

Chapter 3. Enhancing work-based learning in the vocational education and training system in Sweden

Chapter 3 focuses on work-based learning (WBL) in apprenticeship programmes and WBL as a component of the upper-secondary VET programmes provided mainly in schools. In recent years, Sweden has successfully increased the provision of WBL in VET. Chapter 3 shows that Sweden could further improve the quality of workplace experience and increase benefits associated with WBL by vesting social partners with more responsibility over WBL. Finally, it discusses how to increase the attractiveness of apprenticeships to employers and students.

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

Introduction: Background

The chapter looks at work-based learning (WBL) in two contexts: full apprenticeship programmes and as a component of the upper-secondary vocational education and training (VET) programmes provided mainly in schools. In Sweden, WBL is mandatory in upper-secondary National VET Programmes and students choosing VET can opt for an apprenticeship path. These are strong elements of the Swedish VET system. This chapter argues that Sweden can further improve the quality of workplace experience by shifting more responsibility over some of its aspects to social partners.

This introduction first defines work-based learning (WBL), and then explains its potential benefits.

WBL is defined

Work-based learning (WBL) 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 structured mix of:

- WBL: work placement with an employer that leads to the development of new skills, and that can involve productive work.
- Off-the-job education and training at school, college or other educational and training provider involving no or limited productive work.

Reasons for promoting WBL

There is wide recognition of the value of WBL

Programmes including work placements have been widely recognised as an effective means of equipping people with both generic and job relevant skills, by combining learning and work (OECD, 2010_[1]). 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 trainers familiar with the most recent working methods and technologies. Rapidly changing technologies mean that equipment quickly becomes obsolete, and VET training providers 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. Much evidence indicates the growing labour market importance of soft skills (Deming and Kahn, 2018_[2]) and suggests that many soft skills are more effectively learnt in workplaces than in classrooms (OECD, 2010_[1]).

WBL improves school-to-work transition

There is some 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 (Bratberg and Nilsen, 1998^[3]; van der Klaauw, van Vuuren and Berkhout, 2004^[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]). 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]).

Evidence on long-term effect 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, n.d.^[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 two studies 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 to employers

WBL yields useful work for the employer, and is a means of recruitment. When students undertake useful work, it benefits the employer (Walther, Schweri and Wolter, 2005^[11]; Mühlemann, 2017^[12]; Kuczera, 2017^[10]). 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.

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 work place. 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 changed or 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.

WBL in the Swedish VET system

In Sweden, WBL is offered in different ways in different VET programmes

Sweden offers a variety of VET programmes at different levels and targeting different populations. In most cases, WBL is mandatory (Table 3.1). There is also a form of private sector apprenticeship, run by industrial sectors and provided outside the formal education system: in some trades, such as for electricians, new employees pursue this form of apprenticeship, managed by their employer, before becoming fully qualified workers.

Table 3.1. An overview of WBL in VET programmes in Sweden

VET programme	WBL	
Introductory programmes	Vocational Introduction	WBL is compulsory but its extent may vary. May be offered as an apprenticeship.
	Programme Oriented Option*	WBL is compulsory in programmes preparing for school-based national VET programmes or apprenticeship (for youth), but its extent may vary. May be offered as an apprenticeship
	Individual Alternative	WBL may be offered and its extent may vary. May be offered as an apprenticeship.
School-based National VET Programmes (3 years)	WBL is mandatory. It covers at least 15 weeks corresponding roughly to 13% of the programme time.	
Apprenticeship (for youth) (3 years)	WBL is mandatory. At least 50% of the programme time is spent in the workplace.	
School-based VET and apprenticeship for adults	WBL is optional within school-based VET. However, to obtain state grants, schools must provide WBL representing: 15% of the study time in school-based VET and 70% of the study time in apprenticeships.	
School-based VET for students with learning disabilities (4 years)	WBL is mandatory. Minimum of 22 weeks of WBL.	
Apprenticeship for students with learning disabilities (4 years)	WBL is mandatory. At least 50% of the programme time is spent in the work place.	
Higher VET	WBL is mandatory in programmes lasting two years and should represent at least 25% of the programme time. WBL is not mandatory in one-year programmes.	

Note: * This programme has recently been reformed. Previously it prepared only for entry to VET-programmes. The new programme will prepare for all National Programmes. Changes are introduced for students who start in the third quarter of 2019.

Source: Ministry of Education (2018_[13]), *Review of VET in Sweden. Background Report*; Skolverket and ReferNet Sweden (2016_[14]), “Vocational education and training in Europe – Sweden”, *Cedefop ReferNet VET in Europe Reports*, https://cumulus.cedefop.europa.eu/files/vetelib/2016/2016_CR_SE.pdf.

Most upper-secondary VET students receive WBL

A survey of school principals and teachers showed that in 2011/12 - 2013/14, only 4% of all upper-secondary VET students failed to receive the amount of WBL formally required by the regulations. Two-thirds of the cohort received 15 weeks and around 30% received WBL of 17-49 weeks. Approximately 5% carried out workplace training lasting at least 50 weeks, corresponding to students following the apprenticeship route (Skolverket, 2016_[15]).

The VET school is responsible for WBL

The Swedish VET system is highly decentralised, with individual schools having the main responsibility for education and training provision, including the organisation and management of WBL both in school-based and apprenticeship programmes. Schools are expected to ensure in both school-based VET and apprenticeship that the WBL component is in line with the learning objectives defined in the upper-secondary VET curriculum. Schools are free to organise the time-sequencing of WBL to fit the needs of the learner and local employers. For apprenticeship training, WBL could for example be organised over a couple of days per week, every second week during the entire programme or in a block at the end of the programme (Ministry of Education, 2018_[13]). In apprenticeship programmes, a learning agreement signed by the school, the employer and the apprentice defines which parts of the curriculum will be delivered in the workplace and which in school. WBL is optional in VET for adults, presumably reflecting the fact that many adults already have extensive work experience (Ministry of Education, 2018_[13]).

A series of incentives seek to promote training of trainers

Every work place offering WBL as part of an upper-secondary VET programme must have a designated trainer who supports and monitors the student's progress during the WBL period. There are no firm training requirements for such designated trainers, but state grants are channelled through schools to provide incentives (max SEK 10 000/EUR 960 per year) to employers to train trainers. Grants are also available to social partners providing training for trainers (Box 3.1).

