

Chapter 3

Three key elements of high-quality post-secondary programmes

An effective professional training sector needs to offer high-quality programmes that produce highly-skilled workers. This chapter looks at three key features of high-quality programmes: first, systematic work-based learning integrated into programmes; second, effective teacher professional development that balances the need for teaching skills with up-to-date practical experience in industry; and third, attention to numeracy and literacy skills.

Making work-based learning systematic

It is necessary, but surprisingly difficult, to make professional education and training fit the needs of the workplace. One of the best ways of doing so is to bring learning into the workplace. Unfortunately, this does not happen as much, or as effectively, as would be desirable, and work-based learning is sometimes only weakly attached to professional programmes. Building on the successful approaches of many countries, this section argues that work-based learning should be fully integrated into programmes as a credit-bearing and quality assured element. Such an approach would powerfully promote partnership between employers and training providers.

Issues and challenges: Unrealised potential

There are many direct benefits of work-based learning

Work-based learning encompasses a diversity of arrangements including apprenticeships, informal learning on the job, work placements that form part of formal vocational qualifications, and internships of various types. Managed effectively, it delivers benefits for all participants and contributes to better labour market and economic outcomes. Described in *Learning for Jobs* (OECD, 2010) these include:

- *For students, a strong learning environment.* Work-based learning offers realistic experience and makes it easier to acquire practical skills on up-to-date equipment and through colleagues and supervisors familiar with the most recent technologies and working methods. Soft skills such as dealing with customers are also more effectively learnt in workplaces than in classrooms and simulated work environments.
- *For both students and employers, assured linkage with labour market demand.* The employer offer of work placements signals that a connected vocational programme is of labour market value. In systems where the offer of places in vocational programmes is tied to the availability of work placements, employers can influence the mix of training provision through their willingness to offer placements.
- *For both students and employers, an effective recruitment tool.* In the workplace, employers get to know and assess trainees, who in turn get to know the workplace and the employer, providing both parties with valuable information that may lead to recruitment, or alternatively may lead them to look elsewhere.

- For employers, a productive benefit through the work done by trainees. This is not only important for apprenticeships but also in more substantial work placements where trainees have the time to master productive skills.
- For public authorities, value for money. Delivering high-quality vocational programmes outside the workplace can be very expensive, particularly in fields where modern equipment is expensive and requires continuous updating, and where expert practitioners command substantial salaries.

Work-based learning is lifelong learning

At post-secondary level the issues are slightly different, but not fundamentally so. When students are older and have some work experience, there is a lesser role for work-based learning as a means of introducing people to the world of work and transitioning them into jobs. But work-based learning is, or should be, part of lifelong learning, with a vital role to play not only in the initial learning of occupational skills, but also in continuous professional development, deepening and broadening knowledge and skills, as well as allowing for sideways career moves.

There are barriers on both the education and the labour market side

Despite its compelling advantages, work-based learning is too often neglected. One reason may be that it conflicts with a common (but flawed) assumption of the education industry – that learning should be fostered by an academically trained teacher in an academic institution and subject to an academic assessment. Instead, work-based learning is usually pursued under the guidance of a supervisor rather than a teacher, in a workplace rather than a classroom, and often subject to a practical assessment of competence rather than an academic test.

For employers there are other obstacles: work-based learning requires work tasks to be organised so as to meet both production and learning goals – natural in a “learning” organisation with a focus on staff development, but challenging in others. Such a capacity to manage partially skilled workers in ways that will meet both goals is demanding, but it is also very much part of broader management capacity – given that very often employees, particularly in the context of change and innovation, will have limited experience and skills in relation to a changing set of work tasks. The implication is that while increased management capacity may be necessary to make effective use of trainees in the workplace, that capacity will have many wider benefits – particularly in terms of the ability of companies to make the most effective use of their employees, and to innovate. So the transition to a learning organisation may be difficult initially but ultimately rewarding.

A lukewarm approach to work placements achieves little

These barriers on both sides sometimes result in what might be called a “lukewarm” approach to work-based learning, in which work placements are optional additions to programmes, unconnected with learning objectives, are not

assessed, earn no credit, and lack quality assurance. Multiple problems emerge: students have to rely on their social networks to obtain placements, disadvantaging those with less favoured social backgrounds and connections; some students end up in inappropriate or unskilled placements; and expectations on and support for employers providing placements are weak or unclear. In the face of such limitations it would be easy – too easy – to conclude that the placements are of limited value, particularly when compared with the systematic teaching of the classroom and workshop components of a vocational programme. A more robust approach to the use of work-based learning is therefore imperative.

