



OECD Reviews of Vocational
Education and Training

A Skills beyond School Review of the Netherlands

Mihály Fazekas and Ineke Litjens



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Summary: Strengths, challenges and recommendations

Strengths

- The Netherlands has a strong and well-funded vocational and education training (VET) system with a large proportion of each student cohort following vocational studies and substantial public and private resources dedicated to VET.
- Work-based learning forms a large part of Dutch VET both in school-based tracks and apprenticeship programmes. VET in the Netherlands has good labour market outcomes with relatively low youth unemployment rates.
- There is a well-developed system to engage social partners both in policy formulation and implementation, and in the delivery of vocational programmes.
- The Netherlands has a vibrant private sector engaged in delivery of postsecondary VET providing flexible format short courses as well as full professional bachelor and master degrees.
- The newly established associate degree is a positive development in the Dutch postsecondary VET system, filling a gap in the range of qualifications available.

Challenges and recommendations

- The Dutch economy has greatly benefited from a strong work-based learning system, given its effective integration into apprenticeships and school-based upper secondary VET. Challenges remain in sustaining work-based learning and reaping its full benefits, as demographic change and the popularity of academic education put pressure on the VET system. Economic pressures may weaken employers' willingness to offer work placements, in a context of changing regulation.

- Actively champion and promote apprenticeship and work-based learning throughout the Dutch VET system, including at the postsecondary level. Negotiate reform with the social partners to sustain tripartite support for the system.
- Teaching staff are the most valuable resource in any learning institution and their skills have to be updated regularly. As entry from industry into teaching in VET schools is not common, mainly because of regulatory restrictions, the supply of teachers may not be able to respond adequately given a wave of expected retirements, and the need to keep up with changing industry practice.
 - Facilitate the entry of industry practitioners into the teaching workforce and promote skills updating among existing teaching staff through regular industry placements.
- In spite of the relatively small number of students participating in the lowest level of upper secondary VET (MBO 1), it faces considerable challenges. Though, according to the law, this level is not intended to lead to a labour market qualification, inevitably many of those pursuing this programme try to enter the labour market directly or drop out. MBO 1 concentrates young people with disadvantaged backgrounds and yields comparatively poor labour market outcomes. Such a concentration of educational challenges may make it harder to tackle those challenges. At the same time, the diversity of the student body implies a diversity of learning needs.
 - Merge pre-vocational education levels 1 and 2 at lower secondary level and refocus upper secondary VET level 1 programmes as a more effective entry route into upper secondary VET level 2.
- Current postsecondary funding arrangements do not set adequate incentives for providers, in particular to meet the needs of adults seeking part-time provision.
 - Reform regulation and finance so as to support part-time public provision of postsecondary vocational programmes more adequately, and to explore a financing framework that would allow public support for private provision when it is in the national interest.

- The range of qualifications available in the Dutch postsecondary VET system may not fully meet labour market demand in the face of an increasing need for higher vocational skills. There are relatively few options for the graduates of upper secondary VET to upskill other than the academic route or a full bachelor programme. While many short private courses aim at addressing this gap in provision, they lack visibility. In addition, in the absence of an adequate regulatory framework, short courses provided by private institutions may lead to the acquisition of too narrow skills.
 - Increase the number of students pursuing associate degree programmes and consider the development of other short cycle postsecondary vocational options. Encourage programmes to meet the needs of upper secondary VET graduates seeking higher professional qualifications.

Chapter 1

Introduction and initial assessment

This chapter describes the OECD policy study of postsecondary vocational education and training (VET), the review of the Netherlands, summarises the main features of the country system and sets out an assessment of its particular strengths. The challenges, dealt with in subsequent chapters, are also listed.

The policy review of the Netherlands and its place in the wider OECD study

This review is one of a series of country reports on vocational education and training (VET) in OECD countries, prepared as part of an OECD study (see Box 1.1). The series includes *reviews*, (such as this one), involving an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. In addition there are *commentaries*. These exercises pursue the first part of a review and include an assessment of strengths and challenges in the country system. The commentaries are designed to be of value as free-standing reports, but can also become the first phase of a full review, should a country so wish.

Box 1.1 Skills beyond School: The OECD study of postsecondary vocational education and training

This study addresses the policy challenges arising from the increasing demand for higher level technical and professional skills. It builds on the success of the OECD's previous study, *Learning for Jobs* that examined vocational education and training policy, mainly at upper secondary level through 17 country reviews and a comparative report.

Twenty separate country studies, involving country visits, analysis and published reports, were pursued. Full country policy reviews were conducted in Austria, Denmark, Egypt, Germany, Israel, Kazakhstan, Korea, the Netherlands, South Africa, Switzerland, the United Kingdom (England), and the United States (with case studies of Florida, Maryland and Washington State). Shorter exercises leading to a country commentary were undertaken in Belgium (Flanders), Canada, Iceland, Romania, Spain, Sweden and in Northern Ireland and Scotland in the United Kingdom. Background reports describing postsecondary systems were prepared for these countries and, in addition, for France and Hungary. These country studies, alongside a wide range of other evidence, will also provide the foundation for a synthesis report.

Source: OECD (2010), *Learning for Jobs, OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264087460-en>. See also: www.oecd.org/education/vet

This review has a different focus from other reviews in the series in that it looks at both upper secondary and postsecondary VET in the Netherlands. The Netherlands initially prepared a country background report (Meer and Smulders, 2014). An OECD team then visited the Netherlands on 18-22 March and 21-24 May 2013 where they discussed the issues arising with a wide range of stakeholders.

The structure of the report

This first chapter places the review of the Netherlands in the context of the OECD policy study, presents the structure of the report, describes the main features of VET system in the Netherlands, compares it with other systems internationally, explores some key international indicators bearing on the system and examines its strengths and challenges.

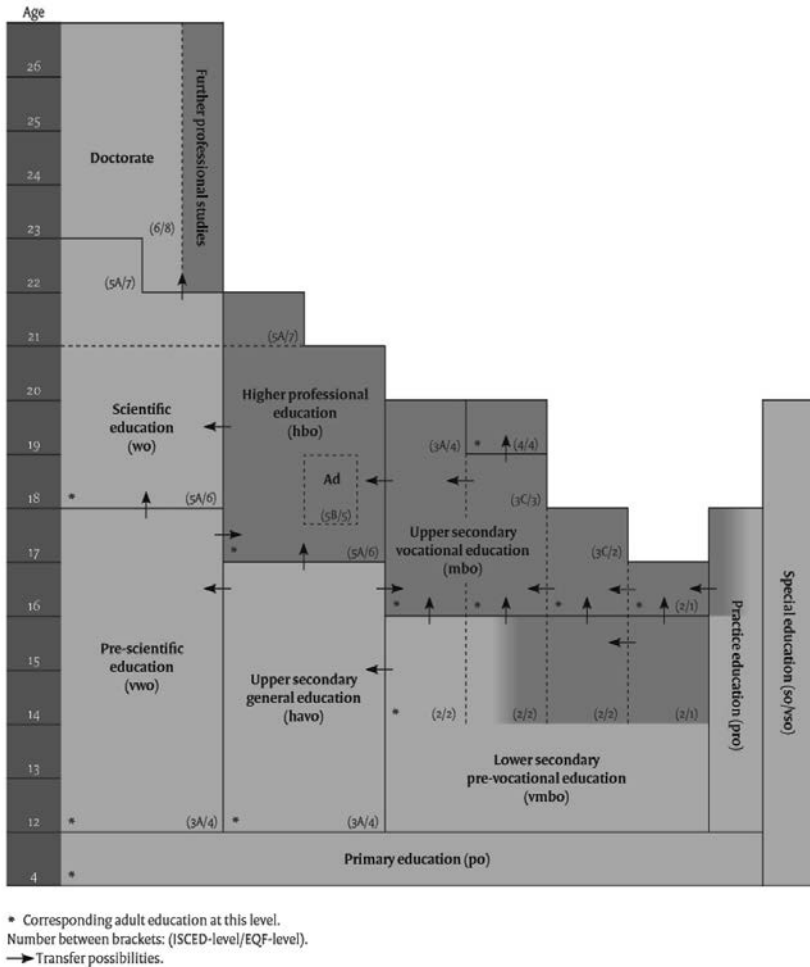
The following chapters advance policy recommendations. Each chapter is set out as:

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

Snapshot of the Dutch vocational education and training system

In the Netherlands VET training is offered at upper secondary as well as postsecondary levels. There are different access routes to VET: students in upper secondary VET usually have a lower secondary diploma at pre-vocational level, while postsecondary VET is accessible to every student with a vocational or academic high school leaving certificate (see Figure 1.1).

Figure 1.1 Diagram of the Dutch education system



Source: Meer, M. and Smulders, H. (2014), *OECD-review: Skills beyond School - National background report for The Netherlands*'s-Hertogenbosch: ecbo.

A large portion of Dutch students pursue vocational programmes at some point in their education career: over three-quarters of the 1.2 million students enrolled in the Netherlands in 2012 were enrolled in vocational programmes either at upper secondary (almost half of all students) or postsecondary levels (about one-third) (OCW, 2013a). It also makes a

substantial contribution to workforce skills with over half of the Dutch labour force having a vocational qualification in 2012 (OCW, 2013a).

Structure of the system

In 2012, there were 69 publically funded upper secondary VET institutions: 43 regional training centres (*roc – regionale opleidingscentrum*) covering diverse professional areas, 12 specialist trade colleges (*vak scholen*: for a branch of industry), 12 agricultural training centres (*aoc – agrarische opleidingscentrum*), and two other schools providing upper secondary VET (OCW, 2013a). In addition, around 100 private institutions provide upper secondary VET education leading to a diploma¹ (DUO 2013a and a few hundred smaller private institutions offer short training courses at *MBO* level (SEO, 2012). There are over 1 000 upper secondary vocational programmes and more than 600 qualifications, but they are currently being reviewed to streamline the whole framework and improve the match with labour market demand (Meer and Smulders, 2014; VNO-NCW, 2011). The mix of students and their fields of study are illustrated in Table 1.1.

Table 1.1 Fields and levels of study in upper secondary programmes (MBO)

Numbers of students enrolled in 2013					
Field of study	Level 1	Level 2	Level 3	Level 4	Total
Economy	2 642	44 519	47 870	82 473	177 504
Technology	3 233	41 587	28 566	69 444	142 830
Care and welfare	1 294	25 756	58 461	88 845	174 356
Agriculture/Green	3 100	6 014	8 172	12 238	29 524
Combination	10 706	230	16	2 522	13 474
Total	20 975	118 106	143 085	255 522	537 688

Source: DUO (2013b), Aantal onderwijsdeelnemers in het MBO, http://www.duo.nl/organisatie/open_onderwijsdata/databestanden/mbo_/Onderwijsdeelnemers/default.asp (accessed 23 January 2014).

The upper secondary vocational system (MBO) consists of two parallel structures: an apprenticeship track (*Beroepsbegeleidende Leerweg* or *BBL*) and a school-based track (*Beroepsopleidende Leerweg* or *BOL*). Both tracks combine learning and working. In the apprenticeship track at least 60% of the learning takes place in the workplace. In practice, most apprenticeship programmes have one day of formal schooling and four days of workplace

training. The school-based track includes at least 20% of workplace training although in practice this is typically around 30% (Vrieze, van Kuijk and de Loo, 2009). Each track is subdivided into four levels (see tables 1.1 and 1.2). Level 1 programmes typically last up to one year, but, according to the law, are not intended to lead to a labour market qualification even though many graduates enter the labour market after graduation (on level 1 programmes see Chapter 4). Level 4 programmes currently last four years but are being redesigned to last only three years in most cases. While there are currently no entry requirements for level 2 programmes, this will change from September 2014 so that a diploma of pre vocational education or equivalent will then be required (OCW, 2011).

Graduates of lower levels can proceed to a higher level. Half of all level 1 and 2 students enter a higher level, while one-third of level 3 students transfer to level 4 (Meer and Smulders, 2014). Currently, graduates with a level 4 diploma have the option to enter postsecondary VET and about half do so, mainly students from the school-based track² (HBO Raad, 2012). Access and entry criteria within upper secondary vocational programmes are currently being revised, and this is likely to affect transfer rates: there are plans to implement national exams for Dutch and mathematics skills for programmes at level 2 and above, and English exams for level 4 programmes (College voor Examens, 2012). Passing these exams will be a requirement for graduation (Chapter 2 provides more discussion of this). In addition, while entry into professional bachelor programmes is, at present, automatic for every student graduating from level 4, there are plans to introduce entry requirements for students entering a professional bachelor *programme* in a field unrelated to the prior MBO degree (Rijksoverheid, 2013).

Table 1.2 Levels in upper secondary vocational programmes (MBO)

	MBO level 1	MBO level 2	MBO level 3	MBO level 4
Title of programme	Assistant training (<i>assistente opleiding</i>)	Basic vocational education (<i>basisberoepsopleiding</i>)	Professional education (<i>vakopleiding</i>)	Middle-management VET (<i>middenkaderopleiding</i>) and specialist training (<i>specialistenopleiding</i>)
Duration	6 months – 1 year	2 years	3 years*	4 years**
Access criteria	No criteria in place	Basic pre-vocational education diploma at lower secondary level or MBO level 1 diploma, although people without these requirements can enter as well	General pre-vocational diploma at lower secondary level (excluding basic diploma); MBO level 2 diploma; successful completion of upper secondary general education or pre-university education	Similar to MBO level 3 (excluding MBO level 2 diploma) or MBO level 3 diploma
Transfer possibilities	MBO level 2	MBO level 3	MBO level 4	Postsecondary VET (HBO or Associate Degree) or higher level of secondary education (HAVO and VWO)

Notes: * = The duration of programmes can be shortened when lower levels of MBO programmes have been successfully completed. ** = The duration of specialist trainings is two years instead of four. The duration of most middle-management vocational programmes at level 4 is planned to be intensified and shortened to three years.

Source: Based on Meer, M. and Smulders, H. (2014), *OECD-review: Skills beyond School - National background report for The Netherlands*, -Hertogenbosch: ecbo and OCW (Ministry of Education, Culture and Science) (2013a), *Kerncijfers 2008-2012*, Onderwijs, Cultuur en Wetenschap. OCW, the Hague.

The postsecondary vocational system includes 39 public universities of applied science (*hogescholen*) delivering a wide range of professional bachelor and associate degree programmes (CBS, 2012) and between 80 and 90 (typically much smaller) private institutions³ (IB-groep, 2014) providing professional bachelor degree programmes, associate degrees, and a few

hundred institutions providing a wide range of shorter courses (SEO, 2012). The majority of programmes in public institutions are full-time and both full and part-time professional bachelor programmes last four years and associate degrees two years. Due to different regulations and flexibility in teaching format, private provision dominates part-time postsecondary vocational provision in the Netherlands (Meer and Smulders, 2014).

421 000 students were enrolled in over 1 200 professional bachelor programmes in 2012, and just 4 500 in 140 associate degree programmes (CBS, 2013). These programmes have a more theoretical focus than upper secondary VET, and have no required work-based learning – although internships of a few weeks to few months are relatively common. Associate degrees largely correspond to the first two years of professional bachelor degree programmes, and their graduates are offered a complementary two-year programme to get a bachelor's degree upon completion (so that the bachelor degree normally takes four years full-time by either learning route). Students with a professional bachelor degree can continue to study in academic or professional master programmes, which last an additional one to two years depending on previously obtained knowledge and skills.

