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A Learning for Jobs Review of Belgium (Flanders)

Viktória Kis

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Summary: strengths, challenges and recommendations

This review of vocational education and training (VET) in Belgium (Flanders) is part of "Learning for Jobs", the OECD policy study of VET, a programme of analytical work and individual country reviews designed to help countries make their VET systems more responsive to labour market needs. The review of Belgium (Flanders) assesses the main challenges faced by the VET system and presents an interconnected package of five policy recommendations. Each recommendation is described in terms of the challenge, the recommendation itself, supporting arguments, and issues of implementation.

Strengths

The Flemish VET system has a number of strengths:

- There is a good range of vocational options at different levels. Initial secondary education offers full-time and part-time programmes, while continuing VET provides further learning and second chance opportunities in centres for adult education, VDAB and Syntra Vlaanderen training centres.
- The average performance of 15-year-olds in reading, mathematics and science is very strong by international standards, as indicated by PISA assessments, in which Flanders has been consistently among the best performing countries.
- A commitment to universal upper secondary education is embedded in compulsory education up to age 18, with the possibility of part-time education from age 16.
- Policy development is dynamic, as illustrated by the recent green paper entitled Quality and Opportunities for Every Pupil, the Competence Agenda and the Pact 2020 agreement concluded between the government and social partners. Evidence is used extensively in reforms.
- The Flemish VET system gives commendable attention to entrepreneurial training through the Flemish Agency for Entrepreneurial Training (*Syntra Vlaanderen*), which offers flexible routes to acquire entrepreneurial competences.

Challenges

At the same time the system faces a number of challenges:

- A proportion of students have weak literacy and numeracy skills.
- Students are tracked at a young age (14, with institutional transition at age 12) and there are limited opportunities for upward progression between secondary tracks.

- The share of unqualified school leavers is high, in 2006 12.4% of 18-24-year olds did not have a secondary qualification[1] and did not follow secondary education.
- Some parts of the VET system make limited use of workplace training, and the effectiveness of quality assurance mechanisms for workplace training also varies.
- The mix of provision is dominated by student preferences in school-based VET, with limited mechanisms to take into account labour market needs.
- The quality of career guidance provided in compulsory education, including collaboration between schools and pupil guidance centres, is variable. Sources of career information are fragmented.

Recommendations

1. Strengthen the core general skills component in programmes that currently contain limited general education, in particular in BSO, DBSO and Syntra apprenticeships. For those who wish to obtain general education beyond the core general skills component, create options to do so.

   Systematically identify those with literacy and numeracy problems at the beginning of VET programmes and provide targeted support to those in need. Enhance data and research on the achievement of the final objectives and on ways to achieve these. We welcome the ongoing sample-based standardised assessment of the final objectives and recommend extending this approach.
2. Postpone tracking at least until the age of 14 and make education in the period preceding tracking fully comprehensive.
3. Sustain and further develop workplace training. Ensure the quality of workplace training, by controlling its content, strengthening the assessment of competences and providing an appropriate level of preparation to those who supervise students.
4. Ensure the mix of provision is more responsive to labour market needs by taking the availability of workplace training into account to balance the influence of student preference in upper secondary VET. This should be complemented with high quality career guidance. Reform the elements of funding that risk distorting the mix of VET provision.
5. Strengthen and develop career guidance by:
   - Ensuring that career guidance receives attention, separately from psychological counselling, and is not submerged by it. Consider the establishment of a separate career advisor profession.
   - Ensuring that individuals receive guidance that is objective and independent from the providers of education and training programmes.
   - Creating a comprehensive website with career information about all levels of education and training.

1. Secondary qualifications include a diploma of the 2nd year of the 3rd stage of ASO, TSO or KSO; certificate of the 2nd year of the 3rd stage of BSO; apprenticeship certificate; DBSO completion certificate.

Chapter 1

Introduction

This chapter describes the OECD policy study of VET, the review of Belgium (Flanders), summarises the main features of the Flemish VET system and sets out an assessment of its strengths and challenges.

1.1 The OECD policy review of Belgium (Flanders)

This is one of a series of reviews of vocational education and training (VET) in OECD countries (see Box 1.1).

Box 1.1 Learning for jobs: the OECD policy study of vocational education and training

The review aims to bridge the gap between learning and jobs, by exploring how to make initial vocational education and training for young people respond better to labour market requirements. It therefore looks at initial VET in schools, colleges, workplaces and other institutions, offering policy messages for all OECD countries, alongside concrete advice on policy reform in reviewed countries. A programme of analytical work drew on evidence from all OECD countries, including a questionnaire on VET systems, literature reviews of previous OECD studies and the academic literature on topics such as costs and benefits, career guidance and VET during the economic crisis. The results of both the analytical work and the country reviews fed into this comparative report, of which an initial version was published on the OECD website in October 2009. A separate OECD exercise on 'systemic innovation in VET', was published as OECD (2009b), while the related *Jobs for Youth* review will be published at the end of 2010.

Skills Beyond School, a new policy review examining postsecondary vocational education and training will be launched by the OECD at the beginning of 2011.

See *www.oecd.org/edu/learningforjobs*.

Country policy reviews were carried out in Australia, Austria, Belgium (Flanders), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas) between the end of 2007 and 2010. Special studies were also conducted in Chile and the People's Republic of China. Canada, Denmark, Finland and the Netherlands have also contributed financially to the work.

The review follows the standard methodology established for the OECD policy review of VET. At the outset, two members of the OECD Secretariat visited Belgium (Flanders) on 8-11 September 2009 for an initial preparatory visit to assemble information on the characteristics of VET in Belgium (Flanders) and to identify the main policy challenges. Then the Flemish authorities were invited to complete a detailed questionnaire. Equipped with the responses and other background information, three members of the Secretariat returned for a week of policy visits on 8-11 December 2009 to conduct further interviews in various parts of Belgium (Flanders) (see Annex A for the programme of the visits) in order to develop policy recommendations. This review presents their recommendations, with supporting analysis and data. (An earlier draft of this report was submitted to the Flemish authorities for verification of factual information in order to ensure that the description of the Flemish VET system presented in this document is correct.)

The review is not comprehensive, but it examines policy issues in the context of the whole VET system. The review deals with a deliberately limited set of issues, on which it could draw on international experience or could otherwise usefully add value to the domestic policy debate.

1.2 The structure of the report

This first chapter places the Flemish review of VET in the context of the OECD policy study of VET, presents the structure of the report, describes the main features of Flemish VET system, and examines its strengths and challenges. The second chapter proposes policy recommendations.

Each policy recommendation 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.
- *Implementation* – a discussion of how the recommendation might be implemented.

1.3 A snapshot of the system

An overview of initial and continuing VET programmes

In Flanders part-time education is compulsory until the age of 18, requiring students to spend at least 28 hours per week in education and training or education and training combined with work. Full-time education is compulsory until the age of 16, except that those who have completed the first stage of secondary education may opt for part-time education at the age of 15 (Eurydice, 2009a).

Primary education enrols students typically from age six to 12. Secondary education includes three stages, each two years long. In the first stage of secondary education there are two streams, A and B. In principle, education is comprehensive in the A stream, although students are already in secondary schools, which provide one or several of the tracks of secondary education. The first year of the B stream aims to give students enhanced support with the aim of entering the A stream, but in practice most students continue in the second, pre-vocational year and very few progress into the second year of the A stream. Those who completed the first stage in the A stream can progress to all second stage options, while those who complete the B stream are only eligible for BSO or part-time VET (*i.e.* Syntra apprenticeship, DBSO).

After the first stage of secondary education students may choose between, or are directed into, four full-time and two part-time tracks. The full-time tracks are offered by secondary schools and include general education (ASO), technical education (TSO), artistic education (KSO) and vocational education (BSO). The part-time options include part-time vocational secondary education (DBSO) offered by part-time secondary schools, and apprenticeships (*leertijd*) offered by Syntra training centres. Artistic education is not in the scope of this review. The diploma of secondary education, required for entry to tertiary education, can be obtained in several tracks.

- **ASO** (ISCED 3A): General upper secondary education leads to the diploma of secondary education.
- **TSO** (ISCED 3A): Technical secondary education aims to prepare students for a career and further education in 22 occupational fields. After completing the third

stage of TSO students obtain the diploma of secondary education. An optional additional specialisation year (*Sense*) allows students to obtain a professional certificate (ISCED 4C).

- **BSO** (ISCED 3C): Vocational secondary education has a strong practical focus, offering students a choice between 19 occupational fields. After completing the third stage of BSO students obtain a certificate (*getuigschrift*). Those who wish to obtain the diploma of secondary education must complete the optional third year of the third stage.
- **DBSO** (ISCED 3C): Part-time vocational secondary education combines one to two days a week at school and three to four days of other activities. These include labour participation (*e.g.* paid or unpaid labour, volunteering, certain types of training); bridging projects and preliminary trajectories, (aiming to develop employability skills); and personal development trajectories (intensive individual guidance for vulnerable students). Depending on their achievement, students may obtain a professional qualification or a diploma of secondary education.
- **Syntra apprenticeships** (ISCED 3C): Apprentices spend four days a week in a company and one day a week in a training centre. The duration of training varies between one and three years. Apprentices have to be aged 15-25, further entry requirements exist only for a few occupations (*e.g.* dental technician, optician). The programme leads to a professional qualification and, if apprentices complete the required general education component, also to the diploma of secondary education. Apprentices receive an apprentice allowance from the employer. Apprentices whose contract is terminated due to problems may follow a "preparatory trajectory" (*voortraject*) alongside their training in Syntra centres for a maximum of six months. These programmes help apprentices find a new apprenticeship contract by assisting in their search and developing their soft skills.

Post-secondary VET includes associate degree programmes offered by adult education centres and university colleges[2] and professional bachelor (*professioneel gerichte bachelor*) programmes offered by university colleges.

2. In the case of nursing, associate degree courses are provided in secondary schools. University colleges are legally entitled to offer associate degrees as of September 2009. But due to delays in implementation, at the moment of writing university colleges do not yet offer associate degree programmes.

Table 2.1 Enrolment in secondary education and tertiary VET

Number of students enrolled in 2008/09

Stage	Programme	Number of students	FT/PT
First stage of secondary education	A stream	115259	FT
	B stream	21672	FT
Second and third stage of secondary education	ASO	117212	FT
	TSO	93143	FT
	BSO	73491	FT
	DBSO	6935	PT
	Apprenticeship	4957[1]	PT
	3rd year of the 3rd stage of BSO	2315	FT
	Sense	4693	FT
Tertiary VET	Associate degree	25641	FT or PT (mostly PT)
	Professional bachelor's	83180	FT or BT (mostly FT)

1. Reference year: 2007/08

FT – full-time, PT – part-time

Source: Flemish Ministry of Education and Training (2010), Statistical yearbook of Flemish education 2008-2009 webpage, *www.ond.vlaanderen.be/onderwijsstatistieken/2008-2009/default.htm*, accessed July 2010.

Continuing VET includes adult secondary education (ISCED 3C), provided by adult education centres; vocational programmes (ISCED 2C to 4C) offered by VDAB and Syntra Vlaanderen; and entrepreneurial training offered by Syntra Vlaanderen (ISCED 4C).

Table 2.2 Enrolment in continuing VET

Number of students enrolled in 2007/08

Programme	Number of students	FT/PT
Adult vocational secondary education	134426	PT
VDAB programmes	48924	PT
Syntra entrepreneurial and additional training courses	38049	FT or PT

Note: FT – full-time, PT – part-time

Source: Flemish Ministry of Education and Training (2009a), "Background report", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

Education and training providers

The constitution of Belgium guarantees the freedom of education in the sense of freedom of publicly funded schools to organise themselves as they wish within some broad parameters. This includes the right of establishment, the right of orientation (*e.g.* religion) and the right of organisation of schools. Secondary schools are organised under education "networks" (*koepel*) – representative associations of the school governing bodies.

- GO! provides public education, acts under the authority of the Flemish Community and is required to be secular by the constitution.
- OVSG provides public education through municipalities.

- POV provides public education through provinces.
- VGO provides subsidised private education. It involves mainly catholic schools under the umbrella organisation VSKO (Flemish Secretariat for Catholic Education).

The funding formula for secondary education takes into account, among other factors, the educational track and occupational field, and the socio-economic background of students. The content of secondary education is regulated through minimum objectives defined by the government: so called "final objectives" (*eindtermen*) exist for all compulsory subjects in secondary education. They are either subject-bound or cross-curricular and have been established for the first stage in the A stream, and the second and third stages of all secondary tracks. The B stream follows "developmental objectives", rather than final objectives.[3] The organising bodies are free to develop their own curricula, which follow the final objectives. The curricula must be approved by the inspectorate and ratified by the Flemish Parliament (Eurydice, 2009b).

Adult education centres provide adult secondary education, including VET. They are subsidised by the Ministry of Education and Training on the basis of teaching hours. The operational budget of centres is composed mainly of registration fees, paid by students. The registration fee is limited to EUR 1 per hour and to a maximum of EUR 400 per course. Means-tested support is available to students.

University colleges offer professional bachelor courses and, after implementation of the relevant legislation, will offer associate degree courses. They are fully subsidised by the Ministry of Education and Training and have full autonomy over their budget. Students pay registration fees, which are capped by the Flemish government at about EUR 550 per academic year for a full-time course. Means-tested support is available to students.

VDAB (Flemish Employment and Vocational Training Agency) operates under the remit of the Flemish minister of labour. It offers training for the unemployed and employees, which may be a complete training programme towards an occupation, training for specific technical skills, or for key competences (*e.g.* literacy, numeracy).

Syntra Vlaanderen (Flemish Agency for Entrepreneurial Training) operates under the supervision of the Ministry of Work and Social Economy. It subsidises and monitors 24 training centres across Flanders. Syntra provides training in the following key areas: apprenticeship (see above), entrepreneurial training, additional specialised training, and tailor made programmes for companies.

Regional Technological Centres (RTC) do not provide VET themselves, but aim to facilitate connections between companies and initial secondary schools or centres for adult education. They also aim to facilitate workplace training opportunities, the sharing of equipment between schools and in-service training of teachers. Finally, they aim to create a platform for sharing good practices in the field of collaboration. RTCs exist in each region and are independent of education networks (Flemish Ministry of Education and Training, 2009a).

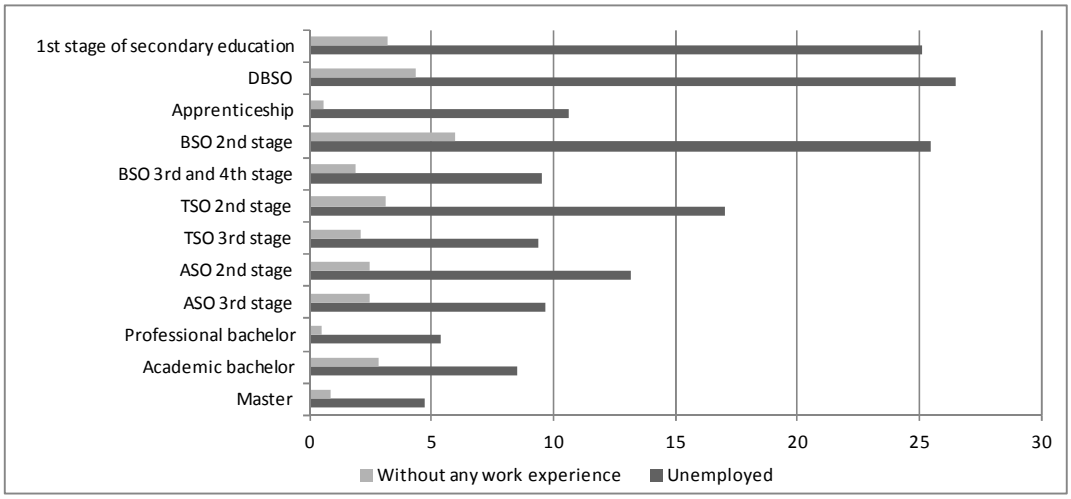
3. For further details on the subjects, the developmental aims and final objectives for different stages and tracks, see *www.ond.vlaanderen.be/dvo/english/corecurriculum/corecurriculum.htm*

The outcomes of VET programmes

Figure 2.1 shows the employment outcomes of those who leave initial secondary VET programmes (data include both completers and drop-outs). In adult secondary education there are no data on labour market outcomes.