Box 3.1. Online training for workplace trainers in Sweden

This programme is designed for current and prospective designated trainers in enterprises offering WBL, as part of VET programmes, and for VET teachers in schools. It involves the equivalent of two days coursework, and includes four introductory general modules and a supplementary module that covers apprenticeship. Each module contains small film scenes followed by interactive exercises. All theoretical content is presented as animated short films (sketch notes). It can be followed online in a flexible way, whenever and wherever it suits the trainer, and has been developed for different devices, including smartphones and tablet computers. The training is free of charge to participants and is funded by the National Agency for Education. As of November 2018, more than 28 000 employer-based trainers had completed the programme, as well as 3 700 VET teachers (about half of the total).

Source: Ministry of Education (2018_[13]), *Review of VET in Sweden. Background Report.*

Government grants support employers and schools providing apprenticeships

Upper-secondary VET schools can apply for a grant that is partly earmarked for the employer taking on an apprentice. The school can receive up to SEK 5 000 per student per year to develop apprenticeship education, while the employer can receive up to SEK 32 500 per apprentice per year to be spent at the discretion of the employer, plus an

extra SEK 10 000 if the apprentice trainer has participated in a training programme (as described above), and SEK 500 per student and per year if the apprentice is employed, and receives a wage, according to the Law on Apprenticeship Employment. In 2017, grants to employers amounted to SEK 404 million out of which SEK 31 million were provided for the training of trainers (Ministry of Education, 2018_[13]). There are also grants to the provider available for adult apprentices if they spend at least 70% of their time in the workplace (Ministry of Education, 2018_[13]).

Financial incentives are offered to youth apprentices

In Sweden, all students under the age of 20 enrolled in education receive a monthly study allowance of SEK 1 250. In addition, young apprentices receive a monthly supplement of a similar amount that is meant to cover the extra costs associated with this form of VET. The supplement is not available to apprentices receiving a wage under the Law on Apprenticeship Employment (Ministry of Education, 2018_[13]).

Public funding supports adults in VET

Adults lacking upper-secondary qualifications who wish to return to education pay no tuition and are eligible for financial support, which depends on the age and life situation of the person, and the type and level of studies. A person in full time education can receive an allowance of up to SEK 723 per week and a loan of at most SEK 2 720 per week. An unemployed person aged between 25 and 56, enrolled in upper-secondary VET to increase the chance of getting a job can receive an additional allowance (*studiestartsstöd*) (Ministry of Education, 2018_[13]).

WBL in a cross-country perspective

The use of WBL varies

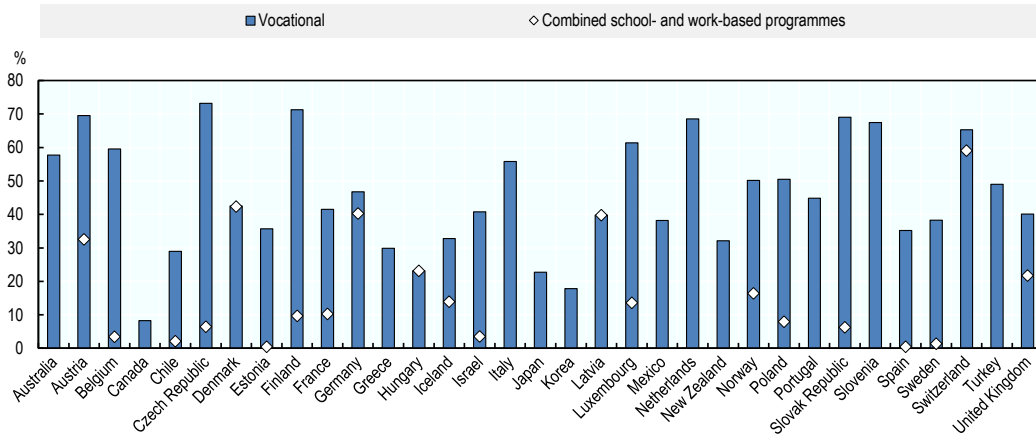
Across countries, WBL ranges from short work experience opportunities such as work shadowing to programmes like apprenticeship that involve extensive training on employer premises. In some VET programmes, a mandatory WBL component represents an important element of the learning experience. Other VET programmes are more dependent on schools, with practical elements delivered in school workshops and work-based learning being an optional and sometimes minor element. Figure 3.1 shows that in some countries, such as Switzerland, Latvia, Hungary, Germany and Denmark nearly all VET students receive WBL, while in Italy, Japan, Korea and Spain, VET is provided mainly in schools. The near-zero share of VET students in Sweden receiving WBL corresponding to representing at least 25% of the curriculum, as shown in Figure 3.1, may be underestimated. According to the national data in 2015, 3% of upper-secondary students in Sweden were in apprenticeship, with at least half of their time spent in WBL (Skolverket, 2016_[15]). The figure of 3% represents a conservative estimate as some students in school-based VET also receive a work-placement representing more than 25% of the curriculum, and therefore meet the definition of combined school and work-based programmes (Skolverket, 2016_[16]).

Comparison of WBL across selected countries

Table 3.2 compares work-based learning in apprenticeship and school-based vocational programmes. Inevitably, it provides a simplified picture since VET programmes are very diverse.

Figure 3.1. Share of all upper-secondary students in vocational programmes, and share of all upper secondary students in vocational programmes combining school and work-based learning

2015, all ages



Note: in Australia, Canada, Greece, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Portugal, Slovenia and Turkey information on combined programmes is missing or the category does not apply. Programmes combining school and work-based learning are defined as those in which 25%-90% of the curriculum is delivered in the work environment.

Source: OECD (2017, p. 254_[17]), *Education at a Glance 2017. OECD Indicators*, <https://doi.org/10.1787/eag-2017-en>.

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Table 3.2. Comparison of WBL in apprenticeship and school-based programmes

	Apprenticeship*	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 (United Kingdom) and 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 undertaken within workplaces.	Typically an advisory role.

Note: For a more detailed comparison of apprenticeship programmes see Annex Table 3.A.1 and Annex Table 3.A.2.

