3 Involvement of employers in the provision of training

This chapter looks at benefits of work-based learning as part of vocational education and training (VET) programmes and how Brazil can increase provision of work placements provided by employers to students. One of the main challenges in increasing work placement opportunities is that some employers may not feel able to train students. The chapter discusses various measures that can enhance the training capacity of firms, such as training of trainers in companies and facilitating collaboration across companies in the provision of training. Recognising the role of schools in reaching out to employers, the chapter provides examples of how the responsibility for work-based learning can be shared between schools and employers.

Making the most of work-based learning

In most countries, schools share the responsibility for training with companies, i.e. some vocational education and training (VET) is provided in schools and some by companies. Work-based learning (WBL) or work placement refers to learning through participation in, and/or observation of work, under the supervision of an employer. Vocational programmes including WBL typically lead to a recognised qualification, and involve a work placement with an employer that leads to the development of new skills. In programmes with longer periods of WBL students typically contribute with some productive work, whereas the amount of productive work performed by students in shorter WBL is limited. In Brazil, few VET students receive training in companies (see Chapter 1).

Learning in a workplace is an essential part of VET and yields benefits to students and employers. The benefits depend on both the length and quality of work placements and together these factors define how effective WBL is in developing the skills required in target jobs, and in transitioning people, particularly young people, into the labour market.

Workplaces provide a strong learning environment. WBL allows students to acquire practical skills on up-to-date equipment and under the supervision of trainers who are familiar with the most recent working methods and technologies. Rapidly changing technologies mean that equipment quickly becomes obsolete, and VET schools are sometimes unable to afford modern equipment. Workplace training will therefore often be more cost-effective, since it makes use of equipment already available in enterprises. In the workplace, students also develop key soft skills, such as dealing with customers, work discipline, teamwork, and problem-solving. Evidence indicates the growing labour market importance of soft skills (Deming and Kahn, 2017[1]) and suggests that many soft skills are more effectively learnt in workplaces than in classrooms (OECD, 2010[2]). Soft skills may be particularly lacking among disadvantaged youth, VET programmes may therefore facilitate the transition of disadvantaged young people from school to the labour market and boost their career options.

There is evidence that VET graduates who have experienced more WBL (such as apprentices) have stronger labour market outcomes, in terms of duration of job search, unemployment spells and wages, than those who choose another type of upper secondary education (van der Klaauw, van Vuuren and Berkhout, 2004[3])]. Evidence from European countries show that young people with an upper secondary VET qualification who gained work experience during their studies have higher employment rates than those without workplace exposure (OECD, 2020[4]). Overall, countries with a high share of youth in apprenticeships have lower rates of disconnected youth and youth experiencing a difficult transition to employment (Quintini and Manfredi, 2009[5]). This is important, as first labour market experiences have lasting consequences. Youth unemployment has long-term scarring effects with high costs for both individuals and society (Bell and Blanchflower, 2011[6]; Nilsen and Reiso, 2011[7]). However, evidence on long-term effects is more mixed. Some research studies argue that while vocational education and training leads, in the short term, to positive outcomes by facilitating labour market entry, this initial advantage disappears in the long term (Hanushek, Woessmann and Zhang, 2011[8]). Forster, Bol and van de Werfhorst (2016[9]) confirm that VET is associated with early career benefits, with the benefits being the largest in countries with strong apprenticeship systems. They show that only in some countries, the early career advantage associated with VET turns into a disadvantage later on. In others there is no clear evidence of a negative effect. Benefits associated with VET therefore depend on the content and organisation of the programme. The results of the studies discussed above should be treated with caution as they suffer from many limitations. They draw conclusions based on an analysis of cross-sectional data, which means that they were unable to separate the age, period, and cohort effects that all influence career trajectories. A more fundamental underlying difficulty is that academic and VET programmes often prepare for different careers (Kuczera, 2017[10]).

WBL is beneficial also to employers. WBL yields useful work for the employer, and is a means of recruitment. When students undertake useful work, it benefits the employer (Kuczera, 2017[10]; Walther,

Schweri and Wolter, 2005[11]; Mühlemann, 2016[12]). Longer-duration WBL allows employers to develop some firm-specific skills in their trainees/apprentices, as well as the broader but still occupation-specific skills that are formally required as part of the VET programme (e.g. the physics of electricity for electricians). Employers taking on apprentices or trainees can observe their performance during the work placement and recruit the best from among them. In Sweden, a study evaluating employer benefits shows that WBL of 20-40 weeks in total in school-based programmes lasting 3 years facilitates future recruitment and lowers its cost, and increases the skills and motivation of company staff, especially for those employees who supervise students (Höghielm, 2015[13]; Karlson and Persson, 2014[14]). Employers reported that students who carry out their traineeship in the third (last) year of the programme are more skilled and are therefore more productive than those in earlier parts of their programme (although benefits from the productive work of students are overall rather limited) (Karlson and Persson, 2014[14]).

WBL ensures VET provision matches labour market needs. Employer willingness to offer work-based learning is an indicator of their support for the associated vocational programme. Employers can influence the number and mix of places in VET through their willingness to offer workplace training. Even short work placements can serve to signal the skills needs of employers, while programmes which are more substantially reliant on WBL (including apprenticeships, but also vocational programmes with a large element of WBL) can also be more responsive to changing employer demand, as a substantial part of education and training is provided in the workplace. VET colleges and schools, on the contrary, may find it difficult to respond to rapidly changing demand, as new equipment is costly, teachers and trainers cannot be easily retrained, and programmes take some time to complete. As a result, in programmes dominated by school-based provision, with little or no WBL, the mix of provision may be biased towards the training that schools and colleges can easily provide, based on their existing equipment and teaching staff (as discussed in Chapter 2).