Figure 1.1 Labour market outcomes of VET programmes

Percentage of school leavers who are unemployed or have no work experience one year after leaving school



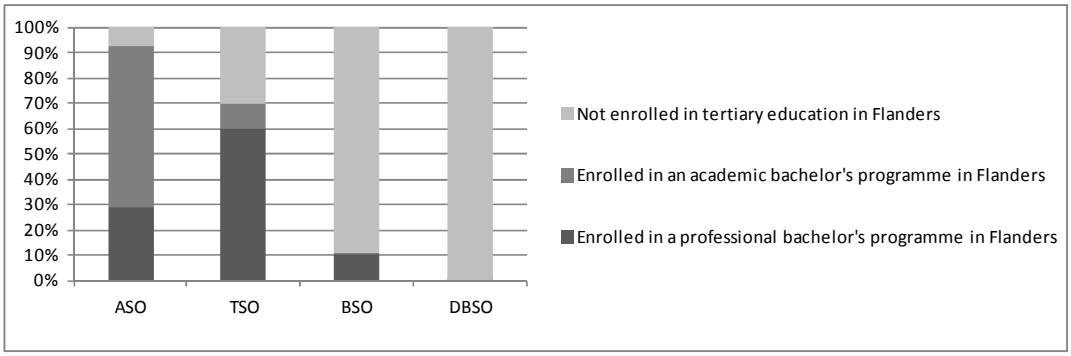
Note: Data on apprenticeships include both completers and drop-outs. The 2nd stage of BSO, TSO and ASO, as well as the academic bachelor, are not final degrees in the sense that completers may pursue further studies rather than entering employment.

Source: VDAB School Leavers Survey (2008) cited in Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

Figure 1.2 shows that over 90% ASO completers and about 70% of TSO completers enrol in tertiary education. Conversely, only 11% of BSO graduates enter a tertiary programme, while less than 0.1% of DBSO graduates do so. In addition, completion rates in tertiary education vary greatly among graduates from different tracks (Figure 1.3). Students from ASO are most likely to succeed in tertiary education, while graduation rates among BSO graduates are only 20%.

Figure 1.2 Destination of school leavers by secondary track

Percentage of school leavers who have enrolled / have not enrolled in tertiary education in Flanders

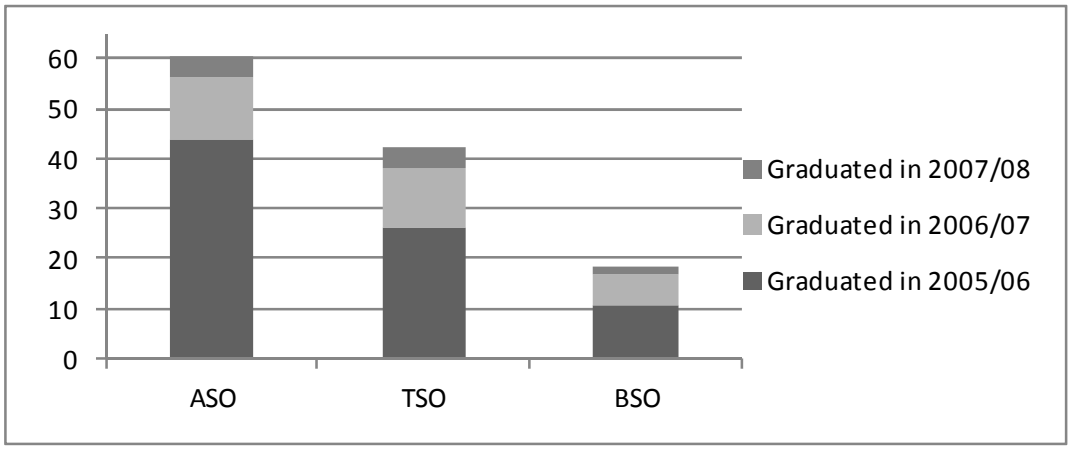


Note: The figures refer to the destination of individuals who were enrolled in initial secondary education in 2007/08 but not in 2008/09. Data include school leavers from the third stage of ASO and TSO, the 3rd and 4th stages of BSO, and all school leavers from DBSO and modularised BSO. Data exclude part of those whose personal identification number was missing in the database.

Source: Flemish Ministry of Education and Training (2010), personal communication, 2 April 2010, unpublished.

Figure 1.3 Completion rates in professional bachelor programmes

Completion rates among students who started their professional bachelor in 2003/04



Source: Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

The role of social partners

Social partners engage with the Flemish VET system through the Flemish Social and Economic Council (SERV). This body is composed of ten employer representatives (from various employer organisations) and ten trade union representatives (from various unions). SERV has a consultative and advisory function to the government on a range of issues, including education and training policy. The Flemish Education Council (VLOR)

includes representatives of stakeholders (*e.g.* organising bodies, teachers, parents, students, principals, social partners) and advises the government on education policy.

Since 2001 the government have been concluding agreements with individual economic sectors. Each sectoral agreement (*sectorconvenant*) establishes a protocol of cooperation for a period of two years –28 sectoral agreements were signed for the period 2007-09. The agreements cover topics such as school-company collaboration, and workplace training for apprentices, jobseekers and employees. These agreements also shape the priorities of labour market policy. Sectors also operate sectoral funds with contributions from companies and employees. The activities supported by these funds vary across sectors, but typically include the encouragement of training of current and potential employees; supporting companies in their competence development and communicating with schools and students (Flemish Ministry of Education and Training, 2009b).

1.4 Strengths and challenges

Strengths

The Flemish VET system has a number of strengths:

- There is a good range of vocational options at different levels. Initial secondary education offers full-time and part-time programmes, while continuing VET provides further learning and second chance opportunities in centres for adult education, VDAB and Syntra Vlaanderen training centres.
- The average performance of 15-year-olds in reading, mathematics and science is very strong by international standards, as indicated by PISA assessments, in which Flanders has been consistently among the best performing countries.
- A commitment to universal upper secondary education is embedded in compulsory education up to age 18, with the possibility of part-time education from age 16.
- Policy development is dynamic, as illustrated by the recent green paper entitled Quality and Opportunities for Every Pupil, the Competence Agenda and the Pact 2020 agreement concluded between the government and social partners. Evidence is used extensively in reforms.
- The Flemish VET system gives commendable attention to entrepreneurial training through the Flemish Agency for Entrepreneurial Training (*Syntra Vlaanderen*), which offers flexible routes to acquire entrepreneurial competences.

Challenges

At the same time the system faces a number of challenges:

- A proportion of students have weak literacy and numeracy skills.
- Students are tracked at a young age (14, with institutional transition at age 12) and there are limited opportunities for upward progression between secondary tracks.

- The share of unqualified school leavers is high; in 2006 12.4% of 18-24-year olds did not have a secondary qualification[4] and did not follow secondary education.
- Some parts of the VET system make limited use of workplace training, and the effectiveness of quality assurance mechanisms for workplace training also varies.
- The mix of provision is dominated by student preferences in school-based VET, with limited mechanisms to take into account labour market needs.
- The quality of career guidance provided in compulsory education, including collaboration between schools and pupil guidance centres, is variable. Sources of career information are fragmented.

1.5 System-wide issues

The following paragraphs describe some system-wide challenges, related to the more specific topics and associated recommendations in Chapter 2.

The changing role of VET: preparing for a career and lifelong learning

While in the past VET often prepared young people for one occupation, which was then maintained throughout life, one-to-one relationships between initial training and a single lifetime occupation are becoming rare. VET needs to prepare young people for labour markets with rapidly changing needs, equipping them with skills that will allow them to learn in the course of their career and change jobs easily. This has led, in the United States, to a new terminology of "career and technical education" in preference to "vocational education and training". This requires sound general skills, in particular literacy and numeracy, as these underpin the ability to adapt to fast-changing workplace requirements and benefit from further education and training opportunities (see section 2.1).

As the needs of the labour market change rapidly, the Flemish VET system (both initial and continuing VET) needs mechanisms to make sure that the mix of vocational provision in terms of numbers in different occupational fields matches the requirements of the labour market, as well as meeting the needs of students. In the light of this, the mix of provision in Flanders, which is now largely driven by student demand, should be balanced by employer needs (see section 2.4).

Labour markets have become increasingly complex and dynamic, and education systems offer diverse pathways, meaning that career choices are getting harder. Flanders has a relatively complex set of pathways, tracks and options at different levels, alongside a strongly entrenched system of institutional choices. This increases the premium attached to good decision-making. Individuals can only reap the full benefits of the pathways offered in the Flemish VET system if they receive effective guidance – both when making their first decisions in compulsory education, and as they progress in their careers (see section 2.5).

4. Secondary qualifications include a diploma of the 2nd year of the 3rd stage of ASO, TSO or KSO; certificate of the 2nd year of the 3rd stage of BSO; apprenticeship certificate; DBSO completion certificate.

Progression within complex and diversified education systems is easier when there are clear pathways. Qualifications frameworks have the potential to illuminate progression pathways by designating a clear sequence of levels of qualifications. With this in mind, many countries have introduced qualifications frameworks and Flanders is in the process of implementing one. The legislation concerning the "Flemish Qualifications Structure" was adopted in April 2009. But the full support of social partners has not yet been obtained, as social partners are in favour of the concept of a qualifications framework but disagree with the way it is being implemented. International experience suggests that the engagement of stakeholders is key to successful implementation (Young, 2005; Raffe, Gallacher and Toman, 2007). One key goal for the government and the social partners should be to sit down together and negotiate an agreed solution.

Engaging social partners

The involvement of social partners in the development and implementation of VET policies ensures VET provision is relevant to labour market needs. Employers are clearly in a strong position to see if the content of curricula and qualifications meet current labour market needs, and to guide their adaptation to emerging requirements. In many countries employers have an advisory role in curriculum development, while in some countries (*e.g.* Switzerland) social partners participate in the decision making process as well.

Employer engagement in policy development is essential if policy is to be successfully implemented, because it helps employers understand the system better. Employers who do not understand the policy context and the institutional settings are more likely to disengage. In Flanders, stronger social partner engagement with the VET system would facilitate policy change in a range of areas, such as the implementation of the qualifications framework, quality assurance in VET and the training of VET teachers and trainers. Active employer engagement is also crucial to achieve more and better workplace training – a tool, which gives students access to a good learning environment, facilitates school-to-work transition and gives a signal about labour market needs (see section 2.3 and 2.4).

Countries with strong social partner engagement typically have a set of interconnected institutions at national, sectoral and local level. In Flanders there is already partnership between social partners and the VET system, but this could usefully be strengthened to give employers more influence in VET policy development. This might involve reviewing the current structure of social partner involvement. Establishing a framework at various levels is useful, as ad hoc consultative arrangements may give undue influence to a few random (often larger) companies. But to be effective, institutions to engage employers with the VET system need to be representative of the diverse opinions found within employers' groups. If employer organisations (rather than individual employers) are represented in government bodies, it is important that these organisations are genuinely representative and recognised as such by the great majority of individual employers. For example, in Flanders it is important that social partner representatives in the Flemish Education Council and the Flemish Social and Economic Council are genuinely representative of the views of social partners across Flanders.

The policy recommendations in the context of the whole VET system

Although this review is not comprehensive, it looks at policy issues in the context of the whole VET system and pays particular attention to issues of articulation, coherence and coordination between different programmes. The issues examined in Chapter 2 were selected because of their importance in ensuring a well-articulated and coherent VET system, which is responsive to labour market needs.

The first two sections focus mainly on initial secondary education because all young people participate in this level of education and the competences developed at this stage will strongly influence subsequent careers – failures in this phase may be corrected later on but at a high cost both to the individual and to society. It is therefore essential to ensure that VET provides strong core general skills (Recommendation 1). Postponing tracking (Recommendation 2) would help low-performers have better outcomes, as well as improve equity. A well-articulated VET system requires not only appropriate progression pathways, but also individuals who are well-prepared to use these – hence the importance of strong basic skills and options for more general education. The third section looks at workplace training in various parts of the Flemish VET system, identifying commendable practices and highlighting areas where it may be further developed. The fourth section sets out some principles that should guide the definition of the mix of VET provision, and discusses their implications for the Flemish VET system. The last recommendation concerns career guidance – a key tool helping individuals benefit from learning opportunities. Again, good initial choices are important so strong attention has to be paid to career guidance in secondary education, while a good source of career information will help people further develop their skills throughout their careers.

Chapter 2

Policy recommendations

The Flemish VET system offers a wide range of vocational options, including second chance opportunities. Policy development is dynamic and aims to continuously improve the VET system. To address the challenges faced by the Flemish VET system and improve its responsiveness to labour market needs, a set of five interconnected recommendations is proposed.

First, the Flemish VET system would benefit from a stronger general skills component in programmes that contain limited general education. This should be completed with systematic identification and support of those with basic skills problems, and better data on the achievement of the final objectives. Second, we recommend postponing tracking at least until the age of 14 and making the period preceding tracking fully comprehensive. Third, workplace training would benefit students, employers and the VET system as a whole. Therefore we recommend sustaining and further developing workplace training, and controlling the content of workplace training to ensure its quality. Fourth, student preferences are an important factor in determining the mix of provision, but also have limitations. We recommend using the availability of workplace training as an indicator of labour market needs to balance student preferences. Finally, in the light of the importance of student preferences in the Flemish VET system, we recommend strengthening and developing career guidance.

2.1 General skills in secondary education

Challenge

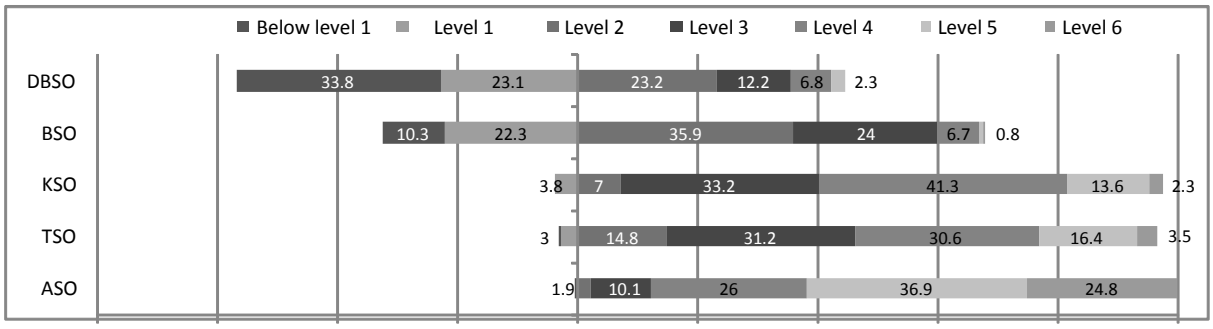
This section looks at basic skills (*i.e.* literacy and numeracy) and general skills in a broader sense (*i.e.* literacy, numeracy, as well as other general subjects such as science, social studies, etc.).

Some groups of students have weak general skills

On average 15-year-olds in Flanders have strong mathematics, literacy and science skills, as indicated by PISA results. The proportion of high-achievers in PISA is also high. But some students have weak general skills. Although their proportion is low in comparison to OECD countries, these students are likely to face difficulties both during their education and training, and in the labour market. Data from IALS show that in the late 1990s people with weak literacy skills were more likely to be unemployed, even taking into account other background variables (educational attainment, age, gender) (Figure C.1 in Annex C). Since then the importance of literacy skills in the labour market has surely not decreased – those with weak literacy skills will be highly vulnerable to unemployment.

Figure 2.1 Percentage of students at each proficiency level on the PISA mathematics scale

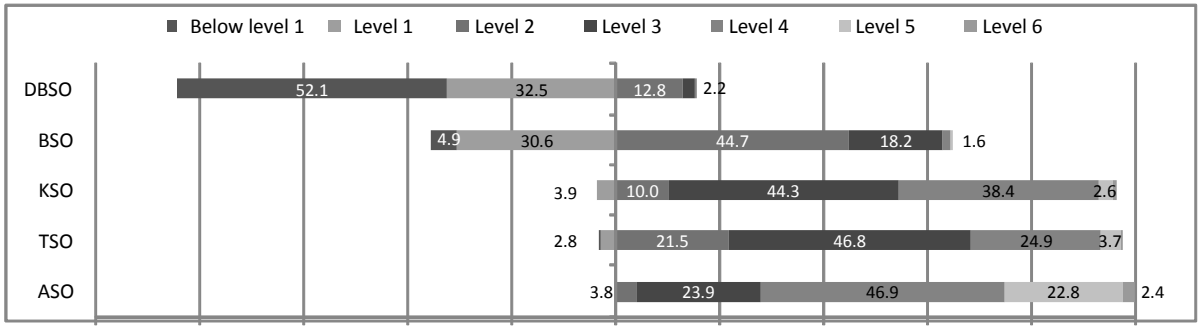
PISA 2003, by track



Source: OECD (2008a), *VET in PISA: Results from PISA 2003 and 2006*, OECD, Paris. Available at: *www.oecd.org/dataoecd/59/32/41538731.pdf* ; Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

Figure 2.2 Percentage of students at each proficiency level on the PISA science scale

PISA 2006, by track



Source: OECD (2008a), *VET in PISA: Results from PISA 2003 and 2006*, OECD, Paris. Available at: *www.oecd.org/dataoecd/59/32/41538731.pdf* ; Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

Within regular secondary education, the proportion of students who perform below the minimum level[5] of mathematic, reading and scientific literacy is high in DBSO and BSO (see Figure 2.1 and 2.2). It is clearly important that these students get adequate support in upper secondary education to remedy these weaknesses and prepare them for careers, which will place increasing demands on their literacy and numeracy skills. But interviews conducted during the visit suggest that not all schools systematically identify of basic skills problems or offer basic skills support. Research conducted by the Centre for Language and Education shows that BSO students hardly improve their literacy skills between the third and the sixth year of secondary education (Flemish Ministry of Education and Training, 2009b).