Recommendation: Systematic, mandatory, credit-bearing and quality assured work-based learning

All professional education and training programmes should include some work-based learning as a condition of receiving government funding. The work-based learning should be systematic, quality-assured and credit-bearing.

Explanation and country approaches: Positive experience with a systematic approach

A systematic approach yields many benefits including the promotion of partnerships with employers

Realising the full benefits of work-based learning requires a number of steps. First it needs to be made an essential and integrated element of the vocational programme, rather than an optional add-on. The learning outcomes expected from the work-based learning component need to be defined, so that what the student has learnt can be assessed, and linked to credit. This framework then provides the basis of quality assurance, since the training enterprise, in combination with the student, becomes responsible for delivery of the learning outcomes. In recognition of these obligations, the framework may also involve a contract between students and training enterprises.

Alongside the direct learning benefits, the integration of work-based learning changes the relationship between an off-site training provider and employers. It means that programmes will only be funded when training providers develop and maintain the active partnerships with employers that support work placements. These employer partnerships will then become central to the mission of training providers, while employers will see that, unless they are willing to offer work placements, the programme from which they draw their recruits may close or contract, and government funding shift to another sector or region. Many currently reluctant employers will choose to offer work placements under these conditions, assuming that they value the training programmes. Potentially it also means that some programmes which are of little interest to employers may need to consider reducing training places, or even close. This gives employers a desirable influence over the mix of training provision, allied

with the principle that the greatest influence goes to those employers that are prepared to contribute most, by way of the offer of work placements.

Such partnerships between training providers and employers have profound benefits. They encourage training provision which is sensitive to labour market needs, familiarise employers with vocational programmes and qualifications, and help teachers of vocational subjects to keep up-to-date.¹ It follows that when this type of systematic approach is first implemented in a country, it should help to build a new culture of partnership with employers in the delivery of vocational education and training, a culture which is found in the world's strongest skills systems. It is also a critical support to other recommendations in this review, including those encouraging vocational teachers to work more closely with employers (see the next section in this chapter) and to negotiate some proportion of the curriculum locally (see Chapter 4).

Many countries have successfully implemented such an approach

The proposition of work-based learning as a mandatory element of programmes (or at least government-funded programmes) often meets resistance. It is commonly argued that employers will not offer the placements and that it is only possible where it is already part of the working culture. But the international evidence overwhelmingly supports its feasibility. In Sweden, workplace training is obligatory in two-year professional programmes and represents one-quarter of the programme duration (Kuczera, 2013). In Denmark, workplace training is a minimum of three months in two-year professional programmes (professional academy) and a minimum of six months in three-year professional bachelor programmes and it can take place at one or several companies (Field et al., 2012). In Belgium (Flanders) vocational programmes targeting the unemployed include obligatory work-based learning in a company that is alternated with periods in learning centres (OECD, 2010; Flemish Department of Education and Training, 2013). In Romania, all post-high school programmes include mandatory work placements (Musset, 2014). In Spain, all post-secondary (as well as upper secondary) VET programmes include a compulsory 10-20 week module of workplace training. During the work placement students receive guidance and support from a teacher at the VET institution they attend and from the person who supervises their work at the company. Homs (2007) argues that when this requirement was introduced in Spain, it ended the isolation of vocational institutions, improved school-company relationships, helped vocational teachers to be in contact with companies and facilitated school to work transition (Spanish Ministry of Education and Science, 2007; Spanish Ministry of Education, Culture and Sport, 2011).

Clearly implementation of this approach requires sensitivity to the challenges faced both by training providers and employers. While a formal commitment to work-based learning as a condition of funding sets the incentives for both training providers and employers, this top-down incentive-setting would need to be buttressed by arrangements at local level to help training providers

work in partnership with employers, and help employers to both see and realise the benefits to them of offering work placements. Such arrangements would not only encourage an adequate number of work placements, but also help to ensure their quality. This support may also foster the capacity of enterprise staff to supervise trainees and develop their skills.

Quality assurance and a legal framework are necessary supports

Quality standards for work-based learning help to avoid the allocation of students to unskilled tasks and ensure they acquire useful occupational skills. Such standards may cover the content and duration of training, the assessment of training outcomes and the competences of those who supervise trainees (see Box 3.1 for an example from Denmark). A clear legal framework can be an important support for work-based learning – the lack of insurance against industrial accidents sometimes inhibits companies from taking on trainees. Box 3.1 includes elements of the legal framework for workplace training in the Community of Madrid, Spain.