Lastly, the provision of training in workplaces can lower the cost of VET provision by schools and make the VET provision less dependent on schools' facilities. As discussed in the previous chapter, the planned rapid expansion of VET in Brazil will mean that schools will need to make substantial investments if they want to start providing or expand their current provision of VET programmes. WBL may make this easier and can also contribute to making the offer more relevant. Given these and other benefits of WBL, the planned expansion of VET in Brazil should be accompanied by an effort of making WBL a systematic part of VET programmes.

Designing effective work-based learning opportunities

The intensity of WBL differs strongly between types of VET programmes

Across countries, WBL ranges from short work experience opportunities, such as work shadowing, to programmes like apprenticeship that involve extensive training on employer premises. In some VET programmes, a mandatory WBL component represents an important element of the learning experience. Other VET programmes are more dependent on schools, with work-based learning being an optional and sometimes minor element. As shown in Chapter 1, in some countries, such as Switzerland, Latvia, Hungary, Germany and Denmark nearly all VET students are in programmes with a significant WBL element, while in Italy, Japan, Korea, Spain and Brazil, VET is provided mainly in schools. VET programmes with a large WBL element are generally referred to as apprenticeships, but can be found under many different names. Table 3.1 compares work-based learning in apprenticeship and school-based vocational programmes. Inevitably, it provides a simplified picture since VET programmes are very diverse.

Table 3.1. Comparison of WBL in apprenticeship and school-based programmes

	Apprenticeship	WBL in school-based VET
Is WBL mandatory?	- In most OECD countries WBL is mandatory (e.g. Denmark, Israel, Germany, Finland, Norway, Sweden, Switzerland, and the Netherlands). - In countries such as the United Kingdom and Australia, apprentices have to be employed but whether apprentices receive any training on-the-job in addition to their regular work is not always specified.	- Can be mandatory (e.g. Finland, the Netherlands, Sweden, Romania) - Or optional (e.g. Estonia, Korea)
What is its duration?	Apprentices spend most of their programme time in companies.	VET students spend most of their programme time in school
What is the status of participants?	- In many OECD countries, including Sweden, apprentices have a special apprentice contract. - In some countries such as Australia, England (UK), Canada apprentices are regular employees.	Typically participation in WBL does not involve any change in the status of VET students
Do participants receive a wage/allowance from the employer providing WBL?	-In the majority of OECD countries apprentices receive a wage. -in few countries such as Sweden employers are not obliged to pay a wage to apprentices	Most of the time VET students do not receive any compensation from the employer.
What is the role of social partners?	Often they have a decisive role on many aspects of the programme, and in particularly on elements of work places.	Typically an advisory role.

Source: Kuczera, M. and S. Jeon (2019[15]), *Vocational Education and Training in Sweden*, https://doi.org/10.1787/g2g9fac5-en.

A pathway with extensive WBL can be offered alongside school-based VET programmes

Extensive work-based learning is at the core of apprenticeship programmes. Many countries offer apprenticeships alongside school-based VET. In Austria, Germany, Denmark, the Netherlands, Norway and Switzerland the apprenticeship systems enrol a large proportion of the cohort. By contrast, in Sweden and Finland, the school-based path enrols the majority of VET students, and a relatively small share of students are in apprenticeships. For example in Sweden, enrolment in apprenticeship stands at around 11% of upper secondary VET (Kuczera and Jeon, 2019[15]).

In Brazil, apprenticeships (*aprendizagens*) exist but are not provided within the initial upper secondary VET. The practical component can be done simultaneously, in the middle, or at the end of the classroom-based training. Apprentices receive a minimum wage (although firms can pay more), work up to six hours a day (eight hours for those who have completed fundamental education), and have a special work contract of up to two years (OECD, 2014[16]). However, the number of apprenticeships is low. In 2012, there were only 260 000 apprentices (OECD, 2014[16]). While the reform aims to expand school-based VET, enriching the upper secondary VET offer with youth apprenticeships (as opposed to the adult apprenticeships which already exist in Brazil) would have many attractions. Some students may find applied forms of learning such as apprenticeships more engaging. VET expansion puts a lot of pressure on schools, many of which have limited experience with VET provision. Providing some VET programmes as apprenticeships would shift some responsibility for VET provision from schools to companies.

WBL typically represents at least 50% of the programme duration in apprenticeships, but the time-sequencing of on- and off-the-job education and training varies between different apprenticeship systems – sometimes involving one or two days a week in school or college as in most dual system apprenticeships, but sometimes in larger time chunks for the off-the-job component, for example in and Ireland. While some flexibility is often possible, the time sequencing of WBL is typically defined for apprenticeship programmes within the country. For example, in Norway most apprenticeships involve two years in school followed by two years in a company. This defined national pattern is very different from Sweden, where delivery of WBL is individually negotiated by the school.

Different populations or industries may prefer school-based VET over apprenticeship or vice versa: in the Netherlands, the school-based option is more popular with younger students, in sectors without an apprenticeship tradition, and in programmes leading to higher-level qualifications (ECBO, 2014[17]).