More broadly speaking, the general education component of some programmes is limited. There are no system-wide data on the amount of time dedicated to general education in different vocational tracks. The government defines final objectives for each track and providers are free to design their curriculum accordingly. Also, in part of BSO general education is integrated with VET and is taught in a modularised, project-based approach.[6] But interviews conducted during the visit suggest that in some vocational tracks – in particular apprenticeships, DBSO and BSO – there is limited emphasis on general skills.

Currently policy-makers in Flanders have limited data on the extent to which the final objectives are being achieved. This is a challenge as targeting policies at groups of students who need it is more difficult without adequate data. School inspections provide some information, PISA data test students' competences – and suggest that students in some tracks have very weak general skills. While schools assess their students in various ways, those with serious literacy and numeracy problems are not systematically identified and therefore cannot receive targeted support within their institutions.

5. In PISA level 2 is considered the baseline proficiency level in mathematics and science.

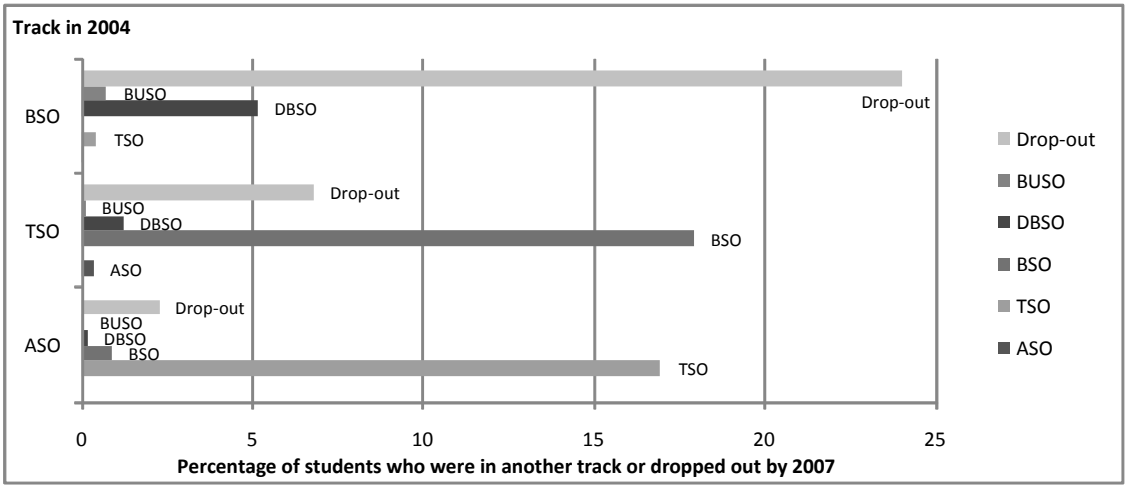
6. Some occupational fields such as nursing are fully modularised, in some fields the programme is modularised but not all school use it, while in other fields the programme is not modularised.

Limited opportunities for sideways and upwards mobility in some tracks

Students with poor results tend to descend a "waterfall" through the different tracks of secondary education – 18% of ASO, 19% of TSO and 6% of BSO students finish their secondary education in a lower track than the one they started in. There is almost no upward mobility – less than 0.5% of BSO and TSO students moved to higher tracks between 2004 and 2007 (see Figure 2.3). This is worrying, given that initial track selection is a very fallible process. It means that some of the potential in the lower tracks is being wasted.

Figure 2.3 Sideways mobility in secondary education

Percentage of students who changed tracks between 2004 and 2007, by track in 2004



Source: Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished

Students with the secondary diploma are nominally entitled to enter any tertiary programme, but in practice graduates of BSO, DBSO and Syntra apprenticeships have not received sufficient academic preparation to follow most tertiary programmes. Only 11% of those who complete BSO enter tertiary education (Figure 1.2) and many of those who do enter drop-out: only 20% of professional bachelor's students who come from BSO complete their programme (Figure 1.3). A number of stakeholders interviewed during the review visit argued that most BSO students are poorly prepared for tertiary studies – they often struggle with the more theoretical approaches used in tertiary education and have insufficient competences in general subjects. While BSO, DBSO and Syntra apprenticeships are designed mainly for direct labour market entry and it may be unreasonable to expect a large proportion of these students to enter tertiary education, there will be some students in these tracks who are capable of benefiting from tertiary education and it is important that they have appropriate access paths.

Recommendation 1

Strengthen the core general skills component in programmes that currently contain limited general education, in particular in BSO, DBSO and Syntra apprenticeships. For those who wish to obtain general education beyond the core general skills component, create options to do so.

Systematically identify those with literacy and numeracy problems at the beginning of VET programmes and provide targeted support to those in need. Enhance data and research on the achievement of the final objectives and on ways to achieve these. We welcome the ongoing sample-based standardised assessment of the final objectives and recommend extending this approach.

Supporting arguments

This recommendation is supported by three arguments. First, modern workplaces require strong literacy and numeracy skills. Second, optional further general education would facilitate mobility within secondary tracks and to tertiary education. Third, data and research are needed to underpin effective policies and interventions.

Modern workplaces require strong literacy and numeracy skills

The limited amount of general education in Syntra apprenticeships, DBSO and BSO may reflect a traditional perception of VET – training young people for a lifetime occupation. Today VET graduates face a different labour market, shaped by technological change, globalisation and increasingly knowledge-based economies. This means they will have to adapt to changing requirements in their own occupation and many will need to move to another occupation in the course of their career. A study from the United States (Autor, Levy and Murnane, 2003) argues that an increasing number of jobs, including blue-collar jobs, require problem-solving skills (*i.e.* the ability to solve problems that cannot be solved by simply applying rules) and complex communication skills (*i.e.* the ability not only to extract and transmit information, but also to communicate a particular interpretation of it). It is argued that literacy and numeracy skills underpin the development of problem-solving and communication skills (Levy and Murnane, 2004). Strong literacy and numeracy skills are associated with better earnings and employment rates, as indicated by studies from Australia (Chiswick, Lee and Miller, 2002) and the United Kingdom (McIntosh and Vignoles, 2001). Data from IALS also show that people with weak literacy skills are more likely to be unemployed, even if other background variables (educational attainment, age, gender) are taken into account (Figure C.1 in Annex C).

These findings suggest that VET programmes that currently contain limited general education (BSO, DBSO, apprenticeships) should contain a stronger core set of general skills and offer support to those who have basic skill problems. A stronger general education component, common across all VET programmes, would make all students better prepared for the labour market and more capable of benefitting from further education and training opportunities.

One potential risk is that stronger general education might undermine students' engagement and increase drop-out. Finding the balance is a delicate task. But is worth dedicating considerable effort to finding ways to provide all students with strong basic

skills, as literacy and numeracy skills are clearly crucial in the labour market. Research studies point to some approaches that can help strengthen general skills, while limiting the risk of drop-out. For example on tackling basic skill deficiencies, a study of 18 further education colleges in the United Kingdom (Basic Skills Agency, 1997) found that offering remedial basic skills support to students dramatically reduced drop-out rates. Literacy and numeracy instruction can also be integrated into VET subjects. In Flanders, the integration of general education and VET is used in part of BSO and Syntra apprenticeship programmes. This approach could usefully be applied in other parts of the VET system (see implementation). Research shows that engaging students with content related to their interests is a very effective way of improving literacy and numeracy (NCTE, 2006). Helping students make connections between basic skills and the real world can motivate them. Motivation is critical in literacy instruction; a review of evidence on adolescent literacy from the United States (Kamil, 2003) argues that students will not benefit from reading instruction unless they are motivated to read.

Optional further general education would facilitate mobility within secondary tracks and to tertiary education

The limited general education component of some vocational tracks makes sideways mobility (*e.g.* from BSO to TSO) in secondary education difficult. Once students are tracked (from a relatively young age, see section 2.2), it is difficult for them to acquire stronger general education than that offered in their own track. But students who graduate from BSO often struggle in tertiary education because of weaknesses in their general education and those in DBSO and apprenticeship rarely enter tertiary education.

Stronger core general education (common across all tracks) would, in itself, improve the skills of VET graduates in terms of employability and ability to benefit from further learning opportunities – such learning may take place formally or informally in a workplace, in formal adult training programmes or in tertiary institutions. In addition, there should be options for enhanced general education (beyond the core general education component), which would make BSO students and apprentices better prepared for further education and training. It would also facilitate upward mobility between tracks, for example BSO students who have taken optional extra mathematics will be better prepared to move to TSO.

Data and research underpin effective policies and interventions

Data are required to identify target groups and areas that need particular attention. A number of studies suggest that relying on a self-declaration of basic skills is insufficient (*e.g.* Bynner and Parsons, 2006; Finnie and Meng, 2005), as many people with weak basic skills do not recognise that they have difficulties, especially in respect of numeracy, while those who do know that they have basic skill problems may be reluctant to admit it (Basic Skills Agency, 1997). Greater awareness of literacy and numeracy problems encourages people to seek help. Bynner and Parsons (2006) found that once people were aware of weaknesses in their basic skills, they tended to be interested in improving these. This is in line with an earlier study of further education students in the United Kingdom (Basic Skills Agency, 1997), which found that a major barrier to taking up basic skills support was that many people did not know that basic skills were essential to the successful completion of their course.

Similarly, both policy makers and education providers need information on the performance of students in general subjects, in particular on the achievement of the final objectives of secondary education. We welcome the ongoing development of a system of assessment of the final objectives conducted by the government, which is testing student achievement on a sample basis. It can help monitor the evolution of performance in the Flemish education system and identify challenges. It can also serve as an accountability tool, as a necessary balance to the autonomy of providers.

Data and research also help assess the effectiveness, costs and feasibility of different policy options and allow them to be continuously improved. The combination of better data on the achievement of the final objectives and research on the integrated approach would be particularly important, as some programmes rely on the integrated approach to teach general subjects. As argued below, this approach has a strong potential but is also challenging, so it is crucial to ensure that this approach yields the expected outcomes.

Implementation

Stronger core general skills through an integrated approach

As argued above, strengthening the general education component of VET programmes is challenging, as these programmes enrol many students who are not motivated by academic content. But research evidence shows that integrating general skills and VET subjects can be very effective in improving literacy and numeracy skills (*e.g.* Jenkins, Zeidenberg and Kienzl, 2009 on basic skills and adult VET; Stone *et al.*, 2006 on maths in upper secondary VET). Currently in Flanders the integrated approach is used typically in BSO programmes that have modularised their provision. While modularisation has a number of benefits (see below) and we encourage Flanders to explore its use in secondary education, the integrated approach could be usefully implemented in currently non-modularised programmes as well (*i.e.* not modularised BSO and TSO programmes). This does not necessarily involve removing stand-alone general subjects. As indicated by a research study from the United States (Box 2.1), enhancing the teaching of maths within vocational subjects can complement regular maths classes and improve student performance.

Box 2.1 Maths-enhanced vocational education

What is the Math-in-CTE approach?

The Math-in-CTE approach was developed from the idea that maths is present in all areas of CTE but is often implicit to both teachers and students. This approach aims to make maths more explicit as a necessary tool for solving workplace problems and help improve students' understanding of maths both in and out of context. It was developed by the National Research Center for Career and Technical Education and consists of teacher professional development and a pedagogical framework.

A research study (Stone *et al.*, 2006) tested this model in five occupational areas (agriculture, auto technology, business/marketing, health, and information technology). In the experimental group, each CTE teacher was partnered with a maths teacher to develop CTE activities that would enhance the teaching of maths skills for use in context. They built a curriculum that intersected maths concepts with CTE curricula, identified opportunities to emphasise maths in the curriculum, and developed lessons for implementing these based on a specific pedagogical framework. This framework makes explicit maths concepts in CTE courses by gradually moving from fully CTE contextualised examples to more abstract examples. For instance, learning about the T-square in a carpentry class is an opportunity to teach the Pythagorean theorem.

After one year of maths-enhanced lessons, the students in the experimental group performed better on standardised tests of maths ability. This was not detrimental to the learning of the vocational content – at the end of the year there were no differences between the experimental and control group in terms of occupational or technical knowledge.

Lessons learned

According to participating teachers critical success factors included CTE-maths teacher partnership. Close one-to-one collaboration between CTE and maths teachers improved CTE teachers' confidence in maths and strengthened mutual respect for each other's expertise. Another key factor was that the programme went beyond "a set of lesson plans". Teachers worked together in a structured framework and participated in professional development. They were engaged in the whole process. "The model works, but it is hard work, and it won't work unless the teachers want to participate".

The study also allowed to identify some challenges. Some teachers had concerns because CTE teachers are not trained to teach maths and maths teaching takes time away from the CTE they should be teaching. Another debated question was whether it is CTE teachers' responsibility to teach maths that students should have learned earlier.

Source: Stone, J.R. *et al.* (2006), *Building Academic Skills in Context: Testing the Value of Enhanced Math Learning in CTE*, National Research Center for Career and Technical Education, University of Minnesota.

Effective integration is challenging. Aiming for excellence in education, Flanders could usefully build on additional research on the integrated approach. Identifying best practices and factors that support effective implementation would help Flanders make full use of the benefits of the integrated approach. For example, a study on the Math-in-CTE approach in the United States (Box 2.1) identified the challenges of implementing the programme, as well as factors that were key to success.

Systematic identification of those with basic skill problems

Developing a standard screening tool could help the systematic identification of those who need basic skills support in all VET programmes, including initial and continuing VET. Such a screening test needs to be implemented tactfully, so that it is not seen as a selective test or barrier to entry. A quick-scan tool already exists in adult education – it is used by VDAB and the Flemish Support Centre for Adult Education, but not in other parts of the Flemish VET system. During the review visit, a number of stakeholders argued that making a standard screening tool compulsory would not conform to the educational culture in Flanders. But this tool might be offered to VET institutions as an option, helping them to easily identify those who need support. The availability of such a tool would make the assessment process easier, as schools would need to develop their own tools. This could encourage schools to identify basic skill problems more systematically.

Options for more general education

There are various ways in which additional general education may be provided to secondary students. One possibility is to provide optional courses within the regular duration of the programme. For example, in Sweden upper secondary VET programmes are modularised and VET students can take extra modules in general subjects. For example mathematics is divided into several modules – Mathematics A to Mathematics E. Requirements vary across programmes: Mathematics A is compulsory in all programmes, social science requires Mathematics A and B, while natural sciences requires Mathematics A and D. Students have the option to take extra mathematics modules, in addition to the ones required for their programme (Swedish Ministry of Education and Research, personal communication, 30 August 2007).

Upward mobility also requires a clear pathway, which sets out the requirements for progression between tracks. Student should have options to take extra general education classes and obtain a certificate recognising that they have completed these and have complied with the requirements for moving to a higher track. If general education is modularised, it should be modularised in all tracks to allow progression between tracks.

Another option would be to offer an add-on year to the current programmes, which would provide strong general education. This would be particularly useful for those who are considering tertiary studies. Currently BSO students can obtain the secondary diploma, entitling them to enter tertiary education, only after completing a seventh year. But the seventh year is strongly focused on occupation-specific skills and does not provide the general education needed for tertiary studies. The add-on year would have to contain sufficient general education to prepare students for successful tertiary education.

2.2 Postponing the age of tracking

Challenge

PISA results in Flanders are excellent on average but with a large dispersion

By international standards, Flemish 15-year-old students perform very well on average in literacy maths and science (Table C.2). But the spread in the distribution of the

scores in reading and mathematics is wider in Flanders than the OECD average, and the impact of socio-economic status (SES) on performance is greater in Flanders than the OECD average. This impact is also asymmetrical: it is stronger among students with lower SES than among those with high SES (Flemish Ministry of Education, University of Ghent, 2008).

Selection hurdles and downward mobility

Flemish students are selected into separate tracks with different educational objectives early on in their educational careers. This is similar to countries like Germany, Austria and Switzerland where students are placed in different tracks before the age of 12, but contrasts with countries like Finland, Sweden, Norway, the US and the UK where students attend comprehensive school at least until the age of 16.

Typically at the age of 12, students enter the first stage of secondary education provided in two streams, A and B. The first year of the B stream is a remedial year provided to students who by the end of primary education had not reached the level required to enter secondary education. During this year students are expected to catch up and move to the A stream. If they do not succeed they continue in the second year of the B stream, which is pre-vocational and leads to BSO, DBSO or apprenticeships. But the share of students in the B stream is higher in the second year than in the first year (18.5% and 12.9% respectively [*www.ond.vlaanderen.be/onderwijsstatistieken*]) – the B stream is not successful in helping students catch-up and is in effect a pre-vocational pathway.

The majority of students are in the A stream, which offers a common curriculum with a choice of optional subjects defined by the school (five lessons per week in the first year and 8-10 lessons in the second year). Options are provided mainly in three categories: classical languages, other theoretical subjects, and technology courses. Although this stage of education is in principle comprehensive, participation in some options does affect the likelihood that a student will end up pursuing VET or general upper secondary education. Students from the classical languages option have the highest likelihood of transit to ASO and those from technological options the lowest[7] (Pustjents *et al.*, 2008).

