachelors” programmes, normally three to four years, include at least six months workplace training. See Box 4.1 for more information on quality assurance mechanisms (Danish Agency for Higher Education and Educational Support, 2012).

Box 4.1 Quality assurance mechanisms in Denmark

Quality assurance mechanisms for workplace in Denmark have three key features:

The quality assurance process is built into the work placement arrangements: these are a decisive factor for the accreditation of new programmes by the Danish Evaluation Institute.

Attention is given to making these placements as useful as possible for both VET programmes and employers and the analysis of those links forms part of the accreditation process by the Danish Evaluation Institute.

The work placement arrangements are designed to be closely linked to learning outcomes. Subsequently to their placement, students report back to their institutions and they are assessed to see if they have met their learning objectives. To ensure this, each student has a teacher or a supervisor for guidance.

Source: Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264173668-en>

Currently in Austria, the mix of provision in VET colleges is largely driven by student demand moderated by *Land*-level co-ordination and planning. If substantial workplace training were to become a mandatory part of all VET college programmes it would serve as a direct feedback mechanism on each programme (OECD, 2010). Employers readily offer internships in professions with skills shortages and less readily in professions oversupplied in the labour market. This would help to align the mix of training provision with labour market needs (see Chapter 5 for further discussion of this point).

A better flow of information between colleges and workplaces should result

Currently, links between the staff in VET colleges and those in enterprises are largely limited to informal discussions, occasional collaboration through students’ projects and consultations over curricula. Strengthened workplace training requirements would reinforce the links between VET colleges and the labour market in at least three areas:

curriculum development, quality assurance, and guaranteeing the appropriate number of work placements. Each of these would create an avenue for information exchange and mutual learning.

In order to better align school curricula with learning goals at the workplace, VET colleges should consult local businesses to understand both their needs and their potential contributions. If VET colleges were incorporated into the quality assurance procedures for the workplace training, teachers of practical subjects would get an opportunity to observe workplace practices more in detail providing an avenue for updating their skills and knowledge.

If workplace training was mandatory VET colleges would become, at least in part, responsible for assuring a sufficient supply of work placements for their students, therefore enabling schools to understand their local business environment better. This would also allow VET colleges help students to find internship places on their own, addressing some of the equity concerns raised above (Eichmann and Saupe, 2011).

Extensive industry experience with workplace training should support its use

Through the dual apprenticeship system there is a strong basis for the implementation of more extensive workplace training in college programmes. Employers are used to training apprentices, so assimilating more trainees should not be too difficult. At the same time, the internships would have to be visibly beneficial to employers, as well as to students.⁵

While the current practice of summer internships may fit most industries and professions there is scope for more flexibility. Feedback from students as well as companies could prove to be crucial (e.g. Heffeter, 2006). A closely related aspect is multiple internships. Many students already pursue workplace training in the same firm two or three times in consecutive years (Eichmann and Saupe, 2011) allowing for accumulation of knowledge.

Effective quality standards should address workplace trainers' preparation (e.g. qualifications, work experience) and expectations towards their training activities. They should set rules covering content and duration of training and training outcomes among others (OECD, 2010). Their key goal is to ensure that students are not allocated to low-skilled tasks and that training is not excessively focused on firm-specific skills. At the same time these standards will be self-defeating if they discourage employers from offering workplace training. The aim should be – perhaps through a framework of self-assessments - to develop a form of quality assurance that employers see as being in their own interests.

Notes

1. This range of courses cover, among others, five-year main form programmes (*Höhere Lehranstalten*), three-year add-on courses (*Aufbaulehrgänge*), and two to three three-year long postsecondary VET courses (*Kollegs*).
2. Regulation of workplace training is to be found in the national level framework curricula for each profession: these frameworks can be accessed at: www.abc.berufsbildendeschulen.at/de/dlcollection.asp (accessed 16 April 2012).
3. For details of internship regulations see: www.abc.berufsbildendeschulen.at/de/page.asp?id=47 (accessed 16 April 2012).
4. Since most of the professional bachelor programmes already had work placement before August 2009, implementing mandatory work placement has mostly been a challenge for the Academies of Professional Higher Education in the form of making new guidelines, adjusting programme regulations, organising and finding work placement agreements.
5. The net benefits of workplace training for employers as well as students also depend on factors such as the level of student's skills prior to workplace training, quality standards, and work organisation. For more detailed discussion of factors of employer and student cost-benefit calculation see OECD, 2010, Chapter 5.