In Finland, vocational programmes in schools with shorter work placements are more popular among young people, while apprenticeships more often serve older students with some work experience (Stenstrom and Virolainen, 2014[18]). In Finland and the Netherlands students select themselves into different paths and a young person is free to choose an apprenticeship, and indeed some do so.

In some countries, different VET paths can lead to the same qualification. For example, in Sweden an upper secondary VET qualification in construction can be acquired through school-based VET for youth, through a youth apprenticeship or through adult VET. Other countries maintain similar arrangements. In the Netherlands, there are two vocational routes at upper secondary level leading to the same qualification: apprenticeships with on-the-job learning representing at least 60% of the programme duration, and school-based vocational programmes with mandatory work placements representing at least 20% of the programme duration (Smulders, Cox and Westerhuis, 2016[19]). Finland and Estonia also offer school-based VET and apprenticeship programmes leading to the same qualifications.

In some countries WBL in school-based VET is mandatory

Many countries recognise the value of WBL and make it a mandatory part of school based VET programmes (without the WBL component being as extensive as in apprenticeship programmes). For example, in Finland a work placement of at least six months is mandatory in upper secondary vocational programmes, and represents about 20% of the programme duration. The recent reform of the Finnish VET system further increased the role of learning in workplace. In the Netherlands, students in school-based VET have to spend at least 20% of their time in work placement with companies, with the average being 30% (Smulders, Cox and Westerhuis, 2016[19]). In Sweden, students in VET programmes lasting 3 years spent at least 15 weeks in work placements. But sometimes in school-based VET, work placements are optional. Israel, for example, has recently introduced an element of work experience in school-based VET that provides some students with the opportunity of observing real work during visits to workplaces, but the majority of VET students follow entirely school-based education (Kuczera, Bastianić and Field, 2018[20]).

WBL in school-based VET can be organised in different ways.

Arrangements for sequencing work placements are diverse. Work placements often take place in the middle of a school programme, and sometimes over a summer (when there is a natural break in a school-based programme). In other cases they are broken into multiple shorter periods of placement scattered throughout the programme, and sometimes right at the end of the programme. They may also be on a weekly basis, e.g. one half day a week. A number of competing objectives bear on the pattern. The arrangements need to be workable for employers. They may, for example, find it helpful to have extra pairs of hands at particularly busy times of the year. Work placements at the end of a vocational programme may allow employers to seamlessly retain, as full employees, the trainees that they prefer. Employers may also prefer to offer training at the end of the programme as students who are about the complete their VET studies are likely to be more mature and knowledgeable than students who just started on the programme.

WBL needs to be built into the vocational programme so as to be coherent with other parts of the programme. In Chile, for example, graduates of four year upper secondary VET have to spend the final four months of their programme in a work placement to obtain their VET certificate. But this placement is not integrated into the curriculum, quality assurance is patchy, and about half of the students do not complete their workplace training (Kis and Field, 2008[21]). WBL arrangements need also to be practical in terms of transport – it may be feasible to spend a few months with an employer in another part of the country, but not to travel there on a weekly basis. Box 3.1 sets out the arrangements in France.

Box 3.1. WBL in vocational programmes in France

Students preparing the professional upper secondary leaving certificate (*baccalauréat professionnel*), follow a three year programme that is predominantly school-based but must include 22 weeks of WBL. Students can participate in up to six work placements with each placement being a minimum of three weeks. There is a strong focus on integrating school-based learning within the job training periods. For instance, the qualification standards define which competences are to be acquired through the on-the-job training. Finding an employer for the student is the responsibility of the VET provider, and VET teachers have to identify and co-operate with companies that are most suitable to host their students. Students sign a training agreement (*convention de stage*) with the school and the employer, covering working time, health and safety or insurance but also the pedagogical aspects. Use of such documentation enables learners to observe, interact and reflect on what they have learnt and on the activities carried out during the training period. In addition, employers have a key role to play in the preparation phase before the training commences. Teaching staff together with employers define the practical aspects of the training period and determine the tasks the learner is required to carry out. To ensure learners are appropriately supported, support is provided by qualified mentors (Field, 2018[22]; European Commission, 2013[23]).

Source: European Commission (2013[23]), Work-based Learning in Europe: Practices and Policy Pointers. http://ec.europa.eu/dgs/education_culture/repository/education/policy/vocational-policy/doc/alliance/work-based-learning-in-europe_en.pdf; Field, S. (2018[22]), *The Missing Middle: Higher Technical Education in England. A Report to the Gatsby Foundation*, https://www.gatsby.org.uk/uploads/education/the-missing-middle-higher-technical-education-in-england.pdf.

Local partnerships are important to facilitate WBL

Often, the biggest challenge in the development of WBL is how to make it happen on the ground. The aspiration is to realise high quality WBL, fully engaging employers, delivered by well-prepared supervisors in supportive workplace environments, backed by an infrastructure of support from the schools, effective integration of WBL into a school-based programme, and a strong assessment framework. But bringing this aspiration to fruition is hugely challenging, particularly when implementation takes place against a background of weak employer engagement as a point of departure. One recent initiative to develop quality WBL in Latvia is described in Box 3.2.