WBL in apprenticeships – a cross country comparison

Apprenticeship involves extensive WBL

Extensive work-based learning is at the core of apprenticeship programmes where working with employers typically represents at least 50% of the programme duration. Austria, Germany, Denmark, the Netherlands, Norway and Switzerland maintain apprenticeship systems enrolling a large proportion of the cohort. England is currently going through an ambitious reform that should lead to a significant expansion of apprenticeships, including the development of degree apprenticeships in partnership with universities. In Sweden, enrolment in apprenticeship stands at around 11% of upper-secondary VET students choosing this path, with most opting for school-based provision (Skolverket, 2018_[18]).

The time sequencing of WBL varies

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 Canada 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.

Apprenticeships can serve different populations

Some apprenticeship systems serve primarily to transition young people from school to work. In Switzerland, for example, in 2014/15 three quarters (76%) of apprentices were under 20 (Mühlemann, forthcoming_[19]). Other countries have a more even mix of adult and youth apprentices, with some of the adults already having significant work experience. In Germany, in 2014 around 56% of apprentices were under 20, and a further 20% were between 21 and 23 years old, the older apprentices being a mix of those who complete the academic upper secondary *Abitur* before entering apprenticeship and others who have often spent some time in pre-apprenticeship programmes. In Australia in the same year, apprentices under 20 and those aged 20-25 represented 41% and 36% of all apprentices respectively (Australian Bureau of Statistics, 2016_[20]). In 2010 and 2011, 20 year-olds and older represented more than half of all apprentices in Finland (Stenstrom and Virolainen 2014).

Sometimes apprenticeship is preceded by pre-apprenticeship programmes

In some cases, a full apprenticeship is preceded by a pre-apprenticeship programme, which can involve general education, as well as, quite often, work placements. Such programmes are sometimes intended to serve disadvantaged youths who would not be able to enter or complete an apprenticeship without targeted preparation [see (Kis, 2016_[21]) and Chapter 6]. In Sweden, the Introductory Programmes serve a similar purpose, preparing for National VET Upper-secondary Programmes (school-based or apprenticeship) and may involve WBL.

WBL in school-based VET – a cross country comparison

In many countries, WBL is a mandatory part of VET programmes

In many countries, as in Sweden, school-based VET includes mandatory work placements with employers. Such placements are typically shorter than in apprenticeship programmes and usually do not exceed 50% of the programme. 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 ongoing reform of the Finnish VET intends to further increase the role of learning in workplace (Ollikainen, 2017_[22]). 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_[23]).

Elsewhere, WBL is optional

But sometimes in school-based VET, work placements are optional. Israel 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, Bastinic and Field, 2018_[24]).

School-based practical training is also sometimes offered to those who cannot find apprenticeships

While apprenticeship has many strengths, finding a sufficient number of apprenticeship places can be a challenge. Denmark addressed such shortages by providing VET students, who were unsuccessful in finding a training place with an employer, with school-based practical training (*skolepraktik*). But outcomes, reflected in employment rates, from this programme are worse than outcomes from apprenticeship (Helms Jørgensen, 2014_[25]), a finding that may partly reflect the characteristics of students who were unsuccessful in finding an apprenticeship. Also, many students who failed to obtain a work placement drop out rather than attend the school-based compensatory path (Helms Jørgensen, 2014_[25]). The school-based option is held in lower esteem by both students and employers than apprenticeship, probably because it is seen as a path for those who failed to secure training with employers in the first place (Helms Jørgensen, 2014_[25]).

Apprenticeship and school-based VET can lead to the same qualification

In Sweden, different VET paths can lead to the same qualification. For example, an upper-secondary VET qualification in construction can be acquired through school-based VET for youth, through a youth apprenticeship or through adult VET. This means that a young person who dropped out from an upper-secondary VET programme in Sweden should be able to complete it through the VET for adults route. 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 time 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_[23]). Finland and Estonia also offer school-based VET and apprenticeship programmes leading to the same qualifications. Different population groups or industries may prefer one or other route: for example 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_[26]). 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_[27]).

In Sweden, strengthening WBL in school-based VET and in apprenticeships may require different measures

Apprenticeship and school-based VET are structured differently. In apprenticeships, students spend most of their time with the employer, where they learn most of the skills required for an occupation. WBL as a component in school-based VET can also contribute to the development of occupation-specific competencies, but to a lesser extent. Typically, its aim is to familiarise students with the work environment and provide specific skills required in an occupation which are difficult to teach in a classroom or school workshop setting. The employer costs involved in offering shorter work placements are different from those in apprenticeships, with a smaller administrative burden, usually no wage costs and fewer demands on the time of the firm's employees. The benefits of shorter WBL to employers are also different than those associated with apprenticeships.

Issues addressed in this chapter

In what follows, the first two challenges, and connected policy options, as set out below, apply to both WBL in school-based VET and apprenticeships. The third challenge is specific to apprenticeships.

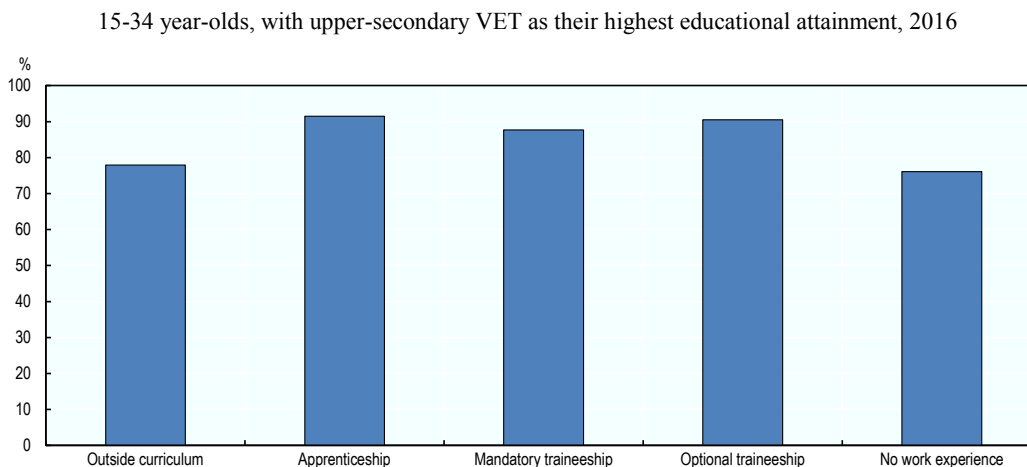
The challenge 3.1: Quality of WBL across VET schools varies

WBL yields benefits to employers and students in Sweden but the benefits could be strengthened

The benefits of work-based learning to students and employers in Sweden could be even greater if the social partners were engaged more fully, and more consistently, and if the quality of WBL was systematically assured. Evidence on the existing benefits associated with WBL in Sweden are set out below:

- *WBL provides a unique learning environment.* A survey of upper-secondary VET students revealed that young people regarded the training received in the work placement as of higher quality than the practical training received in school (Statistics Sweden, 2015_[28]).
- *WBL facilitates the transition from school to work.* Recent Labour Force Survey evidence (Eurostat, 2018_[29]) shows that in Sweden those who graduated from an upper-secondary VET including WBL are less likely to be unemployed than those who did not receive WBL, as well as in comparison with those who worked in a job unrelated to their training programme, while studying (Figure 3.2). This suggests that WBL relevant to the area of study and integrated into the curriculum may facilitate the transition from school to skilled employment.