Governance

At national level, the governance of both upper secondary and postsecondary VET lies with the Ministry of Education, Culture and Science (*Ministerie van OCW*) which provides strategic planning and development, distributes funding to public institutions and ensures quality. Agricultural VET is the responsibility of the Ministry of Economic Affairs (*Ministerie van Economische Zaken*). Upper secondary VET is regulated by the Adult and Vocational Education Act (*Wet Educatie en Beroepsonderwijs*), while postsecondary VET is regulated by the Higher Education and Scientific Research Act (*Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek*). VET institutions in the Netherlands have extensive autonomy with regard to programming, planning and allocation of budgets. While the content of programmes is determined nationally in terms of goals and competencies, each institution has full autonomy in determining how these are taught and examined.⁴ External supervision of teaching and exam quality, and compliance with regulations is undertaken by the Education Inspectorate, which is part of the Ministry of Education and Research. Inspections of schools and programmes take place every few years, with frequency depending on the previous inspection results (Meer and Smulders, 2014).

Social partner engagement

Social partners, including trade unions and employers' associations, are involved in policy development and delivering VET. At upper secondary level, the responsibility for ensuring that programmes meet labour market needs, and assuring the quality of workplace training is in the process of being transferred from sector-specific knowledge centres (*kenniscentra*) to the national-level Foundation for Cooperation on VET and Industry (*Stichting Samenwerking Beroepsopleiding Bedrijfsleven: SBB*). Eight sectoral bodies (*sectorkamers*) will be established to ensure continued influence at sectoral level, recognising that this is accompanied by a halving of the relevant budget. In addition, a recent shift in the focus of VET policies towards technology sectors implies increased attention to technological skills.

Funding

Around EUR 3.5 billion in public funding for upper secondary VET was allocated to institutions in 2012 based on the number of participants, the number of issued diplomas and certificates, and the number of students with special needs or deemed “at risk”. In addition, over EUR 2.5 billion was spent on postsecondary VET institutions in 2012 (OCW, 2013a); 80 to 90% of this budget is divided among the institutions in proportion to the number of students and number of graduates. The remainder is used for specific policy objectives such as quality improvement or training needs. Institutions receive their share of public funding in the form of a lump sum. The national government covers 80% of the costs of vocational education and training on average (OCW, 2013a – authors' calculations). The additional costs fall on students who pay tuition fees and employers who pay for training and support work-based learning. Public subsidies are provided to students in school-based upper secondary VET and in postsecondary vocational education to partially cover their private educational expenses. In addition, a public loan system is in place for those with additional financial needs. Employers pay the wages and training costs of students in workplace learning and receive a tax deduction per full-time student, although there are now proposals to reform this system of tax deductions (Detmar and de Vries, 2009).

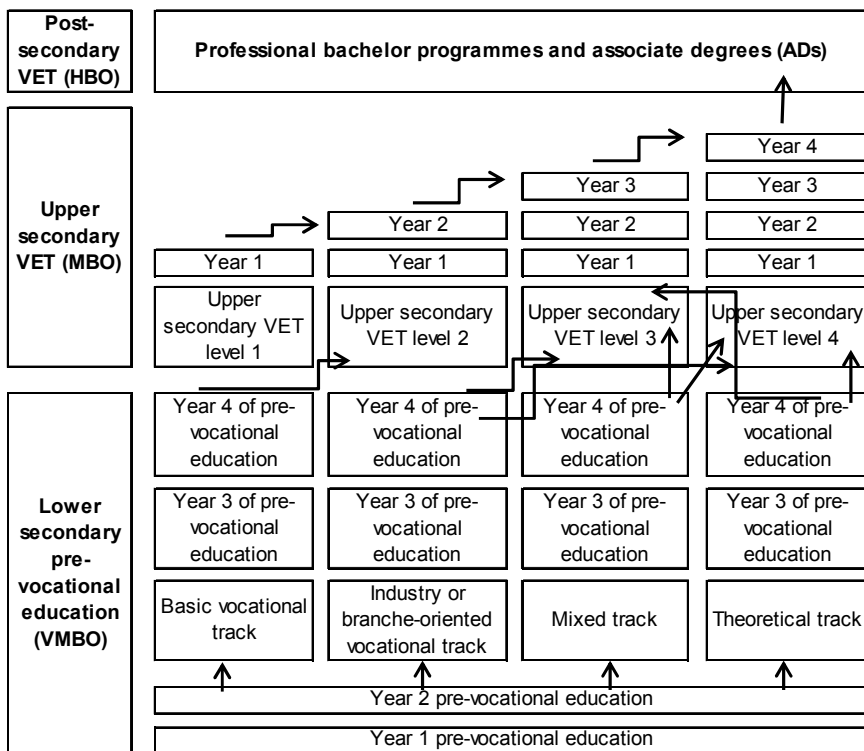
International comparisons

Upper secondary level

Seen from the perspective of other OECD countries, the upper secondary VET system in the Netherlands consists of a very large number of

tracks. It is similar to the system in Flanders (Belgium) which also consists of many tracks (six in total). Many other countries with a strong and long-lasting tradition of VET, such as Germany and Switzerland, have less diversified systems with fewer tracks and qualifications in place (for more on tracking in the Dutch education sector see Chapter 4.). Many other countries have just two tracks (academic and vocational), while some are more comprehensive, with no distinct vocational track at upper secondary level – for example the United States.

Figure 1.2 Diagram of the Dutch VET system



Notes: Definitions in Dutch: Basic vocational track is the *basis-beroepsgerichte leerweg*; Industry or branch-oriented track refers to the *kader-beroepsgerichte leerweg*; Mixed track is the *gemengde leerweg*; and the theoretical track is the *theoretische leerweg*.

Source: Based on Meer, M. and Smulders, H. (2014), *OECD-review: Skills beyond School - National background report for The Netherlands*, -Hertogenbosch: ecbo; OCW (Ministry of Education, Culture and Science) (2013a), *Kerncijfers 2008-2012*, Onderwijs, Cultuur en Wetenschap. OCW, the Hague.

Over 60% of upper secondary students are in vocational tracks (MBO). This is similar to Austria, Belgium and Finland, but more than Denmark and France (Eurostat, 2010).

Postsecondary level

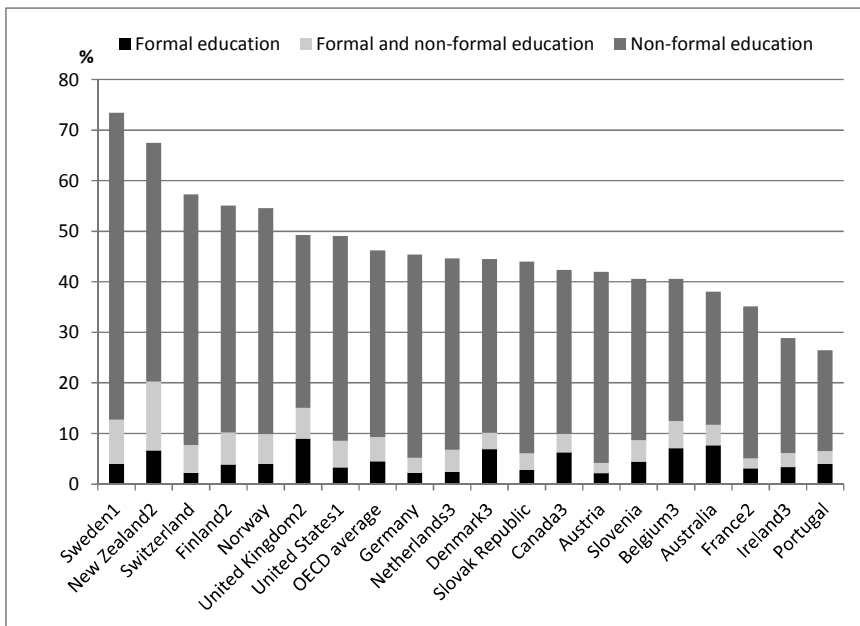
The *hogescholen* (Universities of Applied Sciences or *hogescholen*) have counterparts in many other OECD countries. These include the university colleges in Norway and Sweden, polytechnics in Finland, and *Fachhochschulen* in Germanophone countries. Private providers also offer professional bachelor and associate degree programmes for which, however, there are no comparable data available. Both professional bachelor and associate degree programmes in the Netherlands involve some time dedicated to internships. Associate degree programmes are also offered in a dual pathway. Associate degree programmes in the Netherlands, while being similar to associate degrees in some other OECD countries, have very few participants at present, having been in the pilot stage of development (since 2006) until recently. In other countries, up to 20-25% of students graduate with postsecondary VET qualifications below bachelor level (this issue is explored in Chapter 6).

Lifelong learning

Adult education in the Netherlands, both formal and non-formal, is mostly provided through part-time programmes in private institutions. On average, Dutch adults participate for around 20 hours per year in formal and non-formal education (see Figure 1.3) which is similar to the OECD average but lower than in Belgium and Germany (OECD, 2011).

Figure 1.3 Many adults participate in education and training

Participation rate in formal and non-formal education, 2007



1. Year of reference 2005; 2. Year of reference 2006; 3. Year of reference 2008.

Source: OECD, LSO network special data collection, Adult Learning Working Group.

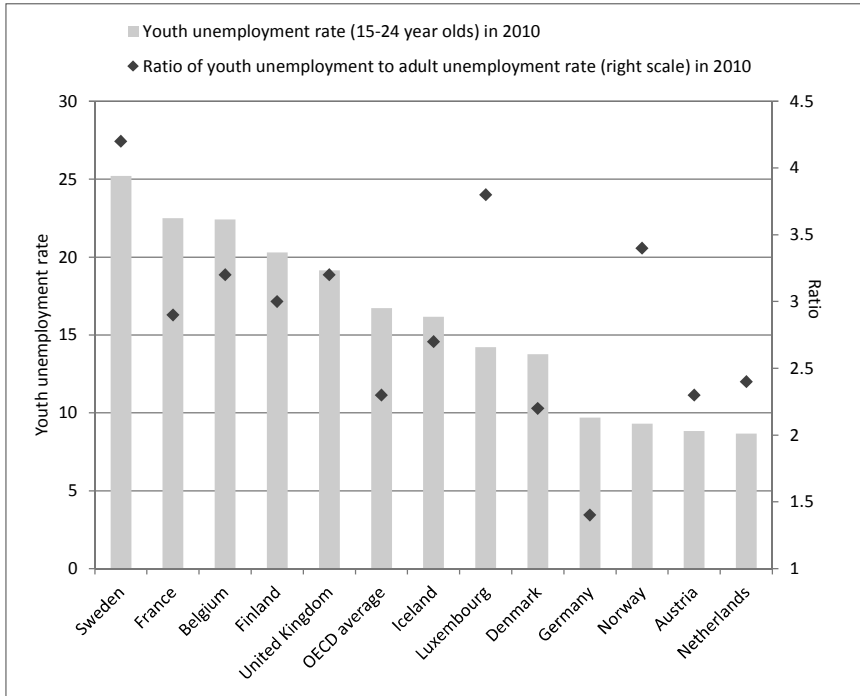
Statlink: <http://dx.doi.org/10.1787/888932461769>

Labour market outcomes

Most indicators suggest that the transition from school to work in the Netherlands is relatively smooth, with comparatively few 15-24 year-olds unemployed (Figure 1.4). In 2010, less than one in ten young persons (8.7%) were without a job, although this has increased since the start of the economic crisis. The ratio of youth to adult unemployment is similar to the OECD average (2.4 compared to 2.3) higher than in, for example, Germany which has been able to maintain a low youth unemployment rate during the crisis (Figure 1.4.). At the same time there are some indications of skills mismatches for upper secondary VET graduates in the Netherlands: 18 months after graduating 14% of the school-based graduates had no job and around one in five had a job not at their own education level in 2011 (ROA, 2012).

Figure 1.4 Youth unemployment a challenge in most OECD countries

2010 data



Source: OECD (2014), *Labour Force Statistics* (database), http://stats.oecd.org/Index.aspx?DatasetCode=LFS_SEXAGE_I_R, accessed March 2014.

Higher levels of education attract higher earnings. People with postsecondary vocational qualifications in the Netherlands earn about one-third more than graduates at levels 3 and 4 from the upper secondary school-based VET track. But qualified apprentices have salaries similar to those with postsecondary qualifications (ROA, 2012).

Appreciation of the Dutch approach to vocational education and training – key strengths

Strong and well-funded system

Across OECD countries

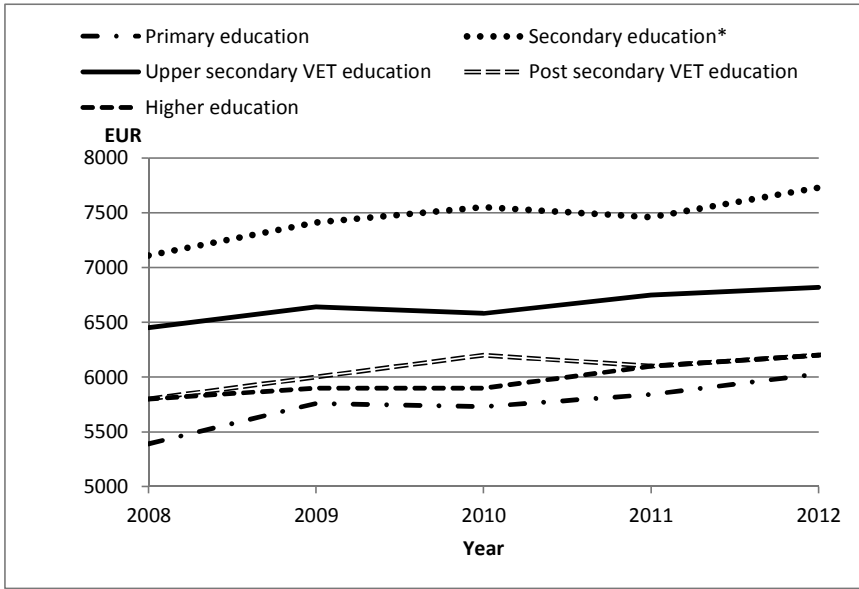
Research evidence suggests that good quality VET yields favourable economic returns on public investment, both for students and the wider society through higher earnings and taxes (e.g. Meer, 2007; Wolter and Weber, 2005). These returns are influenced by public policies bearing on access to education and the cost of education for individuals (OECD, 2012). In most countries, public spending per student per full-time year is higher for secondary and tertiary education than for primary education (OECD, 2013). However, due to budget constraints in most OECD countries, education spending, including spending on VET, is under pressure.

In the Netherlands

The Dutch VET system has benefitted from considerable financial support from the government, with higher annual public funding⁵ per full-time student in upper secondary VET (EUR 6 800) than in postsecondary VET (EUR 6 200) (Figure 1.5). Private spending on VET by students remains low (OECD, 2013) contributing to high participation levels in VET (OCW, 2013a).

Figure 1.5 How expenditure varies by type of education

Public expenditure per full-time student year by level and type of education, the Netherlands, 2008-2012



Note: * Secondary education excludes upper secondary VET education.

Source: OCW (Ministry of Education, Culture and Science) (2013a), *Kerncijfers 2008-2012*, Onderwijs, Cultuur en Wetenschap. OCW, Den Haag.

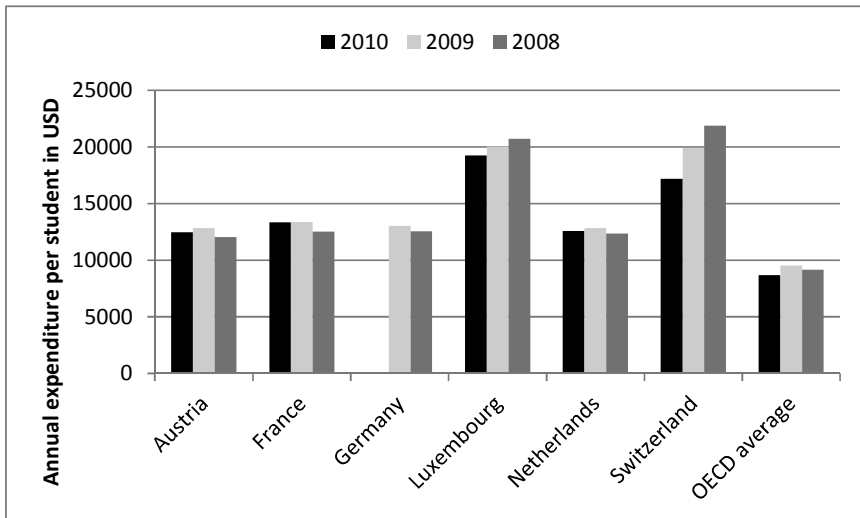
Alongside public spending, Dutch employers contribute substantially. Training firms' expenditure includes wages for students, costs of trainers for students, and in many apprenticeships also tuition fees. Employers' gross spending, per full-time apprenticeship student per year, is around EUR 23 000 per year (Detmar and de Vries, 2009). (Costs and benefits to employers are further considered in Chapter 2. New policy reforms currently being implemented include the replacement of a tax benefit for firms offering training places by a subsidy for apprenticeships and a plan for a system of "cascade" funding.⁶ These reforms will have an impact on the distribution and level of VET funding.