Transition from primary to secondary education involves a change of school, as the first stage of secondary education is provided in secondary schools. After the first stage, often students stay in the same school for the second and third stage. Some secondary schools provide all upper secondary tracks but some provide only TSO and BSO. The choice of secondary school may therefore affect further educational choices, so in effect, some students choose their track at the age of 12.

After the first stage of secondary education 14-year-old students (the theoretical age of transition) in the A stream choose between four full-time and two part-time tracks. Changing tracks is possible and some students move to lower tracks but very few are ever promoted (see Figure 2.3).

Flemish students repeat grades more often than their peers in many other OECD countries (PISA 2003 dataset, see OECD, 2008a). Students who repeated one or more grades are mainly concentrated in BSO. According to PISA 2003, half of 15-year-old BSO students reported repeating a grade once or more compared to one third in TSO and

7. 80% of students following classical language option, 43% of those who followed theoretical curriculum and only 8% of those from technological options were in ASO at the end of their upper secondary education (Pustjents *et al.*, 2008).

less than one tenth in ASO (Kuczera, 2008; OECD, 2008a). The Flemish system combines a sequence of mechanisms sorting students into relatively homogenous groups in terms of performance and socio-economic background. In the second stage of secondary education over 40% of students with the highest socio-economic background were in ASO, 17% in TSO, only 6% in BSO and less than 4 % in DBSO (Flemish Ministry of Education and Training 2009a, 2009b).

These sorting mechanisms provide many options for displacing the problem of students who struggle in school – either by retaining them in the same grade or by directing them to a less demanding track – rather than addressing the problem by providing targeted help to those who need it. Consequently, tracks at the lower end of the "waterfall" tend to enrol the most disadvantaged students who have accumulated school difficulties and sometimes repeated years. This feature of the system has an inevitably strong negative effect on the status of VET in Flemish society. Quite separately, such pathways of adverse selection raise the question of whether vocational programmes at the bottom end of the waterfall can adequately compensate for the accumulated disadvantages of those involved, and effectively meet labour market needs.

Early career choices

The current system requires early occupational choices on students. Students are selected into different tracks at an early age and low upward mobility across the tracks means that the results of the first student sorting exercise are decisive for students' future education and career. The transition point from primary to secondary education involves a sorting mechanism, with longer term effects. Although students do not choose a track or occupational field at the age of 12, the choice of stream or options within the A-stream and the initial choice of secondary institution might in itself already limit options and influence whether a student will continue in VET or in general education. After the first stage of secondary education, typically at the age of 14, students in vocational tracks choose an occupation. The career options of BSO, DBSO students and apprentices are also narrowed by the limited general education they receive, which makes transition to other tracks very hard and limits further education opportunities (see section 2.1).

Recommendation 2

Postpone tracking at least until the age of 14 and make education in the period preceding tracking fully comprehensive.

Supporting arguments

There are two interrelated arguments supporting this recommendation. First, differing quality of education across tracks may increase inequity. Second, in a comprehensive system students at risk have better outcomes.

The quality of education might differ across tracks

In all countries students are sorted into different pathways at some point in their educational careers. But countries vary in terms of the criteria used to select students and the age when it happens. In most countries schools sort students according to performance and academic ability. In some countries (*e.g.* Sweden and Norway) selection is not imposed by schools, but students select themselves according to their interests,

academic performance and career plans. The level of permeability between tracks also differs across countries. The rationale behind tracking students according to their academic ability is that it is held to be beneficial to both high and low achievers, since teaching and learning can be adapted to a group of students who share similar characteristics and learning needs. But the evidence from numerous research studies shows that tracking has a negative impact on the performance and outcomes of those who end up in tracks for students with lower ability (*e.g*. Jakubowski *et al.*, 2010; Bauer and Riphahn, 2006). Intuitively we can assume that the negative effect will not be observed in pathways for the best achievers. The underperformance of disadvantaged students might be linked to the fact that the quality of education in the lower tracks is poorer than in pathways for the best performers. This hypothesis seems to be confirmed by the fact that in early tracking countries students' performance tends to be more closely tied to their socio-economic background. In other words, the earlier the tracking the shorter the time spent by disadvantaged students in a comprehensive school, which is more likely to compensate for their disadvantaged background.

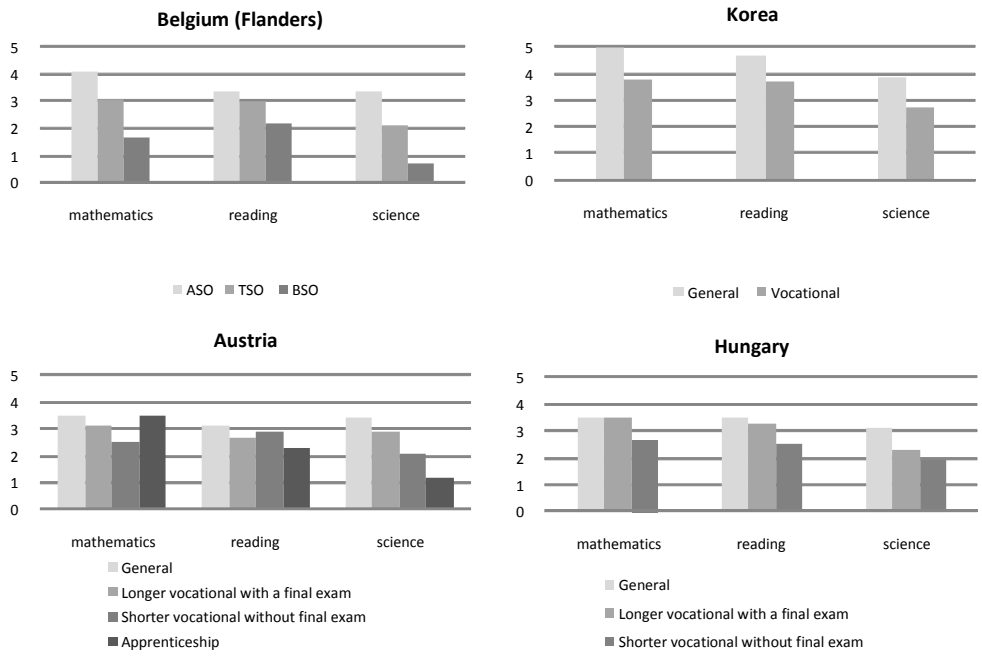
Tracks are differentiated according to study content, educational objectives, teaching quality, students' motivation and engagement in learning. In a comprehensive system students follow the same core curriculum (with modest differences between chosen specialisations or modules) therefore objectives and expectations towards all students vary less than in a system with tracks. A study evaluating the Polish reform, which postponed tracking by one year, points out that more hours of instruction received in a comprehensive school was associated with a significant improvement in the results of students with lower grades (who in the previous arrangement would have already been in a VET track) (Jakubowski *et al*., 2010). On the other hand, as other studies argue, VET with more demanding content may increase drop out among those who struggle the most with learning (*e.g.* Hall, 2009).

Where vocational tracks exist, the curriculum and educational objectives differ between tracks, with vocational students typically receiving less academic education, although the extent of this difference varies between countries. In Flanders, the sorting of students typically starts at the age of 12. While the first stage is in principle comprehensive, objectives for the A stream are much more ambitious than those for the B stream. The "options" in the A stream introduce a further element of differentiation. Although the aim of the first year of the B stream is to help poorer performers to catch up and move to the A stream, such a big difference in the study content makes this transition very difficult.

Figure 2.4 here below shows how 15-year-olds from different tracks evaluate their study time devoted to mathematics, reading and science in different countries. According to these data Flemish students in BSO receive very limited general skills relative to students in other tracks, and also less than those in vocational tracks in three other countries chosen as examples with widely varying VET systems.

Figure 2.4 General skills in general and vocational tracks

Average number of hours per week spent in regular lessons in mathematics, reading and science (2006)



Note: In Flanders in some BSO programmes general education is integrated with VET, in which case it may be harder for students to assess the number of hours spent in each lesson.

Source: OECD (2008a), *VET in PISA: Results from PISA 2003 and 2006*, OECD, Paris. Available at: *www.oecd.org/dataoecd/59/32/41538731.pdf*

In all 55 countries participating in PISA 2006, the time spent by students in regular lessons in science was associated with performance in science. In some countries, including Belgium, those who benefit most from additional instruction time are students with disadvantaged socio-economic background: the improvement in their achievement related to more hours spent in science classes is greater than that of their advantaged peers (OECD, 2010).

The quality of teaching and other less tangible features of the school learning environment may also be linked to tracking. International evidence shows that schools enrolling students with weak academic performance and disadvantaged family backgrounds tend to have the biggest problems with retaining teachers (Field *et al.*, 2007) and retention problems almost certainly reduce the quality of teaching (Rivkin *et al.*, 2001). Since VET tracks enrol a higher share of disadvantaged students than the general track, there is a risk that the quality of teaching will be lower in BSO than in TSO, and in TSO than in ASO. In Flanders, in VET tracks "school well-being" and the relationship between teachers and students were less positive than for those in general programmes (Mertens and Van Damme, 2001 in Kim and Pelleraux, 2005).

To sum up, in the light of international evidence and the features of the Flemish system it can be argued that later tracking and a longer period of comprehensive education would benefit students with disadvantaged backgrounds, who are more likely to achieve less in school and be orientated towards less demanding tracks.

Comprehensive systems improve the outcomes for students at risk

Postponing the age of selection would benefit disadvantaged students. International experience shows that in the short run it improves the school performance and skills of students who are the most likely to struggle with learning. In the long run, it yields higher returns in terms of educational attainment and earnings to those coming from disadvantaged homes.

Between 2000 and 2003 Poland implemented a school reform, including the extension of comprehensive schooling by one year. A comparison of PISA results in 2000 (when sampled students were already tracked) and in 2003 and 2006 (when sampled students were still in a comprehensive school) shows that the average performance improved in all assessed areas after the implementation of the reform. It is estimated that the reading results of students who under the previous arrangement would have attended a vocational track improved by more than 100 points. There was also a slight increase in the performance of students who would otherwise have followed the technical track but lower than in the first group. Finally, the performance of the best achievers did not change in response to the reform (Jakubowski *et al*., 2010) – the small decrease in performance in PISA 2003 among students who under the previous arrangement would have continued in general education, disappeared in 2006. Therefore, the significant increase in Polish performance on PISA assessments is entirely explained by significantly better results of students in the lower tail of the performance distribution.

An evaluation of the Swedish reform in the late 1940s, which extended compulsory schooling, abolished tracking of 12-13-year olds, and introduced a comprehensive curriculum, shows that, in response to the reform, educational attainment increased significantly among students from disadvantaged homes, both for those with high and low ability (Meghir and Marten, 2004). Similarly, a Swiss study comparing the probability of graduating from tertiary education in early and late tracking counties, found that the likelihood of reaching tertiary level was higher in late tracking counties than in early tracking counties. Again, postponing student selection benefited mainly students of parents with low education (Bauer and Riphahn, 2006).

Swedish and Finnish research studies also show that there is a link between earnings and the age of tracking. In both countries the extension of comprehensive education resulted in higher earnings for graduates with disadvantaged backgrounds (Pekkarinen *et al*., 2006; Meghir and Marten, 2004). Conversely, as pointed out by Meghir and Marten (2004), postponing tracking had a negative impact on earnings of those from well educated families in Sweden. The authors do not explain this, but one possibility is that the reform increased overall educational attainment, making the competition for well-paying jobs more severe.

Implementation

Delay institutional transition

Currently Flemish students choose their secondary school at the age of 12. Although at this stage they are still in comprehensive education their performance might be affected by the quality of teaching and orientation of the chosen school. If tracking were postponed at least until the age of 14 but students were still required to change an institution at the age of 12, their choice of track could be biased by the new school characteristics and school objectives. Schools might have an incentive to retain as many

students as possible for the second and third stage, and after two years spent in school students might be unwilling to face another school transition. It would be better for tracking and institutional transition to be simultaneous.

Change in teaching methodology

A comprehensive system implies more unified study content, common minimum educational objectives for all students and increased mobility between different options. The introduction of a comprehensive system should be accompanied by appropriate changes in teaching methodology so as to address the needs of all students. Such a targeted and individualised approach is necessary to prevent the disengagement of those who struggle with academic content, while helping good performers to develop their skills at a fast pace. Teaching in heterogeneous classes is more challenging, so school leaders and teachers might need additional support to adapt to a new arrangement.

2.3 Workplace training

While workplace training is effectively provided across a range of VET programmes in Flanders, the balance between school-based VET and apprenticeships could usefully be shifted, to extend the dual approach to a wider range of occupations. Encouraging various forms of on-the-job training and improving its quality is part of the government's Competence Agenda. This section looks at ways in which workplace training might be promoted and improved, to ensure its full advantages are realised across the VET system.

Challenge

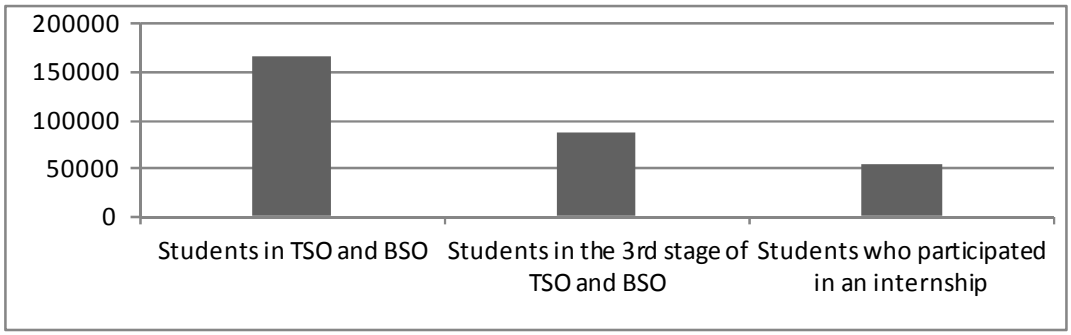
Some parts of the VET system make limited use of workplace training

In initial secondary and tertiary education participation in workplace training and its quality varies greatly across programmes. The government does not determine the amount of workplace training that has to take place in initial secondary education. It is up to schools to define a curriculum that follows the government's final objectives. Practical training is provided in schools, though most schools also facilitate some form of workplace experience for students (Flemish Ministry of Education and Training, 2009b). According to interviews conducted during the review visit, the third stage of BSO and TSO tend to include some element of workplace training. Its duration is not regulated, but according to interviews internships (*stage*) typically last two-eight weeks per year and are provided on a block release or alternating basis. So-called "extra-mural practices" are also used as a form of workplace training – VET teachers go to a company with students and do practical training on their equipment (Flemish Ministry of Education and Training, 2009b).While the government promotes internships, Figure 2.5 shows that in 2007/08 only a third of BSO and TSO students participated in an internship.[8]

8. 2007/08 was the first year during which data on participation in internships have been collected and the data presented may be an underestimate. Other forms of workplace training may be used by schools.

Figure 2.5 Participation in internships in initial secondary education

Number of students (2007/08)



Source: Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished; Flemish Ministry of Education and Training (2010), Flemish Ministry of Education and Training website *www.ond.vlaanderen.be/onderwijsstatistieken*, accessed July 2010.

Less than half of DBSO students participate in workplace training. Among those who participate in some form of work (Table 2.3), not all are in regular work – the definition of "work participation" also includes certain types of training, as well as cultural, social and sports- activities organised by public authorities. Conversely, in the Syntra apprenticeship system, virtually all students participate in workplace training, as an apprenticeship contract with an employer is a condition of entry. Only in exceptional cases do students participate in "preliminary trajectories", when there is a temporary break in the apprenticeship contract (Flemish Ministry of Education and Training, 2009b).

Table 2.3 DBSO students in different types of activity during the period not spent in school

Activity	Percentage of students
Work participation	36.4
Preliminary trajectories	13
Bridging projects	11.9
Personal development trajectories	7.8

Source: Flemish Ministry of Education and Training (2009b), "Responses to the National Questionnaire", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

In professional bachelor's degree programmes, there seems to be a solid element of workplace training. The provision of internships is one of the factors considered in the accreditation process and stakeholders reported that, although not compulsory, all programmes include an internship. They last a minimum of six weeks and their duration varies across programmes.

In adult VET, participation in workplace training varies. In VDAB, all programmes oriented towards a VET occupation contain a compulsory internship (Flemish Ministry of Education and Training, 2009a). The internship is up to 50% of the duration of the programme and ranges between a few half days and six weeks depending on the occupation. The Syntra entrepreneurial training internships are not always used but are encouraged. In Centres for Adult Education a small proportion of students participate in workplace training. Many participants attend courses in the evening and work full-time,

so it is difficult for them to participate in internships during the day. This is a particular obstacle for those not working in a related occupation, as they will be looking for a job without any relevant work experience.

Variations in the effectiveness of quality assurance mechanisms

While many stakeholders reported that finding training places in companies is relatively easy in initial secondary school-based VET, ensuring that the training is of high quality remains a challenge. Schools are responsible for the quality control of training in companies. In some schools, teachers visit the company in advance of the internship agreement to check if their activities fit the study plan. During the internships teachers are in contact with the company. But a number of stakeholders reported to the review team that some of the internships are of poor quality and quality standards are lacking.