Box 3.2. Development of WBL in school-based VET in Latvia

VET provision in Latvia is largely school-based, but since 2012, attempts have been made to develop and strengthen WBL as part of a broader VET reform that also sought to enhance the engagement of social partners. Reform efforts were guided by intensive consultations, championed by the Ministry of Education, and resulted in small-scale pilot interventions that applied a bottom-up approach in terms of design. Subsequently, based on the results of the three-year pilot, the WBL regulatory framework was adapted to allow for a further expansion of WBL provision. The implementation of WBL under the new framework started in 2016. Key elements are:

- A high priority given to WBL by national authorities (Ministry of Education and Science).
- A strong focus on stakeholder consultations, resulting in a shared vision and strong ownership of the reforms.
- A bottom-up pilot initiative preceded and informed the adaptation of the regulatory framework.

The reform was informed by international practices, particularly through strong co-operation with stakeholders from countries with well-established WBL mechanisms, such as Germany and Switzerland Extensive and focused use of EU financing (particularly from the European Social Fund) will support the implementation of the WBL reform from 2016 to 2023, and is expected to contribute to the participation of 11 000 students in WBL activities (Hoftijzer, Stronkowski and Rozenbaum, 2018[24]).

Source: Adapted from Hoftijzer, M., P. Stronkowski, and J. Rozenbaum. (2018[24]). Getting Out of School and into the Workplace: Strengthening Work-Based Learning in Upper Secondary Technical Education in Poland's Świętokrzyskie Region. International Development in Focus, http://dx.doi.org/10.1596/978-1-4648-1322-1.

One key precondition of effective WBL is local partnership between VET providers and the employers that provide the WBL. Such partnerships facilitate the initial offer of work placements, and the subsequent exchanges between VET providers and training employers that sustain the work placements and ensure that the placements fit effectively into the vocational programme.

In Australia, local industry-school partnerships have been increasingly recognised as a means of preparing students for employment (Flynn, Pillay and Watters, 2014[25]). Sometimes such partnerships may be underpinned by local arrangements which adapt the curricula in VET schools to the particular requirements of local employers. Likewise in Romania, within the frame of a nationally determined vocational qualification in the post-high schools, 15% of the curriculum is agreed locally in consultation with the social partners, subject to endorsement by the school inspectorate (Musset, 2014[26]).

Ideally, the responsibility for WBL should be shared between the school and social partners and their roles clearly defined. Looking at other countries, schools are responsible for education and training taking place on school premises, and often they share the responsibility for work placement with the company. For example, the school and the firm agree on the timing of WBL and the skills students should develop while with the company. In Sweden, local partnerships are set up by the school and often this responsibility falls on VET teachers. The VET teachers play an active role in finding companies that can provide work placement, are responsible for following the progress and development of the students at the workplace, and ensuring the apprenticeship agreement signed between the school, the workplace and the apprentice is observed by all the parties. However, reliance on individual teachers resulted in large variation in the quality of work-based learning in Sweden (Kuczera and Jeon, 2019[15]).

Individual VET schools may need support in developing their links with employers and their capacity to foster WBL. Sometimes this support may come from organised bodies, such as the SBB (the Foundation for Cooperation between Vocational Education, Training and the Labour Market) in the Netherlands (Box 3.4). It will often also be helpful for schools to find means to share their experiences. Systematic support for this form of sharing is provided in Finland in the shape of a manual, fostered by the Finnish National Board of Education (Box 3.3).

Depending on the place of the training different bodies evaluate the quality of training. Schools are evaluated by school inspectorates (or equivalent) while the social partners support the training provided by the employer. Social partners' tasks may involve certification of companies offering WBL according to agreed criteria and providing regular feedback to schools. Box 3.4 sets out how responsibilities for WBL are shared across different stakeholders in the Netherlands and the quality standards for companies providing WBL.

Box 3.3. Transferring innovative models of work-based learning in Finland

In August 2010, the Finnish National Board of Education with partners, published a manual for transferring innovative work-based learning practices, designed to help the many providers and stakeholders that are unsure of how to select the most appropriate model of WBL and how to transfer it to their context. The manual is targeted at a range of different audiences including VET providers, colleges, training centres and employers. The manual focuses on the process of transformation and innovation of VET programmes and WBL practices. The manual encourages VET providers to carry out a needs assessment, using measures such as a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis and peer review, to identify what needs improvement. It encourages providers to identify good practice among other providers by identifying those aspects that are not-context dependent and can be transferred. The manual also offers practical examples of how a VET school (as an illustration) can identify where improvements to WBL are required, how to plan to make such improvements and how to deal with changes that have been made (European Commission, 2013[23]).

Source: European Commission (2013[23]). Work-based Learning in Europe: Practices and Policy Pointers. http://ec.europa.eu/dgs/education_culture/repository/education/policy/vocational-policy/doc/alliance/work-based-learning-in-europe_en.pdf.

Box 3.4. Responsibility for WBL in the Netherlands: The role of bodies involving social partners

The Foundation for Cooperation between Vocational Education, Training and the Labour Market (SBB) (*Samenwerkingsorganisatie Beroepsonderwijs Bedrijfsleven*) in the Netherlands is organised in eight 'sector chambers' with social partners and representatives from the VET sector equally represented (ECBO, 2016[27]).