The Netherlands has been identified in international studies as having, alongside some other continental European countries, a 'world-class' VET system (European Commission, 2012). Continued support for VET, including funding support, is necessary for a strong VET system with good labour market outcomes. Countries with comparably strong and well-funded

VET systems such as Germany (Figure 1.6) have largely shielded VET from extensive budget cuts, underlining the importance of continued budgetary support.

Figure 1.6 How expenditure varies across OECD countries with strong VET systems

Annual expenditure per student in vocational/pre-vocational programmes at upper secondary level, by country, 2008-2012, in equivalent USD converting using PPPs, based on full-time equivalents



Source: OECD (2011), *Education at a Glance 2011: OECD Indicators*, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/eag-2011-en>; OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/eag-2012-en>; OECD (2013), *Education at a Glance 2013: OECD Indicators*, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/eag-2013-en>

Strong work-based learning system at upper secondary level, with good labour market outcomes

Across OECD countries

Work-based learning is a very important part of effective vocational programmes because it provides a strong learning environment for students and improves transition from school to work by allowing employers and potential employees to get to know each other. It also links employer needs and training supply by limiting provision to programmes where employers are willing to offer placements. Students in workplace training contribute to

the output of the training firm, creating value for the economy. To get the best out of workplace training, the placement has to be of quality. In the absence of quality control, workplace training opportunities for young people can degenerate into cheap labour, or involve very narrow and firm-specific skills (OECD, 2010).

In the Netherlands

All school-based upper secondary vocational programmes are required to dedicate between 20% and 60% of learning time to work-based learning, while in apprenticeship programmes 60% of learning time is the minimum requirement. An average of 29% of study time is spent in work-based learning in school-based upper secondary VET, while the corresponding figure for apprenticeship is 65% (Vrieze, van Kuijk and de Loo, 2009). There are no requirements for the minimum number of hours spent in work-based training in postsecondary VET (Inspectie van het Onderwijs, 2011).

The quality of work-based learning is assured by sectoral knowledge centres (*kenniscentra*) and in the future by the Foundation for Cooperation on VET and Industry (*SBB*). These institutions co-operate with employers and VET schools in matching labour market needs with the supply of qualifications, provide recommendations on curricula, and assess the quality of work-based learning in training firms. This collaboration led to an agreement (protocol) on quality requirements for work-based learning (BPV protocol, 2009). Each student has a supervisor providing guidance within the workplace and the school and student satisfaction with upper secondary work-based learning in the Netherlands is high (Sikkema, 2012).

The Netherlands has reaped many benefits from a VET system with a strong work-based learning component. Labour market outcomes for apprentices are particularly good with only 3.5% of graduates unemployed in 2011, 18 months after graduation, while for graduates of universities of applied sciences and *hogescholen* the comparable figure is 7% (ROA, 2012).

Well-developed system to engage social partners

Across OECD countries

The engagement of employers and unions is necessary to ensure that the organisation and the content of vocational programmes meet the needs of the labour market. Policy development in vocational education and training offers particular challenges because of the wide range of different stakeholders involved. Alongside the students, teaching staff and parents that play a role in all education systems, labour market actors such as employers and unions are critically important. But the level of engagement

in VET policy varies markedly among countries. At the national level social partner engagement in policy development is essential if policy is to be successfully implemented, since social partners that bought into policies during their development will be much readier to collaborate in their implementation (OECD, 2010). Organised social partnerships and strong apprenticeship systems often support high levels of engagement. At postsecondary level, additional challenges emerge because postsecondary institutions often have distinctive missions and high levels of autonomy that may leave local employer requirements somewhat marginal.

In the Netherlands

Social partners are well-integrated into the Dutch VET system contributing to policy formulation as well as delivery. Nationally, the Social Economic Council (*Sociaal Economische Raad – SER*) including representatives of trade unions and employers’ associations and independent members, gives advice on major social and economic issues including VET. The STAR (Labour Foundation) which includes only social partners also advises on these topics. There is also a VET-specific national-level organisation, the Foundation for Cooperation on VET and Industry (*SBB*), where social partners play a major role.⁷ This organisation is responsible for providing advice on VET policy, updating the qualifications framework, facilitating labour market matching of VET provision, and providing advice to training firms (SBB, 2013a). The social partners work closely with the government to develop sectoral exam profiles with the goal of reducing the number of VET qualifications and improving the match between the qualifications framework and the labour market (Van der Touw, 2012; SBB, 2013b).

One example of such co-operation is the 2013 joint agreement on initiatives to stimulate the Dutch technology sector and education provision (Nationaal Techniekpact 2020). As part of this plan, employers offer scholarships to postsecondary VET and university-level technology students and provide technical education to primary and lower secondary pupils to increase interest in technology (National Techniekpact 2020).

Employers are actively engaged in the delivery of vocational training at all levels, including through 140 000 apprenticeship placements and 300 000 shorter work placements each year (SBB, 2013b).

A private sector actively engaged in delivery of postsecondary programmes

Across OECD countries

In some OECD countries, private providers offer many postsecondary vocational programmes. Shorter courses directly relevant to industry needs are most often delivered by private providers. For example, in the United States, there is a large private sector developing and delivering certifications serving industry needs (Kuczera and Field, 2013).

Giving aging populations in many OECD countries, and therefore sometimes a declining workforce, alongside the need for skills updating over the life course, the demand from adults for postsecondary VET is increasing (e.g. CEDEFOP, 2012). Higher level vocational skills have a positive impact on productivity, innovation and employment chances of individuals and can also ensure a more equitable distribution of skills by providing additional skills to those who missed out first time round (OECD, 2005; 2010).

In the Netherlands

In the Netherlands the private sector provides many part-time associate bachelor degrees and shorter professional courses (Buisman and van Wijk, 2011; SEO, 2010; 2012). While precise statistics are lacking, around 80 000 students, or 16% of the total, were enrolled in bachelor programmes offered by private providers in 2011 according to estimates. Private providers represent over half of all part-time provision⁸ (ResearchNed, 2012; OCW, 2013a, Authors' calculations).

To meet diverse student needs, especially of those who are already working, private providers of postsecondary VET in the Netherlands are flexible and innovative. They offer tailor-made courses for industry and are able to rapidly set up new programmes to meet employer needs (Buisman and van Wijk, 2011). Non-formal learning (taking place outside of school) is very common in the private upper secondary VET sector, which experiences fewer regulatory obstacles than public institutions in providing flexible education (ResearchNed, 2012). For example, private institutions frequently deliver education and training within a company instead of school (ECBO, 2011), and e-learning is an increasingly popular form of teaching (ResearchNed, 2012; SEO, 2012).

The newly established associate degree fills a gap

Across OECD countries

VET systems face the challenge of ensuring that people have opportunities to acquire high level vocational skills and that graduates of the initial VET system have access to further learning opportunities. Such opportunities are desirable as growing technological complexity is increasing the demand for higher level skills because people themselves are aspiring to higher level qualifications and because the absence of such opportunities tends to leave initial VET pathways as low status dead ends. Students are more willing to pursue vocational programmes if there are opportunities for graduates to subsequently pursue higher level qualifications (Dunkel and Le Mouillour, 2009).

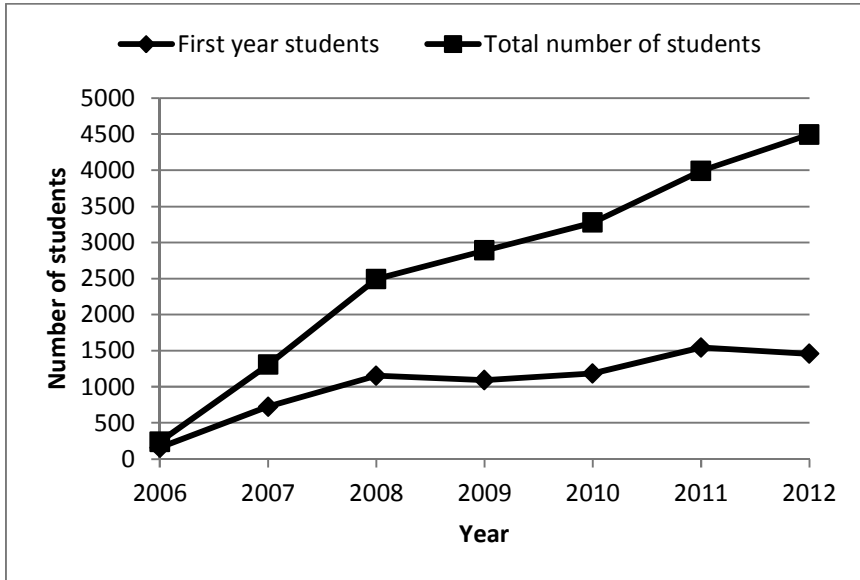
Across OECD countries, graduates of upper secondary vocational programmes often have two options for upskilling. First, students can pursue more specialised vocational training, such as the master craftsman qualifications often offered to qualified apprentices and linked to the ability to run a small business and manage staff. Second, there are educational pathways to more academic qualifications that may open up different or wider career opportunities (Fazekas and Field, 2013).

In the Netherlands

Associate degrees, established in 2006, provide avenues for upper secondary VET students who wish to further specialise in their profession and for workers and job seekers seeking to upskill. These professional degrees are similar to the first two years of a professional bachelor programme, and graduates are offered a two year programme to advance to a bachelor's degree, so that the bachelor degree normally takes four years by either learning route. They mainly attract upper secondary VET graduates from the school-based track (SEO, 2010). Since their inception, the number of associate degree enrolments has gradually increased from a few hundred students in 2006 to 4 500 students in 2012 (Figure 1.7). Enrolments in professional bachelor programmes remain around 100 times greater (SEO, 2010; OCW, 2013c).

Figure 1.7 Increasing but small numbers of associate degree students

Number of students enrolled in public associate degree programmes by year, 2006-2012



Source: OCW (2013c), *Monitor Trends in Beeld 2013*, OCW, Den Haag.

The government intends to substantially expand the number of associate degree programmes and student enrolments by 2020⁹ (OCW, 2013c). To support this expansion, the government is working together with employers to develop more labour market relevant programmes and promoting associate degree programmes within upper secondary and postsecondary VET institutions. A temporary national commission (*commissie AD*), a national platform (*Landelijk Platform Ad*) and a national network (*Landelijk Netwerk Ad*) have been established to accompany institutions and employers in these tasks and monitor their progress (Commissie Associate Degree, 2011). With an expected increase in the demand for higher-level VET skills (ROA, 2012), associate degrees meet a significant economic need.

Challenges

Despite all the manifest strengths of the Dutch VET system, there remain, inevitably, some significant challenges. These challenges are set out below in summary. What might be done to address them forms the subject of chapters 2-6.

- The Dutch economy has greatly benefited from a strong work-based learning system, given its effective integration into apprenticeships and school-based upper secondary VET. Challenges remain in sustaining work-based learning and reaping its full benefits, as demographic change and the popularity of academic education put pressure on the VET system. Economic pressures may weaken employers' willingness to offer work placements, in a context of changing regulation.
- Teaching staff are the most valuable resource in any learning institution and their skills have to be updated regularly. As entry from industry into teaching in VET schools is not common, mainly because of regulatory restrictions, the supply of teachers may not be able to respond adequately given a wave of expected retirements, and the need to keep up with changing industry practice.
- In spite of the relatively small number of students participating in the lowest level of upper secondary VET (MBO 1), it faces considerable challenges. Though, according to the law, this level is not intended to lead to a labour market qualification, inevitably many of those pursuing this programme try to enter the labour market directly or drop out. MBO 1 concentrates young people with disadvantaged backgrounds and yields comparatively poor labour market outcomes. Such a concentration of educational challenges may make it harder to tackle those challenges. At the same time, the diversity of the student body implies a diversity of learning needs.
- Current postsecondary funding arrangements do not set adequate incentives for providers, in particular to meet the needs of adults seeking part-time provision.
- The range of qualifications available in the Dutch postsecondary VET system may not fully meet labour market demand in the face of an increasing need for higher vocational skills. There are relatively few options for the graduates of upper secondary VET to upskill other than the academic route or a full bachelor programme. While many short private courses aim at addressing this gap in provision, they lack visibility. In addition, in the absence of an adequate regulatory framework, short courses provided by private institutions may lead to the acquisition of too narrow skills.

Notes

1. The figures on private institutions only refer to nationally recognised and registered institutions, that are training people to obtain *MBO* diplomas, nationally recognised by the Ministry of Education, Culture and Science, and excludes institutions that provide short-term training programmes or those training for certificates only.
2. In 2010, 6,7% of graduates of apprenticeship-based programmes at level 4 continued schooling at postsecondary VET level, while 60% of graduates of the school-based track transferred to HBO (HBO Raad, 2012).
3. The figures on private institutions only refer to nationally recognised and registered institutions that are training people to obtain *HBO* diplomas, nationally recognised by the Ministry of Education, Culture and Science, and excludes institutions that provide short-term training programmes or those training for certificates only.
4. The exception are the planned implementation of national exams for Dutch and arithmetic skills for upper secondary VET levels 2 to 4, and English for upper secondary VET programmes at level 4.
5. Public investment levels refer to expenditure from the Ministry of Education, Culture, and Science (OCW) on VET education per student.
6. The plan for cascade funding is to link public funding to length in upper secondary vocational education. The level of public funding would be higher for first year students than for students in later years (OCW, 2013b).
7. It has taken over most of the roles previously played by 17 sectoral centres of expertise.
8. It is not possible to obtain 100% accurate figures on private provision of part-time bachelor programmes even though the available evidence suggest that almost all private provision of bachelor programmes is part-time.
9. In 2012, 1% of all postsecondary VET students were enrolled in associate degree programmes (Rijksoverheid, 2012).

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Chapter 2

Work-based learning

The Dutch economy has gained much from a strong work-based learning system, both through apprenticeships and in the work-based element of school-based upper secondary vocational education and training (VET). Challenges remain in sustaining these benefits, in maintaining student numbers and employer willingness to train.

This chapter argues that there is a need to champion and further promote apprenticeship and work-based learning. As work-based learning depends on a joint effort by employers, schools, and the government, it is essential to sustain tripartite support for work-based learning and negotiate reform with the social partners. Work-based learning should also be systematically promoted in postsecondary vocational programmes.

Challenges: Increasing competition, economic cycles, and changing policies

The Dutch economy has gained much from the strong work-based learning element of its upper secondary VET system. But work-based learning now faces three challenges: first, demographic decline and the popularity of academic education put increasing pressure on the VET system in the competition for students. Second, weak labour market demand is affecting the willingness of employers to offer work placements both in school-based VET and apprenticeship. Third, current and prospective changes to the regulation of work-based training could have adverse consequences.