Ensuring high quality workplace training is also a challenge in adult secondary education, where clear quality standards are lacking. The framework for workplace training is also weak – the contractual arrangements vary greatly across institutions. In the case of VDAB training, in-company training supervisors do not receive any targeted training, though VDAB provides guidelines to workplace learning and advice on looking after trainees.[9] In Syntra entrepreneurial training those supervising trainees do not systematically receive targeted training (Flemish Ministry of Education and Training, 2009b).

Recommendation 3

Sustain and further develop workplace training. Ensure the quality of workplace training, by controlling its content, strengthening the assessment of competences and providing an appropriate level of preparation to those who supervise students.

Supporting arguments

The relatively good provision of workplace training in the Flemish VET system shows commitment to workplace training and widespread awareness of its benefits. A variety of tools are available to enhance its quality (*e.g.* standards regarding the content and assessment methods in Syntra apprenticeships, the *Estafette* training programme for supervisors, "godfather" programmes in VDAB for employees who support trainees in workplace training). This section sets out the benefits of workplace training, highlighting areas where its expansion would be particularly important in Flanders. It also discusses factors that influence the quality of workplace training, which should receive attention throughout the VET system.

This recommendation is supported by four arguments. First, the VET system as a whole would benefit from a more extended use of workplace training. Second, students would have several benefits, such as skills development, transition to employment and motivation. Third, employers would get better recruitment opportunities, as well as benefitting from the productive contribution of trainees. Finally, clear standards for workplace training would help improve its quality.

9. Tools for quality assurance of workplace training are available at *www.vdab.be/stage*.

The VET system as a whole would benefit from a more extended use of workplace training

Training in a company can be cost-effective, as companies already have up-to-date equipment, together with the personnel able to handle these – many schools cannot afford this. One Danish study (Westergaard-Nielsen and Rasmussen, 1999) compared the public cost of apprenticeship and the cost of fully school-based VET programmes. It found that school-based VET is more expensive than VET with workplace training provided by employers, even taking into account the subsidies to training companies. It may be possible to shift some of the practical training from schools to companies could help schools with the challenge of providing up-to-date equipment, particularly in areas in which technologies are changing rapidly and equipment is expensive (*e.g.* CNC machines). Of course issues such as safety and the risk of damage to expensive machines do arise and would need to be managed.

Workplace training can also improve the match between the mix of VET provision and labour market needs. The willingness of employers to provide workplace training sends a signal about labour market needs (for further details see section 2.4).

Students would benefit from a more extended use of workplace training

There is abundant international evidence on the benefits of workplace training to students and employers (Field *et al.*, 2009). Workplaces can provide a strong learning environment. Soft skills, such as teamwork and communication are more easily learned in an authentic work environment, while simulating these in workshops is more difficult (Aarkrog, 2005). Students can learn on up-to-date equipment, available in companies, from trainers who are familiar with the most recent technologies. Box 2.2 summarises the benefits of workplace training to students.

Workplace training can facilitate school-to-work transition. All programmes that currently do not always include a substantial element workplace training (*e.g.* TSO, BSO, DBSO) would benefit from this. The school-to-work transition function of workplace training would be particularly needed for those in adult education who wish to change occupations. In the absence of workplace training they will be looking for a job without any relevant work experience.

Box 2.2 What can students gain from workplace learning?

Specific skills: In programmes with substantial on-the-job elements (*e.g.* classical apprenticeships), workplace training plays a key role in developing specific skills, both occupation- and firm-specific skills. This is more difficult to achieve if the workplace element is shorter. In that case, workplace training might be an opportunity for students to apply what they learnt at school and depending on the duration and quality of the on-the-job element they may acquire new specific skills.

Generic skills: Workplaces can develop soft skills, such as teamwork, dealing with clients and conflict-management. Similarly to specific skills, a substantial period of training will develop these skills better than a short period of internship (*e.g.* one to two weeks).

Transition into employment: Workplace training allows employers to learn about a potential recruit and vice versa. This can only be achieved if the training is sufficiently long and trainees carry out tasks that help them acquire the competences needed in their occupation.

Career guidance: Students can learn about the day-to-day reality of an occupation – the type of tasks involved, working conditions etc, as well as learning about a particular employer. Short periods of workplace training (*e.g. Schnupperlehre* in Switzerland) typically serve this purpose.

Motivation: Students can see how what they learn at school can be used in real life situations. This can increase student motivation and engagement with their programme.[1]

1. Admittedly students might lose motivation when learning about the reality of an occupation. In that case, however, workplace training plays an important role as a career guidance tool.

Employers would benefit from a more extended use of workplace training

Box 2.3 summarises the key benefits of workplace training to employers. A major benefit for employers is the prospect of recruiting future employees. Research on Syntra apprenticeships and DBSO (De Rick, 2006; 2008) shows that among Flemish employers the recruitment benefit is a major motive to offer workplace training.

Companies may also benefit from students' productive contribution. These benefits depend on various factors, including how the firm allocates tasks to VET students. A study comparing Germany and Switzerland (Dionisius *et al*., 2008) argues that Swiss apprentices spend more time doing productive work, and this is a major reason why in the majority of firms apprenticeship training is profitable already during the training period in Switzerland (Wolter and Schweri, 2002), while it is not in Germany (Beicht, Walden and Herget, 2004).

Box 2.3 What can employers gain from workplace training?

Recruitment: Employers can learn about potential recruits, as well as equipping them with the skills needed by the firm (Autor, 2001; Clark, 2001). Hiring through training is also less costly than external recruitment (Dohmen, 2007). This benefit depends on the recruitment and training costs of external skilled workers, as well as on the share of apprentices who stay with the training firm (Wolter and Schweri, 2002).

Productive contribution: This depends on various factors, including the tasks performed by apprentices (productive vs. unproductive activities, skilled vs. unskilled tasks), the performance of apprentices and the wage of skilled and unskilled workers (Wolter and Schweri, 2003). Typically the productive contribution of apprentices is higher at the later stages of training. Quality standards can help ensure that apprentices receive high quality training, while being productive in the company.

The question arises whether the increased productive contribution of apprentices is at the expense of training quality. Research from Norway (Askilden and Øivind, 2005) and the Netherlands (Smits, 2006) suggests that firms that train to substitute apprentices for workers tend to use trainees as a cheaper substitute for unskilled workers. Smits (2006) also found that the quality of training is better in firms that train to meet their future needs of qualified labour. Evidence from Switzerland (Dionisius *et al*., 2008) challenges this, showing that quality standards can ensure that apprentices receive high quality training, while being productive.

Clear standards help improve the quality of training

Reaping the full benefits of workplace training requires quality assurance. Companies will be tempted to offer training that immediately increases their productivity. But on its own such training may be too narrow to meet the interests of students (Cornford and Gunn, 1998; Kilpatrick, Hamilton and Falk, 2001; Smits, 2006). Even if a firm has an interest in providing high quality training, their interest may differ from those of students (Smits, 2006). According to the classical economic argument, in a perfect market firms have no incentives to provide transferable skills, as employees might then move to another company and the company that provided the training will not benefit from it. This means that there is a risk that companies will offer firm-specific rather than broader occupational training. In practice, because of all kinds of market imperfections, firms do support some training in transferable skills, but often not enough. While workplace training needs to yield benefits to employers to encourage them to offer training places, it should not be so firm-specific that it inhibits future professional mobility. This argues for quality standards for workplace training.

"Quality standards" are a binding set of rules defining how workplace training is provided. Usually they are set nationally with different types of responsibility for localities and schools. Some elements of such a framework already exist in Flanders, although arrangements vary greatly across programmes.[10] Quality assurance may focus on different aspects of workplace training, including the following:

10. In addition to quality guidelines on workplace training, recently developed by the government and social partners, circular letters are being drafted to focus attention on aspects of quality. These letters are not binding.

- **Content**: Standards ensure that students are not used just as unskilled labour and they can acquire occupational skills that are transferable to other companies. Quality standards should set out the expected outcomes of workplace training in terms of competences. A study of the quality of internships (*stages*) in Flanders found that the content of internships was key to their success (Ruelens *et al.*, 2003). In line with studies from other countries (Gruber, Mandl and Oberholzner, 2008; Robertson *et al*., 2000), it argues that tasks should be varied, increase in complexity over time and allow trainees to work autonomously (taking into account safety considerations).

  Translating the targeted competences into the specific context of workplace training (*e.g.* company characteristics, duration of training) and creating a training plan is challenging. Adequately preparing in-company supervisors (see below) and VET teachers on how to ensure high quality workplace training, including setting and monitoring its content, would facilitate this task.

- **Assessment**: Once the content of workplace training is agreed, there needs to be assurance that the competences set out in the training plan are being effectively developed. Systematic assessments of the acquired competences, as currently used in Syntra apprenticeships, are a useful tool in achieving this. They should be extended to other VET programmes.

- **Supervisors**: Those who supervise VET students in the company need relevant skills. These include pedagogical skills and social skills, such as communication skills, the ability to deal with conflicts and unexpected mistakes (Harris, Simons and Bone, 2000). Research from Germany shows that the suspension of formal training for apprentice supervisors seems to have had a negative impact – higher drop-out rates and more complaints from companies about the performance of their apprentices (BIBB, 2008). In Flanders a study of internships (Ruelens *et al.*, 2003) shows that one key element of successful internships is good supervision – both formal supervisors and colleagues play an important role. It would be therefore important to ensure that in-company supervisors are adequately prepared – the stronger the workplace training element in a programme, the more it is necessary to give targeted training to in-company supervisors.

Different forms of workplace learning may help achieve different objectives (see Box 2.2) and quality standards should reflect this – the more the programmes rely on workplaces to deliver training, the stronger the quality control should be. A substantial element of workplace training with strong quality control is crucial in programmes that typically lead to direct labour market entry, as it supports a smooth transition into employment. On the other hand, programmes that are typically followed by further studies may put more emphasis on work experience as a means of broadening the students' understanding of the world of work, as well as (or instead of) conveying immediately applicable job skills. This is the case of many high school VET programmes in the United States, where VET often serves the purpose of "career exploration" more than preparation for direct entry into the labour market. In this case, quality standards may be less demanding.

As described in the challenges, in Flanders the extent to which these elements are present in workplace training varies across programmes. Some variation in the use of workplace training is a natural part of diversified provision, but many students (and employers) would benefit from a more systematic use of substantial and high quality workplace training – particularly those in BSO, DBSO and adult vocational programmes,

as these programmes are designed for direct labour market entry. Other vocational programmes, such as TSO, would also benefit from an enhanced use of workplace training.

Implementation

Workplace training and work-based learning can take a variety of forms. In the Flemish VET system, they range from short group visits to a company with a teacher or a few days of internships, to apprenticeships in which students spend four days a week on-the-job. In initial secondary education, there are two main ways of promoting the systematic use of workplace training. One way would be expanding the apprenticeship system to cover a wider range of occupations and a larger number of students. If Flanders took this approach, it would be desirable that apprenticeships offer more general education, as argued in section 2.1. This would be crucial if the apprenticeship system is to cover a wider range of occupations. Alternatively, another way would be enhancing workplace training in existing school-based programmes. The two options are not mutually exclusive and we would encourage consideration of both. If the workplace training element is enhanced in school-based secondary programmes, it should ensure that all programmes include a substantial period of workplace training, combined with strong quality standards.

In adult VET (in particular in CAEs) one barrier to workplace training is that many participants already work full-time, although often not in the field in which they are being trained. Establishing a framework for workplace training in adult VET would be helpful – this might include a standard contract for internships in adult VET, quality standards for workplace training, and enhancing study leave arrangements. Interviews conducted during the visit suggest that although some study leave options already exist, they are limited and not adapted to workplace training. In addition, those who work in the field of their training might use their own workplace to perform some training tasks – some stakeholders said this approach is already used sometimes. Promoting examples of best practice might encourage the use of this approach. International experience on promoting adult learning is offered in the OECD review of adult learning (OECD, 2005).

Obtaining sufficient training places in companies is a challenge in many countries. Research from Switzerland suggests that employers offer more workplace training in occupations in which students fully compensate for the costs of training through their work output during the apprenticeship period (Wolter, Mühlemann and Schweri, 2006). Training opportunities are also more likely to be offered in occupations that do not allow trainees to switch to other employers after completing their training or where expensive and occupation-specific machines force schools and firms to cooperate (*e.g.* aeronautics).

Flanders has some incentives to encourage employers to offer workplace training to VET students (*e.g. stagebonus* for those taking on apprentices). Sectoral funds and agreements (*sectorconvenants*) are already used as a framework for workplace training, particularly in the training of employees. Some countries (*e.g.* Austria, Switzerland) use sectoral training funds to limit the problem of poaching, which may discourage firms from offering training. Extending these incentives to a wider target group (*e.g.* including students in BSO, TSO, adult or tertiary VET) could stimulate the offer of workplace training.

Small firms typically face further obstacles to training: the fixed cost of using one employee's time to supervise trainees is a proportionately greater burden for these firms

and they often lack the capacity to deal with the administrative aspects of workplace training. The implementation of good quality control mechanisms might further increase this burden. To encourage employers to take on VET students, Flanders could consider setting up bodies that facilitate the allocation of VET students to companies by sharing the burden involved (see examples in Box 2.4). Alternatively, existing bodies (*e.g.* regional training centres) might be strengthened and used to this end.

Box 2.4 External bodies involved in apprenticeship training

Group training organisations in Australia

Group training organisations (GTOs) are not-for-profit organisations supported by the Australian state and territory governments, with some charges to host employers. GTOs employ apprentices and hire them out to employers. They sometimes focus on a particular industry or a particular region. The tasks performed by GTOs include selecting apprentices to suit the needs of employers, arranging and monitoring training both on and off the job, taking care of the administrative duties involved, and ensuring that apprentices receive a broad range of training experience (if necessary, apprentices are rotated from business to business).

Source: Department of Education, Employment and Workplace Relations (DEEWR) (2010), training.com.au website, *www.training.com.au*, accessed June 2010.

For research papers on GTOs see *www.ncver.edu.au/publications/bytheme.html*

Training Offices in Norway

Training Offices (TO) *(opplæringskontor)* are owned and funded by companies, and usually relate to specific trades. TOs work actively to identify new potential training companies and establish new apprenticeship places, supervise companies with apprentices, and train staff involved in the tutoring of apprentices. Many training offices organise the theoretical part of the apprentices' training. They often sign apprenticeship contracts on behalf of smaller training enterprises, thereby becoming accountable for completion of the training and its results

Source: Norwegian Directorate for Education and Training (2008), "Responses to the National Questionnaire", unpublished.

There is some tension between the goal of expanding workplace training and that of improving its quality. Quality standards can create a burden on employers, which may discourage them from offering workplace training. But quality standards can also help employers to achieve their objectives and have better prepared potential recruits. Quality control may take the form of supportive measures for companies. Box 2.5 provides an example from Switzerland, where companies may use a self-assessment tool to improve the quality of their training (an example of the *QualiCarte* assessment form is provided in Annex D). Research on DBSO and Syntra apprenticeships (De Rick, 2006; 2008) suggests that improving quality could encourage employers to offer workplace training. It shows that Flemish employers are more motivated by the prospect of recruitment than by immediate returns of productivity. But many employers were concerned about apprentices' low learning potential, drop-out and the quality of off-the-job training (De Rick, 2008). De Rick (2008) argues that financial aspects are less of a concern for employers, and policies should focus on supporting employers in providing quality training, improving quality in training centres and enhancing collaboration between employers and training centres.

The government in collaboration with the social partners has developed a guide on the quality of workplace training. Implementing these guidelines and integrating them into quality assurance systems of education is one of the government's priorities (Flemish Ministry of Education and Training, 2009a). In efforts to ensure systematic quality control of workplace training in all programmes, Flanders could usefully build on its existing tools and encourage their wider use. For example supervisor training programmes like *Estafette* could be offered to those who supervise students in initial or adult secondary education, or indeed in any other VET programme. The experience (whether it is positive of negative) of Syntra apprenticeships with the supervision and regular assessment of apprentices to ensure their progress might be helpful in schools' efforts to improve the quality of internships. In other parts of the VET system existing good practices could be shared among institutions and companies. For example, stakeholders in tertiary VET argued that existing mentorship programmes in teacher education might be extended to internships in other fields as well.

Box 2.5 Quality control of workplace training in Switzerland

Quality is controlled at two levels. Host companies are responsible for checking the progress of students. To help companies improve quality, the Swiss Conference of VET/PET[1] Agencies and employers', employees' and trade associations created the *QualiCarte* project. It provides a checklist of 28 quality criteria (see Annex C) describing key aspects of workplace training (including the engagement of the company, particular aspects of the initial phase of the training and the subsequent training process). These criteria are used by companies for self-assessment.

Cantonal authorities control the quality of workplace training by issuing licenses, which host companies must obtain to provide workplace training to VET students. To acquire a license, companies must meet technical and staff criteria, and demonstrate that their training programme complies with quality standards and the content of training matches the needs of the occupation.