Strengthening the training workforce

Vocational teachers and lecturers have jobs that in many ways are more demanding than those of academic teachers. They not only need to have knowledge and experience of the diverse package of skills required in particular professions, they also need to know how to convey those skills to others. On top of this, they need to continuously update their knowledge in response to changes in technology and working practices. The issues are common to the upper secondary and post-secondary levels, and both the challenges and potential solutions are set out in *Learning for Jobs* (OECD, 2010). This section offers an update based on the *Skills beyond School* country reviews.

Issues and challenges: Gaps in the knowledge and skills of vocational teachers

Initial training of vocational teachers is not always adequate

Teacher training qualifications are sometimes very general, without any differentiation between the teaching of academic and vocational subjects. In England, for example, initial teacher training programmes have been described as too generic and theoretical, and insufficiently related to the professional and occupational expertise of college lecturers (Lingfield, 2012). In contrast to secondary school initial teacher training, where trainees are grouped by subject, programmes for teachers in (often vocational) further education cater for a huge diversity of trainees and subject and occupational areas. Programmes designed to teach how to go about conveying practical and vocational skills are rarely available. The scope for vocational teachers to update their skills by spending time in industry is also sometimes much too limited.

Box 3.1. **Quality assurance and legal frameworks for work-based learning**

In **Spain**, participation in work-based learning is mandatory for all upper secondary or post-secondary vocational students. Autonomous communities create their own **legal framework for implementation**. That of the Community of Madrid covers collaboration agreements signed by the company and the school's principal, setting out the participating students, the place of training, start and end dates, hours of work, and details of the training programme. Students are covered for workplace accidents under the regulations on insurance. The training plan specifies the set of training activities that the student will perform while in the company. The workplace training module is evaluated by the teacher who supervises the module on behalf of the school. The teacher has to visit the company at least every two weeks to interview the in-company supervisor of the student and observe the students.

In **Denmark**, all academy profession programmes include a minimum of three months of work-based learning, and six months in professional bachelors' programmes. Following their placement, students report back to their training provider and they are assessed to see if they have met their learning objectives. Supervisors need to have a solid knowledge of the theoretical content of the student's course and have sufficient time and resources to offer guidance. **Quality assurance** has three key features:

- Quality assurance is built into the work placement arrangements, and plays a decisive role in the accreditation of new programmes.
- Attention is given to making these placements as useful as possible for both vocational programmes and employers, and the analysis of those links forms part of the accreditation process.
- The work placements are closely linked to learning outcomes. Students apply concepts learnt in the study programme at the workplace, linking theory to practice.

Source: General Directorate for Secondary and Vocational Education, Community of Madrid, Spain (2009), Instrucciones de la Dirección General de Educación Secundaria y Enseñanzas Profesionales, por las que se concertan, para los centros públicos, determinados aspectos relativos al módulo profesional de formación en centros de trabajo, www.madrid.org, accessed December 2011; Field, S., et al. (2012), A Skills beyond School Review of Denmark, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264173668-en>.

There are often barriers to the use of part-timers

In some countries over-rigid qualification requirements make it hard for people with valuable industry experience to contribute to vocational training. In the Netherlands, instructors from industry can only teach in the presence of a pedagogically qualified teacher (Fazekas and Litjens, 2014). In Germany, *Fachschulen* teachers have demanding qualification requirements which can be

barriers for part-timers from industry (Fazekas and Field, 2013). In England, the requirements for part-time teachers have been the same as for full-timers and this limits the scope for future recruitment in response to anticipated retirements: 20% of the further education workforce will reach the age of 65 by 2020 (Skills Commission, 2010).

Recommendation: Vocational teachers should balance teaching skills and industry experience

Ensure that the workforce in professional training institutions benefit from a strong blend of pedagogical skills, industry experience and academic knowledge. Adapt qualification requirements to that end.

Explanation and country approaches: Qualifications, local partnerships and leadership

Full- and part-time teaching by industry practitioners can be promoted

Part-time teaching staff that maintain their role in industry bring up-to-date practical experience into the teaching environment, benefitting not only students, but also fellow teachers (OECD, 2010). It is therefore important that highly skilled and experienced professionals are able to move into teaching, either full or part-time, without having to overcome too many regulatory obstacles. Allowing skilled workers to acquire their pedagogical competences in a flexible way (e.g. distance learning, recognition of prior learning) helps to encourage them to practice as vocational teachers/trainers. Typically part-time teachers require pedagogical training, but it is unrealistic and undesirable to impose the same demands on them as full-time teaching staff, given that they will often compensate by bringing up-to-date industry experience into their teaching and to share with their colleagues (Field et al., 2012). In England, a new programme has been launched to encourage industry experts to teach part-time in vocational programmes (see Box 3.2).