Demographic decline and competition from academic education put pressure on VET

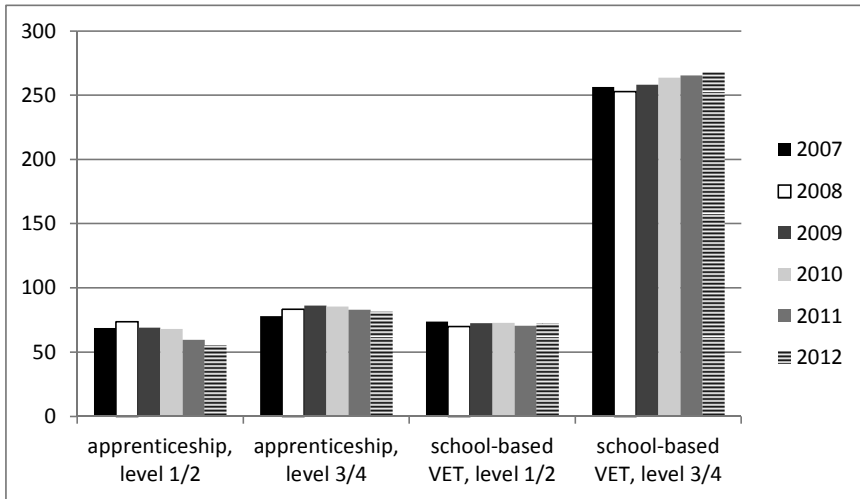
The number of young people has been falling in the Netherlands for some years (as in many OECD countries) particularly in rural areas and outside the Randstad, the country's economic core (CBS, 2010). This decline will continue in coming decades, impacting on the supply of skills and, potentially, economic growth (OECD, 2012a). With falling numbers of young people, competition for students may intensify not only across institutions, but also between vocational and academic tracks. The Dutch government has recognised these challenges and has taken certain measures to protect VET (Verwest and van Dam, 2010). But given the lower status of VET compared to academic education (OCW, 2010; Onderwijsmeter 2005, 2008), there is a risk that VET may suffer disproportionately from declining student numbers (although some projections foresee stable student numbers in upper secondary VET until about 2020) (OCW, 2012a).

Labour market weaknesses may dampen supply of work placements

International evidence suggests that the supply of apprenticeship places, relative to labour market entrants, decreases with economic downturns as firms prefer to concentrate on training their own employees and are less interested in additional recruits (Brunello, 2009). Most probably because of the global recession, a decline in apprentice numbers can be observed in the Netherlands since 2009 (Figure 2.1) accompanied by a parallel increase of student numbers in school-based VET. While this buffer role of school-based VET is useful in the short run, prolonged economic problems could lead to a long term decline in the skills supplied by apprenticeship programmes (CEBR, 2013; Lerman, 2013).

Figure 2.1 Declining numbers of apprentices and increasing numbers of students in school-based VET

Students in upper secondary VET (MBO) according to programme and level, thousands of students, 2007-2012



Source: OCW (2012b), *Key Figures 2007-2011*, OCW, The Hague; OCW (2013a), *Kerncijfers 2008-2012*, OCW, the Hague.

Some proposed policy reforms may have adverse consequences for work-based learning

The willingness of employers to offer work placements depends on their assessment of the costs and benefits. The costs include the wage paid to VET students, the time spent on training by in-company trainers, and materials and equipment used for training. The benefits include the productive contribution of VET students and the value to the employer of work placements as a recruitment device (OECD, 2010a). Companies can be highly sensitive to changes in these factors (Zwick, 2007; Wolter and Ryan, 2010; Hogarth et al., 2012), and changes to the regulation of VET and work-based learning, recently introduced or under consideration, may affect companies' cost-benefit calculations.

First, striking the right balance between general and vocational skills provision is key to the long term labour market success of VET graduates (OECD, 2010a). Some 2010 legislation, establishing required standards for Dutch language and mathematics, was designed to enhance the general skills of all students in primary and secondary education including VET (*Wet referentieniveaus Nederlandse taal en rekenen*, 2010). To this end, it

prescribes standardised examinations in both subjects for students in upper secondary VET, and all students need to pass these exams at their set reference levels to obtain a school leaving certificate. While schools are free to allocate teaching time, it is expected that most of them will either intensify course-work (i.e. more hours per week) and/or will increase the ratio of general to vocational skills instruction possibly also diminishing the time available for work-based learning. In addition, the duration of around 80% of upper secondary VET level 4 programmes will be decreased from four to three years probably putting downward pressure on the time available for work-based learning and vocational subjects (SBB, 2012a) (since the fourth year typically involves the largest share of time spent in work placement) (Detmar and de Vries, 2009).

Second, as more than half of students failed one or more of the general skills exams in the pilot exercise¹ (College voor Examens, 2012), there is a risk that students with strong vocational skills may not gain the qualification. If the failure rate remains high when examinations are fully implemented, the labour market may not be able to fully benefit from vocational graduate skills in the way they have done in the past.

Third, it is unclear whether the institutional restructuring (which at the time of writing in early 2014 is ongoing, and not yet fully implemented) will maintain the amount of support available for training companies and the strengths of the quality assurance framework. 17 Knowledge Centres for VET, Trade and Industry (*Kenniscentra Beroepsonderwijs Bedrijfsleven: KBB*) have been primarily responsible for the development of qualification structures, accreditation and support of companies offering work-based learning, and facilitating the match between the supply of VET graduates and labour market demand (Wet educatie en beroepsonderwijs, 1995). Most of these tasks are in the process of being transferred to the Foundation for Cooperation on VET and Industry (*Stichting Samenwerking Beroepsonderwijs Bedrijfsleven: SBB*), a national-level organisation potentially less closely linked to sectoral and local labour markets (SBB, 2013a). Within the SBB eight sectoral *sectorkamers* will be organised to ensure a continued sectoral voice, but the resources available will be reduced. While the new arrangement has still to be fully implemented (with effect from 1 January 2016), there is a risk that some of the accumulated tacit knowledge of training enterprises supporting work-based learning may be lost in the restructuring. International experience suggests that effective quality assurance and continuous support for training firms are particularly relevant to help students and companies to reap the full benefits of work-based learning (OECD, 2010a).

Fourth, the recent reform of tax benefits for companies offering work-based learning could affect employer willingness to offer training. The

reform includes the change of a tax deduction for employers in support of work-based learning into a more targeted subsidy for employers providing apprenticeships, (but not for work-based learning on the school-based vocational track).²³ As public support plays a considerable role in companies' decisions to offer work-based learning (Detmar and de Vries, 2009), the supply of work placements may decrease in the sectors where public funding is withdrawn or decreased.

Fifth, while social partners play a key role in developing and maintaining work-based learning in the Netherlands, ongoing policy reforms may not always be based on sufficient consensus. Successful policy reform crucially depends on the support of social partners, especially employers (OECD, 2010a).

Recommendation: Promote work-based learning and negotiate reform with social partners

Actively champion and promote apprenticeship and work-based learning throughout the Dutch VET system, including at the postsecondary level. Negotiate reform with the social partners to sustain tripartite support for the system.

Supporting arguments: High quality, good outcomes, and potential for growth

There are four arguments supporting this recommendation. First, work-based learning in school-based VET as well as apprenticeship provides a high quality and cost-effective learning environment. Second, work-based learning, especially apprenticeship, leads to improved school to work transition. Third, international experience suggests that the Netherlands could gain from increased emphasis on work-based learning, including at postsecondary level. Fourth, there are effective tools in use in OECD countries which could further facilitate work-based learning in the Netherlands if transplanted.

Work-based learning represents a high quality and cost-effective learning environment

The Netherlands greatly benefits from its well-developed work-based learning system. As learning goals at the workplace are aligned with school curricula and a strong quality assurance framework is in place, work-based learning contributes substantially to training quality. High quality work-based learning allows for the acquisition of soft skills highly valued by employers such as conflict management skills, entrepreneurship, or team-

working. Furthermore, learning from trainers working in enterprises using the most up-to-date equipment and organisational structures allows for skills not always available at VET schools to be acquired.

If employers are willing and able to offer work placements, VET programmes can become more cost-effective particularly if learning goals in enterprises and schools are aligned (OECD, 2010a). Typically, the most up-to-date equipment and organisational structures are readily available in enterprises, whereas in schools, investment needs to be made continuously to keep equipment and organisational structures up-to-date. Public expenditure per student in the last five years has been consistently 34-36% higher in school-based VET than in apprenticeship (authors' calculations based on data from OCW (2013a)). Work-based learning also makes efficient use of private funding as enterprises contribute financially to training while potentially earning a net benefit in the short or long term (Mohrenweiser and Zwick, 2009); for example, it is estimated that in the Netherlands the gross costs to enterprises were EUR 23 000 per apprentice per year (and almost EUR 9 000 per student per year in work placement for school-based VET) in 2008 (Detmar and de Vries, 2009). For apprenticeships the net costs to enterprises fall to EUR 12 000 per apprentice per year once the productive output of the apprentice, plus the tax-benefit incentive to the enterprise are taken into account. If work-based learning is sufficiently long, the productive contribution of trainees to economic output can offset the costs of training. One additional benefit to enterprises of taking on apprentices, not reflected in these figures, is that it is an efficient means of recruitment.

Work-based learning leads to improved school to work transition

School to work transition is a long standing challenge exacerbated by the global economic crisis (OECD, 2010b). As already noted in Chapter 1, school to work transition of the Netherlands has been relatively smooth with more than 95% of 15-24 year-olds finding their way into employment or education in 2008 (OECD, 2010b). The labour market outcomes of apprenticeship are better than school-based VET, with lower unemployment rates and higher wages, although differences in the age profile and prior employment of students in the two tracks will certainly explain some of these differences (ROA, 2012).⁴ Some international evidence suggests that high quality apprenticeships lead to better labour market outcomes than school-based VET (OECD, 2010b, Ryan, 1998). More high quality apprenticeship and workplace learning could further reinforce these strengths.

High quality apprenticeship and work-based learning may also improve the reputation of the vocational track hence its attractiveness, especially when weak labour markets put a premium on smooth school to work

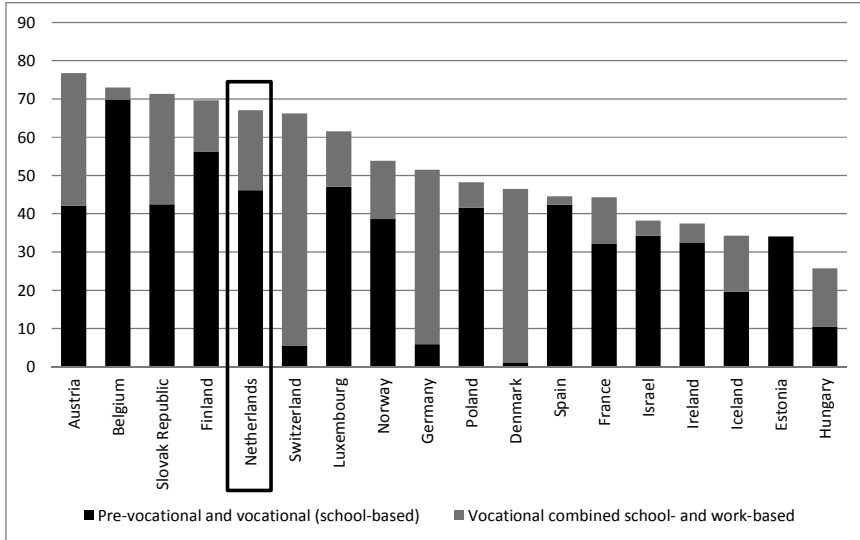
transition. In countries with strong apprenticeship systems such as Switzerland, some apprenticeship programmes are in very high demand even among the best graduates from academic education (Fazekas and Field, 2013).

International examples suggest room for extending work-based learning, including the postsecondary level

While work-based learning is one of the Dutch VET system's strengths, the full apprenticeship system is relatively small compared to countries with similarly large upper secondary VET systems and similar economic structures (Figure 2.2). (Conversely, school-based VET in the Netherlands, unlike many other countries, includes a substantial element of workbased learning). In 2010, apprentices amounted to 31% of total upper secondary VET enrolments in the Netherlands compared to 49% in Austria, 88% in Germany, 92% in Switzerland, and 97% in Denmark (authors' calculations based on OECD, 2012b, Table C1.3). This comparative picture remains the same when looking at the proportion of apprentices within the whole cohort enrolled in upper secondary education (OECD, 2012b, Table C1.3). Apprenticeships are much more common at upper secondary VET levels 1 and 2 (MBO level 1/2) suggesting that there is room for targeted interventions to support apprenticeship at levels 3 and 4 (MBO level 3/4).

Figure 2.2 Relatively small proportion of work-based VET (apprenticeships) in the Netherlands

Proportion of upper secondary enrolments in school-based VET and work-based VET programmes, %, (2010)



Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/eag-2012-en>, Table C1.3.

Work-based learning could also be more systematically integrated into postsecondary provision. The Flemish foundation degree, which closely parallels the associate degree in the Netherlands, contains the requirement that every programme should include a “reasonable” amount of work-based learning. Other postsecondary programmes such as higher vocational education in Sweden and post-high school provision in Romania also make work-based learning a mandatory element of the relevant programmes.

There are effective tools available for further facilitating work-based learning and apprenticeship

Policy implementation can build on the existing strong institutional framework in the Netherlands while also benefiting from rich international experience, especially from countries which managed to protect their apprenticeship and work-based learning systems in the midst of the economic downturn (e.g. Austria, Germany and Switzerland) (OECD, 2010a).

Currently, while the supply of Dutch apprentice placements is insufficient to meet demand it could be stimulated by providing targeted support to SMEs both in terms of the administrative burden (administrative costs may be relatively more burdensome for smaller companies) and allowing them to provide training jointly (SBB, 2012b). For example, in Switzerland vocational training associations (*Lehrbetriebsverbände*) can be established by groups of firms that share apprentices in order to allow those companies which do not have the capacity and resources to provide full apprenticeship training to become engaged and to decrease the financial and administrative burden on each individual firm.

Notes

1. The share of students who passed the exams during the pre-pilot phase in January 2012 is at MB-2 level: 61% for Dutch and 35% for arithmetic skills. At MBO-3 level it is 85% for Dutch and 57% for arithmetic skills. The June 2012 pilot results of MBO students indicate that 63% of students would have passed the Dutch examination and 20% the exam for arithmetic skills (College voor Examens, 2012).
2. The reform has been implemented on January 1, 2014 (OCW, 2013b). The current tax credit for companies offering training places is EUR 2 700 per student per year. Most of this (EUR 189 million) currently goes to VET, and a smaller proportion (EUR 15 million) to higher education. The maximum subsidy a company can receive per student has also been set at this amount (Belastingdienst, 2013).
3. The proposed target groups include: apprenticeship students in both lower and upper secondary VET programmes, *HBO* students enrolled in technology programmes, and students in research (OCW, 2013b).
4. Between 2007 and 2011, unemployment rates were 3-times higher in school-based VET than in apprenticeship one and a half year after graduation. For example, in the cohort graduating in 2011, unemployment rate was 20% for school-based VET level 1/2, 8% in school-based VET level 3/4, 5% in apprenticeship level 1/2, and 2% in apprenticeship level 3/4 (ROA, 2012).

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Chapter 3

Teachers and trainers in upper secondary vocational schools

Teaching staff are the most valuable resource in any teaching institution, but their skills have to be updated regularly. Academic qualification requirements make it hard to recruit teaching staff for vocational schools. As a result it may be difficult for the teaching workforce to keep abreast of industry needs, and in terms of numbers, to ensure sufficient new recruits to match an anticipated wave of retirements.

This chapter argues that the Dutch government and social partners should facilitate the entry of industry practitioners into the teaching workforce by easing regulations and providing better support for entrants. Skills updating among existing teaching staff should be promoted through regular industry placements integrated into teachers' careers and evaluation system.

Challenges: Ageing, skills updating, and mid-career entry

Teaching staff are the most valuable resource in any learning institution. The teaching workforce in upper secondary vocational schools in the Netherlands faces three challenges. First, technological and other changes in working life require teachers and trainers to regularly update their skills. Second, many teachers are approaching retirement. Third, entry from industry into teaching in VET schools is relatively uncommon primarily due to regulatory restrictions.