Figure 3.2. Employment rates among upper-secondary VET graduates in Sweden, by type of WBL



Source: Adapted from Eurostat (2018^[29]), *Employment and Unemployment (LFS) Data* (database), <http://ec.europa.eu/eurostat/web/lfs/data/database>.

StatLink  <http://dx.doi.org/10.1787/888933927514>

- *WBL facilitates recruitment and increases motivation among company staff.* A study evaluating the employer benefits of WBL in school-based programmes (20-40 weeks in total) shows that it facilitates and reduces the costs of future recruitment and increases the skills and motivation of company staff, especially for those employees who supervise students (Höghielm, 2015^[30]; Karlson and Persson, 2014^[31]). Employers reported that students typically contribute productive work while in the workplace with students who carry out their placement in the third (last) year of the programme being more skilled and therefore more productive than those in earlier parts of their programme. The study shows, however, that benefits from the productive work of students carried out WBL of 20-40 weeks in total were overall rather limited (Karlson and Persson, 2014^[31]).

But the quality of work placements is not systematically assessed...

WBL is nearly universal in Swedish upper-secondary VET, and is seen as beneficial both by students and employers. These are real strengths, but there is evidence that WBL quality is variable. In addition, learning in the workplace and interaction with working life are not systematically included in school evaluations, possibly because they are seen as being outside of the school's control (Skolverket, 2016^[16]). This omission reduces the incentives for schools to invest effort in ensuring the quality of WBL.

...and provision and quality of WBL is highly dependent on individual VET teachers

The provision and organisation of WBL is highly dependent on individual schools and individual VET teachers (Skolverket, 2016^[16]). In some schools there are special WBL coordinators, but more usually the organisation and supervision of WBL is the carried out by VET teachers. These teachers need to reach out to companies to secure work

placements, and then agree with the training company the content of WBL, and ensure its quality. There are many advantages of having VET teachers closely involved in WBL as they are in a position to relate the WBL to the needs of individual students. While many VET teachers do a remarkable job, teachers are often time-constrained (Skolverket, 2016_[16]). They may also lack the specialist skills – different from ordinary teaching skills – to organise WBL. VET teachers who left industry some time ago may lack professional contacts and may not be fully aware of all the technological changes taking place in the field. These factors may limit their ability to set up an effective learning plan and to evaluate student progression in the work placement (Höghielm, 2015_[30]). Independent of teacher competencies, building a system that is dependent on individuals, rather than a systematic framework is risky.

Policy option 3.1

To address quality challenges, WBL tasks currently assumed by individual VET teachers could be usefully shared with and supported by other bodies, such as reinforced local bodies where social partners are represented, as argued in Chapter 2 and Chapter 4.

While retaining an important role for individual VET teachers, social partners would therefore be more involved in the organisation and management of WBL than they are now. Within this framework, the social partners, working collectively and in co-ordination with VET schools, might offer systematic support to individual companies with the provision of WBL, certification of companies offering WBL according to criteria agreed with social partners, and provide regular guidance and feedback to schools and National Programme Councils on the content of WBL and methods of assessment of practical skills.

The responsibility of VET schools and social partners for WBL should be clearly defined and both parties should be kept accountable for delivery of WBL. The school inspectorate and social partners may share the responsibility for quality assurance of WBL in VET programmes.

Policy arguments and implementation 3.1

Policy argument 1. Sharing responsibility for WBL across various stakeholders would make its provision more systematic, and less dependent on individuals

To address the quality challenge in WBL, this report argues that the responsibility for WBL should be shared between the school and social partners and their roles clearly defined. The proposed changes would both reduce the VET teacher's workload and make provision of high quality WBL more systematic and less dependent on individuals. As an example of how this might be realised, Box 3.2 sets out how responsibilities for WBL are shared across different stakeholders in the Netherlands.

Box 3.2. 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*) is organised in eight ‘sector chambers’ with social partners and representatives from the VET sector equally represented (ECBO, 2014_[26]).

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_[23]).

The role of the school

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_[26]).

Source: ECBO (2014_[26]), *Apprenticeship-Type Schemes and Structured Work-based Learning Programmes The Netherlands*, https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_NL_2014_WBL.pdf; Smulders, H., A. Cox and A. Westerhuis (2016_[23]), *Netherlands: VET in Europe: Country Report 2016*, http://libserver.cedefop.europa.eu/vetelib/2016/2016_CR_NL.pdf.

Policy argument 2. Clearly defined roles and evaluation mechanisms would improve the quality of WBL

In Sweden, the contribution of schools and employers to WBL should be routinely evaluated, as a way of encouraging high quality WBL, and providing actors with the information they need to improve quality. Looking at other countries, typically, schools are evaluated by school inspectorates while the social partners support the training provided by the employer. The social partners’ role in WBL in Sweden might be developed by drawing on the experience of other countries. Social partners’ tasks may involve certification of companies offering WBL according to agreed criteria, regular feedback to schools and national regional bodies overseeing VET policy on the content of WBL and methods of assessment of practical skills. Box 3.3 provides examples of quality standards for employers providing WBL in Denmark and the Netherlands. In these two countries, social partners are actively involved in the definition of the standard and evaluation of training companies.

Box 3.3. Requirements for companies providing WBL in the Netherlands and Denmark

In the Netherlands, 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, 2014_[26]).

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 cooperate 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.