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Chapter 5

Reflecting labour market demand in the mix of provision

The mix of training provision (as between different fields and contents) in postsecondary vocational education and training (VET) is mainly driven by student preferences, and it may therefore not fully reflect the needs of the economy. Building on some existing initiatives, this chapter recommends the development of mechanisms to give more weight to labour market demand in determining the mix of provision. Better information and stronger guidance would help to get this right.

Challenge: insufficient response to the needs of the economy

The mix of provision in *Fachhochschulen* and VET colleges is driven primarily by student preferences. Signals of labour market needs are weak. There are also some indications of skills mismatch in the Austrian labour market.

The mix of provision is driven by student demand

In Austria employers play a limited role in determining the number of *Fachhochschulen* and VET college training places, and often have a limited involvement in determining their content.

The existence and growth of *Fachhochschulen* depends on their being attractive to students. Programmes are therefore developed to fit student preferences, rather than to respond to a demand from the labour market. Quantitative and qualitative studies of labour market needs and employment opportunities of graduates¹ are used to accredit programmes in the first instance, but they are not used to any extent to update and develop programmes.

In VET colleges (both BHS (*berufsbildende höhere Schulen*) and *kollegs*), the mix of provision is also largely driven by student preferences. The offering of programmes is determined incrementally, by adding new programmes. Each Board of Education at the *Land*-level (*Landesschulrat*) is responsible for issuing permits for starting new VET colleges and programmes, and the curricula are developed by the ministry at the federal level, subject to amendment every five to ten years. These procedures involve tests of how many jobs might be available in the field of study but these are often very limited. Although individual VET colleges are entitled to develop their own focus, they rarely use this discretion to adapt their programmes to local labour market needs. There appears to be limited scope for the development of new programmes that fit new and/or future needs.² The key test, as with *Fachhochschulen*, is whether colleges and programmes within colleges can recruit students.

Both VET colleges and *Fachhochschulen* therefore have incentives to meet student demand, subject to the cost of doing so (which may bias provision towards existing or cheaper programmes). But as training provision is largely funded from the public purse, it should reflect the wider interests of society, including labour market actors as well as students. These wider interests may be 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 in the labour market and might therefore drive economic growth. Of course student preferences respond to signals of labour market demand – for example, expressed in high wages for skills in shortage areas. But this response is very unsatisfactory, not least because students are often inadequately informed. But there are few data in Austria on the labour market outcomes of the different programmes, and individual institutions which might support appropriate guidance to students.

Signals of labour market needs are insufficient

Lassnigg argues that there is no formal monitoring of skills match or mismatch in the Austrian labour market (Lassnigg, 2011) and therefore it is difficult to assess how many people should be trained for each qualification, and what competences are required for particular jobs. In the case of nurse training for example, there are apparently no forecasts of how many nurses will be needed in the future, although health care is a sector where predictable demographic trends are the main drivers of demand.³

Those involved in defining new programmes, the number of places and their content, are mainly situated on the institutional supply side (VET colleges, *Fachhochschulen* and ministries). Some have argued that *Fachhochschulen* are more open to the labour market, and more adaptable to its needs, than VET colleges (Henkel and Markowitsch, 2005). But communication flows between the institutions and employers, and also between the different institutions are often very patchy (Lassnigg, 2011).