Rapid workplace change requires teachers and trainers to update their skills

High quality vocational programmes require teachers and trainers to possess, alongside pedagogical skills, good technical vocational skills. Maintaining and updating these technical skills is a challenge shared by many OECD countries (OECD, 2010), given rapid change in production technology and workplace organisation (Parsons et al., 2009). These involve, for example, the use of new machines and software, or novel organisational structures in low as well as high tech professions.

In the Netherlands, about two-thirds of the teaching staff in upper secondary VET are qualified through a four-year full-time teacher training programme while most of the remainder have a pedagogical certificate (ITS, 2013). The first group enters teaching directly from school with little work experience, while the second group encompasses people coming from industry with at least three years of work experience. As most of the teaching staff stay in full-time teaching without working in industry for decades, their skills may readily become outdated, a concern expressed by some VET institutions and trade organisations in the Netherlands as well (ITS, 2013). While in-service training is a requirement for Dutch teaching staff, there is at present no minimum amount of training, and schools and teaching staff have full discretion to decide what type of in-service training to undertake (Ruud de Moor Centrum, 2010). Upper secondary VET teaching staff express less satisfaction with in-service training opportunities than teachers in other parts of the education system, suggesting that they face some barriers to training (Bokdam et al., 2011).

Current reforms involve the introduction of a registration scheme for teaching staff linked to enhanced in-service training commitments for pedagogical as well as vocational skills (Lerarenregister, 2013; OCW, 2011a). Teaching staff registering their competences commit to 160 hours of relevant professional development every four years, after which their participation and their competences are assessed by a committee for re-

registration. In 2017, registration will be compulsory for all teaching staff (Website *lerarenregister*; OCW, 2011a). Funding is available to support such in-service training (OCW, 2011a; OCW, 2011b).¹ These changes take place against the background of increased attention to policy on the teaching profession, for example reflected in the National Education Accord (Nationaal Onderwijsakkoord, 2013), and widespread discussion of ‘reconversion’ meaning a shift in policy attention back towards teachers.

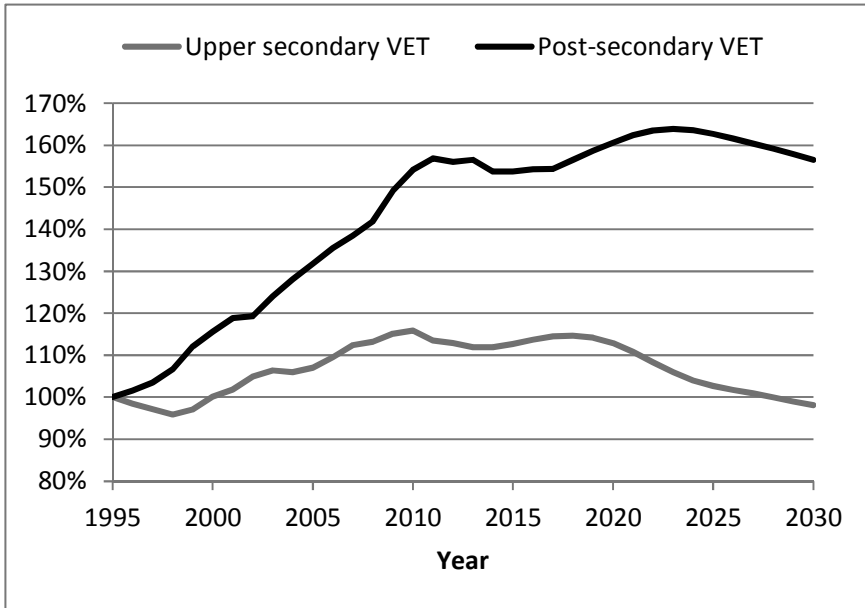
While these are steps in the right direction, they may not be sufficient to ensure that teachers and trainers in vocational schools are familiar with the fast-changing requirements of modern workplaces.

Many teachers will retire in the coming years

In many OECD countries, the teaching workforce in vocational schools is ageing (OECD, 2010). In Sweden, for example, more than half of the vocational teachers and trainers in upper secondary schools are over 50 (Skolverket, 2007). The Netherlands faces a similar challenge (see Figure 3.1). While in 2002, only 43% of the VET teaching workforce (excluding “instructors”) was over 50, that has increased to 58% in 2012, while the influx of young teachers has remained low. Only 6% of upper secondary VET teaching staff were below 30 in 2012 compared to 4% in 2002 (authors’ calculations using DUO, 2013). This has already started to affect the number of teaching staff available with a 15% decrease in the total number of teaching staff between 2002-2012 (authors’ calculations using DUO, 2013), primarily because of the difficulty of hiring new teachers (OCW, 2011a; Onderwijsraad, 2013).

Figure 3.2 The number of VET students is likely to stay close to its 2010 level

Changes in the number of students enrolled in upper secondary and postsecondary VET, Index 1995=100



Source: OCW (2012), Referentieraming (2012), www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2012/09/18/referentieraming-2012.html (accessed 24 June 2013)

Obstacles to the recruitment of teaching staff from industry

Currently, persons without a teaching qualification but with relevant industry experience can only work in vocational schools under the supervision of an “official” teacher with a teaching qualification, or alternatively they have to obtain a teaching qualification following a course of at least 500 hours (i.e. a pedagogical certificate). A survey among postsecondary VET institutions indicated they experience difficulties in finding people from industry willing to meet these requirements (ITS, 2013). In addition, current tax regulations are not always conducive to attracting part-time workers from industry and uncertainties exist about what taxes should be levied on, or can be deducted by, schools, knowledge centres and companies after the costs of part-time teaching staff from industry (Commissie van der Touw, 2013). These regulatory complications and

uncertainties are in themselves a limiting factor on the number of part-timers.

At the same time there is a great variability in the quality and content of pedagogical training between regions and institutions, resulting in professionals not always being adequately prepared for teaching (Onderwijsraad, 2011; 2013). To support the transition from industry to classroom, the teaching qualification programmes need to be of high and consistent quality. At the time of writing a government-led project group is working on this subject.

Recommendation: Building the industry skills and experience of the teaching workforce

Facilitate the entry of industry practitioners into the teaching workforce and promote familiarity with industry among existing teaching staff through regular industry placements.

Supporting arguments: Drawing on skills in industry and updating existing skills

Three arguments support this recommendation. First, part-time teaching staff coming from industry help to bring up-to-date experience into VET schools and address the shortage of teachers and trainers. Second, entry from industry into teaching in VET schools can be facilitated without compromising teaching quality. Third, the regular placement of VET teachers and trainers in industry would help to update their skills.

Part-time teachers from industry bring up-to-date industry skills

Part-time teachers and trainers who also work in industry can bring high quality practical experience into the learning environment, helping students, fellow teachers and trainers, and contributing to skills-updating more broadly. Employers have been found to attach more value to those VET courses where trainers are required to have workplace experience (Spark, 1999 in Dalton and Smith, 2004).

Independently of strict qualification requirements, those coming from industry will need to be valued by the receiving institutions. Encouraging entrants from industry and reaping the benefits of their knowledge and skills will therefore also depend on the quality of school leadership. Such leadership plays a crucial role in facilitating a collaborative teaching culture in all OECD countries (Pont et al., 2008) and specifically in the Netherlands

(Hofman-Hofman, 2011). For these reasons, school heads support for such a reform may prove to be critical for successful policy implementation.

An easier entry from industry would also allow VET schools to adjust provision more flexibly. The shortage of teaching staff is acute in some VET schools already, so more flexibility in staffing arrangements would help to alleviate skills shortages. For example, in Norway, VET institutions and local enterprises co-operate to address shortages in VET teachers and trainers through the use of part-time practitioners drawn from industry (OECD, 2010).

There are effective tools to facilitate entry from industry into teaching

In some OECD countries, skilled professionals may teach a limited number of hours per week after the completion of a short teaching course designed for part-timers (OECD, 2010). The course is organised so as to meet the specific needs of part-timers and industry practitioners (e.g. distance learning, weekend workshops) can extend their supply. For example, the South Carolina DIRECT programme is designed to prepare prospective VET trainers coming from business and industry through block seminars of a few days over the summer and a couple of weekend workshops (Rex et al., 2008) a much more manageable requirement than the 500 hours currently requested in the Netherlands.

Countries with extensive work-based learning systems such as the Netherlands should also be able to draw on the large pool of workplace trainers who have experience of teaching young apprentices. Ideally, the new set of requirements should allow for a staged entry into full-time teaching from industry (from workplace-trainer through part-time teacher to full-time teacher).

Regular placement of VET teaching staff in industry update their skills

While a number of mechanisms already exist in the Netherlands to update the skills of full-time teachers and trainers, sufficient hands-on experience of workplace developments is sometimes lacking. Internships or part-time work in an enterprise would therefore be desirable for teachers and trainers (OECD, 2010).

The simple opportunity for teaching staff to engage with industry may not be sufficient; Dalton and Smith (2004) observe of Australian vocational teachers that they often consider themselves to be too busy to update their skills and knowledge unless training is formally integrated into their job and

recognised as part of their workload. So there is a need for an effective framework recognising teachers' and trainers' efforts as well as motivating them and the receiving enterprises. Current efforts to support teachers' professional development could incorporate such goals building on well-established international examples (see Box 3.1).

Box 3.1 Teacher-worker pairing: Co-operation between VET institutions and industry in Finland

The Telkkä programme in Finland was based on close co-operation between teachers and workplace trainers. It aimed to improve the ability of VET to respond to the needs of working life. The programme included a two-month on-the-job period for teachers, during which teacher-worker pairs were formed. This offered an opportunity for teachers to update their professional skills and for workers who also work as workplace trainers to improve their pedagogical skills. The training period was preceded by a seminar and planning (to clarify goals and expectations) and followed by feedback from teachers and workers and dissemination to the broader community.

Teachers reported a wide range of benefits, such as: increased familiarity with recent work practices and requirements and the equipment used; easy access to firms for study visits; the contacts necessary to invite people from industry to give lectures at their VET institution; increased confidence; respect from students; and motivation. The training period also allowed teachers and workers to discuss issues related to work-based learning for students and improve training plans and assessment methods. Participants improved their skills and self-esteem, and disseminated knowledge to other colleagues. This exercise was evaluated by the Economic Information Office in Finland as one of the best ways of developing teachers' professionalism.

Source: Cort, P., A. Härkönen and K. Volmari, (2004), *PROFF – Professionalization of VET Teachers for the Future*, CEDEFOP, Thessaloniki.

Note

1. Under the National Education Agreement the implementation of the Teacher register will involve the social partners and there will be emphasis on the connection between school teachers and practice.

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Chapter 4

Tracking and the lowest level of upper secondary Vocational Education and Training (MBO 1)

The lowest level of upper secondary vocational education and training (VET) (MBO 1) tends to concentrate young people with disadvantaged backgrounds and learning difficulties and yields comparatively poor labour market outcomes. Such a concentration may not effectively meet learning needs, and encompasses a very diverse student body with equally diverse learning needs.

This chapter argues that, at lower secondary level, the pre-vocational track should be merged with the general track to give young people with disadvantaged backgrounds a better chance to improve their skills. At the upper secondary level, MBO 1 programmes should be refocused as an entry route into upper secondary VET level 2 to better support upskilling and ensure that graduates enter the labour market with sufficient skills.

Challenges: High concentration of challenges, diversity and poor labour market outcomes

Four per cent of all upper secondary VET students, or 19 000 students, were enrolled in MBO 1 in 2012, with little change in enrolment over the last five years (OCW, 2013). There are three closely related challenges. First, this track concentrates young people with the most disadvantaged backgrounds and this risks further exacerbating their educational challenges. Second, it encompasses a very diverse student body which calls into question the underlying rationale for tracking. Third, though, according to the law, this level is not intended to lead to a labour market qualification, many of those pursuing this programme try to enter the labour market directly or drop out and this level yields poor labour market outcomes.

MBO 1 concentrates young people with disadvantaged backgrounds

The Dutch secondary education system has more educational pathways than the vast majority of OECD countries, with selection taking place as early as the age of 12 (OECD, 2012, Table 2.2), and pre-vocational programmes (*VMBO*) tracking 14 year-olds before they enter upper secondary VET. Currently, some changes are planned in the VMBO curriculum, with a *vakmanschapsroute* and a *technology* route being introduced with the aim of smoothing the transition from VMBO to MBO. Lower secondary VET consists of four tracks each of which has four sectoral specialisations such as agriculture or technology. The upper secondary VET system consists of four different tracks (*niveaus*) for both school-based VET and apprenticeships. Including the academic tracks, there are ten tracks at upper secondary level. This contrasts with most other OECD countries which typically have between one and four upper secondary tracks.

While the tracking arrangements are not intended to concentrate students with disadvantaged backgrounds in particular programmes, or particular schools, in effect they do so through their selection arrangements. They are compounded with some elements of geographical segregation which tend, in the Netherlands as in many other countries, to concentrate social disadvantage in certain areas and therefore in certain schools. Such concentration has a detrimental effect on their achievement and progression according to evidence from a range of OECD countries (OECD, 2012; Fertig, 2003; Thrupp et al., 2002) including the Netherlands (e.g. Karsten et al., 2006). It is therefore a concern that tracking takes place at an early age and later education trajectories add further differentiation as students move from lower to upper secondary VET.

The current plan to implement general examinations for Dutch language and arithmetic skills for upper secondary VET (College voor Examens, 2012) may create an additional obstacle for level 1 students seeking to enter higher level VET. Currently, 60% of students at the lowest level of school-based upper secondary VET transit to level 2, while only 21% of apprentices of the lowest level do so (OCW, 2013). Clearly many of the students in MBO 1 face academic challenges. Few have completed lower secondary education: almost one-quarter (23%) have reading difficulties (Hiteq, 2009); and only 16% of those with a pre-vocational qualification (*VMBO*) reach the required arithmetic skills level¹ (College voor Examens, 2012). Most students continue to fail the set reference levels for upper secondary VET students:² in 2011, only 5% of VET graduates reached the reference level for arithmetic skills, and 13% for reading (Broos, 2012; Bureau ICE, 2012).

MBO1 is very diverse, undermining the argument for selection

In 2009, 60% of students were in employment or unemployed before entering MBO 1; the remaining 40% left secondary education, but without a school-leaving certificate (CBS, 2010). The MBO 1 population includes many drop-outs returning to education (MBO Raad, 2012), as only 4% of MBO 1 entrants have completed lower secondary VET according to 2011 figures (DUO, 2011). The high proportion of drop-outs entering MBO 1, either directly from other education institutions or after being on the labour market, signifies that the skills weaknesses concentrated in MBO 1 have arisen at lower levels of schooling. In this respect, the basic vocational track of lower secondary VET stands out as it had low levels of student attainment and high drop-out rates with 16% of the students leaving without a qualification in 2009/10³ (OCW, 2012). To a large degree, MBO 1 represents the main way for these drop-outs to re-enter the school system.

In addition, many MBO 1 students have no secondary school qualification and many come from socially disadvantaged backgrounds, especially in the apprenticeship track (Hiteq, 2009). Many also have an immigrant background and weak Dutch language skills (ECBO, 2010), that are often associated with lower graduation rates (MBO Raad, 2012). Students at MBO 1 often have mental and health disorders which can lead to learning difficulties, such as the inability to concentrate (Hiteq, 2009; ROA, 2012a). The rationale for tracking is often presented as a way of allowing programmes to be adapted to the different needs of the pupils. But despite the tracking, the evidence suggests that MBO 1 students have a very diverse range of needs and disadvantages (Hermanussen, 2012; Hiteq, 2009), so that the tracking in no way obviates the need for personalised approaches to learning needs.