Local partnerships with employers help teachers keep up-to-date

The previous section in this Chapter argued for the systematic integration of work-based learning into programmes, involving efforts to improve linkages between training providers and employers. Chapter 4 of this report will recommend local flexibility in curricula to encourage partnerships between training institutions and employers. Both initiatives will naturally involve teachers in developing and updating their knowledge of modern industry. This provides a framework in which it would be much more feasible for vocational teachers to pursue work placements themselves as a way of updating their industry skills, perhaps as a routine or mandatory element of in-service training. Conversely, teachers who are more knowledgeable about modern industry will find it easier to respond to the needs of local employers and to negotiate work placements for their students.

Box 3.2. “Teach Too”: A programme in England to encourage industry experts to teach in vocational programmes

Teach Too aims to encourage occupational experts from industry to spend some time teaching their occupational expertise to others and contribute to curriculum development, while continuing to work, so keeping off-the-job vocational education and training as up-to-date as possible. The programme implements a recommendation by the Commission on Adult Vocational Teaching and Learning on the need for “vocational teachers and trainers to combine their occupational and pedagogical expertise, [and] build strong partnerships with employers.”

The programme will be developed by: learning from existing good practice and disseminating these lessons, funding a range of developmental activity to encourage innovation; challenging employers; and training providers to propose solutions that work for their learners and businesses. Drawing on this knowledge and activity the intention is to develop a national Teach Too framework which all stakeholders will be keen to embrace.

Source: The Education and Training Foundation (2014), Teach Too, <http://et-foundation.co.uk/teach-too.html>.

Strong leadership can get the best out of a teaching team

Thoughtful leadership is required in vocational institutions in order to make the most effective use of a team of teachers with a mix of skills that balance pedagogical understanding, academic knowledge and industry experience. While it may be too much to expect the perfect mix of skills in any individual teacher, effective leadership and teamwork can ensure that a strong blend of knowledge and experience is constructively shared and deployed within institutions.

Ensuring adequate basic skills

Basic skills of numeracy and literacy are not only a key part of the skillset required in any job, they are also tools for further learning, supporting the acquisition of the further skills and qualifications that are increasingly sought by students and needed by employers. The (too common) assumption that the development of basic skills can safely be left to initial schooling is implausible, given results from the Survey of Adult Skills (PIAAC) showing that some adults with higher (academic and vocational) qualifications also have weak basic skills. This section argues that professional programmes need to support the development of these skills, and that basic skills may be effectively taught in conjunction with practical skills.