1. PET: professional education and training

Source: OPET (2008), Vocational and Professional Education and Training in Switzerland, National report from Switzerland contributing to the OECD Review of VET, "Learning for Jobs", unpublished.

2.4 The mix of provision: determining the number of trained persons per occupation

This section concerns the "mix of provision", defined as the numbers of persons trained in the different occupations. It looks at how the mix of provision in various VET programmes is determined, with an emphasis on initial secondary education.

Challenge

The set of programmes offered in upper secondary VET is determined at the Flemish community level. In secondary VET, the labour market relevance of each VET programme is regularly reviewed (Flemish Ministry of Education and Training, 2009b). The Flemish Educational Council (VLOR) advises on the continuation of existing and the creation of new programmes. Within the frame of existing programmes, the number of places in each programme in secondary education is largely driven by student demand. But weaknesses in career guidance mean that student preferences are sometimes not well-informed (see section 2.5), and even when well-informed may not sufficiently reflect

the requirements of the labour market, as well as student needs. The review team was told that some areas, such as sports and animal care attract many students, but have poor labour market outcomes.

The review team was told that there is often a dialogue between individual schools (or sometimes school networks) and local social partners. But labour market needs are not systematically taken into account in determining the mix of VET provision. The Flemish qualifications structure, currently under implementation, will aim to ensure that the programmes on offer match labour market needs: in secondary VET, adult secondary education and associate degree courses all new programmes will have to be linked to a qualification, developed by social partners.[11] This measure is welcome, as it can ensure that the content of each occupational programme is relevant to the labour market. But it does not affect the number of students in each programme and therefore does not improve the match between the mix of provision and labour market needs.

In tertiary VET close attention is given to the issue of labour market relevance, before an institution can add a new programme to its offers. The accreditation process examines whether the same or a similar programme is already offered in the country, region or city; and whether there is evidence of labour market demand for additional graduates from that particular programme. In addition, tertiary institutions often have an advisory board for each programme, which includes employers. Such boards are not established routinely in upper secondary VET.

Some of the funding mechanisms risk distorting the mix of VET provision at secondary level. Starting a new programme can be very costly to a school. The major capital costs of equipment (*e.g.* installing a kitchen for a programme in culinary arts) fall on schools. This encourages the continuation of existing programmes, even when there is limited demand for them in the labour market, and discourages the introduction of new programmes, even if there is demand for them.

Minor material costs (*e.g.* knives in cooking courses) fall on students both in initial secondary and adult education. Schools are required to provide information to prospective students and their parents about these costs. But the government does not have consistent data on the contributions students have to pay. The contributions vary between programmes and schools. A survey (Poesen-Vandeputte and Bollens, 2008) found that the average material cost to families[12] varies by field of study – it is EUR 246 in food services, EUR 213 in car mechanics, while in tourism the average cost is EUR 2 and in graphical techniques EUR 13. While these costs may not have a relevant influence for better-off students and their families, they do encourage poorer students to choose cheaper courses, even if these are less in demand in the labour market.

11. Abolishing existing programmes, not linked to the qualifications structure, is likely to be a challenge.

12. Costs taken into account include raw material, tools, work clothing, formal clothing, safety and protective clothing and internship costs.

Recommendation 4

Ensure the mix of provision is more responsive to labour market needs by taking the availability of workplace training into account to balance the influence of student preference in upper secondary VET. This should be complemented with high quality career guidance. Reform the elements of funding that risk distorting the mix of VET provision.

Supporting arguments

This recommendation is supported by three arguments. First, student preferences are an important factor in determining the mix of provision, but they should be balanced by signals of labour market needs. Second, the availability of workplace training is an indicator of labour market needs. Third, modifying some funding mechanisms would limit the risk of distortions.

Student preferences are important but have limitations

OECD countries the mix of provision is typically determined by three main factors which, often blended together – student preference, company needs and supply constraints (*e.g.* availability of facilities, teachers and trainers). In the Flemish secondary VET system student preferences are a dominant factor in determining provision. Giving weight to student preferences is important, as students are normally good judges of their own skills and interests. It would be counterproductive to coerce students into careers they do not want, as it would risk damaging their engagement in the programme (*e.g.* Culpepper [2006] on US college students).

At the same time, if VET provision is to meet labour market needs, student preferences can only improve the match within certain limits. First, students need high quality career guidance (see section 2.5), offering them information about different occupations, education and training programmes and the outcomes they yield. Another factor, which adds complexity to this, is the time lag between the time of choice and entry into the labour market. A study from the Netherlands (Borghans, de Grip and Heijke, 1996) suggests that students make errors in anticipating future labour market developments. In addition, student choices are not exclusively based on income and employment prospects. Non-market factors, such as individual tastes and interests also play a significant role (Fiorito and Dauffenbach, 1982). Earlier work by Fogel and Mitchell (1973) argued that student tastes might not be in line with labour market needs. The influence of non-market factors in itself is not problematic. Some non-market influences, such as personality and interests, are desirable, as argued by Culpepper (2006). But some other non-market influences (*e.g.* uninformed prejudices about an occupation) should be minimised.

One potential risk is that constraints on career choices in the light of labour market prospects will result in dissatisfaction with their career choice. But a German study (Heckhausen and Tomasik, 2002) found that information on labour market prospects can constructively change how students view their “dream job”. As the deadline for applying for an apprenticeship was approaching and as students were receiving feedback from potential employers, what students defined as their “dream job” became more sober and realistic. For example, a student who was dreaming about becoming a horse-trainer might

have realised that this career offered limited employment prospects and other occupations, offering better career prospects might have become more appealing. Informing students about the realistic outcomes of different options can change their aspirations and interests, so adjusting choices to the reality of the labour market does not necessarily go against students' wishes and tastes.

In principle, the relative weight of student preference and labour market demand should depend on various factors.

- *Who pays*: If students pay most or all of the cost of VET courses, then the mix should be equivalently dominated by student reference.
- *Student age*: Younger students may be less ready to make long-term career decisions, so student preference should be balanced by factors like employability.
- *What the programme leads to*: If the main objective of the programme is to provide direct entry into the labour market, employability should be a major factor determining provision. For example, in programmes that offer much occupation-specific content from an early age and rarely lead to further studies (*e.g.* BSO, DBSO), it is crucial that students choose an occupation with good career prospects.

Conversely, if a programme contains strong general education, and typically precedes further studies, which may or may not be related to it, VET may be seen as an opportunity to explore an occupational field, rather than a major career decision with long-term consequences. The cost of changing fields will be lower and student preference should therefore have more weight. In the United States, VET at upper secondary level (commonly termed CTE) typically serves the purpose of career exploration. The curriculum contains strong general education elements, while the CTE modules allow students to learn about a field and obtain some job-specific skills if they wish. If they want to change fields, they can do that easily.

In the light of these factors, in programmes that are designed for direct labour market entry and do not usually lead to further studies, student preferences should be balanced by some consideration of labour market needs, as many graduates will have to succeed in the labour market with the initial skill-set acquired at school. This is the case for BSO and DBSO – few BSO and DBSO graduates pursue and complete education (see Figure 1.2 and 1.3). For students in these tracks it is crucial that they are trained in an occupation demanded in the labour market. Therefore their career choices should be informed with particular attention and balanced by indicators of labour market needs. As a complementary measure, all students should have the option of pursuing further education or training, which argues for stronger general education in DBSO and BSO, as well as apprenticeships (see section 2.1). This would underpin the ability of young people to benefit from further learning opportunities. A strong general education component reduces the weight of initial career choices, because sound general skills allow easier transition to other career fields and to further education and training. This is currently the case of TSO. If the general component of BSO, DBSO and apprenticeships was strengthened, this principle could apply to these tracks as well. In programmes with a strong general education component there are more arguments for maintaining a strong element of student preferences in the definition of VET provision.

Applying these principles to apprenticeships and continuing VET programmes, student preferences seem to have an adequate weight and the main challenge is to ensure high quality guidance (see section 2.5). In apprenticeships the availability of workplace

training provides a signal that the programme is relevant to labour market needs. In adult secondary education, as students are older, have some experience in the labour market and typically pay a fee, one might argue that a strong element of student preference is desirable. In VDAB, long-term and annual business plans are developed following an analysis of the labour market and stakeholder consultation. The mix of provision is determined in line with the annual business plan and student preferences are limited to the programmes contained in the business plan, thus providing a labour market counterbalance to student preferences. As in adult secondary education, students are older and have some experience in the labour market, so they are typically more aware of the importance of labour market outcomes when making decisions. In conclusion, in apprenticeships and continuing VET programmes efforts to improve the match between VET provision and labour market needs should focus on career guidance.

The availability of workplace training is an indicator of labour market needs

In apprenticeships the offer of places in VET is typically tied to the availability of apprenticeship places in companies, so employers can influence the mix of VET provision through their willingness to offer workplace training. In some countries (*e.g.* Germany, Switzerland) the market in apprenticeship training therefore adjusts VET provision to labour market needs, alongside student preferences and variations across regions. Faced with an insufficient number of apprenticeship places, some countries (*e.g.* Austria, Denmark) have introduced some off-the-job practical training, adjusting provision the needs of the labour market (see section on implementation).

In Flanders the availability of workplace training is used to define provision in the apprenticeship system and in part of the DBSO system. One option to balance student preferences with indicators of labour market needs would be to extend this principle to other vocational tracks and use the availability of work placement opportunities as a test of employers' interest in the skills a programme provides to students. This could involve, for example, reducing in size those BSO programmes that do not attract workplace training offers.

Of course employers do not always correctly anticipate labour market needs and the availability of workplace training places may not perfectly reflect future skills needs. It can nevertheless serve to signal skills needs – employers will be particularly keen to offer workplace training in contexts where they have labour shortages.

Modifying some funding mechanisms would remove the risk of distortions

Supply-constraints (*e.g.* availability of teachers, trainers and equipment) always influence the mix of provision, and in particular the ability of schools to adapt quickly to new requirements. Continuing existing programmes is always easier than starting a new programme or closing one down, and adjustments in the size of programmes are also subject to supply-constraints. The initial cost of acquiring new equipment when a new programme is launched can be particularly high and risks distorting provision in favour of existing programmes. Such distortions should be minimised – cost should be a factor to some extent, but it should not prevent sensible investment in human capital. For example, if there is strong labour market demand for a particular occupation, policies should enable schools to offer that programme, and either access funds to buy adequate equipment or collaborate with companies to make use of their equipment while students participate in workplace training. If equipment is very costly and becomes rapidly obsolete (*e.g.* CNC

machines) it will typically be more cost-effective to offer practical training in workplaces (see also section 2.3).

As argued earlier, student preferences are an important factor in determining the mix of VET provision. It is important that student preferences are well-informed (see section 2.5) and that they are not distorted by arbitrary factors, unrelated to labour market needs. The cost of buying materials should not deter students from occupations that are in demand in the labour market, or encourage the take-up of courses that are cheap but are not in demand. So if a programme is demanded in the labour market, the related smaller material costs should be covered by schools or employers, but not by students to avoid distorting their choices. This principle is essential at initial secondary level, which is compulsory in Flanders. In adult secondary education and Syntra trainings, a similar argument would apply for those who follow a programme with a view to employment in that occupation.

Implementation

Workplace training as an indicator of labour market needs

The mix of provision can be influenced by the availability of workplace training in different ways. In classical apprenticeship systems the mix of provision is tightly linked to the availability of workplace training. In Germany and Switzerland, those who do not find an apprenticeship place cannot obtain an apprenticeship qualification. As described earlier, Austria and Denmark offer limited provision for apprentices in off-the-job settings. Another option would be to require VET programmes to include some workplace training. Programmes in which a small proportion of students can find workplace training would have to shrink or develop stronger links with employers. Based on this principle, the Learning for Jobs review of Sweden (Kuczera *et al*., 2008) recommended making a 15-week work placement over a three-year period compulsory for all upper secondary VET programmes. The review suggested that the implementation of such a reform may require staging, with a carefully evaluated pilot.

During the review visit some stakeholders in Flanders argued that a limitation of VET provision to the number of available workplace training places would not be desirable, as the culture of offering workplace training to VET students is not sufficiently developed among employers. A more feasible approach might be a transition towards a system in which the availability of workplace training is taken into account and balances student preferences. At the same time, Flanders might make more use of tools to encourage employers to offer workplace training to secondary VET students. Some examples of such tools are described in section 2.3.

Some countries use the availability of workplace training as a major factor in determining the mix of provision, while also allowing the state to play a role. For example, in Austria and Denmark VET authorities compensate for the lack of training places in companies by offering off-the-job practical training. But such provision can be adjusted to the assessed needs of the labour market. In Austria the Labour Market Service, which organises such training, provides guidance to prospective apprentices and takes into account demand for skilled labour when allocating off-the-job training places. In Denmark the state limits the number of students admitted to programmes in which students cannot find an apprenticeship place or where overall employment prospects are poor in the sector (Danish Ministry of Education, 2005).

Removing potential distortions in funding mechanisms

Funding the purchase and continued updating of equipment, both the initial acquisition and the continuous updating, is a major challenge in school-based VET systems. The current mechanisms for funding the capital costs should be reviewed. If schools are expected to cover the costs of buying and updating equipment out of their regular budget, there will be an incentive for them to continue existing programmes and not start new ones, while it might be difficult to find resources to update equipment. Therefore it might be helpful to create targeted public funds, dedicated to VET facilities, to which schools may apply for, justifying the need for additional investment in equipment. Similar funds exist, for example, in the United States (see Box 2.6). Existing bodies, such as regional technological centres, could play an important role in facilitating the shared use of equipment across schools, thus leveraging limited resources.

Box 2.6 Equipment and supplies grants in the United States

The Perkins Instructional Equipment and Supplies Grant is a federal competitive grant. It aims to provide funds to purchase up-to-date instructional equipment and supplies for career/vocational technical education programmes at the secondary level. In the application process, eligible institutions are required to provide information on various aspects of the purchase, justifying its necessity. These include:

- Provide a description of the up-to-date instructional equipment and supplies that would be purchased and the cost.
- Provide documentation that the instructional equipment and supplies have been recommended by business/industry.
- Provide the estimated number of students who would benefit from the up-to-date instructional equipment and/or supplies during the school year.
- Describe how indicator(s) of performance outcomes would be enhanced by the up-to-date instructional equipment and supplies (*e.g.* improved job placement upon graduation).

Source: Massachusetts Department of Elementary and Secondary Education (2010), Massachusetts Department of Elementary and Secondary Education web site, *http://finance1.doe.mass.edu/Grants/grants10/rfp/411.html*, accessed July 2010.

Another option would be to offer practical training in workplaces, using equipment already available in companies (see also section 2.3). This is often more cost-effective than school-based practical training, especially if the equipment involved is expensive and becomes quickly obsolete.

2.5 Career guidance

Challenge

This section discusses the challenges in the Flemish VET system associated with the different elements of career guidance: career information, career education and individual guidance. Following Watts (2009), career guidance has two main elements, underpinned by ***career information*** on courses, occupations and career pathways.

- ***Career education*** in which students learn about the world of work and develop competences for managing their careers. This may involve classroom teaching and other activities such as work experience.
- ***Individual career guidance*** conducted on a one-to-one basis, providing specific advice on career decisions, either pro-actively (mandatory interviews for all) or reactively (on demand).

Weaknesses in career education and individual guidance

In compulsory education, schools are the main providers of career guidance, which mainly takes the form of career education (*i.e.* the development of career competences as described in the final objectives). In primary education career competences receive limited attention. Students typically receive guidance in the last year of primary education. According to some stakeholders interviewed during the visit, this would be more effective if started earlier. In secondary education career competences are included in the cross-curricular final objectives (under "learning to learn") and are the same for all streams and tracks. Schools are free to decide how these competences are developed and integrated into the curriculum (Flemish Ministry of Education and Training, 2009a). But teachers may not be able to provide an informed view of all the career options or an objective assessment of the labour market prospects of their programmes. As they are academically trained themselves, they may be reluctant to recommend vocational courses and may be biased towards general education and university pathways. In addition, secondary schools have an incentive to direct students towards programmes offered at their own institution even if this is not in the students' interest. This is a problem especially for guidance provided in the first stage of secondary education. In principle, this stage is comprehensive (for those in the A-stream), but students are already in a particular secondary school. After the first stage students have to choose between secondary tracks. To ensure optimal choices, students should be well-informed about all the options available for further stages and, if it is in their interest, they should be adequately advised about tracks and study programmes in other institutions.