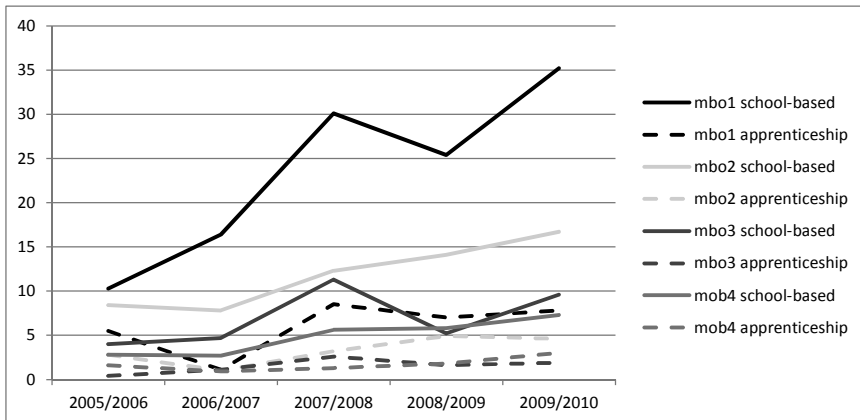
Poor labour market outcomes

MBO 1 is not, according to the law, intended to lead to a labour market qualification, but inevitably many of those pursuing this programme enter the labour market directly. The programme, especially the school-based track, yields poor labour market outcomes, (Figure 4.1). Around one-third of students in MBO 1 leave school without a final qualification (OCW, 2012). Graduates typically fill unskilled positions with little responsibility, such as shop assistants (MBO Raad, 2012; ROA, 2012b). The cohort graduating in academic year 2009/2010 faced an unemployment rate of 35% in the school-based track and 8% in the apprenticeship track one and a half years after graduation. Both figures are well above that of the other upper secondary VET levels. The time series also suggest that the crisis has had a particularly strong impact on level 1 graduates' employment prospects and wages (ROA, 2013).

The fact that apprentices in the lowest level of upper secondary VET do much better on the labour market than the graduates of the school-based track, further lends support to the arguments set out in Chapter 2 in favour of work-based learning. It also points to VET schools as the most critical point of policy intervention.

Figure 4.1 Increasing unemployment among MBO1 graduates

Unemployment rates one and a half years after graduation according to VET track and level, 2005/2006-2009/2010, %



Source: ROA (Research Centre for Education and the Labour Market), (2013), *Kerncijfers Schoolverlatersonderzoek*, <http://um-wbdotnet20.unimaas.nl/roa/sis-online/Home.aspx> (accessed: 2/7/2013).

Recommendation: Reform pre-vocational tracking and re-orientate level 1 VET programmes

Merge pre-vocational education levels 1 and 2 at lower secondary level and refocus upper secondary VET level 1 programmes as an entry route into upper secondary VET level 2

Supporting arguments: Improved student performance, tailored support, and better reputation

This recommendation is supported by three arguments. First, postponing the division between level 1 and 2 from the prevocational stage to upper secondary VET would contribute to improved student attainment and better integration of disadvantaged students. Second, a reoriented MBO 1 would provide more effective support for students in need. Third, re-orientation of MBO 1 as an entry route into level 2 and higher VET programmes would increase the overall reputation of VET, especially in the eyes of employers.

“Early” tracking, which sorts students into different tracks at lower secondary level at age 11 or 12, has been shown to have a negative impact on the general skills attainment of those in the lowest track(s) (OECD, 2012). This is confirmed, for example, using PISA data on general skills across OECD countries (Hanushek and Woessman, 2006). While lower performing students tend not to benefit from tracking, the evidence on any advantages for higher ability students is mixed (Jakubowski, 2010). Bauer and Riphahn (2006) exploit variations in the age of tracking across Swiss cantons to show that later tracking reduces the relative advantage of children of better educated parents, thus supporting the findings by Dustmann (2004) for Germany.

The negative impact on students in the lowest track(s) results from a range of factors: first, students in the lowest track(s) cannot benefit from the positive effects of being around more capable peers; second, tracking typically results in a stigmatisation of the lower track(s) (Hanushek and Woessman, 2006); third, the existence of lower level track(s) creates a vicious circle in those track(s) where teachers lower their expectations of student performance and students reduce their expectations and efforts in response (Gamoran, 2004); fourth, more experienced and more capable teachers tend to prefer to work in higher level track(s) (Oakes, 2005).

Early tracking also tends to limit social mobility as it reinforces the impact of student socio-economic background on academic performance (OECD, 2012, Field et al., 2009). Students from disadvantaged backgrounds, especially immigrants, tend to be disproportionately

represented in the lowest track(s) before they had the chance to develop the linguistic, social and cultural skills to attain their maximum potential (OECD, 2010).

Further evidence emerges from country experience (OECD, 2012). For example, the Polish educational reform of 2002 postponing first tracking from the age of 14 to 15 appears to have increased average performance and decreased inequality (Field et al., 2009). In a similar vein, the Finnish school reform of the 1970s postponing tracking from the age of 11 to 16 supported social mobility by reducing the earning correlation between fathers and sons (Pekkarinen et al., 2006).

A re-orientated MBO1 could provide more constructive support for students in need

Students in MBO 1 clearly have diverse backgrounds and learning needs. The re-orientation of MBO 1 as an entry route into higher level VET would create the opportunity for targeted support for students with different needs so as to prepare them for level 2 or higher. Tailored teaching approaches could focus on socialization into work, improving basic reading and maths skills, and offer the elementary vocational skills typically obtained at pre-vocational level.

The suggested policy reform can build on existing practice in the Netherlands. Coaching and professional support measures are already in place in many VET schools. Each student has a mentor within the school who can support the school and students in finding appropriate solutions for learning difficulties or personal problems. There is already increasing collaboration with external institutions to provide counselling and professional support to students and their parents on school and non-school related issues (Onderwijsraad, 2010). Some schools make effective use of remedial teachers to support students' academic capacities and social skills (Inspectie van het Onderwijs, 2011).

International examples point to some potentially effective intervention strategies. One example of targeted intervention specifically for migrant students, elements of which could be adopted in the Netherlands is the National Pact for Career Training and Skilled Manpower Development in Germany (Box 4.1).

Box 4.1 National Pact for Career Training and Skilled Manpower Development in Germany 2010-2014

Recognising the specific challenges associated with supporting students with migrant backgrounds, the German government engaged a broad coalition of relevant actors to deliver remedial programmes. This coalition included, among others, the Ministry of Education, Ministry of Social Affairs and Labour Market, employer associations, and professional organisations.

The National Pact delivers enhanced career guidance to students with migrant backgrounds as well as their parents, additional financial support is provided for companies training to such students, and matching between student demand and supply of apprenticeship placements is facilitated by dedicated personnel. This Pact represents a holistic approach involving every major stakeholder with the aim of co-ordinating efforts across policy fields including welfare services and education.

Source: BMBF (Federal Ministry of Education and Research) (2010), Nationaler Pakt für Ausbildung und Fachkräftenachwuchs in Deutschland. 2010 – 2014, BMBF, Berlin and BMBF (Federal Ministry of Education and Research) (2013), Nationaler Aktionsplan Integration. Bilanz der Bundesmaßnahmen zum Dialogforum „Bildung, Ausbildung, Weiterbildung“, BMBF, Berlin.

Re-orientating MBO1 as an entry route for higher level VET programmes could improve the reputation of VET

As in so many countries, Dutch VET tends to have lower status than academic education (Hiteq, 2009; Onderwijsmeter 2005; 2008). This may at least partially result from the high concentration of students facing learning difficulties and weak labour market outcomes in upper secondary VET MBO 1 programmes. During the OECD’s mission to the Netherlands, employers raised concerns about the quality of level 1 apprenticeships and graduates’ low skills levels. While this may partly reflect unrealistic expectations on the part of employers, it also underlines the weak labour market value of MBO 1 in isolation. Re-orienting MBO 1 as a more effective entry route to higher levels of VET would remove a group of graduates from the labour market who are often perceived in a negative light. At the same time, these students would get a better chance to earn a qualification allowing them to undertake real skilled jobs. This reorientation would make the goals and expected outcomes of MBO 1 clearer, and improve the overall reputation of upper secondary VET.

Notes

1. Data refers to a pilot test in 2012 on arithmetic skills among students in pre-vocational education in the basic vocational track (*basis beroepsgerichte leerweg*). The required level of arithmetic skills for these students is set at 2F. 16% of these students passed the exam (College voor Examens, 2012).
2. The reference levels for upper secondary students in niveau 1, 2, and 3 are set at level 2F, and at level 3F for MBO niveau 4 (College voor Examens, 2012).
3. As a comparison: drop-out rates are 7.9% in the industry-oriented track; 4.8% in the mixed track; and 8% in the theoretical track (OCW, 2012b).

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Chapter 5

More flexible provision for adults in postsecondary vocational programmes

This chapter argues that postsecondary vocational education and training (VET) programmes need to be provided in a form more suitable to the needs of adults with home and work responsibilities – part-time, modular and allowing options for the recognition of prior learning. Adult needs might be better served in two ways: first, by reform to encourage hogescholen and public provision more generally to meet the needs of adults through part-time and modular provision, and second, by establishing mechanisms so that where it makes sense, public money can be used to fund adult provision by private providers.

Challenges: Inadequate provision of part-time and modular programmes for adults

The postsecondary VET system in the Netherlands includes *hogescholen*, universities of applied sciences (UAS) which provide professional bachelor and associate degrees, alongside many private providers. This system faces two major challenges: first, there is inadequate public provision of part-time and modular programmes that might meet the needs of adults, and second, that the private sector, although it performs a useful service in meeting the need of adults for part-time provision, cannot call on public funding.

Inadequate public provision of part-time and modular programmes

At least one in six workers participates in some form of post-initial training or education in the Netherlands each year (CBS, 2012; OCW, 2013). But many adults have to handle a difficult balance between their desire for further or higher qualifications and the demands of their working and home lives. Often they will only be able to study part-time, and preferably in a flexible way that allows them to pursue the different components of a programme at their own pace. They may also already have relevant skills and experience, covering some parts of the programme, which it would therefore be wasteful to repeat. These requirements are very different from those of younger students that have just graduated from upper secondary education, where full-time study would be the norm.

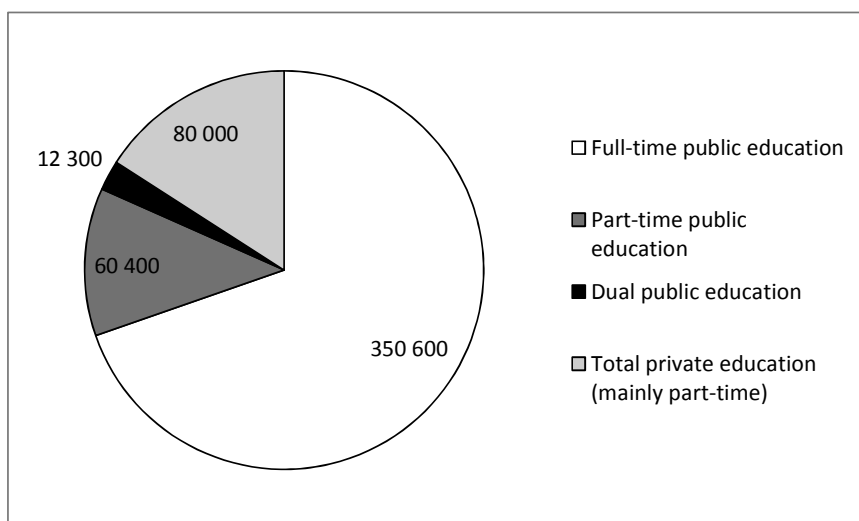
The current legal framework for public provision discourages part time study. Public institutions are, by law, obliged to provide only complete educational programmes, so they cannot offer and give credit for individual modules of programmes (Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek, 2013). Given these obstacles, the number of part-time students in public education is modest and has been decreasing, dropping from around 20% of the total student population in postsecondary VET in 2005 (or around 64 000 students) to less than 15% (or around 60 000 students) in 2011 (OCW, 2013).

Instead, many adults who wish to study part-time, and who can afford the fees (or have their fees paid for them) prefer the private sector, since course length can vary and it is possible to obtain only some credits in one semester and the rest of the programme later on (Inspectie van het Onderwijs, 2012; ResearchNed, 2012). (Buisman and van Wijk, 2011; Buisman, van Wijk, and Houtkoop, 2011 SEO, 2010; 2012a). While accurate statistics are not available (and that is also a challenge), it is estimated that around 80 000 adults participated in privately provided

postsecondary VET programmes in 2011 (Figure 5.1), the vast majority in part-time studies (NRTO, 2012; ResearchNed, 2012). The most frequently quoted reason for choosing a private provider over a public one was that the form of education desired was not available in the public institution (Buisman and van Wijk, 2011; Denktank Leren en Werken, 2009).

Figure 5.1 Number of students in postsecondary VET programmes, by type of programme

Year: 2011



Notes: ResearchNed (2012) for figures on private education; OCW (2013) for figures on public education.

Source: ResearchNed (2012), *Kenmerken, wensen en behoeften deeltijd hoger onderwijs*, ResearchNed, Nijmegen; OCW (Ministry of Education, Culture and Science) (2013), *Kerncijfers 2008-2012*, Onderwijs, Cultuur en Wetenschap. OCW, the Hague.

Adult students with work experience often have prior knowledge and skills relevant to their programme, and recognition of prior learning (RPL) is therefore important. According to stakeholders interviewed by the OECD, RPL is less common in public than in private *hogescholen*, at least partly due to incentives set by the financial framework. Individualised learning pathways are more costly to organise and the testing of obtained skills requires extra investment (Buisman, van Wijk and Houtkoop 2011; ResearchNed, 2012). Reports from the national inspectorate and Ministry argue that even though public providers are encouraged to use RPL this is

not yet a widespread practice (Inspectie van het Onderwijs, 2012; OCW, 2012).

Adult students typically work during their studies, creating an opportunity to link studies and workplace practice which can transfer valuable skills as well as shorten the study length. But public *hogescholen* also face regulatory constraints on the total amount of learning taking place outside the institution, hence on the extent of work-based learning counted for credits.

Private sector provision for adults is little supported by public funding

A separate but closely related challenge is the two tier market in provision. Tuition fees in public institutions are subsidised and were set at a maximum of around EUR 1 800 per year for 2013/2014 (DUO, 2013). In the unsubsidised private sector, tuition fees are often at least two to three times higher for comparable programmes (CBS, 2008). In the private sector about half of the students pay their tuition fees themselves (ECBO, 2011a) while most of the remainder have their fees paid by employers (Buisman, van Wijk and Houtkoop 2011). The most substantial public sector support applying to both sectors equally is that individuals can deduct training related expenses from their income tax.

This two-tier market has problems in terms of both equity (between the subsidised and unsubsidised students) and efficiency (with strong incentives to participate for those subsidised, and much lower ones for those unsubsidised, potentially distorting the mix of provision). A particular gap in provision may emerge among adults keen to participate and able to benefit, but needing part-time provision (ROA, 2012; SEO, 2010).¹ A recent commission, (Commissie Rinnooy Kan, 2014) argued that provision for adults, particularly those with work experience, needs to be developed, and pointed out that there are often funding barriers.

Recognising these challenges, the government has put forward plans to provide publicly funded loans (SER, 2011) to adults wishing to return to education and to create a voucher system for some target groups allowing them to spend their voucher on selected postsecondary VET programmes (SEO, 2012a). A Swiss simulation study, (based on short courses rather than more substantial programmes and therefore somewhat speculative), suggests that vouchers could contribute to a 6-11% increase in adult education participation (SEO, 2012a). The actual implementation and the precise content of the voucher system however has yet not been agreed on.