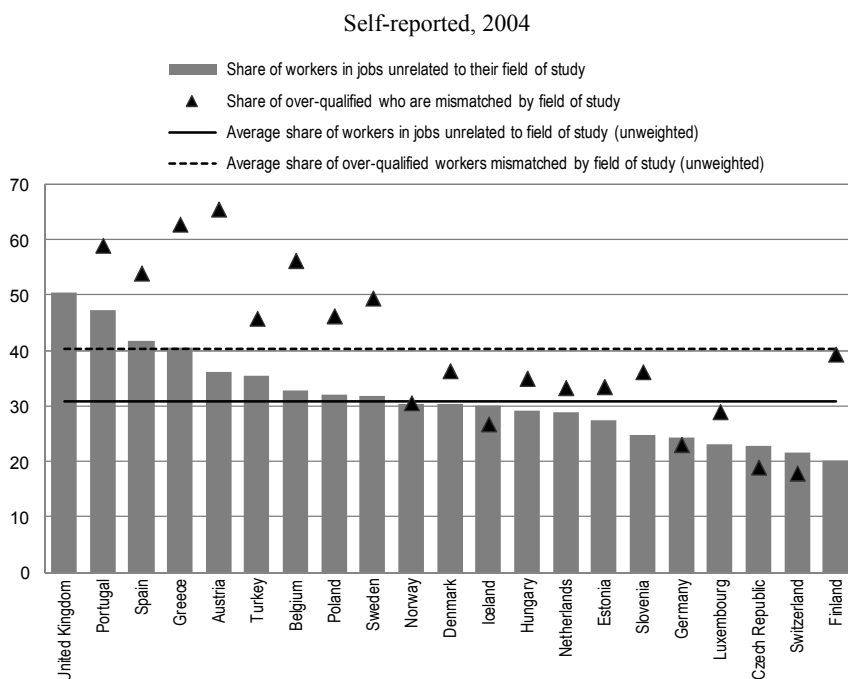
Evidence of skills mismatch

Some international data suggest a degree of mismatch between student qualifications and labour market needs.⁴ In Austria 36% of workers hold jobs in areas that are unrelated to their field of study – substantially higher than other “dual system” countries such as Germany and Switzerland. Although in Austria there is a relatively low incidence of over-qualification in general (24 % - not in the figure – See Figure 1. “Indicators of qualification mismatch” in Quintini, 2011a) there may be more mismatch than might be expected (see Figure 5.1). Some particular fields of study are associated with a higher incidence of over-qualification (see Figure 5.2).

Although VET colleges have generally good labour market outcomes (see Chapter 1) highly variable returns suggest that some students are pursuing programmes or professions for which there is a limited labour market demand (Schneeberger, Schmid, and Petanovitsch, 2011). Students in business fields find it significantly more difficult to obtain an internship placement than in other professions such as engineering or social care

(Eichmann and Saupe, 2011). VET college graduates in business occupations also seem to get a lower return from their qualification than those in technical specialisations (see Figure 5.3). Rates of return from VET colleges have dropped slightly since the early 1980s, while rates for people from the dual system and VET schools have hardly changed (Steiner, Schuste and Vogtenhuber, 2007). As a result, Lassnigg (2008) has argued that there is increasing mismatch between the skills provided by VET colleges to graduates and those needed by the labour market.

Figure 5.1 Fields of study and overqualification: European Social Survey

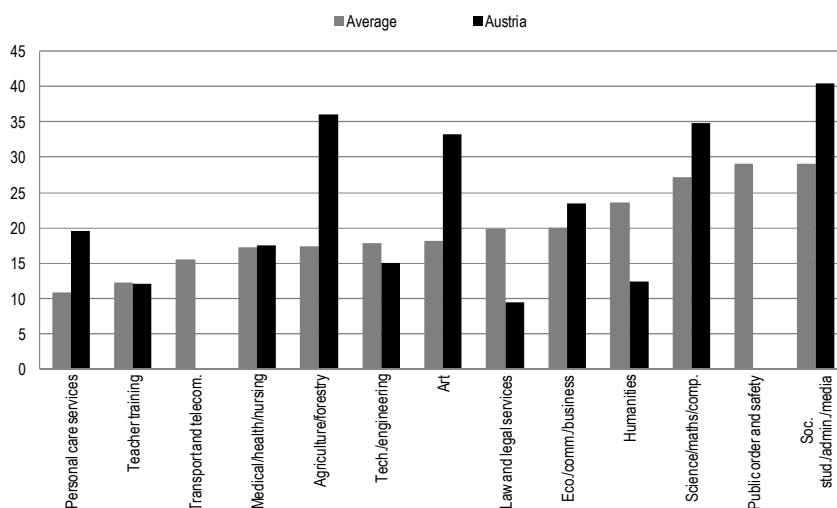


Source: Quintini, G. (2011a), “Right for the Job: Over-Qualified or Under-Skilled?”, *OECD Social, Employment and Migration Working Paper*, No. 120, OECD Publishing, Paris.