All companies offering work placements (both in apprenticeship and school-based programmes) have to be accredited and the accreditation has to be renewed every four years (ECBO, 2016[27]). One of the criteria for accreditation is the availability of a trained supervisor or tutor (*praktijkopleider*). Tutors must be qualified at least at the same level for which he/she is supervising work-based learning. Furthermore, tutors must be able to share their working expertise with students and be pedagogically competent (validated by diplomas/ certificates). In addition, the company has to offer sufficient training opportunities allowing students to develop the skills and competences prescribed in the curriculum. The company has to agree to co-operate with the VET school and workplace tutors have to contact the school on a regular basis. The work environment has to be safe for VET students.

SBB is responsible for maintaining the qualifications for secondary VET, for accreditation and coaching companies offering work placements, and collecting relevant labour market information. SBB also works on themes with a cross-regional and cross-sector focus (Smulders, Cox and Westerhuis, 2016[19])

VET schools co-ordinate workplace learning by developing or selecting workplace training course books, the planning of education and training offered in school, and facilitating sessions allowing students to reflect on their work experience. The school also keeps track of student progress by means of regular visits to the workplace ((ECBO, 2014[17]).

Source: Smulders, H., A. Cox and A. Westerhuis (2016[19]), *Netherlands: VET in Europe: Country Report 2016*, http://libserver.cedefop.europa.eu/vetelib/2016/2016_CR_NL.pdf.

Complements and alternatives to WBL exist

In addition to work-based learning in which VET students work in real workplace, various other strategies exist to have students develop practice-oriented skills in settings that are close to the workplace:

- Inter-company training centres: In some countries, they play an important role in delivering the curriculum in VET programmes. - they typically involve classroom-like settings for theoretical instruction and/or workshops for the development of practical skills. In practice, there are some differences across countries in how inter-company training centres are used. For example, in Germany, Norway and Switzerland they complement training in workplaces. They can be particularly helpful to support training in small and medium enterprises (SMEs) that often cannot provide a full range of skills to students. Students carrying out work placements with SMEs would receive some training in inter-company training centres. In Austria, they can complement training in workplaces or replace the work-based component for young people who cannot find a work placement (ideally, until they do find one). However, this arrangement is not optimal as students receiving their work placements uniquely in inter-company training centres do not reap the full benefits associated with work-based learning with an employer. Work placement in a training centre instead of a training with a firm can also be stigmatising. It sends a signal that the student was not able to secure a placement with a company.
- Dedicated workshops in firms: Some firms (especially larger ones) have dedicated workshops where they train apprentices before engaging them in the production process. Such arrangements are like school-based training workshops in that they are not part of productive work, but they are also like learning on-the-job as they enable students to learn from skilled workers in firms and using equipment in firms.
- Replicates of real workplaces in schools: These allow learners to reap some but not all of the benefits of work-based learning. For example in a restaurant run by a catering school, students cook and serve real customers, though they may not face the same pressures and expectations as in regular restaurants and they do not gain useful connections with potential employers. As above, replicates of real workplaces in schools targeting students who were unsuccessful in finding a work placement with a company may be perceived as a lower status option.

Supporting employers to engage in WBL

In Brazil, there are limited WBL opportunities in initial VET, but in programmes for adults, often run by social partners, WBL is more common. To develop WBL in initial VET Brazil may draw on experience of employers who already provide work placements to adult learners. Moreover, Brazil could learn from the experiences of countries with a well-developed WBL system. To inform Brazil on how other countries ensure the availability and quality of WBL, this section discusses various approaches helping employers to train. These approaches include financial incentives such as rewarding employers who train with additional funding or by making employers who do not train pay. Brazil has a long tradition of sectoral levy funds (related to Sistema S), whereby firms from the sector share the responsibility for training. It can be explored if training levy funds can be used to develop WBL in initial VET.

Employers' capacity to train can also be supported with measures other than financial ones. Provision of training requires additional efforts of the employer such as filling administrative duties, organising training on site, appointing and often training employees who are responsible for trainees. WBL can provide a unique and valuable learning experience to students but it is of little value if trainees are mainly allocated to unskilled tasks. Some unskilled work can be beneficial as it allows students to acquire soft skills, for example, understanding how to successfully complete an assigned task on time and how to become familiar with the work environment. However, students who undertake only unskilled work learn few new skills. To ensure that training in firms is beneficial to students, there are regulations defining the

competencies that students should develop, how work based learning should be delivered, qualifications of VET teachers in schools and trainers of students in companies. The regulations and WBL standards are more important in programmes with longer periods of WBL as that is where students spend most of their time. While regulations ensure WBL develops in students the required skills, they may impose additional burden on employers and discourage them from offering training to students. Helping employers to meet various requirements and to 'teach' them how to train may be necessary to expand WBL opportunities in Brazil.

Capacity building and support measures

Some employers may not feel able to train students, and some are better than others at conducting on-the-job training. Training capacity depends on the quality of trainers, training methods and training equipment. It is typically less well developed in small companies that do not have dedicated training arrangements. Small companies may therefore particularly benefit from measures designed to enhance training capacity, such as training for trainers, assistance with administrative work and sharing responsibility for training.

Training of trainers

Governments can enhance the training capacity of firms through a wide range of tools. Trainers in companies are typically company employees who are responsible for training of students. They know a lot about the occupation and the firm but may know less about how to train young people. To ensure trainers have the capacity to convey knowledge and develop skills in students, some countries require or encourage trainers to take up an appropriate training. Governments may also facilitate networking among employers to share knowledge and experience on how best to support and develop students and put their skills to use. Box 3.5 provides examples of how training for in-company trainers is regulated or provided in various OECD countries.