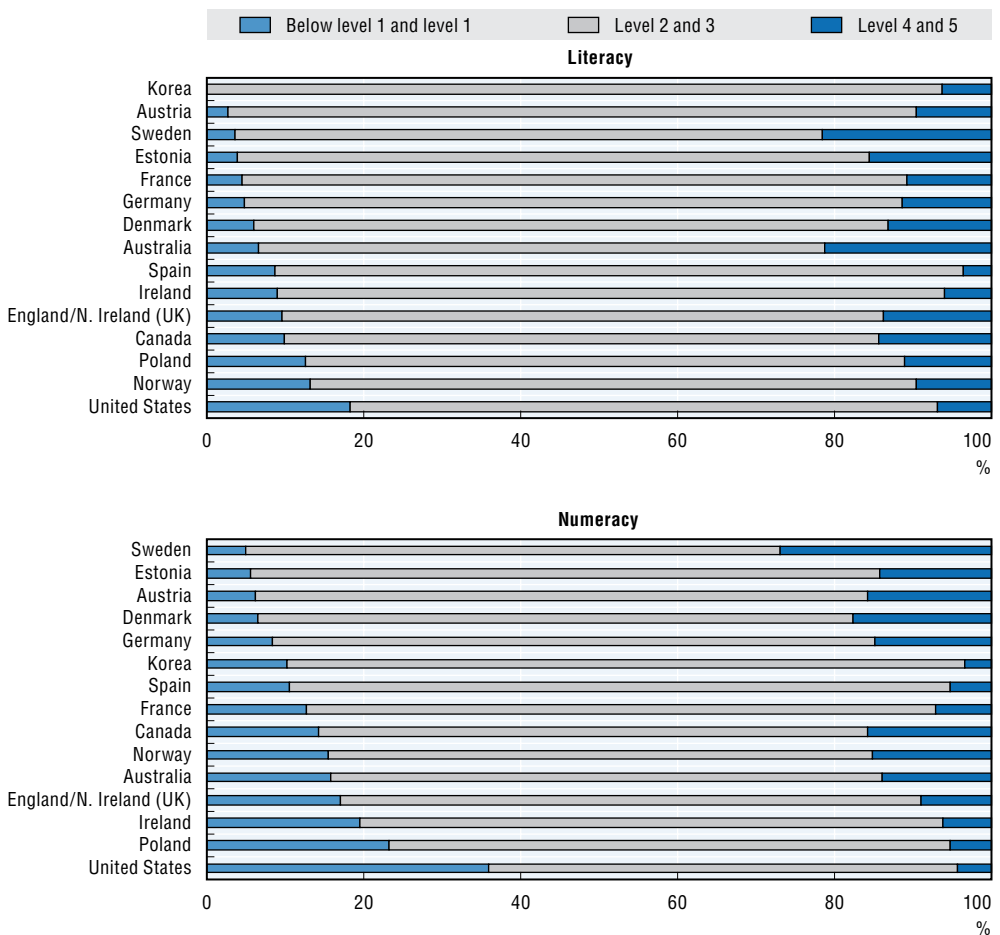
Issues and challenges: Weaknesses in basic skills

Some post-secondary students and graduates have weak basic skills

Looking at the data in Figure 3.1, the most pressing concern is the proportion of students in professional programmes with very weak basic skills, particularly in respect of numeracy. This may inhibit completion, and, for those who graduate, hold back career development and further learning. In many countries more than one in ten students in short-cycle professional programmes perform

Figure 3.1. Literacy and numeracy skills among current students in short-cycle professional¹ programmes

16-65 year-olds



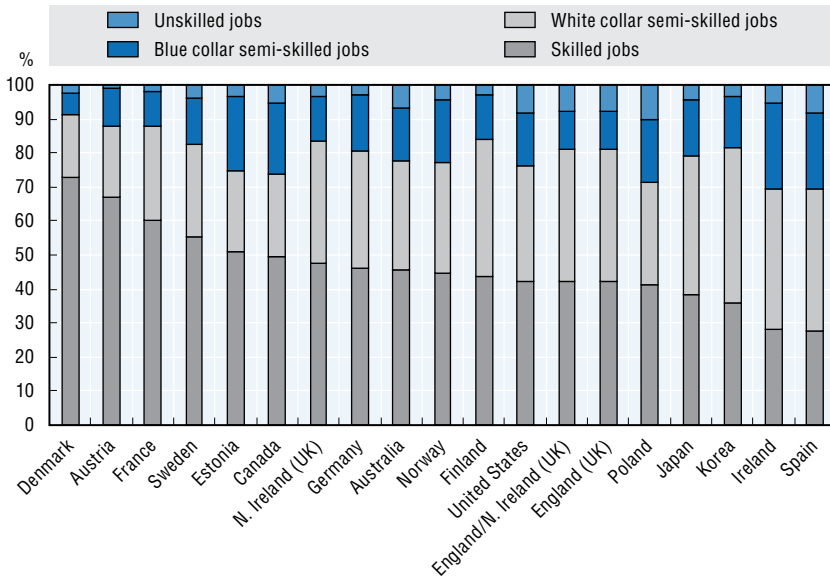
1. For a definition and explanation see Box 1.4.
Source: Survey of Adult Skills (PIAAC) (2012).

at the lowest levels 1 and below in numeracy. It is not surprising that students in engineering, manufacturing and construction tend to do better in numeracy, but it is striking that weak numeracy is a particular challenge in some of the English-speaking countries. This could reflect a number of factors, including the way in which students are selected into these programmes, as much as any deficiencies in the programmes themselves.

Graduates of professional programmes are usually in jobs needing strong basic skills

Although, as indicated above, students of short-cycle professional training face some challenges in respect of basic skills, graduates of these programmes typically enter jobs involving higher level technical and professional skills such as medical lab technicians, legal secretaries, computer support technicians, nurses, medical radiographers, occupations classified in ISCO coding as technicians and associate professionals.² But this is variable. In England, Korea, Spain and the United States, 40% or less of professional programme graduates are in skilled jobs, compared to more than 60% in Austria and Denmark (see Figure 3.2). Any underlying weakness in basic skills may therefore contribute to dropout from programmes, reduce the capacity to enter more highly skilled jobs, and undermine the potential for further training and career development.