Notes: On average across the 22 OECD countries covered by the ESS, 31% of workers hold jobs in areas that are unrelated to their field of study and this is the case for 40% of the over-qualified. In Austria, 36 % of workers hold jobs in areas unrelated to their field of study, and it is also the case for 66 % of the over-qualified.

Figure 5.2 Field of study and the likelihood of over-qualification

2005

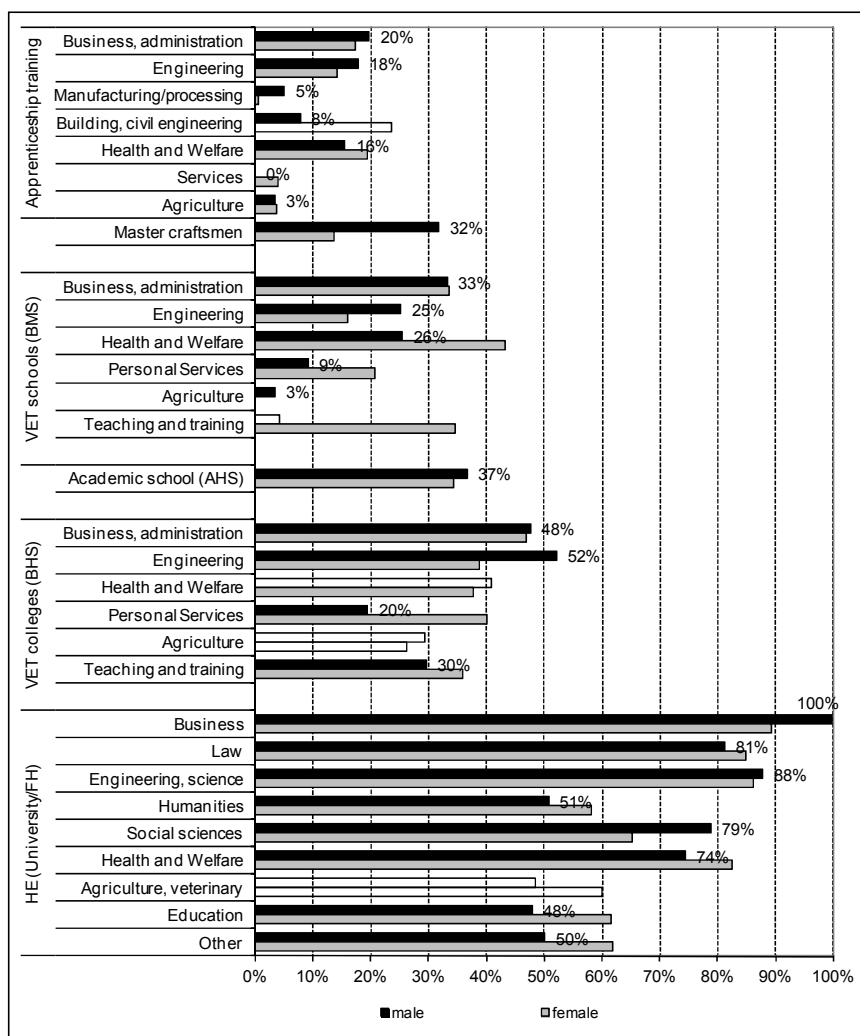


Notes: Average includes Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Source: Quintini, G. (2011a), “Right for the Job: Over-Qualified or Under-Skilled?”, *OECD Social, Employment and Migration Working Paper*, No. 120, OECD Publishing, Paris.