Recommendation: Stronger support for part-time students

Reform regulation and finance so as to support part-time public provision of postsecondary vocational programmes more adequately, and to explore a financing framework that would allow public support for private provision when it is in the national interest

Supporting arguments: Flexibility, performance orientation, and using existing good practice

This recommendation is supported by three arguments. First, a more flexible regulatory framework would allow *hogescholen* to better respond to student need. Second, an improved financial framework where funding goes to the best provider irrespective of its ownership or status would provide better incentives to *hogescholen* to meet the needs of part-time students. Third, the Dutch postsecondary VET system is innovative and diverse; implementation can build on the existing good practice.

More flexible regulation would allow hogescholen to better respond to adult needs

In countries such as Canada, Switzerland, or the United States part-time studies represent a major way of obtaining postsecondary vocational qualifications (OECD, 2002, Fazekas and Field, 2013, Kuczera and Field, 2013). Courses are often modularised allowing for students to interrupt studies at multiple points and return to education later without the loss of already obtained credits. Typically, modes of study combining distance, evening, and self-study are on offer to meet the needs of older, already working students with multiple work and family commitments. Stringent external quality assurance at the end of the modules and the whole course such as final examinations (see for example Switzerland) and reliance on labour market outcomes as signals for quality are conducive to high quality standards (Kuczera and Field, 2013).

Modularisation could also encourage public as well as private *hogescholen* to use the existing recognition of prior learning (RPL) framework more extensively. Funding for RPL should be balanced by strong quality standards in RPL to ensure that individuals receiving course waivers genuinely deserve them (Field et al., 2012). Competencies recognised in one institution should be portable to other institutions.

Public funding could support provision for adults by diverse providers

At present, restrictions on public providers mean that adults seeking part-time and modular provision receive little public support. A public purchasing system would allow government to “buy” priority courses from the market - public or private. The government could enforce high quality standards as an informed buyer of education services and guarantee value for money. This would clearly involve toughened quality assurance for the private sector. If bidding parameters are set right, competition among providers could provide incentives for quality and cost-effectiveness, while allowing for student choice between courses. This would allow public authorities to “buy” provision in a form suitable for adults through the private sector. Implementing such a system would clearly have to be handled carefully, recognising the risks that in education markets where quality is not transparent and insufficiently regulated, price competition may also drive down quality.

For example, in Switzerland, each canton determines its own priorities for funding postsecondary professional education and training (i.e. which courses are funded) typically reflecting local economic structure, but delivery is left mainly to the market allowing public as well as private providers to compete under the same conditions (Fazekas and Field, 2013). There is a similar system in place in the higher vocational education and training system of Sweden (Ministry of Education and Research Sweden, 2013).

Providing public funding for some part-time postsecondary courses in private as well as public *hogescholen* could also improve equity as courses may become more affordable for employees in a less favourable labour market position such as those who are less educated, or have an employer less willing to finance training. Such people typically need support, recognising that investment in upskilling will pay off over time (Bassanini et al., 2005).

Implementation can build on the existing strengths of the postsecondary VET system

Policy makers have already recognised many of the challenges outlined in this chapter and potential solutions are under discussion. Postsecondary VET in the Netherlands is an innovative and diverse system whose strengths provide a solid foundation for reform and policy implementation. Public *hogescholen* would benefit from appropriate incentives to enter into more intense competition for students, especially given demographic decline and shrinking student populations already evident in some regions. Private

providers will be eager to compete for students on an expanded market. Their experience with flexible training provision represents a valuable asset for a better financed and regulated postsecondary VET market, recognising that this would need to be balanced by a stronger quality assurance regime, appropriate to providers receiving public money. Synergies and economies of scale between full and part-time education in public *hogescholen*, and between public and private providers, might be harnessed using appropriate incentives.

Note

1. For a discussion of similar challenges see Fazekas and Field (2013) on Switzerland.

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Chapter 6

Insufficient postsecondary vocational provision

Current provision may not fully meet labour market demand in the face of increasing need for higher vocational skills. Enrolment in associate degrees is low, and there are few options for the graduates of upper secondary vocational system to upskill other than the academic route. While many short private courses seek to address this gap in provision, they lack visibility.

This chapter argues that creating options for upskilling in postsecondary vocational education and training (VET) parallel to the existing academic route would benefit both the Dutch labour market and the whole VET system. If delivery of the more academically oriented associate degree programmes is improved, it could cater for a much larger student body. International examples provide guidance on the direction of reforms.

Challenges: Increasing demand, but limited opportunities

There are four challenges to the range of qualifications available in the Dutch postsecondary VET system. First, outside the Netherlands, many countries educate more people through short-cycle postsecondary VET programmes at levels below a bachelor degree. Second, this reflects growing demand for higher technical and professional skills at this level. Third, there are insufficient vocational options for graduates of upper secondary VET. Fourth, short courses provided in the private sector do not adequately fill the gap.

Many countries educate more people through postsecondary VET programmes

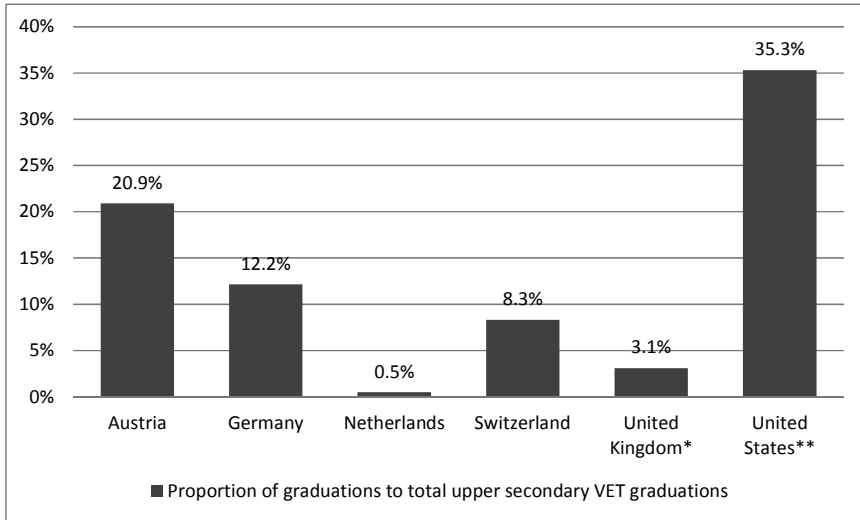
Many OECD countries have large postsecondary vocational sectors, educating substantial proportions of the cohort with vocational qualifications that go beyond upper secondary level, but are less than a bachelor degree. In the United States for example, around 12% of the labour force have a postsecondary “certificate” as their highest qualification – and certificate graduation rates are burgeoning – tripling in recent years. A further 10% have an associate degree (Kuczera and Field, 2013). Similarly in Canada, around one-quarter of the cohort gains an associate degree as their highest qualification (Department of Human Resources and Skills Development Canada, 2012). In France, in 2010-2011 almost 360 000 students were enrolled in two-year postsecondary VET programmes (*Brevet de technicien supérieur* and *Diplôme universitaire de technologie*), representing one-third of the students entering postsecondary education (Ministère de l'éducation nationale / Ministère de l'enseignement supérieur et de la recherche, 2013). In Korea, roughly one-third of the youth cohort enters junior college or polytechnic programmes, which are dominated by two-year programmes in postsecondary VET (Kis and Park, 2012). In Switzerland, around 15% of the entire student population graduate through the professional education and training system, through professional colleges and industry-led federal exams (Fazekas and Field, 2013a). In some other countries, while postsecondary VET is smaller in scale, it is rapidly growing. In Sweden, the numbers enrolled in higher VET programmes trebled between 2001 and 2011, while in Romania enrolments in “post high school” grew from 44 000 in 2005/6 to 70 000 in 2010/11 (Ministry of Education and Research Sweden, 2013; NCDTVET Romania, 2013). All of the programmes mentioned here are substantial one-two year postsecondary vocational programmes.

Apprenticeships also often play a significant postsecondary role. In Ireland all apprenticeships are postsecondary, with a school-leaving certificate a pre-requisite (Kis, 2010). In Canada, a substantial proportion of apprentices have high school diplomas. Even in Germany, where apprenticeship is nominally at upper secondary level, the average age of a starting apprentice is nearly 20, while around 20% of starting apprentices already have the German upper secondary certificate (*Abitur*), which also grants entry to university (BIBB, 2013). In France, there were more than 110 000 apprentices at the postsecondary level in 2010-2011, about 60% of them in two-year apprenticeships in the service sectors (Ministère de l'éducation nationale / Ministère de l'enseignement supérieur et de la recherche, 2013).

In the Netherlands, there are very few comparable short-cycle postsecondary programmes. The only similar set of programmes which remained in a pilot phase for several years after their launch are the associate degrees which are still numerically insignificant (Figure 6.1). They offer subjects¹ typical of the first two years of professional bachelor programmes (SEO, 2010). A recent report (Commissie Rinnooy Kan, 2014) concluded that associate degree programmes should therefore be expanded, particularly for those leaving upper secondary VET.

Figure 6.1 Limited numbers in associate degree programmes in the Netherlands

Proportion of graduates (below bachelor's degree) of postsecondary VET colleges to total upper secondary VET graduations, %, 2009



Notes: *Total number of enrolments rather than graduations.**The basis is total upper secondary graduation rather than upper secondary VET graduation, 2010.

Sources: For exact definitions and sources see Annex B.

Growing demand, globally and in the Netherlands, for higher level skills

Globally, developed countries display a growing demand for postsecondary vocational qualifications involving less than a bachelor's degree. Within countries, it is often difficult to track latent demand, because employers tend to ask for the type of qualifications to which they are accustomed (rather than for qualifications which they could make use of if they existed). Manifest demand then comes to mirror supply, disguising skills mismatches. It is therefore instructive to look more broadly at a number of countries to explore how demand for this level of education is evolving.

A forecast of employment change in the 27 EU countries between 2010 and 2020 implied that nearly two-thirds of overall employment growth would be concentrated in the “technicians and associate professionals” category - the category (one of nine) most closely linked to postsecondary VET. The same category currently represents only 15% of EU employment. Jobs are becoming more skill-intensive at all levels.² Of the total 75 million

job opportunities projected due to replacement demand, about 32 million for medium-level qualifications, many of which are vocational qualifications, and 23 million will be for jobs requiring high-level qualifications. Highly-qualified technicians and associate professionals will become increasingly important. The report stated more specifically in several other countries³ the employment share of people with medium level qualifications will rise (CEDEFOP, 2012; see Box 2.1).

Similarly, in the United States, a recent forecasting exercise (Carnevale et al., 2010) predicts that in the decade to 2018, nearly two-thirds of job vacancies will require more than high school education, but only half of these, or one-third of all vacancies will require four-year degrees or higher qualifications. So nearly one-third of the vacancies will require some postsecondary qualification but less than a four-year degree – in most cases a postsecondary vocational qualification - in the US context an associate degree, certificate, or certification (Kuczera and Field, 2013).

The implication is that the economies of most OECD countries need a substantial and growing amount of postsecondary vocational provision below bachelor level. Occupational skills requirements do not grow naturally in chunks requiring three or four years of full-time education. Common sense tells us that some occupations involve more than upper secondary qualifications but less than a bachelor's degree, and the skills systems of many OECD countries reflect this fact. But in the Netherlands, this appears to be a gap in provision.

Although forecasts are highly fallible, there is a consensus that new jobs in the Dutch economy will mainly require higher level skills. Forecasts - taking into account labour market developments since the global economic crisis - suggest that labour market demand will only expand in the more highly skilled professions (Table 6.1), particularly in occupational groups where most upper secondary VET graduates would go such as technicians and associate professionals. Comparable data from Dutch labour market forecasts further support these claims (ROA, 2011).

VET graduates will also need to upgrade their skills to fill high skill positions. In the light of demographic decline, it will be crucial for the whole Dutch economy to be able to meet at least some of this additional demand by upskilling those coming through the vocational track (CEDEFOP, 2013a).

Table 6.1 Demand predicted to increase in professions of postsecondary VET graduates

Predictions of labour market demand between 2010 and 2020 by occupational group and qualifications level in the Netherlands

Measures	Expansion Demand 000s	Replacement Demand 000s	Total Job Openings 000s
Occupations (ISCO)			
Qualifications (ISCED)			
All occupations			
Netherlands	197.67	2528.90	2726.57
Low	-289.63	596.83	307.19
Medium	-165.14	973.44	808.30
High	652.45	958.63	1611.08
Major occupational groups with postsecondary VET graduates			
2 Professionals	193.86	588.59	782.45
Low	0.00	7.65	8.57
Medium	-35.16	63.46	28.30
High	228.10	517.47	745.57
3 Technicians and associate professionals	-7.36	384.98	377.63
Low	-28.80	31.77	2.97
Medium	-101.41	210.71	109.30
High	122.85	142.50	265.35
5 Service workers and shop and market sales workers	133.94	292.13	426.07
Low	-18.29	101.84	83.55
Medium	67.81	157.23	225.04
High	84.42	33.06	117.48
6 Skilled agricultural and fishery workers	-23.80	35.02	11.22
Low	-17.48	18.80	1.33
Medium	-7.27	14.50	7.23
High	0.00	1.71	2.66
7 Craft and related trades workers	-85.14	193.20	108.06
Low	-83.02	80.62	-2.39
Medium	-23.46	103.19	79.73
High	21.33	9.39	30.72

Source: CEDEFOP (European Centre for the Development of Vocational Training), (2013b), Skills Forecast - detailed data. www.cedefop.europa.eu/EN/about-cedefop/projects/forecasting-skill-demand-and-supply/skills-forecasts/detailed-data.aspx, accessed 29 July 2013.

Too few higher vocational options for graduates of upper secondary VET

For graduates of lower levels of upper secondary VET, there are relatively few options for further upskilling. Only graduates of MBO level 4 can (without meeting additional requirements) continue to a professional bachelor or Associate Degree programme in *hogescholen*. Graduates of lower VET levels seem not to be able to find an adequate higher level VET course (HBO raad, 2012; ROA, 2012). While *hogescholen* could be more responsive to the needs of those coming through the vocational track (see Chapter 5), even in the best functioning system, only a modest proportion of VET graduates will want to pursue higher level programmes (see for example Fazekas and Field, 2013a, 2013b; Orr, Gwosc, and Netz, 2011). This is mainly because graduates from upper secondary VET typically already have a job, often have a family and the benefits of an additional degree are lower than for graduates of academic secondary education.

Short courses may not adequately fill the gap

For those graduates of upper secondary VET who want a vocationally oriented postsecondary pathway there are a number of short courses provided by private organisations. While exact figures are not available, this mostly involves short term courses (60% are less than one month) which do not lead to a formal degree (SEO, 2012). These courses are mostly work-related (ECBO, 2011), focusing on inter-personal skills such as communication or specific vocational skills in the economic, education and health care sectors (SEO, 2012). Many thousands of private providers offer short courses (SEO, 2012, Onderwijsraad, 2009). This can lead to confusion: an ECBO survey found that one-quarter of participants was only aware of their particular provider, even though there are typically a number of competitors (Buisman and van Wijk, 2011). Short postsecondary courses often reflect the specific needs of one employer, rather than the industry sector, potentially inhibiting labour market mobility. This concern has been echoed by interviewees of the OECD who said that non-accredited or non-certified short courses are not always recognised by other employers or schools.

Recommendation: Enhance provision of postsecondary vocational programmes below bachelor level

Increase the number of students pursuing associate degree programmes and consider the development of other short cycle postsecondary vocational options. Encourage programmes to meet the needs of upper secondary VET graduates seeking higher professional qualifications

Supporting arguments: Stronger pathways, more associate degrees, and professional examinations

This recommendation is supported by three arguments. First, avenues of progression for graduates of upper secondary vocational systems are vital to the health of the whole VET system. Second, reform is necessary in the institutional location of associate degrees to encourage their development. Third, a professional examination system, as in Switzerland, could provide a further avenue for progression.