In Denmark, companies providing apprenticeship training have to be approved by the social partners through the relevant trade committee. Employers have to demonstrate they are able to offer various tasks in an occupation and have required technical equipment. Committees may also assess whether the company has the staff available to perform the training. There are different types of trainers with different responsibilities: planners, training managers and daily trainers. Trainers in enterprises who are responsible for apprentices must be ‘craftsmen’. They must have completed a VET programme for which they have received a journeyman’s certificate and have work experience. Accreditation does not need to be renewed unless the company has not been active for five years or more (Andersen and Kruse, 2016_[32]).

Source: ECBO (2014_[26]), *Apprenticeship-Type Schemes and Structured Work-based Learning Programmes The Netherlands*, https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_NL_2014_WBL.pdf; Andersen, O. and K. Kruse (2016_[32]), “Vocational education and training in Europe – Denmark”, *Cedefop ReferNet VET in Europe Reports*, www.cedefop.europa.eu/en/publications-and-resources/country-reports/denmark-vet-europe-country-report-2016.

The challenge 3.2: WBL could be used more effectively to guide the mix of provision

Half of the schools ignore the availability of WBL when planning VET provision

In Sweden, the introduction of local programme councils, alongside mandatory WBL was intended to tie the provision of VET more closely to the regional and local demand for skills. But this objective has only been partially realised. WBL availability does not seem to be an important factor in defining the mix of provision in VET schools. Around half of school principals reported that the number and mix of WBL-places offered does not depend on the availability of relevant WBL (Skolverket, 2016_[16]). This implies that schools first accept students, and only subsequently try to find WBL to match the number of students. Whereas the Swedish labour market is currently very tight and finding WBL

should not be too difficult, the risk is that some schools may provide unsuitable work placements, just to meet the formal requirement of mandatory WBL. The fact that more than 40% of VET teachers estimate there are not enough quality work placements in the programme they are teaching seems to support this hypothesis (Skolverket, 2016_[16]).

Schools may not be aware of existing WBL opportunities

In Sweden, schools collaborate with local social partners by establishing local programme councils that facilitate WBL alongside other functions. However, the quality of these local partnerships tends to vary across schools impacting the quality of WBL. Since collaboration with social partners is established at a very local level, schools may also not be fully aware of all the WBL opportunities in the wider region. On the employer side, employers that wish to provide WBL may also struggle to find the right school as a partner, given the large number of VET schools and no obvious regional interlocutor.

Policy option 3.2

Employer willingness to offer WBL could be used more fully to steer students towards occupations in demand in the labour market, and to adjust school provision. This should improve the match between the mix of training provision and skills in demand among employers. To facilitate the match, a website platform may be created where companies and schools announce their needs in terms of WBL.

Policy arguments and implementation 3.2

Policy argument 1. By giving more prominence to WBL in planning VET provision Sweden could tie provision more closely to employer needs

WBL provides an indication of employers' needs

Countries have developed a range of tools to guide the mix of VET provision – the numbers of students being trained in different fields. WBL availability is one such tool. For example in most apprenticeship systems, apprentices wishing to enter a certain occupational field must first find an employer in that field willing to take them on. So students will find it easier to get an apprenticeship in fields where there is a shortage of skills, and employers are keen to use apprenticeship as a means of recruitment. Alternatively planning mechanisms can be used to guide the mix of training places offered by the VET system. In Finland targets, in terms of the mix of training provision, are defined both at the national and regional level. Recent reforms in Finland have increased the pressure on VET providers to demonstrate that they are meeting regional labour market needs (Koukku and Paronen, 2016_[33]). Providers are required to participate in regional development and reflect on the regional needs in planning provision. The Finnish government has introduced 'effectiveness funding' based on graduate employment rates to encourage providers to adjust the VET offer in response to regional labour market needs (Koukku and Paronen, 2016_[33]; Ollikainen, 2017_[22]). These new funding criteria may indirectly encourage providers to secure high quality WBL as WBL improves the labour market prospects of VET students.

There would be advantages in tying the mix of provision of VET more closely to WBL in Sweden

As discussed in other parts of this report, the mix of provision in VET as between different fields of study is driven by student choice and school competition. By giving more prominence to WBL in planning VET provision, Sweden could tie provision more closely to employer needs. Information about work placements can guide entrants to VET programmes in fields where they can get a good work placement and that probably lead to a good job. It would be important for this information to come from an independent source, because schools have an interest in attracting students, and if they are in the business of providing fields of study in surplus fields, they could not be relied upon to discourage prospective students.

Collecting information on supply and demand for WBL on a website is an easy way to improve access to information

A website where employers can post their WBL vacancies and schools signal their needs in terms of WBL would facilitate access to information and improve match between VET schools and employers providing WBL. Such tools exist in other countries, for example in the Netherlands accredited companies offering work placements are listed on an open website (Stagemarkt.nl) (ECBO, 2014_[26]). In addition, in the Netherlands, students entering school-based VET programmes are advised at the outset, through an information tool, whether it will be easy, average, or hard to obtain a work placement in that field, steering them away from fields of study where it may be difficult to get a job. This model could readily be applied in Sweden.

The challenge 3.3: In comparison to other countries Swedish apprenticeship is relatively school driven

Enrolment in apprenticeships has been growing but its use remains limited

Apprenticeship enrolments have been growing over recent years, and represent an increasing proportion of VET enrolments (Figure 3.3). But, at 3% of all upper-secondary enrolments, it plays a much smaller role in the Swedish skills system than in many other countries. The low take-up could reflect entrenched student and employer preferences, it may also be that some features of its design could be tweaked to make apprenticeship more appealing both to students and employers. This section looks at this issue.