Figure 3.2. **The jobs performed by graduates of short-cycle professional programmes**
16-45 year-olds



1. For a definition and explanation see Box 1.4.
Source: Survey of Adult Skills (PIAAC) (2012).

Unsurprisingly, individuals working as professionals and technicians (higher-skilled jobs) are more likely to be confronted with complex job tasks. In all countries there are relatively more graduates from professional programmes facing complex problem solving at work than upper secondary graduates, but fewer than those with a tertiary qualification (see Figure 3.3).

Recommendation: Sustain basic skills and integrate them with vocational teaching

Professional education and training programmes should ensure adequate literacy and numeracy skills among their students alongside occupation-specific competencies. This means assessing basic skills at the outset of programmes, addressing weaknesses, and integrating basic skills development into professional programmes.

Explanation and country approaches: Building basic skills into professional training

Basic skills should be built into professional education and training

Given the importance of basic skills, they need to receive attention within professional programmes. This may mean administering a test of numeracy and literacy on entry to post-secondary programmes to determine student needs, offering targeted help for those with the weakest basic skills. Requirements vary – programmes designed to upskill established professionals will be differently placed from those designed for adults re-entering the labour market. Strong literacy and numeracy will be particularly important for vocational graduates who wish to pursue further academic qualifications; in this case strong basic skills should help to underpin transition to, and articulation with, academic education.

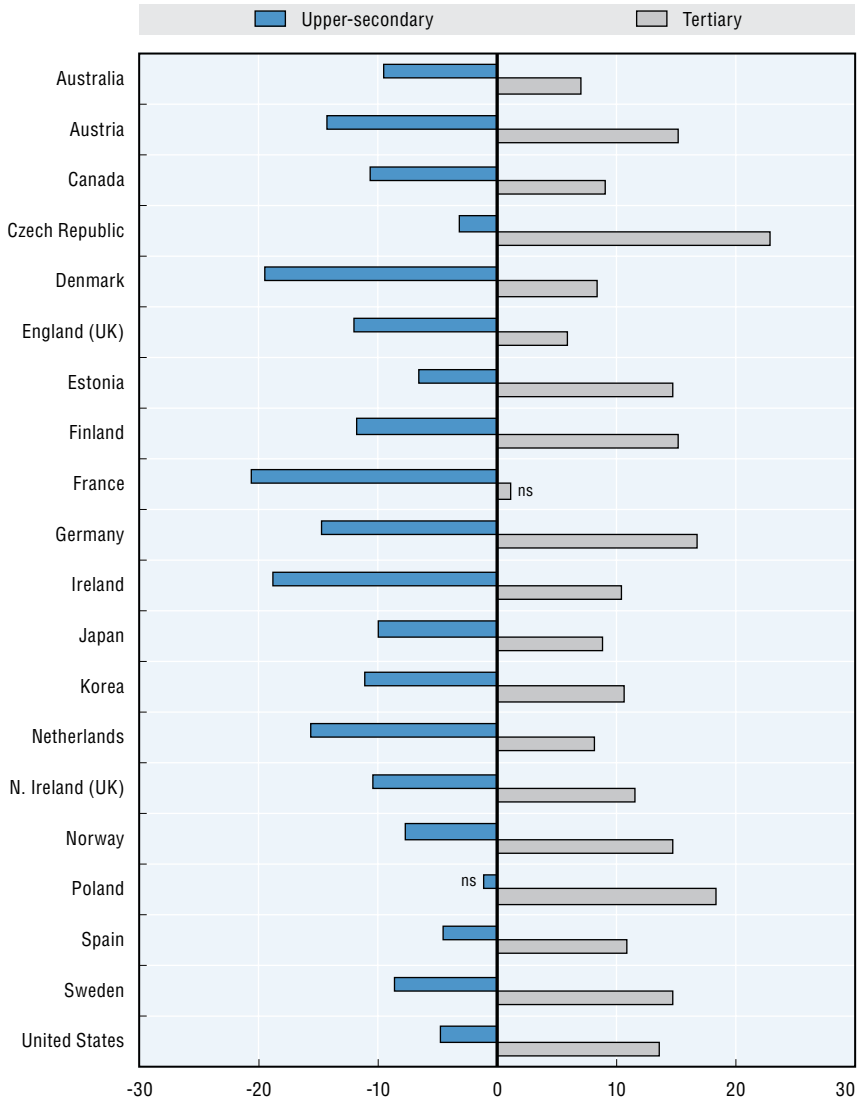
In countries where professional programmes are relatively open to students, regardless of prior qualifications, extensive efforts are sometimes devoted to the basic skills of those entering the post-secondary system. Box 3.3 details some experience in the United States.