Pathways beyond upper secondary vocational programmes

Upper secondary vocational tracks in some countries can be dead ends, with few opportunities for further upskilling – both a waste of potential for those held back and a threat to the status of the entire vocational track, since able students will not choose a vocational track that locks them out of further education opportunities. When students choose among different vocational and academic tracks future upskilling opportunities influence their decision (Ordovensky, 1995). So a clear route of upward mobility is essential to a high status vocational track.

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

qualifications often offered to qualified apprentices and linked to the ability to run a small business and manage staff; second, more academic qualifications at bachelors or master level that may open up different or wider career opportunities.

While it is not realistic or necessarily desirable to imagine that a large proportion of initial VET graduates will enter academic tertiary education, the steady increase in the level of skills required in modern labour markets imply that efforts should be made to open up tertiary institutions to the greatest extent possible. In Germany, access to university for students without the normal higher education access qualification was substantially opened up in 2009.⁴ Switzerland has been relatively successful at opening Fachhochschulen to graduates from the dual system through the creation of a specific vocational matriculation examination (the *Berufsmaturität*), to be completed in parallel to the VET track and that provides access to tertiary education. Today, around 12% of all VET graduates obtain the *Berufsmaturität* and they represent half of the students in the Universities of Applied Science (Hoeckel, Field and Grubb, 2009). Austria, similarly, has introduced the *Lehre mit Matura* in 2008. In Denmark, throughout 2005-2007, 8-11% of graduates from academy professional programmes started a higher education degree within 27 months (Danish Agency for Higher Education and Educational Support, 2012). In the Netherlands, significant numbers of MBO 4 graduates already continue into higher education. But there is scope for further development.

As argued above, associate degrees in the Netherlands attract small numbers of students relative to potential demand. International experience suggests that short-cycle postsecondary programmes such as the Dutch associate degrees tend to be more successful in countries where a set of institutions other than university institutions delivers them. For example, community colleges in the US and Canada, TAFEs in Australia, IUTs in France, HVE in Sweden, professional colleges in Switzerland, Fachschulen in Germany, and VET colleges and Kollegs in Austria. They tend to be less successful in countries where universities and “professional” universities are key agents such as in England and Northern Ireland where foundation degrees are delivered by further education colleges, but under the auspices of universities (Figure 6.1).

Only a minority of *hogescholen* have actively pursued the development of associate degrees, because many *hogescholen* see that their main and (often easier) mission is the provision of bachelor qualifications. Other institutions might be readier to pursue the development of associate degrees. (In a number of countries, including Germany, Austria, Romania and Spain, upper secondary vocational institutions also provide postsecondary qualifications). This approach might also involve some healthy degree of

separation between associate degrees and “parent” bachelor programmes – while preserving the clear articulation that allows graduates of associate degrees to omit the first two years of a bachelor programme.

An examination system facilitates recognition of prior learning and labour market mobility

Currently, as mentioned above, an active private sector in the Netherlands provides diverse industry certifications and examinations. The value of this sector could be enhanced by offering a national standard for such qualifications signaling both that the examination has recognition by the relevant industry sector, that it provides a qualification recognised by both employers and education and training providers, and that it meets some standards, including international standards. In addition, focusing industry certification on the final exams allows for effective recognition of prior learning, improving labour market efficiency by making skills more transparent.

One such system of high quality is that of professional examinations in Switzerland demonstrating not only how minimal regulatory intervention can be organised, but also the benefits of such arrangements (Box 6.1). Further examples are spelled out in Annex A.

A new system of examinations in the Netherlands would have to fit in the educational landscape already in place. For example, there is already a “master” title in a few sectors (*meester*) signalling exceptional skills such as being a master chef. Allowing professional bodies to define the requirements for each level within their sector would ensure that new qualifications fit with existing ones.

Box 6.1 Professional examinations in Switzerland

In Switzerland, an industry-led, but federally regulated system of professional education and training (PET) examinations provides a means of upskilling, in most cases for adults who have graduated from the apprenticeship system and are already practicing their chosen profession. In 2011, there were around 240 examinations leading to a Federal PET Diploma, and 160 leading to an Advanced Federal PET Diploma. The Advanced Diploma reflects the classical progression from apprenticeship to Meister level, enabling the examinees to show their capacity to carry out their profession independently, run their own business, and train apprentices.

The number and content of examinations change regularly as labour market organisations adjust the examinations to changing needs; typically 60-100 examination rules are under revision at any point in time. Students typically take part in a preparatory course for a national PET examination even though participation is in principle not mandatory and degrees are awarded exclusively on the basis of exam performance. Preparatory courses can take from a few months to two to three years. Course format reflects student demand, it often means weekend or evening classes and distance learning.

The scope of this examination type has now widened to include non-technical professions in the commercial, manufacturing, agricultural, and service-related sectors. The examinations fulfill the need to certify specific professional competencies needed in legally regulated areas, to act as an entry point to the service sector and can also be used as a human resources development tool.

Source: Fazekas, M. and S. Field (2013a), *A Skills beyond School Review of Switzerland*, OECD Reviews of Vocational Education and Training, OECD publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264062665-en>

Notes

1. Although dual ad programmes provide the opportunity to combine studying with a work experience as part of the programme.
2. They argued that as routine tasks are increasingly carried out by technology rather than people, there will be a greater need for skills such as independent problem-solving, planning, organisation and communication, even in elementary occupations.
3. Including Belgium, Bulgaria, Germany, Ireland, Greece, Italy, Lithuania, Luxembourg, Malta and Portugal.
4. New regulation permits those who pass an advanced vocational examination (e.g. *Meister*) a general entrance to academic higher education and holders of vocational qualifications without such qualification a subject-specific higher education entrance qualification.

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

	Austria	Germany	Switzerland
Postsecondary professional examination	Meisterprüfung/Befähigungsprüfung (Masters' and craftsman examination)	Meisterprüfung (Master's craftsman Examination) a set of professional examinations, the two main are Industriemeister (for industry) /Handwerksmeister (for crafts).	Advanced Federal Professional Education and Training (PET) Diploma Examination (<i>höhere Fachprüfung</i>), including the Federal Diploma Examination (<i>Eidgenössische Berufsprüfung</i>) and the Advanced Federal Diploma Examination (<i>höhere Fachprüfung</i>).

	Austria	Germany	Switzerland
Objectives	To provide deeper technical skills and skills to run one's own business in the regulated trades (71 trades in 2009), to be entitled to train apprentices.	To provide deeper technical skills, to be entitled to train apprentices, to provide capacity to run one's own business in the regulated trades (for the <i>Handwerksmeister</i>) and to manage a team of people (for the <i>Industriemeister</i>).	To provide deeper technical skills and skills to run one's own business, to be entitled to train apprentices, to certify required competencies in legally regulated areas (e.g. electrician, tank inspector). Advanced Federal Diplomas represent a higher professional level than Federal Diplomas, but in many professions only one kind of PET Diploma can be obtained.
Snapshot	In 2011-2010, the number of obtained <i>Meister</i> qualification was 3 536.	In 2010, the number of advanced vocational examinations passed was around 93 000, among which the number of <i>Industriemeister</i> was 7 827, and <i>Handwerksmeister</i> was 19 659.	In 2009, 14 852 people obtained a national PET examination.
Institutional setting	Master craftsperson exams are organised by the offices for master craftsperson examinations, which are located at the regional economic chambers.	The examinations are primarily managed by the chambers of commerce in the field of industry and by the chambers of crafts. The main examinations (a few hundred) are	The governance of the PET system rests on a partnership between the federal and cantonal governments and labour market organisations which include employer

	Austria	Germany	Switzerland
		<p>federally regulated and consistent across the whole of Germany. Others (a few thousand) are managed by local chambers of commerce in individual Länder. The Federal Ministry of Education and Research is responsible for approving new Advanced Vocational Certificates and exams in accordance with the BMWi and after consultation with the Federal Institute for Vocational Education and Training</p>	<p>organisations, professional associations, and trade unions. The federal government, through the Federal Office for Professional Education and Technology, OPET, provides strategic planning and development and ensures quality. It approves rules for professional examinations and recognises professional college degree programmes by approving the core curricula. The federal certification process ensures that there is no overlap between examinations and that the stakeholders reach a consensus regarding course content without extensive government intervention.</p>
Pre-requisites	Candidates have to be above 18 years old.	Candidates must have completed an apprenticeship.	The professional organisations define the entry requirements. If existing, candidates must first obtain a Federal PET Certificate in or an equivalent qualification such as years of professional experience.

	Austria	Germany	Switzerland
Preparation	The preparation courses for the Meister exam are non-mandatory, non-state-regulated and are mainly offered by the <i>Wirtschaftsförderinstitut</i> (Institutes of Economic Promotion) and Chambers of Commerce [xvii].	Preparation courses are offered mainly by the Institute of Economic Promotion (<i>Wirtschaftsförderinstitut</i>) in Austria. Even though formal preparation through courses is not mandatory, most candidates attend preparatory courses.	Students typically take part in a preparatory course for a national PET examination even though participation is in principle not mandatory and degrees are awarded exclusively on the basis of exam performance. Preparatory courses are much more diverse than professional college degree courses and they are largely unregulated. In the preparatory courses registered by BFS, only 7% of students followed a full-time course. Preparatory courses can take from a few months to two to three years. Course format reflects student demand, it often means weekend or evening classes and distance learning.
Examination	The <i>Meister</i> exam consists of five mandatory modules of which the order is not fixed. 1. Practical (Part A can be replaced by LAP certification); 2. Oral (Part A can be replaced by LAP certification); 3. Written 4. Instructor examination; 5. Entrepreneur examination [xix].	The Meister exam consists of four parts: 1. Practical; 2. Theoretical; 3. + 4. The same in all trades (Economic and legal knowledge + pedagogical skills).	The exam characteristics depend on the professional field. The exam set-up responds rapidly to changing labour market demands.

	Austria	Germany	Switzerland
Finance	2010: The <i>Meister</i> examination fees were EUR 2329. The costs of the preparatory courses varies widely. Financial support is available for candidates.	The <i>Meister</i> exam fees cost EUR 2000-2500 and financial support schemes are available.	The exam is subsidised by the Swiss Confederation. The expenses per person depend on the profession and on the subsidisation the institution offering the preparatory courses receive from the Canton.
Access to further higher education	<i>Meisters</i> are allowed to enter <i>Fachhochschulen</i> and universities.	Since 2009, a " <i>Meister</i> title with distinction" renders studies at <i>Fachhochschulen</i> possible.	PET Holders in certain professions are entitled to enrol for a Master's degree at <i>Fachhochschulen</i> .

Sources: OPET (Federal Office for Professional Education and Technology) (2011), "Skills beyond School in Switzerland: Country Background Report." OPET, Bern; Hippach-Schneider U., et. al (2012), "Skills beyond school in Germany: Country Background Report"; Schneeberger A., K. Schmid and A. Petanovitsch (2011), "Skills beyond School in Austria: Country Background Report", OECD Review of Postsecondary Vocational Education and Training.

Annex B: Definitions and figures underlying figure 6.1 on postsecondary VET colleges

	1	2	3	4	5	6
	National terms for postsecondary VET colleges	Number of postsecondary VET graduates	Number of upper secondary VET graduates	Year	Source of column 2	Source of column 3
Austria	VET colleges, Kollegs	19 600	93 762	2009	statOECD	statOECD
Germany	Fachschulen; Berufsakademien	53 744	441 522	2009	Statistisches Bundesamt (2010), Berufliche Schulen: Schuljahr 2009/2010, Fachserie 11 Reihe 2, Wiesbaden: Statistisches Bundesamt.	statOECD
The Netherlands	Associate degree programmes offered by hogescholen (Hoger beroepsonderwijs)	1 026	175 385	2009	Centraal Bureau voor de Statistiek: http://statline.cbs.nl/StatW/eb/publication/2 DM=SLNL&PA=71493NE	Centraal Bureau voor de Statistiek: http://statline.cbs.nl/StatWeb/publication/2 DM=SLNL&PA=71493NED&D1=0

112 – ANNEX B: DEFINITIONS AND FIGURES UNDERLYING FIGURE 6.1 ON POSTSECONDARY VET COLLEGES

1	2	3	4	5	6
	National terms for postsecondary VET colleges	Number of postsecondary VET graduates	Year	Source of column 2	Source of column 3
		Number of upper secondary VET graduates		$\frac{D \& D1 = 0 \& D2 = a \& D3 = 0.11}{\& D4 = 6.15 \& D5 = 0 \& D6 = 0 \& D7 = 8.10 \& HDR = T, G6, G4, G5, G2 \& STB = G1, G3 \& VW = T}$	$\frac{\& D2 = a \& D3 = 0.11 \& D4 = 6.15 \& D5 = 0 \& D6 = 0 \& D7 = 8.10 \& HDR = T, G6, G4, G5, G2 \& STB = G1, G3 \& VW = T}{G1, G3 \& VW = T}$

	1	2	3	4	5	6
	National terms for postsecondary VET colleges	Number of postsecondary VET graduates	Number of upper secondary VET graduates	Year	Source of column 2	Source of column 3
Switzerland	Höhere Fachschulen	7 766	93 183	2009	Bundesamt für Statistik (2010), <i>Diplomstatistik 2009: Höhere Berufsbildung, Höhere Fachschulen HF. Neuchâtel? Bundesamt für Statistik</i>	statOECD
United Kingdom (England)	Further Education Colleges; Higher Education Colleges	115 100	3 716 000	2009	OFQUAL (2010), <i>Higher Qualifications Quarterly, Table 7</i> , http://webarchive.nationalarchives.gov.uk/+/http://www.ofqual.gov.uk/files/2011-03-04-statistics-bulletin-hqc-2010-04.pdf	OFQUAL (2010): www2.ofqual.gov.uk/standards/165/411 tables: 5, 9, 13, 18
United States	Community Colleges (or equivalent)	1 167 221	330 6220	2010	SbS US background paper, Table 7: number of VET credentials awarded in Less-than-4-year (sub-baccalaureate) institutions	NCES (2010) <i>Digest of Education Statistics</i> , Table 110, http://nces.ed.gov/programs/digest/d10/tables/dt10_110.asp

GLOSSARY

1. Academic education: All non-vocational education at secondary and postsecondary level, including upper secondary general and pre-scientific education (HAVO and VWO) and scientific education at university level, i.e. tertiary education (excluding postsecondary VET at *hogescholen* as well as special needs education).
2. Lower secondary VET: General English term used to refer to pre-vocational education in the Netherlands or *Voorbereidend Middelbaar Beroepsonderwijs* (VMBO) in Dutch. VMBO is part of the first years (or: lower years) of vocational education at secondary school-level.
3. Non-formal learning: All learning that takes place in non-educational settings, i.e. outside of the classroom or schooling institution, regardless of the recognition of the certificate earned at the end.
4. Postsecondary VET: General English term used to refer to vocational education and training which takes place at postsecondary level (after completion of upper secondary VET). In the Netherlands, Associate Degrees (AD) and *Hoger Beroepsonderwijs* or *hogescholen* are part of postsecondary VET.
5. RPL: Recognition of Prior Learning. RPL is the process used by education and training institutions to evaluate skills and knowledge acquired outside the classroom (outside the current study programme) for the purpose of recognising competences, skills and knowledge obtained before the start of the current study or training programme.
6. UAS: University of applied sciences. The English term used to describe the *hogescholen* which offer *Hoger Beroepsonderwijs* (HBO or higher professional education) in the Netherlands.
7. Upper secondary VET: General English term used to refer to senior secondary vocational education in the Netherlands or *Middelbaar Beroepsonderwijs* (MBO) in Dutch. MBO is part of the last years (or upper years) of vocational education at secondary school-level.

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Chapter 5. More flexible provision for adults in postsecondary vocational programmes

Chapter 6. Insufficient postsecondary vocational provision

Further reading

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

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

For more information about OECD work on skills, see <http://skills.oecd.org>.

Consult this publication on line at <http://dx.doi.org/10.1787/9789264221840-en>.

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