Box 3.5. Training of in-company trainers

Estonia

In Estonia, VET teachers are responsible for training of in-company trainers. They organise seminars and training courses, supervise and support in-company trainers. In the past, VET institutions could apply for additional funding to develop training of trainers. The purpose of the training is to raise the quality of supervision during work placement and the efficiency of such training. The course is between 8 to 40 academic hours long and participants receive a certificate. Training topics are about preparing, administering and evaluating work practice, and include for example didactics, supervision and training provision; curriculum objectives and assessment principles; work practice and supervision for special education needs students (Estonian Ministry of Education and Research, 2017[28])

Switzerland

In Switzerland, trainers at companies providing apprenticeships have to have a special qualification, that is awarded upon attending 100 hours of training in pedagogy, VET law, VET system knowledge, and problem solving methods for adolescents. VET trainers for intercompany courses have to complete 600 hours of pedagogy preparation and there are also special requirement for examiners (Hoeckel, Field and Grubb, 2009[29]). In addition to formal requirements, Switzerland provides in the QualiCarte a checklist of 28 quality criteria that are used by companies for self-assessment (OECD, 2010[2]).

Norway

The Norwegian Directorate for Education offers free resources for apprentice instructors on their website, including short movies showing how instruction can be carried in practice (Norwegian Directorate for Education and Training, 2011[30]).

England (United Kingdom)

Within the English context, a guide prepared by the Chartered Institute of Personnel and Development (CIPD) offers a range of advice to employers on best practice in mentoring and developing apprentices – but it is almost entirely voluntary (CIPD, 2021[31]).

Companies working together to provide training

To support employers that on their own would not be able to deliver WBL, many countries have arrangements that allow employers to share responsibility for it. Examples discussed below are mainly about apprenticeships but they can be easily transposed in the context of WBL of shorter duration. For example, in Denmark, small companies can jointly provide part or all of an apprenticeship (Poulsen and Eberhardt, 2016). In Germany "apprenticeship sharing" includes the following models (Poulsen and Eberhardt, 2016):

- Lead enterprise with partner enterprise model: the lead enterprise bears the overall responsibility for training, but parts of the training are conducted in various partner enterprises.
- "Training consortium" model: several small enterprises work together and take on trainees.
- "Training association" model: the individual enterprises establish an organisation for the purpose of the training that takes over the organisational tasks (contracts, etc.), while the master enterprises offer the training. The organs of the association are the general meeting and the honorary committee. A statute regulates rights and obligations of the members.

In Austria, companies that cannot fulfil certain standards (for instance because they are too small or too specialised to provide their apprentices with required training) may form training alliances (*Ausbildungsverbünde*) to share apprentices. Alliances of training firms are supervised at the state level by the Apprenticeship Offices (*Lehrlingsstellen*) appointed by Economic Chambers. The Economic Chambers help to find partners for firms willing to create new training alliances. Lachmayr and Dornmayr (2008) show that training alliances help to improve the quality of apprenticeship provision. In 2008, at least 5 000 training firms, or 15 000 apprentices, were organised in training alliances (estimation in Lachmayr and Dornmayr, 2008 based on Hoeckel, 2010). Group training organisations (GTOs) in Australia employ apprentices and hire them out to host employers, sometimes focusing on a particular industry or region. Their tasks include: selecting apprentices adapted to the needs of employers; arranging and monitoring training both on and-off-the job; taking care of administrative duties; and ensuring that apprentices receive a broad range of training experience, sometimes by rotating them to different firms.

Small companies may particularly benefit from these measures as they are less able to take advantage from the economies of scale that can reduce the unit cost of apprenticeship training. Such economies are realised when, for example, a trained instructor provides training to a few students at the same time, or the company bears the fixed cost of understanding the administrative and other requirements associated with apprenticeship. Small companies may also be unable to train for the full range of skills required by a specific qualification, which is particularly important in apprenticeships. Governments can support small employers, either through financial incentives targeted at small firms, or by setting up mechanisms that allow smaller employers to work together to gain some economies of scale in training provision.

Financial incentives

Financial incentives funded with general public expenditure: Tax breaks and subsidies

The provision of WBL can also be facilitated by reducing the associated financial burden on employers. Financial incentives for companies to offer training can be funded through general public expenditure, and therefore come from taxpayers, as: 1) a reduction in the tax base or tax due by companies providing apprenticeships; or 2) a subsidy to firms with apprentices. Existing incentives in OECD countries are mainly targeted at companies providing apprenticeships as they incur a much higher cost than companies providing shorter work placements for students. Some examples include:

- In Austria, tax incentives were abolished in 2008 and replaced by direct subsidies for apprenticeships. The Ministry of Economics and Labour considered the tax incentive scheme failed to target companies that would benefit most from additional support for apprenticeships (CEDEFOP, 2011[32]). Tax incentives have been replaced by a grant based system. The amount of grant received by the employer depends on the year of apprenticeship, with the subsidy decreasing with each year of apprenticeship (in the first year the employer receives an equivalent of three gross apprentice wages per apprentice, in the second year an equivalent of two gross apprentice wages, and in the third year an equivalent of one gross apprentice wage). Extra support is available to employers for the provision of additional training and for the training of instructors, and to employers whose apprentices excel on their final assessment or face learning difficulties. In addition, grants are available for apprenticeships that support the equal access of men and women to traditionally non-male and non-female professions (Federal Ministry of Science, 2014[33]) (Casey, 2013[34]).
- In France, all enterprises employing apprentices for at least one month can benefit from a tax credit. During the COVID-19 crisis additional exceptional subsidies have been given to employers recruiting a first-year apprentice. For large firms, these exceptional subsidies were conditional on hiring a certain number of apprentices.
- In Australia, employers that engage an apprentice or trainees can access a range of incentives through the Australian Apprenticeship Incentives Program. This includes wage subsidies of up to 50% of wages paid to apprentices and trainees during the COVID-19 pandemic, which aim to ensure workforce training continues during a period of considerable economic uncertainty.
- In the Netherlands, tax deductions were abolished in 2014 and replaced with subsidies (Casey, 2013[34]).

Financial incentives: Transfers from schools to companies

Provision of training in companies can reduce the cost of training delivered by schools, i.e. training that otherwise would be provided by schools takes place in companies. In recognition of the role of employers in education and training of young people, some countries transfer to employers providing WBL opportunities funds that would otherwise be channelled to schools. In Norway, upper secondary programmes provided in schools lasts three years, except for apprenticeship, where students spend the first two years in schools and the last two years in companies. Public authorities in Norway fund three years of upper secondary education. In the case of apprenticeship, it is the employer who receives one-third of the dedicated funding rather than the school. This model allocates resources from schools to firms without increasing the total cost of provision. It is thus a special type of subsidy based on the cost of VET student education.

In countries without a tradition of employer engagement in VET, schools play more active role in initiating and organising work placements and sometimes also in funding. In Estonia, the school designs a plan for apprenticeship study and may also design an individualised curriculum for the apprentice. In terms of

funding, the school covers the training at school, supervisors' training and salary for the school supervisor. Based on the apprenticeship contract between the school, the company and the student, the school can transfer up to 50% of the cost of the study place to the enterprise to cover the salary cost of workplace supervisors (Estonian Ministry of Education and Research, 2017[28])

In Sweden, similarly to Estonia, only recently work-based learning has been promoted and expanded in upper secondary VET. Schools play an important role in arranging and supervising work placements with companies. Upper secondary schools providing apprenticeship can also apply for a state grant that is partly earmarked for the employer taking on apprentices. The amount of grant for employers is higher if trainers (company employees working with students) in the company have participated in the dedicated training programmes. The subsidy is therefore partially designed to promote training of company trainers (Ministry of Education and Research Sweden, 2018[35]).

Financial incentives: Training levy funds

Another option through which countries can encourage firms to set aside resources for training is by using training levies/funds, i.e. employers pay a (compulsory or voluntary) contribution to a pooled fund out of which training is financed. These levies or funds can either be mandated by law or imposed on certain sectors through collective agreements. Many OECD countries – especially in Europe – and some partner economies have training levies in place. For example, in the Danish and French levy system, all employers share the costs of apprenticeships. In Austria, Germany and Switzerland, levies are collected by sector; while in England, only large employers contribute. The size of employers' contributions varies significantly across countries, and sometimes even within countries when they are differentiated by sectors, firms size, or fund. Typically such a levy corresponds to a certain percentage of turnover or payroll (as is the case also in Brazil, see discussion below). Under levy schemes, funds from contributions may be used to support training in general and in VET for youth in particular. Training levies/funds can be designed in three different ways: i) revenue-generating schemes used to finance general training programmes; ii) levy-grant schemes returning funds to firms so that they can finance workers' training; and iii) levy-exemption schemes reducing the cost of training to zero when firms train, up to the amount of the tax liability (OECD, 2019[36]).

Levy training funds are often set up to correct for market failures, by supporting training that is in the collective interest of employers and society. For example, employers may not provide training because they fear that workers they train will be recruited by other employers. Employers benefit from a well-trained pool of potential recruits, and should therefore contribute to the cost of the training through a levy (rather than, or in addition to, contributions from general taxation). This point may apply to the training of current workforce and future recruits (Kuczera, Field and Windisch, 2016[37])). This last group includes:

- Young labour market entrants receiving initial vocational education and training in schools and sometimes in apprenticeships. Some labour market levies, particularly in Latin America are primarily focused on this group, and have been used to support initial vocational training systems.
- Adults in need of new skills, including the unemployed and those seeking career change**.** While the individuals concerned will benefit from the training, they can often not afford the full costs, and, on equity grounds and in the collective economic interest, their training should be funded.

Levy funds may also aim to reduce inequalities by targeting training of disadvantaged populations, or support small employers, including in the informal economy (Palmer, forthcoming[38]).

Levy training funds can span across all sectors at the national and regional level. They can also be set by employers up to address skills needs of a sector (or a few sectors). Employers have particular incentives to set up a sectoral levy fund when the cost of training is high, the labour market is tight and it is difficult to find skilled employees on the external market, and employers face a high risk that their fully trained employees will be poached by other employers.

Sectoral training funds are common in a number of European countries, including for example in Austria, Belgium (about 10 sectors), Denmark (10-15), Germany, Iceland (2-4), Italy (19), Luxembourg, Netherlands (about 100), Switzerland (multiple funds) and the United Kingdom (3). In Latin America, Brazil has nine sectoral training funds as part of its S-system, while Peru has two. South Africa has 21 sector training funds and is the only country in sub-Saharan Africa with this type of fund (the majority are national training funds). Sector training funds are also present in Australia (3 construction sector training funds in different regions of Australia) and Malaysia (Palmer, forthcoming[38]).