Figure 5.3 Educational returns in Austria (men and women) broken down by level and field of study

Compared to people that have not completed upper secondary school (2005)



Source: Steiner, P. M., J. Schuster and S. Vogtenhuber (2007), “Bildungserträge in Österreich von 1999 bis 2005” in Luomi-Messerer, K. and S. Vogtenhuber (eds.) (2009), “National VET Research Report Austria”, Report within the Framework of ReferNet Austria, Vienna.

Notes: BMS: *berufsbildende mittlere Schulen* (VET school); BHS: *berufsbildende höhere Schulen* (VET college); FH: *Fachhochschulen*.

Recommendation: better reflecting labour market demand

Building on existing initiatives, institutional mechanisms should be developed to ensure that the mix of provision in Fachhochschulen and VET colleges takes account of employers' needs alongside student demand.

Supporting arguments: mechanisms to reflect labour market needs

This recommendation is supported by four supporting arguments. First, new mechanisms to reflect labour market needs can and should build on existing institutions. Second, the new mechanisms should engage the different stakeholders, and operate at regional level. Third, mandatory workplace training, as recommended in Chapter 4, would help to guide the mix of provision. Fourth, stronger career guidance would help student preferences to converge with labour market needs.

Building on existing initiatives

In Austria, a number of existing initiatives may help skill needs to drive the mix of training provision. Thus:

- In 2009 a Standing Committee on Skill Needs⁵ was created. But its impact on actual policies and planning is low, and the committee has received criticism from many different parts of the system (Tritscher-Archan and Nowak, 2011). Another deficiency is the low level of comparability of different activities as all of the studies use their own taxonomy and do not build on each other (Lechner and Wetzel, 2008).
- At regional level, Lower Austria has developed an innovative approach designed to allow employers' needs to influence the mix of provision (see Box 5.1).
- In 2002, for example, the AMS (*Arbeitsmarktservice Österreich* - public employment agency) launched a research network⁶ and a platform (www.amsforschungsnetzwerk.at) to link Austrian research institutes, including in the area of skills forecasts. Austria has made efforts in recent years to implement skills forecasting tools (such as the AMS-Qualifikations-Barometer (www.ams.at/english.html) an online system set up in 2002 that summarises current and foreseeable labour market trends and skill needs).
- In VET colleges, especially in those for engineering, arts and crafts, many teachers work part-time in the industry or have long working experience in industry before becoming teachers. But due to a

change of legislation in 1994 it has become more and more difficult to recruit teachers from industry (Steiner, 2005).

- About half the VET colleges in the technical sector have set up boards of trustees normally including industry representatives, but there are only a few in the social and business sector (Steiner, 2005).

But these different and separate initiatives have not been co-ordinated (Lechner and Wetzel, 2008). Lechner and Wetzel (2008) in a review process from the European Employment Observatory argue that a current deficiency in Austria is the lack of an integrated institutional framework which includes all relevant institutions (labour market and educational actors, social partners, etc.) at different regional levels.

Box 5.1 An innovative regional approach

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 was conducted for 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.noe-fb.at/DE/Die%20NÖ%20Forschungs-%20und%20Bildun6/Netzwerkstatt/Netzwerkstatt.aspx?&jsCheckDone=true&hasJs=true accessed 21 March 2013.

Establishing mechanisms to guide the mix of provision

Training provision needs to reflect both national and regional requirements. This should not be a crude exercise in manpower planning, but rather a structure designed to allow labour market needs to influence the mix of provision. One option would be to address this through a regional advisory council,⁷ including the chambers of labour and the economy, and representatives of the *Länder* and the regional *Fachhochschulen*. But such an advisory body would need to have real influence and power to be effective. Quintini (2011b) argues that policy interventions require the co-operation of many different actors involved in acquiring skills linked to the needs of the labour market, bringing employers, students, workers, policy makers (from both central and local government), public employment services and the social partners. The example of Lower Austria reflects something of this approach (see Box 5.1).

Such regional bodies could encourage individual institutions to pursue initiatives related to labour market needs – along the lines of those listed above. Thus, a stronger linkage of the staff in VET colleges with industry would help, as would the engagement of trustees with industry involvement.