Integrating basic and vocational skills has many advantages

Often, when students have not pursued academic styles of classroom learning for some years, or where they have a negative past experience of such learning, there is a real difficulty in pursuing traditional mathematics or literacy classes. One promising approach is to integrate basic skills with vocational training, so that literacy and maths skills are acquired in meaningful practical contexts. While research evidence (e.g. Jenkins, Zeidenberg and Kienzl, 2009; Kamil, 2003; NCTE, 2006) shows that integrating academic and vocational content can be effective, implementing such an approach is demanding. It requires careful planning, adequate resources and preparation. A study of maths and vocational training (Stone et al., 2006) identified factors that teachers considered


Figure 3.3. **Short-cycle professional programme¹ graduates and problem solving on the job**

Percentage difference in the share of employees aged 16-45 spending 30 minutes or more at least once a week on finding solutions to complex problems. Comparison of upper secondary and tertiary graduates with graduates of short-cycle professional programmes



1. For a definition and explanation see Box 1.4.
ns – not significant.

Source: Survey of Adult Skills (PIAAC) (2012).

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Box 3.3. Tackling basic skills weaknesses in community colleges in the United States

Bailey (2009) estimates that for at least two-thirds of community college entrants weak academic skills threaten course completion. In 2007-08, 45% of first and second year community college students reported having to take remedial courses (US Department of Education, 2013). While extensive resources are devoted to remediation of basic skills, its effectiveness is limited. Colleges allocate scarce resources to remediation activities, while students commonly use federal grants and subsidised loans to cover the cost of remedial education. This leaves them fewer resources for their post-secondary studies and increases the chance of dropout, and financial distress. Some examples of initiatives designed to help those who encounter difficulties once they start college are given below.

The **Accelerated Learning Project (ALP)** pioneered by the Community College of Baltimore County, Maryland, tackles low performance in college by providing students in remediation with relevant college credit courses in parallel (rather than in advance) of their studies so as to speed up their progress. The strategy is based on the principle that skills taught in one course and reinforced in another are more likely to be mastered. ALP participants concurrently enrol in a credit-bearing English course and a developmental writing course taught by the same instructor. The initiative has proved successful in terms of students completing the relevant credit courses. These positive outcomes have led the ALP to be adopted by different colleges throughout the United States.

In Washington State the **Student Achievement Initiative (SAI)** is a new performance funding system for all community and technical colleges. Institutions are rewarded with additional funds if they record a significant improvement in the number of students moving from remedial to credit courses, completing credits, and successfully completing a degree. Colleges are evaluated relative to prior performance and institutions are encouraged to measure the impact of their efforts and adjust practices in response. Evaluation of the SAI shows that since its introduction, students have acquired stronger basic skills.

Source: Bailey, T. (2009), "Rethinking developmental education in community college", *CCRC Brief*, No. 40, February 2009, CCRC; US Department of Education (2013), *Institute of Education Sciences, National Center for Education Statistics, Career/Technical Education Statistics, 2013*; Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264202153-en>.

key to success, such as allowing sufficient time away from teachers' regular tasks, and effective partnerships between maths and vocational teachers. An example is given in Box 3.4.

Box 3.4. I-BEST: Integrated instruction in the United States

The Integrated Basic Education and Skills Training (I-BEST) provides a strong example of a programme designed to improve labour market outcomes and entry rates to professional training among adults with low basic skills. Developed in Washington State, it has proved successful and is now being introduced in other parts of the United States.

The programme combines basic skills teaching with professional training that yields college credits and contributes to a credential. Courses are provided in occupations in high demand. In Washington State combining basic skills with vocational content is facilitated by the availability of both types of programme at community and technical colleges, and I-BEST programmes are available in every college in the state. Individuals must score below a certain threshold on an adult skill test and qualify for adult basic education to participate. In practice, this translates to around 2% of basic skills students.

I-BEST students earn more credits and were more likely to complete a programme than a comparable group of students not participating in the programme. Evidence on the link between participation in I-BEST and earnings is less conclusive.