In secondary education, pupil guidance centres (*Centra voor Leerlingenbegeleiding* – CLBs) have an important role in providing guidance and counselling. CLBs have established career guidance support teams, which serve schools across education networks. Each of the 73 CLBs across Flanders has at least one expert in career guidance. CLBs conclude agreements with schools, which set out the services that CLBs will provide (Flemish Ministry of Education and Training, 2009a). Typically CLBs support schools in the integration of career competences into the curriculum, but guidance is delivered by teachers through arrangements determined by individual schools. CLBs may also supervise individual students, often those with learning difficulties and behavioural problems. During the review visit some stakeholders reported that the quality of guidance varies greatly and depends on the relationship between individual schools and CLBs. Similarly, VDAB and CLB offices may collaborate at local level, but the quality of this collaboration also varies.[13] In addition, according to interviews some schools are

13. In order to enhance systematic collaboration, representatives of CLB and VDAB form a task force, in which the expertise and efforts of both services are pooled to provide more integrated vocational and educational guidance to youngsters, alongside information about occupations. Since last year, the CLB-VDAB task force also includes the pedagogical guidance services (which support schools in pedagogical-didactical matters) of the education networks. In this way, steps are taken to facilitate and reinforce the shared responsibility between schools, CLBs and

overwhelmed by the different and uncoordinated initiatives coming from different sources (*e.g.* CLBs, individual companies, sectoral bodies).

While career education is taught to all secondary students, not all students receive individual career guidance. It is unclear to what extent schools provide individual guidance to all students, and there is a risk that CLBs might focus more on counselling students with psychological and behavioural problems, rather than providing career advice to all students. This is particularly problematic, as the Flemish school system involves many different tracks and students have to make weighty decisions at relatively young ages (typically at age 12 and 14, in addition to the decision after completing upper secondary education).

Weaknesses in the availability and use of career information

Interviews also suggest that the guidance provided in secondary education is typically about study programmes and students receive little information on the occupations and career prospects these lead to. Staff in CLBs are typically trained to deal with psychological, social and health problems (Flemish Ministry of Education and Training, 2009a). While this background may be appropriate for supporting students with learning difficulties or behavioural problems, it does not equip them to deliver advice on types of job, career prospects and learning opportunities (Watts, 2009).

Stakeholders in university colleges argued that many teachers, who advise students in secondary education, lack information about tertiary education, for example on the different programmes and what competences they require. The team was told that wrong choices are one of the main reasons for dropping-out. University colleges provide guidance and counselling to their students (including re-orientation for those who are not satisfied with their choice), but its quality varies across institutions and departments.

Career information sources beyond compulsory education are fragmented. The website of the Ministry of Labour and VDAB provides information on occupations. In the framework of sectoral agreements, economic sectors also provide material for career information (*e.g.* toolkits, brochures). The website of VDAB provides information to both employed and unemployed adults (as well as employers), although most VDAB programmes are oriented towards job-seekers and are difficult to combine with work. The website of the Ministry of Education also provides some information, but according to interviews conducted during the visit the information is not comprehensive and weakly linked to labour market information.

Recommendation 5

Strengthen and develop career guidance by:

- **Ensuring that career guidance receives attention, separately from psychological counselling and is not submerged by it. Consider the establishment of a separate career advisor profession.**
- **Ensuring that individuals receive guidance that is objective and independent from the providers of education and training programmes.**

VDAB. The aim is to help teachers provide comprehensive advice to students on follow-up programmes and career opportunities.

- **Creating a comprehensive website with career information about all levels of education and training.**

Supporting arguments

This section sets out the principles of high quality career guidance, following the arguments set out in the OECD VET review of the Czech Republic (Kuczera, 2009). The recommendation is supported by three arguments. First, meaningful student choice has to be supported by well-resourced, independent and pro-active career guidance. Second, career guidance professionals need specific training. Third, high quality career information is necessary to underpin effective career guidance.

Meaningful student choice has to be supported by well-resourced, independent and pro-active career guidance

In Flanders student preferences are the driving factor in determining the mix of provision if VET. As argued in section 2.4, if student preferences are to be responsive to labour market demand, then it has to be informed. This requires access to high quality career guidance with up-to-date information on different options and their likely outcomes. While it is difficult to untangle the specific effect of guidance from confounding factors, many research studies suggest that high quality guidance develops career related skills, self-awareness and self-esteem, which lead to rewarding choices (Bowes *et al.*, 2005; Hughes *et al.*, 2002).

Wrong career decisions are costly, both to the student and to society. Guidance services need to be adequate and protected against the risk of being squeezed at the margins of an activity such as regular teaching. Key elements of guidance should be delivered pro-actively to all students to ensure universal coverage. Research from the UK suggests higher achievers are readier to seek advice and information and have clearer ideas about their progression (Transition Review Group, 2005). As VET programmes enrol many students with weak academic results, those considering VET tracks may be particularly in need of pro-active and good quality career guidance. This means, for example, that when students in Flanders are choosing their secondary school, educational track or a particular vocational programme after the first stage of secondary education, a compulsory one-to-one interview with a career advisor would greatly benefit students. Similarly, students at the end of their secondary education should receive systematic guidance on post-secondary programmes and career options.

While it makes sense to deliver guidance in schools to ensure access to all students, it is important that guidance professionals preserve their independence from the school (or education network) in the sense that they should not have any bias towards programmes offered at the school or towards academic rather than vocational options.

Career guidance professionals need specific training

Career guidance responsibilities are demanding and require a specific set of competences. Career advisors need to have good knowledge of labour markets, careers and learning opportunities, and the capacity to identify and use further sources of information to provide more specific career advice. They also need to be able to draw out from young people what their interests, aptitudes and objectives are and to identify career options that are both realistic and meet their needs.

In many countries (*e.g.* Austria, Czech Republic, Ireland) career guidance is amalgamated with counselling for students with a range of behavioural and psychological problems. In Flanders, CLBs have the task of supporting schools in their career education and guidance, but also have a counselling function. But international evidence shows that when career advice is combined with psychological counselling, career advice tends to be marginalised (Fretwell and Watts, 2004; OECD, 2004). Fretwell and Watts (2004) argue that counsellors tend to focus on the learning and behavioural problems of a small number of students, at the expense of helping other students with their choices. In addition, guidance tends to focus on immediate educational choices rather than longer term career planning. When guidance and counselling are amalgamated, students may be less willing to be seen knocking on a counsellor's door, as it may be stigmatising. In addition, the use of labour market information is often neglected within psychology-focused training programmes for counsellors (Watts, 2009). In the United Kingdom, the integration of careers with personally-based services targeting young people at risk has decreased the attention paid to labour market issues in the training of career advisors (Colley *et al.*, 2008).

Similarly, traditional teacher training programmes will not provide teachers with the skills needed for effective career guidance. Students may prefer academic education because of the status of university education and jobs it leads to, but this may also reflect bias in the guidance provided by teachers. One UK study reports that while parents, young people and employers considered apprenticeship as a genuine alternative to academic upper secondary education, most teachers lacked knowledge about apprenticeships and its benefits and tended to encourage young people to follow more traditional academic routes (Skills Commission, 2009).

High quality career information underpins career guidance

Career information on courses, occupations and career paths, including labour market outcomes and prospects, can be provided in various formats (*e.g.* websites, printed material) (Watts, 2009). Easily accessible and high quality career information would support the work of career advisors. This could usefully be complemented by an emphasis on the use of labour market information in the training of career guidance professionals. Similarly, while students can learn to manage their own career (*e.g.* as set out in the final objectives in Flanders), they also need up-to-date career information to make informed choices. This should include information on the content of VET programmes and the labour market prospects they offer.

Implementation

Specific training for career advisors

In strengthening the career guidance profession, Flanders could usefully build on existing training programmes for career advisors. During the review visit the team was told that there are some targeted training programmes for career advisors, but staff in CLBs are not required to complete these. VDAB provides indoor training for psychologists on the features and functioning of the labour market. Ideally, the route leading to a career advisor qualification would cover not only those in schools but also those who work in continuing education and training and employment services. One advantage of this approach would be that the competences of advisors would be

transferable and recognised across institutional sectors (*e.g.* schools could hire career advisors from employment offices and vice versa). As argued by the OECD review of career guidance (OECD, 2004), a framework covering all career practitioners helps to develop progression opportunities for advisors and improves the status of the profession.

Education and training for career advisors can be provided in a flexible way. Offering part-time and evening classes, with possibilities for the recognition of prior competences could help encourage existing and prospective career advisors to follow targeted training. Box 2.7 provides examples of specific training programmes for career advisors.

Box 2.7 Examples of career advisor training

The University of East London offers a Postgraduate Diploma in Career Guidance that can be passed by those with a recognised university degree or equivalent. It can be completed either in one year full-time or in two to three years part-time. It trains people to work with a range of client groups. The programme covers: theory and practice of career guidance, strategies to promote equal opportunities in a guidance context, labour market studies, education systems, and organisation of guidance structures.

Source: OECD (2004), *Career Guidance and Public Policy. Bridging the Gap*, OECD, Paris.

Career advisors in Switzerland receive a specialised diploma from universities or other publicly recognised institutions. Students at universities have to attend 600 hours of specialised training; students from other institutions 1 200 hours. In addition, all students have to complete a traineeship of 12 months. The studies include five areas: individual development (learning and developmental psychology); the individual in society (basic knowledge in sociology, law and economics); the individual and the world of work (the education system, education and professional career choice, occupational psychology, the labour market); work methods (diagnostics, career guidance, monitoring, documentation and public relations); professional ethics, professional identity and quality.

Source: Schweizer Bundesrat (2009), Verordnung über die Berufsbildung §55-58, *www.admin.ch/ch/d/sr/4/412.101.de.pdf.*

Independent career guidance

There are various ways of ensuring that guidance professionals are independent from the school. Switzerland, for example, has established a professional career guidance service separate from schools, but with a roving function in the schools[14] (see Box 2.8). One option in Flanders might be to strengthen the career advisor function of CLBs by ensuring that adequate resources (in terms of staff and time) are dedicated to career guidance and that all students receive career guidance. Career guidance should not be marginalised by the counselling function of CLBs.

14. The OECD review of career guidance (OECD, 2004, ch.3) recommended “specialised external career guidance agencies that visit the school”.

Box 2.8 Career guidance in Switzerland

All students in compulsory secondary education are required to attend career guidance and information sessions. In years seven, eight and nine of lower secondary school students learn in their own schools about career options, and all teachers receive targeted training about labour market opportunities. Students learn about the main institutions for guidance and counselling, in particular about the centres for occupational information (*Berufsinformationszentren, BIZ)*. These are free-standing institutions providing independent information and counselling about all education and training programmes, for individuals at all levels. Individuals can consult generalist advisors and may then be directed to specialists with more knowledge of specific institutions. Advisors work closely with schools and may provide some services at the school, rather than at the BIZ site.

Alternatively, making guidance professionals independent from schools might involve teachers trained as guidance professionals who report to the guidance service in respect of their guidance responsibilities, and with a fixed time commitment to guidance work. Ensuring that career guidance is independent from schools is important where the school might have incentives to direct students towards programme within the school – this risk exists, for example, when secondary institutions are responsible for guidance to students in the first stage.

A comprehensive website of career information to avoid fragmentation of information sources

Creating a single comprehensive website of career information would help improve awareness and usage of career information. It could support the work of career advisors (whose task may be also guiding individuals in their use of these information sources) and directly inform those who do not come into contact with a career advisor but seek information on their own. For them it is particularly important that career information is presented in a form that is easy to identify and understand. Box 2.9 describes the approach of the Czech Republic and South Carolina.

Box 2.9 Career information in the Czech Republic and South Carolina

In the **Czech Republic**, a website provides information on educational options and their labour market outcomes. Website users can learn about the range of programmes provided by secondary and tertiary institutions, entry requirements, and the qualifications and jobs these programmes lead to. Information is presented about employment conditions and employee satisfaction in different occupations. This is supported by data on employment/unemployment rate and salary by educational attainment and field. Web users can also learn about various occupations by watching video material available on the web site, and read about employer needs and their expectations in terms of skills and competencies in potential recruits.

Source: Národní ústav odborného vzdělávání (2010), Informační systém o uplatnění absolventů škol na trhu práce, *www.infoabsolvent.cz/*, accessed June 2010.

The **South Carolina** College and Career Planning System offers detailed online information to students, parents and educators on a wide range of topics. The "career planning" section includes an overview of nearly 1000 occupations, describing the occupation, important interests, skills and abilities, education requirements and income. Students can obtain information on programmes after high school, ranging from three-months training to doctoral programmes. They can also learn about preparing for different programmes and financing their studies.

Source: Personal Pathways to Success. (2010), *www.scpathways.org/MasterWeb/content/SC/dispatch.aspx?category=planner&page=main&major=guest&minor=planner*, accessed June 2010.

Acronyms

ASO	Algemeen secundair onderwijs (General secondary education)
BSO	Beroepssecundair onderwijs (Vocational secondary education)
BUSO	Buitengewoon secundair onderwijs (Special secondary education)
CAE	Centre for Adult Education
CLB	Centrum voor Leerlingenbegeleiding (Pupil guidance centre)
CNC	Computer numerical control
DBSO	Deeltijds beroepssecundair onderwijs (Part-time vocational secondary education)
IALS	International Adult Literacy Survey
KSO	Kunstsecundair onderwijs (Artistic secondary education)
PISA	Programme for International Student Assessment
RTC	Regional Technological Centre
TSO	Technisch secundair onderwijs (Technical secondary education)
VDAB	Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding (Flemish Public Employment and Vocational Training Service)
VET	Vocational education and training
VLOR	Vlaamse Onderwijsraad (Flemish Education Council)

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Annex A

Programme of the review visits

Preparatory visit, 8-11 September 2009

Tuesday 8 September, Brussels

Meeting with the VET steering board
Meeting with the Flemish Ministry of Education and Training
Meeting with the Flemish Ministry of Work and Social Economy
Meeting with VLOR
Meeting with Syntra-Vlaanderen

Wednesday 9 September, Brussels

Meeting with education networks (GO!, VSKO, POV, OVSG)
Meeting with educational unions (ACOD, COC, VSOA)
Meeting with Regional Technological Centres
Meeting with VDAB
Meeting with SERV
Meeting with the Flemish Council for Non-University Higher education
Meeting with academics

Thursday 10 September, Turnhout, Antwerp and Leuven

Visit to a secondary school and a centre for adult education
Meeting with employers
Visit to Syntra and VDAB training sites

Friday 11 September, Brussels

Meeting with the VET steering board

Policy visit, 8-11 December 2009

Tuesday 8 December, Brussels

Meeting with the VET steering board
Meeting with SERV
Meeting with policy makers and stakeholders in initial upper secondary VET (Flemish Ministry of Education and Training, Syntra Vlaanderen, education networks, VLOR, unions)
Meeting with academics

Wednesday 9 December, Aalst, Ghent

Visit to a secondary school
Visit to an adult secondary school
Visit to a university college
Visit to a firm offering apprenticeships

Thursday 10 December, Brussels

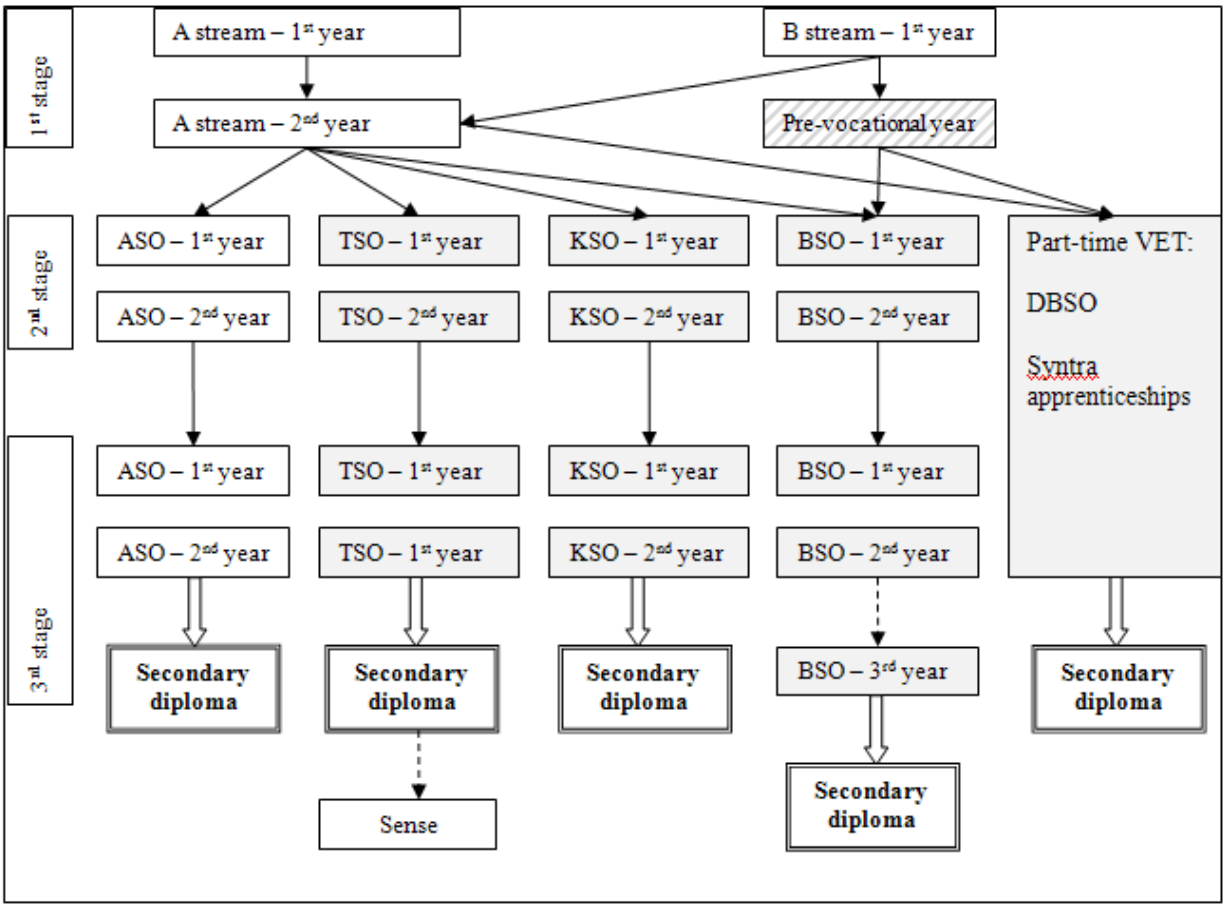
Meeting with VLOR
Meeting with policy makers and stakeholders involved in career guidance (Flemish Ministry of Education and Training, Flemish Ministry of Work and Social Economy, CLB, VDAB, higher education institutions, SERV)
Meeting with the Flemish Ministry of Work and Social Economy
Meeting with policy makers and stakeholders in tertiary VET (Flemish Ministry of Education and Training, VLHORA, directors higher education institutions)
Meeting with policy makers and stakeholders in adult VET (Flemish Ministry of Education and Training, Flemish Ministry of Work and Social Economy, VDAB, Syntra, CVO's, SERV)
Meeting with Regional Technological Centres

Friday 11 September, Brussels

Meeting with the VET steering board

Annex B

An overview of secondary education in Flanders



Source: Flemish Ministry of Education and Training (2009a), "Background report", Learning for Jobs: The OECD Policy Review of Vocational Education and Training, unpublished.