Mandatory workplace training in VET colleges would help

Chapter 4 recommends the introduction of mandatory workplace training in VET colleges. In addition to the learning benefits for students implementing this recommendation should also help to bind provision more closely to skills needs. Employers will be more willing to offer training places in those fields where there are skills shortages (OECD, 2010).

Mandatory workplace training also supports the engagement of employers and social partners,⁸ and makes it easier for them to participate in the definition of programmes that correspond to the needs of the workplace. This would allow curricula to be adjusted to match local business needs.

Stronger career guidance and more labour market information would allow better informed student preferences

One simple way of encouraging a convergence between student preferences and skills needs is to ensure that students are very well-informed about wage returns (which will be higher in areas of skills shortage). At present guidance services are provided by a large number of federal and regional authorities, municipal institutions, bodies of public and private law, associations, businesses and various individual actors – such as the WIFI and the BFI, run by the social partners (Schneeberger, Schmid and Petanovitsch, 2011). The Public Employment Service Austria

(*Arbeitsmarktservice Österreich*) also has its own services. For an example of a more centralised arrangement, see Box 5.2.

Box 5.2 Career guidance in Denmark

Career guidance is widely available for young people, through a range of services, many of them within the education system. Denmark is unusual among OECD countries in having specific legislation on educational and vocational guidance.¹ The Ministry of Science, Innovation and Higher Education is responsible for the seven regional guidance centres and other services include a national guidance portal and a call centre.

The service aims primarily to assist the transition of young people between secondary and postsecondary education, offering information both about available programmes and the careers associated with them. In co-operation with the different stakeholders – in particular social partners and local municipalities, different workshops, seminars, career fairs, individual and group guidance sessions are developed and organised. The centres provide their services in different settings, e.g. schools, public libraries (Danish Agency for Higher Education and Educational Support, 2012).

The quality of guidance is underpinned by linkages between guidance services and all relevant stakeholders, making it relevant for both education institutions and the labour market. A decentralised and flexible structure produced a diversity of practice and exchange of experiences, knowledge and best practice, with strong local ownership by the different stakeholders – including youth education and higher education institutions, and the social partners in industry and commerce (Danish Agency for Higher Education and Educational Support, 2012).

1. From 2004 a new Act on Educational and Vocational Guidance has been implemented.

Source: Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing.
doi: <http://dx.doi.org/10.1787/9789264173668-en>

Teachers provide career guidance in VET colleges. While they might be well prepared to help students with their learning difficulties, they are not necessarily well equipped to deliver sound advice on jobs and career prospects. Better career guidance to support students in their individual choices could help to reduce the existing discrepancies in the supply and demand of workers by field of study. When career guidance services are not available, students rely on informal sources, such as family and friends, and they may lack reliability and impartiality, and reinforce social disadvantage (OECD, 2010).

A related challenge is that relevant labour market information – such as expected labour market returns for different qualifications, fields of study and institutions - are not available. This is particularly needed as certain qualifications can be reached by different routes. More data would also allow policy makers and stakeholders to make better informed decisions about the future of the system. In the United States for example, student labour market outcomes are often available by institutions, to help inform student preferences.

Notes

1. When applying for accreditation for a new programme, the institution must present qualitative and quantitative studies prepared in theory by an independent institution of a minimum of three pages, presenting economic indicators (such as sectoral employment and unemployment, labour market offers) and expert interviews with Human Resources (HR) managers and labour market experts and recruiting employees in companies and organisations. The OECD review team heard that the quality of these studies was very heterogeneous. To renew a programme, the institution can prepare its own report, focusing particularly on the outcomes of graduates (FHR, 2011). Many studies have a very small scale design (Lassnigg, 2011).
2. One study on the employment-related skill needs of graduates of colleges of engineering (Schneeberger, 2008) contributed to the establishment of new programmes but this does not seem to happen in a systematic way.
3. In general, forecasts see a clear rise for high skilled occupations, especially in the area of technical and health professions as well as in the service sector (Austrian Economic Research Institute, 2007).
4. Quintini (2011a) used the European Social Survey (ESS) to assess how many workers hold jobs in areas that are not related to their field of study and how this contributes to qualification mismatch. A worker is classified as over-qualified when the difference between his/her qualification level and the qualification level required in his/her occupation is positive. While qualifications are one of the closest proxies of skills one can think of, they are an imperfect one for several reasons: *i)* at each qualification level, student performance varies significantly and so does field of study, particularly for tertiary graduates; *ii)* qualifications only reflect skills