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

Notes

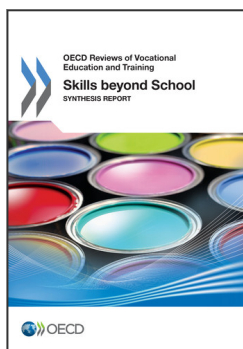
1. For example in Denmark mandatory work placements are seen by many VET teachers as an important means of ensuring that they are aware of modern workplace requirements (Field, et al., 2012).
2. See ILO, 2012, *International Standard Classification of Occupations. Structure Group definitions and correspondence tables, ISCO-08*, ILO, Geneva). In the Survey of Adult Skills occupations were grouped in 4 categories: *Skilled* occupations such as professionals, managers, technicians and associate professionals. Typically they, which typically require post-secondary education and training including post-secondary vocational and longer academic degrees; *white collar semi-skilled* occupations, including clerical support and sales workers, typically requiring lower or upper-secondary education and occasionally shorter post-secondary vocational qualifications; *blue collar semi-skilled* occupations, with education and skills requirements similar to the previous category above; and *elementary* occupations relying on skills corresponding with primary education.

References

- Bailey, T. (2009), "Rethinking developmental education in community college", CCRC Brief, No. 40, February 2009, CCRC.
- Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Germany*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264202146-en>.

- Fazekas, M. and I. Litjens (2014), *A Skills beyond School Review of the Netherlands*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris.
- Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264173668-en>.
- Flemish Department of Education and Training (2013), *Vocational Education and Training in Flanders, Country Background Report*, OECD review of Post-secondary Vocational Education and Training.
- General Directorate for Secondary and Vocational Education, Community of Madrid, Spain (2009), *Instrucciones de la Dirección General de Educación Secundaria y Enseñanzas Profesionales, por las que se concertan, para los centros públicos, determinados aspectos relativos al módulo profesional de formación en centros de trabajo*, www.madrid.org, accessed December 2011.
- Homs, O. (2007), "La Formación Profesional en España, Hacia la Sociedad del Conocimiento", *Colección Estudios Sociales*, No. 25, Obra Social, Fundación Caixa.
- ILO (2012), *International Standard Classification of Occupations. Structure Group Definitions and Correspondence Tables*, ISCO-08, ILO, Geneva.
- Jenkins, D., M. Zeidenberg and G. Kienzl (2009), *Educational Outcomes of I-BEST, Washington State Community and Technical College System's Integrated Basic Education and Skills Training Program: Findings from a Multivariate Analysis*, www.eric.ed.gov/PDFS/ED505331.pdf.
- Kamil, M.L. (2003), *Adolescents and Literacy. Reading for the 21st Century*, Alliance for Excellence in Education.
- Kuczera, M. (2013), *A Skills beyond School Commentary on Sweden*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf.
- Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264202153-en>.
- Lingfield, R. (2012), *Professionalism in Further Education: Interim Report of the Independent Review Panel*, established by the Minister of State for Further Education, Skills and Lifelong Learning.
- Musset P. (2014), *A Skills beyond School Commentary on Romania*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnRomania.pdf.
- NCTE (2006), *NCTE Principles of Adolescent Literacy Reform, A Policy Research Brief*, National Council of Teachers of English, www.ncte.org/library/NCTEFiles/Resources/PolicyResearch/AdolLitPrinciples.pdf.
- OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264204256-en>.
- OECD (2013b), *The Survey of Adult Skills: Reader's Companion*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264204027-en>.
- OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264087460-en>.
- Skills Commission (2010), "Teacher Training in Vocational Education", An Inquiry by the Skills Commission into Teacher Training in Vocational Education.

- Spanish Ministry of Education, Culture and Sport (2011), *El portal de la formación profesional*, www.todofp.es, accessed December 2011.
- Spanish Ministry of Education and Science (2007), *Real Decreto 1538/2006*, Boletín Oficial del Estado.
- Stone, J.R., et al. (2006), *Building Academic Skills in Context: Testing the Value of Enhanced Math Learning in CTE*, National Research Center for Career and Technical Education, Columbus, Ohio, www.aypf.org/forumbriefs/2007/Resources/MathLearningFinalStudy.pdf.
- The Education and Training Foundation (2014), *Teach Too*, <http://et-foundation.co.uk/teach-too.html>.
- US Department of Education (2013), *Institute of Education Sciences, National Center for Education Statistics, Career/Technical Education Statistics*, 2013.



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