In Sweden, school maintains the main responsibility for apprenticeship

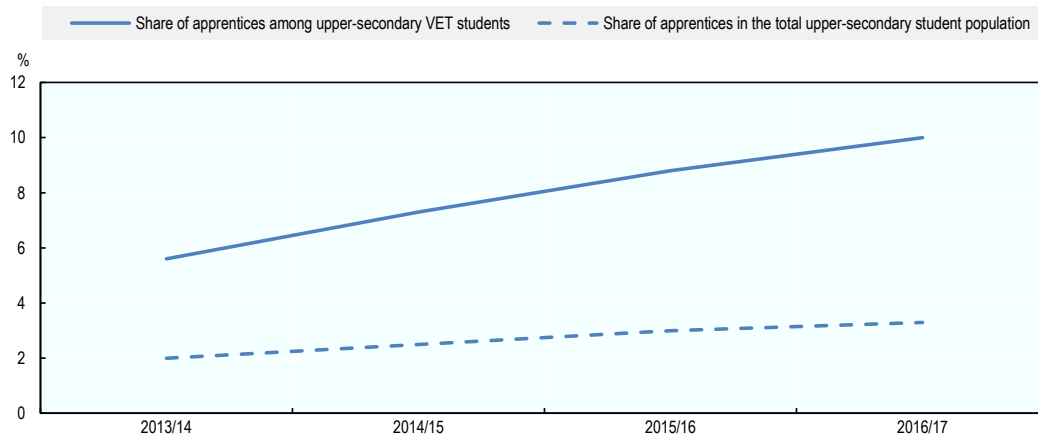
In Sweden, social partners are less involved in the design and provision of apprenticeships than many apprenticeship countries, while the role of the school is stronger. The school is responsible for matching the student to the employer, and the school defines the content and mode of delivery of WBL in dialogue with the employer. The school is also responsible for ensuring that students receive a relevant WBL experience. Consequently, Swedish employers offering apprenticeships have fewer responsibilities, but also less influence than their counterparts in other countries.

Unlike many countries, few apprentices in Sweden receive a wage

Employers in Sweden are not obliged to pay apprentices a wage (Annex Table 3.A.2). However, since 2014, employers have had the option of employing and paying an

apprentice who remains in education (Ministry of Education, 2018_[13]). According to the National Agency for Education, only around 2% of apprentices receive a wage. The Agency has launched several projects to increase the share of apprenticeships involving a wage.

Figure 3.3. Share of apprentices in Sweden



Source: Adapted from Ministry of Education (2018_[13]), *Review of VET in Sweden. Background Report*.

StatLink  <http://dx.doi.org/10.1787/888933927533>

Policy option 3.3

Over recent years, the involvement of social partners in formal VET in Sweden has been gradually increasing. Apprenticeship has been growing, as have the numbers of apprentices receiving wages, but numbers remain small. Building on these trends, employers in Sweden should:

- Be allowed to select their apprentices (as in other countries).
- Be granted a stronger influence over the content and modes of delivery of WBL in apprenticeship.
- Be more strongly encouraged to pay apprentices a wage.

Wages for apprentices and stricter regulation on WBL quality would increase the cost of apprenticeship provision for employers. Financial and/or non-financial incentives may therefore also be necessary to maintain the attractiveness of the scheme to employers. Current grant support to employers providing apprenticeships should be evaluated and if necessary adjusted.

Changes in apprenticeship schemes should be designed to increase the attractiveness of apprenticeship to employers. Governments can help employers provide good quality training and meet requirements for WBL, for example by providing a framework for cooperation across companies.

Policy arguments and implementation 3.3

Policy argument 1. Across countries, social partners typically play a more prominent role in apprenticeship systems than in school-based provision

The role of social partners in apprenticeship systems ranges from a merely advisory role to full decision-making powers. In many apprenticeship systems social partners often decide on occupational qualifications, corresponding skills, assessment requirements and methods, and the content and delivery of work placements (e.g. in countries such as Austria, Denmark, Germany, Norway and Switzerland). Norway has recently reinforced the role of social partners in apprenticeship by promoting their role from advisory to decision making in relation to the content of training taking place in companies (Utdanningsdirektoratet, 2017^[34]). The high level of involvement of the social partners reflects the central role of the employer in apprenticeship: relative to other forms of vocational training, employers therefore have more obligations but also more control.

Policy argument 2. Apprentice wage is an important element of the apprenticeship model

The apprentice wage reflects both the employer's and student's interest in apprenticeship

Initially, the reasons for the low take-up of apprenticeships in Sweden were associated with lack of information about the scheme and with apprenticeships being perceived as a path for less motivated students and those with low academic grades (Skolverket, 2013^[35]). This section discusses a potential impact of the apprentice wage on the provision of apprenticeship by employers and its attractiveness to students. If take up is constrained by lack of student demand, then if more apprentices were to receive a wage, take-up could be expected to increase. But if limited employer interest is holding back the growth of apprenticeships, then in the absence of other compensatory measures, apprentice wages would exacerbate the problem. Currently, the Swedish government helps employers to recover part of the apprentice wage cost by providing them with a grant (SEK 5 000) per apprentice and per year. Pilot projects that aim to increase the share of apprenticeships involving a wage are being introduced by the National Agency for Education. Evidence from these pilots should provide interesting insights, e.g. by comparing take-up of apprentices among companies with and without apprentice wages, and by evaluating the impact of the grant on the employer offer of apprenticeship training. This report argues that when the apprentice wage is properly set, and accompanied by other measures supporting employers, an apprenticeship including a wage can be beneficial both to apprentices and employers.

An apprentice wage motivates students

In most countries apprentices receive a wage (Table 3.2), increasing the attractiveness of apprenticeship to students relative to school-based alternatives (Moretti et al., 2017^[36]). Wages can develop self-esteem and potentially increase the motivation to complete the programme and to carry out workplace tasks diligently.

Apprenticeship with a wage can still be beneficial to employers

Apprentice wages often represents the largest part of the costs associated with apprenticeship provision for employers, but despite the wage cost, apprenticeship can be beneficial to employers (Mühlemann, 2017^[12]). The minimum an employer should pay to an apprentice should be set at the level that allows employers to at least break-even but at

the same time is not detrimental to students. In some countries, the apprentice wage is negotiated by sectors while in others it is defined nationally. Sectoral wage setting is generally preferable, as the costs and benefits of apprenticeship provision differ substantially across sectors. Employer benefits associated with apprenticeship also depend on the design of WBL. To make the investment in apprenticeship worthwhile, employers may require apprentices to become quickly productive in skilled tasks. The wage therefore provides employers with an incentive to train effectively for skilled employment.

If employers pay apprentice wages, they may reasonably expect more control over apprenticeship in return

Wages for all apprentices and stricter regulations on WBL provision will tend to increase the costs of apprenticeship provision for employers. Employers will reasonably expect something in return. In line with apprenticeship design in other countries, employers in Sweden should therefore have a stronger influence over the content and modes of delivery of WBL and have the opportunity to select their apprentices. For example, in Switzerland the employer pays an apprentice wage but he/she is also in charge of recruitment. A student that is well matched with the apprenticeship position would make a greater contribution through productive work during the period of WBL, and in the long run if employed after the end of the programme. An apprentice chosen by the employer will also be more likely to be subsequently recruited. This means that employers can pay apprentice wages but still see apprenticeship as a good investment.