Brazil has well established sectoral levy funds that have been in place since 1940. Similarly to some other Latin American countries (INA in Costa Rica, INATEC in Nicaragua, SNPP in Paraguay, SENATI in Peru) sectoral associations established their own training facilities to train their workers and future recruits. Employer perception of the levy training funds in Brazil is positive. For example, employers consider that their employees educated by SENAC perform well at work; and 95% of Brazilian companies that hired people trained by SENAI were satisfied (Palmer, forthcoming[38]). SENAC and SENAI also conduct studies to evaluate the effect of training on employability of their graduates. More than 90% of SENAC graduates feel prepared to perform their activities after completing the course and 80% have improved their career options; 73% of people trained through SENAI found a job within one year of training completion (Palmer, forthcoming[38]). Given that the existing training levy funds seem to function relatively well, professional organisations running them should be included in the discussions on how to expand and fund provision of initial VET.

Overall, the effectivenss of a levy fund and employers's support of the fund depends on how it is designed, managed and evalued. Employers tend to be more sceptical of universal levy schemes, often perceived by employers as a tax (Palmer, forthcoming[38]; Müller and Behringer, 2012[39]). Levy training funds receive limited support from employers when the funds are diverted to purposes other than training, and when employers (and in some cases trade unions) have little control over how the money is spent. Palmer (forthcoming[38]) argues that some cross-subsidisation of non-levy payers can be beneficial (e.g. funding of training in small enterprises). However, too much cross-subsidisation may result in disengagement of the levy paying companies with the scheme. For example, levy payers may consider that their contribution is wasted if funds are diverted to low quality initial VET where the provision is driven by school capacity (available equipment and VET teachers) rather than employers' needs.

Challenges associated with financial incentives

As argued by (Palmer, forthcoming[38]) evidence on training levy funds is too scarce to draw conclusions on their effectiveness. Available evaluations on financial incentives for apprenticeships point to their modest impact on provision of apprenticeship training by employers. Westergaard and Rasmussen (1999[40]) found a significant positive effect of public subsidies in Danish firms, but only in manufacturing, office and retailing. In Austria, subsidies appear to have had a limited impact (Wacker, 2007[41]). In Switzerland (where there are no subsidies of this type), a simulation exercise suggested that subsidies would have an impact on firms not involved in apprenticeships, but would have no effect on the supply of apprenticeship training in firms that train already (Mühlemann, 2016[12]). An evaluation of the Australian scheme shows that the subsidy had only a small impact on the decision of employers to train. This was mainly because the subsidy covered only a small part of the company cost of offering an apprenticeship (Deloitte, 2012[42]). Another Australian study evaluates the impact of the withdrawal of a subsidy to employers, showing that it had no effect on employers using apprenticeships as a recruitment tool (Pfeifer, 2016[43]). However, the withdrawal of the subsidy led to a decline in apprenticeship provision in sectors where employers could not count on the long-term benefits of apprenticeships. These employers were not able to break even by the end of the programme without the subsidy. Muehlemann (2016[12]) argues that since in Australia the reduction in apprenticeships was particularly strong in the service sector, where the quality of apprenticeship provided was often low (as measured by graduation rates and employment outcomes), the subsidy may therefore have been promoting apprenticeships that were of limited value to

individuals. The overall implication is that financial subsidies will typically involve a significant amount of "deadweight", i.e. training that employers would have funded anyway, even in the absence of the relevant incentive. Some element of deadweight is inevitable; usually the objective is to minimise its scale so that incentives increase the number of trainees. A further risk is that financial incentives may succeed in engaging employers who are primarily interested in the subsidy, rather than in training. Countries where employers have not been traditionally involved in training of students are more likely to subsidise employers providing work placements.

Large employers tend to benefit disproportionately from financial incentives (Müller and Behringer, 2012[39]). For employers to benefit from the subsidy they need to be informed about the scheme, e.g. on the existence of the measures, the criteria of eligibility, and procedures of application. Access to accurate and timely information may be easier for larger employers that often have training departments and staff dedicated to training issues. The provision of training and the use of subsidies also involve costs. The cost of these procedures may be less significant for bigger enterprises, relative to their overall training costs. Small enterprises may lack the capacity to determine training needs, plan accordingly and file applications for cost reimbursement or grants. It is therefore important to assist small companies with access to and the processing of available funding in parallel to providing financial incentives for training.

Conclusions

Expansion of VET in Brazil should be accompanied by an effort of making WBL a systematic part of VET programmes given the benefits associated with WBL. Provision of training in companies is more cost effective and can also contribute to making the VET offer more relevant to labour market needs. Helping employers to meet various requirements and to 'teach' them how to train students may be necessary to expand WBL opportunities in Brazil. Supporting the training of trainers and encouraging employers to work together are some of the solutions.

To develop WBL in initial VET, Brazil may draw on experience of employers who already provide work placements to adult learners. In Brazil, there are limited WBL opportunities in initial VET, but in programmes for adults, often run by social partners as part of Sistema S, WBL is more common. Brazil has well established sectoral training levy funds. It can be explored if and how this experience can be used to promote WBL in upper secondary VET.

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