learnt in formal education and certified training; *iii*) skills learnt on the job through labour market experience are not usually measured; and *iv*) some of the skills reflected in qualifications may deteriorate over time if they are not used or kept up-to-date. Despite these differences between qualifications and skills, it is likely that some qualification mismatch does reflect skills mismatch (Quintini, 2011a).

5. This Committee is composed of representatives of the AMS (Arbeitsmarktservice Österreich - the public employment agency) as well as representatives of the social partners, relevant ministries, and the WIFI (*Wirtschaftsförderungsinstitut*) and bfi (*Berufsförderungsinstitut*), as major training providers. This body makes decisions about the setting up of expert groups (HR and training managers from large key companies) on specific occupational areas (e.g. construction, tourism, electro, chemistry, motor vehicles, etc.).
6. Between 2002 and 2008, via the AMS research network, joint annual events with the social partners have covered topics such as skill needs in the field of healthcare and social affairs.
7. The precise extend of the “region” can be any sub-national unit and does not have to necessarily follow the administrative divisions.
8. As mentioned in Chapter 4, links between VET colleges and enterprises are typically informal.

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Annex A: Overview of postsecondary vocational examinations in the three Germanophone countries: Austria, Germany and Switzerland

Table A.1 Postsecondary vocational examinations in Austria, Germany and Switzerland

	Austria	Germany	Switzerland
Postsecondary professional examination	<i>Meisterprüfung/Befähigungsprüfung</i> (Master craftsperson examination)	<i>Fortbildungsprüfungen</i> (Advanced Vocational Examinations) a set of examinations, among which <i>Fachwirt</i> (for people working in commerce), <i>Industriemeister</i> (for industry) and <i>Handwerksmeister</i> (for crafts)	<i>Federal Professional Education and Training (PET) Diploma Examinations</i> (<i>Eidgenössische Prüfungen</i>), including the <i>Federal Diploma Examination</i> (<i>Eidgenössische Berufsprüfung</i>) and the <i>Advanced Federal Diploma Examination</i> (<i>höhere Fachprüfung</i>)

	Austria	Germany	Switzerland
Objectives	To provide deeper technical skills and skills to run one's own business in the regulated trades (71 trades in 2009), to be entitled to train apprentices.	To provide deeper technical skills, to be entitled to train apprentices, to provide capacity to run one's own business in the regulated trades (for the <i>Handwerksmeister</i>) and to manage a team of people (for the <i>Industriemeister</i>).	To provide deeper technical skills and skills to run one's own business, to be entitled to train apprentices, to certify required competencies in legally regulated areas (e.g. electrician, tank inspector). Advanced Federal Diplomas represent a higher professional level than Federal Diplomas, but in many professions only one kind of PET Diploma can be obtained.
Snapshot	In 2011-2010, the number of obtained Meister qualification was 3 536.	In 2010, the number of advanced vocational examinations passed was 93 357, among which the number of <i>Fachwirt</i> was 27 063, <i>Industriemeister</i> was 7 827, and <i>Handwerksmeister</i> was 19 659.	In 2009, 14 852 people obtained a national PET examination of which 12 184 was Federal Diploma Examination and 2 668 was Advanced Federal Diploma Examination.