Policy argument 3. There are different types of incentives for apprenticeship

Financial incentives for apprenticeship have a mixed effect

In Sweden, grants are available to employers and providers that offer apprenticeships. Across-country evidence on the effectiveness of financial incentives for apprenticeships is mixed (Kuczera, 2017^[37]). Setting an effective level of subsidy is difficult because the costs and benefits differ largely across sectors and employers: for some employers the subsidy will not be enough while for others, which will take apprentices in any case, the subsidy represents “deadweight”. In Sweden, a study looking at the experience of employers providing WBL, mainly within apprenticeship programmes, shows that many employers would provide apprenticeship training without a grant (Höghielm, 2015^[30]). It also shows that the grant may have a stronger impact on small companies.

Government can support employers by making them better at training

Another way of promoting apprenticeship is for government to assist employers to provide good quality training and meet regulatory requirements. Such assistance might include measures to help enterprises with the training of trainers, guide employers with the administrative tasks associated with apprenticeship, and support employers offering apprenticeships to deal with the various challenges faced by young people – sometimes with social disadvantages – as they pursue their apprenticeships. The objective is to use regulation to improve apprenticeship quality while at the same ensuring that regulation does not offer a barrier to employers, by helping employers to comply with regulation, often in their own interest. Sweden has already introduced some of these measures such as training for trainers. Other measures that could foster apprenticeships include arrangements allowing employers to work together to provide different components of apprenticeship training in the light of their different specialisations, and to share tasks related to organisation of apprenticeships. Such measures may be particularly relevant to

small companies that often find regulatory requirements particularly burdensome. Country experience with these measures is described in Box 3.4.

Box 3.4. Mechanisms that can assist employers in sharing responsibilities for apprenticeship training

Some small or highly specialised companies are not in a position to provide WBL covering the entire work-based part of the curriculum for an occupation. In some countries there is the option of sharing responsibility for training with other training companies or with an external body set up for this purpose.

Switzerland: Two basic types of training alliances are found. In the *training company network*, two or more companies form a network to provide apprenticeship training. While the host training company is responsible for the main part of apprenticeship training, partner companies cover other fields of study where their specialist capacity is more relevant. In most cases, the host company itself provides training but in addition it also fulfils staff-related, organisational, planning and managerial functions. The *collaborative training alliance* includes a managing organisation. Training is held in the different participating companies of the alliance but the organisation is usually organised externally by a managing organisation.

Austria: *Training alliances* support companies that cannot provide a full range of skills to apprentices required for the specific occupation. They can involve: an exchange of apprentices between two or more companies; sending apprentices to one or several other companies or to their training workshop (usually for payment); and attendance of courses or programmes at training institutions against a fee. Some provinces support training alliances by providing information and support to companies about possible partner enterprises and educational institutions, and co-ordinating different training alliances activities (Federal Ministry of Science, Research and Economy, 2014_[38]).

Norway: Apprenticeship Training Agencies (ATA) (*opplæringskontor*) are owned by companies and aim to establish new apprenticeship places, supervise companies with apprentices, train staff involved in the instruction of apprentices and organise the administrative tasks related to being a training company. Many ATAs organise the theoretical part of apprentices' training. While county authorities must approve each individual company with apprentices, ATAs often sign the apprenticeship contracts on behalf of enterprises providing apprenticeship, thereby becoming accountable for completion of the apprenticeship and its results. About 70-80% of companies with apprentices are associated with ATAs. These bodies are funded through the state grant. Typically, companies pay half of the amount received from the state for apprenticeship training to ATAs. The prices of ATA services are set in an agreement between ATAs and the member companies.

Source: Høst, H., A. Skålholt, A. and A. Nyen, (2012_[39]), *Om potensialet for å få bedriftene til å ta inn flere lærlinger: En kartlegging av norske bedrifters vurdering av lærlingordningen*; Høst, H. (2014_[40]), *Kvalitet i fag og yrkesopplæringen. Arena for kvalitet – Opplæringskonferanse*, www.dcdualvet.org/en/dual-vocational-education-and-training/terminology/; Federal Ministry of Science, Research and Economy (2014_[38]), *Apprenticeship: Dual Vocational Education and Training in Austria Modern Training with a Future*, www.en.bmdw.gv.at/Vocationaltraining/Apprenticeshipsandvocationaltraining/Documents/NEU_HP_Apprenticeship.pdf.

In principle, employers are interested in providing apprenticeships to students with strongest performance...

Apprenticeship can be beneficial to employers, with the benefits, among other things, depending on the student's characteristics. Typically, students with strong academic performance and good non-cognitive skills (e.g. punctuality, motivation, team working) are more productive and so more attractive to employers than those with low academic grades and behavioural issues. Leaving apprentice recruitment entirely to employers may therefore result in fewer apprenticeship opportunities for disadvantaged students.

...but a carefully designed apprenticeship for disadvantaged youth can be attractive to employers

Forcing employers to provide apprenticeships to disadvantaged youth is counterproductive as it may result in employers offering no apprenticeship. It can also reinforce the image of apprenticeship as a path for low performers. Kis (2016_[21]) shows that an apprenticeship targeting disadvantaged youth, when carefully designed, can be attractive to employers. Such apprenticeship has following features:

- It is designed to fit the needs of disadvantaged students. For example, disadvantaged students may require more time to master the specific skill (Kis, 2016_[21]).
- There are additional measures preparing disadvantaged students for apprenticeships. These may include, for example pre-apprenticeship programmes that create a bridge to work-based learning and improve the matching of young people with work-based learning opportunities (Kis, 2016_[21]).
- There are support measures provided to disadvantaged youth during the apprenticeship. Box 3.5 describes examples of these measures in selected countries.

Box 3.5. Measures supporting disadvantaged youth during apprenticeship

Austria

Training assistance is at the centre of the integrative VET programmes (Integrative Berufsausbildung, IBA). These programmes target young people with special needs (two-thirds of participants), disabled youth and those without a school-leaving certificate. Training assistance has both a co-ordinating and support function. Most training assistants have a special education background and come from organisations for disadvantaged youth. When IBA takes place at a training company, training assistants are in charge of administrative tasks, define the content of the training contract between the apprentice and the training company, prepare the company employees for the arrival of the apprentice, identifying a person of trust, and register the apprentice at the vocational school. Subsequently, training assistants act as mediators, provide tutorial support and design the final exam for the partial qualification pathway.