Annex C

International and national statistics

Table C.1 Enrolment rates, by age

Full-time and part-time students in public and private institutions (2008)

	Ending age of compulsory education	Number of years at which over 90% of the population are enrolled	Age range at which over 90% of the population are enrolled	Students aged		
				5 to 14 as a percentage of the population aged 5 to 14	15 to 19 as a percentage of the population aged 15 to19	20 to 29 as a percentage of the population aged 20 to 29
Australia	15	12	5 - 16	99.6	82.7	33.2
Austria	15	13	5 - 17	98.1	82.0	20.0
Belgium [1]	18	16	3 - 18	99.4	95.5	29.2
Canada [2]	16-18	m	m	m	80.2	26.0
Czech Republic	15	13	5 - 17	99.9	89.9	20.2
Denmark	16	13	3 - 16	97.4	83.1	37.8
Finland	16	13	6 - 18	95.1	87.9	42.9
France [1]	16	15	3 - 17	101.0	85.9	20.1
Germany	18	14	4 - 17	98.8	88.6	28.5
Greece	14.5	13	6 - 19	98.1	92.8	32.0
Hungary	16	14	4 - 17	100.3	87.5	24.9
Iceland	16	14	3 - 16	98.8	84.6	37.2
Ireland	16	12	5 - 16	101.2	87.8	20.2
Italy [1]	15	13	3 - 15	100.7	81.5	20.2
Japan	15	14	4 - 17	100.7	m	m
Korea	14	12	6 - 17	94.9	85.9	27.6
Luxembourg [3]	15	12	4 - 15	96.2	73.5	9.2
Mexico	15	9	5 - 13	100.9	48.8	10.9
Netherlands	18	13	5 - 17	99.6	88.7	26.9
New Zealand	16	12	4 - 15	101.0	74.4	29.4
Norway	16	14	4 - 17	98.8	86.3	30.0
Poland	16	13	6 - 18	94.5	92.6	31.0
Portugal	14	11	5 - 15	103.8	73.0	20.9
Slovak Republic	16	12	6 - 17	96.8	84.8	17.3
Spain [1]	16	14	3 - 16	101.0	80.2	21.8
Sweden	16	13	6 - 18	98.8	87.8	36.1
Switzerland	15	12	5 - 16	100.3	83.5	22.1
Turkey	14	6	7 - 12	82.9	45.2	11.3
United Kingdom	16	12	4 - 15	100.7	69.7	17.3
United States	17	11	6 - 16	98.0	78.4	23.1
OECD average	**16**	**13**		**98.5**	**81.5**	**25.1**
EU19 average	**16**	**13**		**99.0**	**84.9**	**25.1**

	Ending age of compulsory education	Number of years at which over 90% of the population are enrolled	Age range at which over 90% of the population are enrolled	Students aged		
				5 to 14 as a percentage of the population aged 5 to 14	15 to 19 as a percentage of the population aged 15 to19	20 to 29 as a percentage of the population aged 20 to 29
Partner countries						
Brazil [2]	14	10	7 - 16	93.1	79.6	21.2
Chile	18	10	7 - 16	91.2	72.2	2.5
Estonia	15	12	6 - 17	102.2	87.4	26.6
Israel [4]	15	13	5 - 17	95.8	65.0	20.6
Russian Federation [2]	15	9	7 - 15	81.5	73.5	18.7
Slovenia	14	12	6 - 17	96.4	91.3	32.7

Note: Ending age of compulsory education is the age at which compulsory schooling ends. For example, an ending age of 18 indicates that all students under 18 are legally obliged to participate in education. Mismatches between the coverage of the population data and the student/graduate data mean that the participation/graduation rates may be underestimated for countries such as Luxembourg that are net exporters of students and may be overestimated for those that are net importers.
1. The rates "4 and under as a percentage of the population of 3-to-4-year-olds" are overestimated. A significant number of students are younger than 3 years old. The net rates between 3 and 5 are around 100%.
2. Year of reference 2005.
3. Underestimated because many resident students go to school in the neighbourhood countries.
4. Excludes programmes for children younger than 3 years old, resulting in substantially lower figures than in previous years.

Source: OECD (2008b), *Education at a Glance*, OECD, Paris.

Table C.2 Performance of 15-year-olds in science, reading and mathematics

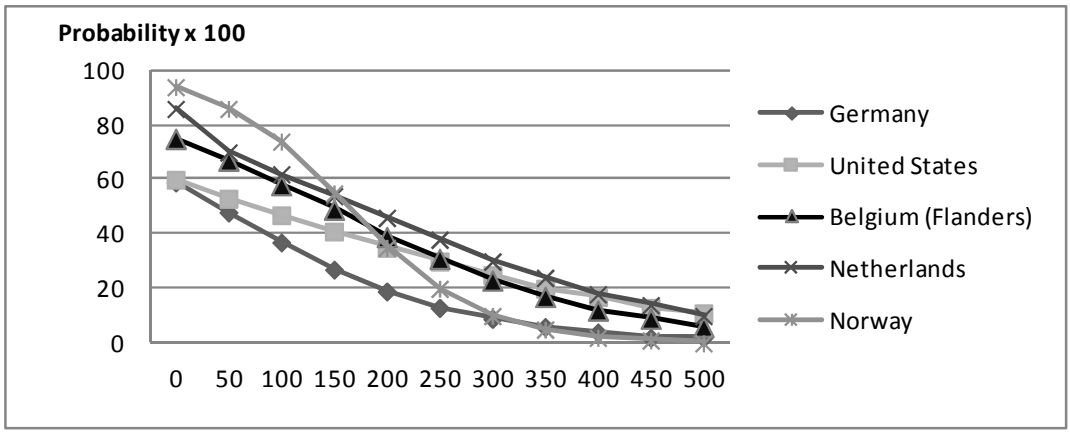
Mean score and variation in student performance on PISA science, reading and mathematics scale (2006)

	Science scale				Reading scale				Mathematics scale			
	Mean score		Standard deviation		Mean score		Standard deviation		Mean score		Standard deviation	
	Mean	S.E.	S.D.	S.E.	Mean	S.E.	S.D.	S.E.	Mean	S.E.	S.D.	S.E.
Country												
Australia	527	(2.3)	100	(1.0)	513	(2.1)	94	(1.0)	520	(2.2)	88	(1.1)
Austria	511	(3.9)	98	(2.4)	490	(4.1)	108	(3.2)	505	(3.7)	98	(2.3)
Belgium	510	(2.5)	100	(2.0)	501	(3.0)	110	(2.8)	520	(3.0)	106	(3.3)
Canada	534	(2.0)	94	(1.1)	527	(2.4)	96	(1.4)	527	(2.0)	86	(1.1)
Czech Republic	513	(3.5)	98	(2.0)	483	(4.2)	111	(2.9)	510	(3.6)	103	(2.1)
Denmark	496	(3.1)	93	(1.4)	494	(3.2)	89	(1.6)	513	(2.6)	85	(1.5)
Finland	563	(2.0)	86	(1.0)	547	(2.1)	81	(1.1)	548	(2.3)	81	(1.0)
France	495	(3.4)	102	(2.1)	488	(4.1)	104	(2.8)	496	(3.2)	96	(2.0)
Germany	516	(3.8)	100	(2.0)	495	(4.4)	112	(2.7)	504	(3.9)	99	(2.6)
Greece	473	(3.2)	92	(2.0)	460	(4.0)	103	(2.9)	459	(3.0)	92	(2.4)
Hungary	504	(2.7)	88	(1.6)	482	(3.3)	94	(2.4)	491	(2.9)	91	(2.0)
Iceland	491	(1.6)	97	(1.2)	484	(1.9)	97	(1.4)	506	(1.8)	88	(1.1)
Ireland	508	(3.2)	94	(1.5)	517	(3.5)	92	(1.9)	501	(2.8)	82	(1.5)
Israel	454	(3.7)	111	(2.0)	439	(4.6)	119	(2.8)	442	(4.3)	107	(3.3)
Italy	475	(2.0)	96	(1.3)	469	(2.4)	109	(1.8)	462	(2.3)	96	(1.7)
Japan	531	(3.4)	100	(2.0)	498	(3.6)	102	(2.4)	523	(3.3)	91	(2.1)
Korea	522	(3.4)	90	(2.4)	556	(3.8)	88	(2.7)	547	(3.8)	93	(3.1)
Luxembourg	486	(1.1)	97	(0.9)	479	(1.3)	100	(1.1)	490	(1.1)	93	(1.0)
Mexico	410	(2.7)	81	(1.5)	410	(3.1)	96	(2.3)	406	(2.9)	85	(2.2)
Netherlands	525	(2.7)	96	(1.6)	507	(2.9)	97	(2.5)	531	(2.6)	89	(2.2)
New Zealand	530	(2.7)	107	(1.4)	521	(3.0)	105	(1.6)	522	(2.4)	93	(1.2)
Norway	487	(3.1)	96	(2.0)	484	(3.2)	105	(1.9)	490	(2.6)	92	(1.4)
Poland	498	(2.3)	90	(1.1)	508	(2.8)	100	(1.5)	495	(2.4)	87	(1.2)
Portugal	474	(3.0)	89	(1.7)	472	(3.6)	99	(2.3)	466	(3.1)	91	(2.0)
Slovak Republic	488	(2.6)	93	(1.8)	466	(3.1)	105	(2.5)	492	(2.8)	95	(2.5)
Spain	488	(2.6)	91	(1.0)	461	(2.2)	89	(1.2)	480	(2.3)	89	(1.1)
Sweden	503	(2.4)	94	(1.4)	507	(3.4)	98	(1.8)	502	(2.4)	90	(1.4)
Switzerland	512	(3.2)	99	(1.7)	499	(3.1)	94	(1.8)	530	(3.2)	97	(1.6)
Turkey	424	(3.8)	83	(3.2)	447	(4.2)	93	(2.8)	424	(4.9)	93	(4.3)
United Kingdom	515	(2.3)	107	(1.5)	495	(2.3)	102	(1.7)	495	(2.1)	89	(1.3)
United States	489	(4.2)	106	(1.7)	m	m	m	m	474	(4.0)	90	(1.9)
OECD total	491	(1.2)	104	(0.6)	484	(1.0)	107	(0.7)	484	(1.2)	98	(0.7)
OECD average	500	(0.5)	95	(0.3)	492	(0.6)	99	(0.4)	498	(0.5)	92	(0.4)

Source: OECD (2008a), *VET in PISA: Results from PISA 2003 and 2006*, OECD, Paris. Available at: *www.oecd.org/dataoecd/59/32/41538731.pdf*

Figure C.1 Probability of unemployment and literacy proficiency

Probability of being unemployed according to prose literacy score, for men aged 16-25 with less than upper secondary education, 1994-1998



Source: OECD and Statistics Canada (2000), *Literacy in the Information Age. Final Report of the International Adult Literacy Survey*, OECD, Paris.

Annex D

QualiCarte

Company/institution .....
Date ……
Name of supervisor .....
Assessment
- - does not meet criteria - partially meets criteria + meets criteria (there is room for improvement) ++ meets criteria well

Quality indicators	Assessment				Notes
	- -	-	+	++	
Hiring: The receiving company/institution establishes the conditions of hiring.					
1. The criteria defining the expected profile of the apprentice are announced.					
2. Interviews are conducted with the applicants, in addition to other recruitment tools.					
3. "Taster apprenticeships" (short periods allowing potential apprentices to learn about the job) are organised.					
4. The results of the application process are communicated clearly.					
5. Information is provided on working conditions.					
6. The terms of contract are explained to the apprentices.					
Starting the training: A special programme is prepared for the initial period spent in the company/institution.					
7. The persons responsible for the apprenticeship are designated.					
8. The apprentice receives a personal welcome.					
9. Information is provided on the activities of the company/institution and the relevant industrial field.					

10. The apprentices are informed about work, security, health and hygiene regulations.					
11. A workplace equipped with the necessary tools is available to the apprentice.					
12. The apprentices are informed about the importance of the training plan (methodological guide, apprenticeship plan etc.).					
13. There is a regular dialogue between the apprentice and supervisor during the probationary period. At the end of the probationary period a training report is written together with the apprentice.					

Training: The company/institution helps the apprentice acquire competences required in the labour market and takes the time to provide training and progressively transmit their knowledge and skills.					
14. The training of the apprentice provided by supervisors is embedded in the company/institution.					
15. The training plan and other tools to support learning are used in an interactive way.					
16. The supervisor defines clear and measurable objectives.					
17. The different working methods and procedures are planned, demonstrated and explained.					
18. Tasks carried out by the apprentice are subjected to qualitative and quantitative control.					
19. The apprentice progressively becomes involved in the company's activities, with increasing autonomy.					
20. The performance of the apprentice in the VET school and industry courses is taken into account and discussed.					
21. The supervisor supports each apprentice according to his/her potential and needs.					
22. The supervisor prepares a training report at the end of each semester, according to relevant regulations ("ordinances").					
23. The supervisor takes into account the feedback received from the apprentice as much as possible.					

Responsibility of the training company/institution: The company/institution is engaged and collaborates with all those involved in the training.					
24. If the apprentice has difficulties, the supervisor contacts his/her parents, school or relevant VET office.					
25. If there is a risk of breaking off the apprenticeship contract, the training company/institution immediately informs the relevant authorities.					
26. The departure of the apprentice is in order.					
27. The supervisor continuously updates his/her skills needed to support apprentices.					
28. The company/institution provides the supervisor with the necessary time, financial and material resources.					

Objectives	Deadline

The supervisor (name and signature) .....
For the company/institution (name and signature) .....

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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OECD Reviews of Vocational Education and Training

A Learning for Jobs Review

BELGIUM (FLANDERS)

For OECD member countries, high-level workplace skills are considered a key means of supporting economic growth. Systems of vocational education and training (VET) are now under intensive scrutiny to determine if they can deliver the skills required.

Learning for Jobs is an OECD study of vocational education and training designed to help countries make their VET systems more responsive to labour market needs. The final report is now published.

The Flemish VET system has a good range of vocational options at different levels. The system is underpinned by strong academic standards reflected in the performance of 15-year-olds and compulsory education up to age 18. Commendable attention is given to entrepreneurial training. Policy development is dynamic and evidence is used extensively in reforms. At the same time the system faces a number of challenges, including early tracking, weaknesses in literacy and numeracy skills among some students, and too many unqualified school leavers. The use of workplace training is very variable, and some training provision inadequately reflects labour market needs. The quality of career guidance in compulsory education could also usefully be improved.

Among the review's recommendations

- Strengthen the core general skills component in programmes that currently contain limited general education.
- Systematically identify those with literacy and numeracy problems at the beginning of VET programmes and provide targeted support to those in need.
- Postpone tracking at least until the age of 14 and make education in the period preceding tracking fully comprehensive.
- Sustain, further develop and ensure the quality of workplace training.
- Ensure the mix of VET provision is fully responsive to labour market needs
- Strengthen career guidance by separating it from psychological counselling, ensuring that individuals receive independent guidance, backed by a comprehensive career information website.

OECD has conducted country VET policy reviews in Australia, Austria, Belgium (Flanders), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas). Reports on Chile and the People's Republic of China have also been published.

Country and other reports are available at ***www.oecd.org/edu/learningforjobs.***