	Austria	Germany	Switzerland
Institutional setting	Master craftsperson exams are organised by the offices for master craftsperson examinations, which are located at the regional Economic Chambers.	The examinations are primarily managed by the Chambers of Commerce in the field of industry and by the Chambers of Crafts in field of crafts and trades. The largest examinations (a little over two hundred) are federally regulated and consistent across the whole of Germany. Others (a little over three thousand) are managed by local chambers. The Federal Ministry of Education and Research is responsible for approving new Advanced Vocational Certificates and exams in accordance with the BMWi and after consultation with the Federal Institute for Vocational Education and Training.	The federal government, through the Federal Office for Professional Education and Technology, OPET, approves rules for professional examinations and recognises professional college degree programmes by approving the core curricula. The federal certification process ensures that there is no overlap between examinations and that the stakeholders reach a consensus regarding exam content without extensive government intervention.
Pre-requisites	Candidates have to be above 18 years of age.	Candidates must have completed an apprenticeship or have several years of work experience in the field of examination to be taken.	The professional organisations define the entry requirements. If existing, candidates must first obtain a Federal PET Certificate in or an equivalent qualification such as years of professional experience

	Austria	Germany	Switzerland
Preparation	Students typically take part in a preparatory course even though participation is not mandatory and the degree is offered exclusively on the basis of the exam performance. Preparation courses are offered mainly by the Institute of Economic Promotion (<i>Wirtschaftsförderinstitut</i>). Private providers can also set up their own preparatory courses, with very little regulation.	Students typically take part in a preparatory course even though participation is not mandatory and the degree is offered exclusively on the basis of the exam performance. These are offered by the Chambers of Crafts and Commerce as well as by Vocational Schools, and a large variety of smaller private providers. These are largely unregulated, and their quality can be very variable. 45.7% of examinees in commerce attend part-time preparatory courses at the Chambers and 5.2 % attend distance and online courses offered by private providers.	Students typically take part in a preparatory course for a national PET examination even though participation is in principle not mandatory and degrees are awarded exclusively on the basis of exam performance. Preparatory courses are much more diverse than professional college degree courses and they are largely unregulated. In the preparatory courses registered by BFS, only 7% of students followed a full-time course. Preparatory courses can take from a few months to two to three years. Course format reflects student demand, it often means weekend or evening classes and distance learning.
Examination	The Meister exam consists of five mandatory modules of which the order is not fixed: 1. Practical (Part A can be replaced by LAP certification); 2. Oral (Part A can be replaced by LAP certification); 3. Written; 4. Instructor examination; 5. Entrepreneur examination.	The Meister exam consists of four parts: 1. Practical; 2. Theoretical; 3. + 4. are the same in all trades (Economic and legal knowledge + pedagogical skills).	The exam characteristics depend on the professional field. The exam set-up responds to rapidly changing labour market demand.

	Austria	Germany	Switzerland
Finance	In 2010, the Meister examination fees were EUR 2 329. The costs of the preparatory courses varies widely. Financial support is available for candidates.	The Meister exam fees cost EUR 2 000-2 500 and financial support schemes are available. The costs of the preparatory courses varies widely.	The exam is subsidised by the Swiss Confederation. The expenses per person depend on the profession and on the subsidisation the institution offering the preparatory courses receive from the Canton, but it typically varies between CHF 700-2000.
Access to further higher education	Meisters are allowed to start Bachelors' programmes at <i>Fachhochschulen</i> and universities.	Since 2009, a "Meister title with distinction" renders Bachelor's studies at <i>Fachhochschulen</i> possible.	PET Diploma holders in their relevant profession may be entitled to enrol for a Bachelor's degree programme at <i>Fachhochschulen</i> , but allowing the access rests on the decision of each <i>Fachhochschule</i> .

Source: Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Switzerland*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264062665-en>; OPET (Federal Office for Professional Education and Technology) (2011), *Skills beyond School. The OECD Policy Review of Post-Secondary Vocational Education and Training. Swiss Background Report*, OPET, Bern; Hippach-Schneider, U., et al. (2012) (eds.), *Getting Ahead though Advanced Vocational Training. German Background Report on the OECD study "Skills beyond School"*, BMBF, Bonn. www.bmbf.de/pub/getting_ahead_through_advanced_vocational_training.pdf; Schneeberger A., K. Schmid and A. Petanovitsch (2011), "Skills beyond School in Austria: Country Background Report", OECD Review of Postsecondary Vocational Education and Training.

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Further reading

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

See also www.oecd.org/education/vet.

Consult this publication on line at <http://dx.doi.org/10.1787/9789264200418-en>.

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