Germany

Apprenticeship assistance (*Ausbildungsbegleitende Hilfen*) is available free of charge to young people taking an apprenticeship or *Einstiegsqualifizierung*, as well as those who dropout of an apprenticeship, and supports the transition into another apprenticeship (or training programme). Assistance includes remedial education (language skills, theoretical and practical instruction) and support with homework and exams, which helps to overcome learning difficulties. Socio-pedagogical assistance (including mentoring) is also offered, including support with everyday problems and mediation with the training company, school teachers and family. The service is provided following a support plan, which is established in partnership with the young person concerned. It is delivered through individual assistance at least three hours per week; there are also small group sessions. The aim is to effectively reach out to youth with learning difficulties and those disengaged from school.

Scotland (United Kingdom)

Skills Development Scotland offers support to young people at risk of disengaging from learning working towards a Certificate of Work Readiness through My Work Coach Service. Work coaches identifies opportunities for young people and act as a facilitator between the young person and the employer. The responsibilities of work coaches include undertaking an initial evaluation of the young person; assisting them as they receive career guidance; offering advice to the VET school on a suitable work placement; meeting with the employer and/or learning provider before the start of the work placement to clarify what is expected of the young person and coaching the young person based on these discussions; and liaising regularly with the employer and the learning provider to support the young person throughout their learning journey.

Switzerland

Young people enrolled in two-year apprenticeships (leading to partial qualifications which target those who may not be able to complete or are not willing to embark on a 'regular' apprenticeship lasting typically 3-4 years) can receive individual coaching (*Fachkundige individuelle Begleitung*) designed to help them improve their academic, technical and social skills. Swiss cantons are responsible for implementation under a national framework and guidelines. Around half of two-year apprentices take up this opportunity mostly to tackle weak language skills, learning difficulties or psychological problems. Most coaches are former teachers (of vocational or special needs education), learning and speech therapists or social workers. They receive targeted training, which may vary across cantons. For example, in Zürich they must attend a 300-hour course and participate in regular team-coaching sessions. Apprentices may also attend remedial lessons at vocational schools, for example in Vaud canton, apprentices may take time off during their work placement to attend school for remedial classes.

Source: Kis, V. (2016^[21]), "Work-based learning for youth at risk: Getting employers on board", *OECD Education Working Papers*, No. 150, <https://doi.org/10.1787/5e122a91-en>.

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Annex 3.A. Characteristics of apprenticeship programmes

Annex Table 3.A.1. The duration of apprenticeship programmes and how apprentices spend their time

	Duration of the programme including off-the-job period and work placement with the company	Time allocation in apprenticeship programmes	Workplace time spent in productive and non-productive tasks
Austria	3-4 years	Around 80% in the work place	83% of the time with the company is spent on productive work
England (United Kingdom)	Minimum 12 months - average around 15 months	At least 20% in off-the-job education and training	
Germany	Mostly 3 years	70% in the work place	77% of the time with the company is spent on productive work
Israel	3-4 years	Work-based learning is provided in the last two years, 1-3 days per week	---
Netherlands	2-4 years	Often four days a week in the work place and one day at school	---
Norway	Mostly 4 years (Shorter programmes are available for disadvantaged students)	50% in the work place (typically, first two years are spent in school and the last two with the company)	1 year of training 1 year of productive work
Sweden	3 years	At least 50% in the work place	---
Switzerland	3-4 years (2 year programmes in some occupations leading a lower level qualification)	Around 70% in the work place	83% of the time with the company is spent on productive work

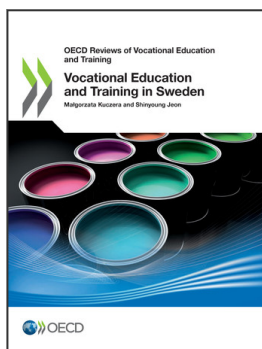
Source: Kuczera, M., T. Bastianić and S. Field (2018_[24]), *Apprenticeship and Vocational Education and Training in Israel*, OECD Reviews of Vocational Education and Training, <https://doi.org/10.1787/9789264302051-en>; Cedefop (2016_[41]), *Spotlight on VET: The Netherlands*, www.cedefop.europa.eu/files/8090_en.pdf.

Annex Table 3.A.2. Minimum apprentice wages in youth apprenticeships

	Do apprentices receive wages during the on-the-job period?	Do apprentices receive wage during off-the-job period?	What is the minimum wage the apprentice should receive?	Who defines the minimum apprentice wage?	Do employers pay social security contributions for an apprentice?
Austria	Yes	Yes	On average 50% of the skilled worker wage	Sectors at regional level	Yes, but the state covers parts of the insurance costs
Denmark	Yes	Yes	30-70% of the skilled worker wage, depending on the year of the programme	Sectors	No
Germany	Yes	Yes	25-33% of the skilled worker wage, depending on the year of the programme	Sectors at regional level	Yes
Israel	Yes	No	For youth apprenticeship: 60% of the minimum wage or around 35% of the skilled worker wage ¹	National: The minimum apprentice wage is set by law	---
Norway	Yes	No: during the first two years provided fully in school. Yes: in the last two years with an employer including one year of training	30-80% of the skilled worker wage, depending on the year of the programme	Sectors at national level	Yes
Sweden	No	No	-	-	-
Switzerland	Yes	Yes	On average 20% of the skilled worker wage, depending on the year of the programme	Individual company but employer/ professional associations provide recommendations. As a result, apprentice wage varies by sector	Yes

Note: Apprentice wages can vary largely across sectors and tend to increase over the duration of apprenticeship programme.

Source: Kuczera, M., T. Bastianić and S. Field (2018^[24]), *Apprenticeship and Vocational Education and Training in Israel*, OECD Reviews of Vocational Education and Training, <https://doi.org/10.1787/9789264302051-en>.



From:
Vocational Education and Training in Sweden

Access the complete publication at:

<https://doi.org/10.1787/g2g9fac5-en>

Please cite this chapter as:

Kuczera, Małgorzata and Shinyoung Jeon (2019), "Enhancing work-based learning in the vocational education and training system in Sweden", in Małgorzata Kuczera and Shinyoung Jeon, *Vocational Education and Training in Sweden*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/fcee37ba-en>

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