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The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training. We provide information on and analyses of vocational education and training systems, policies, research and practice. Cedefop was established in 1975 by Council Regulation (EEC) No 337/75.

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Foreword

Vocational education and training (VET) is important. It has a dual role. It supports economic growth through increased competitiveness and promotes social cohesion by improving the employment and career prospects of everyone, from the most highly skilled to those with low levels of qualification.

As the European Union's (EU) prosperity depends on the skills of its workforce, VET in Europe has to be of the highest quality. Consequently, the European Commission, EU Member States, associated and candidate countries and European social partners launched the Copenhagen process, in 2002, to strengthen European cooperation in VET.

Since 2004, Cedefop has been entrusted with analysing and reporting on progress. These reports show that, over the last eight years this voluntary European cooperation has helped to reshape VET in an EU that has grown from 15 to 27 Member States since the Copenhagen process began.

Countries have agreed on and committed themselves to common priorities. They have developed several common European principles and instruments designed to make qualifications easier to understand and promote geographical mobility and greater flexibility in VET systems. VET is higher on the European policy agenda than ever before. Its contribution to lifelong learning and employment and social policies is widely acknowledged as shown by the role VET played in combating unemployment during the economic crisis of 2008. A strong partnership between European and national levels has emerged and is improving the quality and performance of VET systems.

The new Europe 2020 strategy to create a smart, green, sustainable, inclusive and high-employment economy in the next decade reinforces the role of VET. Skills remain crucial to put Europe back on track after the economic downturn. In an economy that is shifting to services and knowledge- and skill-intensive occupations, technology, innovation, demographic and climate change generate new demands for skills.

Most of tomorrow's workforce is already on the labour market today. Consequently, to meet the demand for new skills, people in today's workforce need to complement, widen or upgrade their knowledge, skills and competences through VET. However, too many people in

Europe's workforce are low qualified, too many young people leave school early and not enough people participate in lifelong learning. Unemployment, especially among young people remains high while some countries and sectors lack skilled workers.

This report shows that strong technical and political European cooperation in VET plays a key role in addressing these issues and how it has and can continue to build a bridge towards VET systems of the future.

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Executive summary

The skills that Europe needs for the future and the ageing workforce that will have to provide them are changing. Concerned that it would be left behind by technological advance, the European Union (EU) launched its Lisbon strategy in 2000. Convinced of the need to modernise education and training systems, as part of the Lisbon strategy, the Copenhagen process began in 2002 to strengthen cooperation in vocational education and training (VET).

There is clear evidence that, so far, the Copenhagen process has been successful. The period 2002-10 has been one of the most productive for European cooperation in VET with some impressive results. However, its impact on the performance of education and training systems has yet to be fully realised.

As Europe embarks on a new strategy for smart, sustainable and inclusive growth from now to 2020, this report looks at the Copenhagen process' achievements, its overall impact and the next steps.

Achievements of the Copenhagen process

Responsibility for VET is very diverse, often shared between national and regional governments and social partners. This can make developing and managing VET policy difficult. By coordinating voluntary technical and political cooperation at European level (see Chapter 1), the Copenhagen process proved to be an effective way of working.

The process gave VET a clearer voice at European level and helped align European and

national VET policies. This made it possible for a comprehensive European VET policy, which supports and complements national VET policies, to emerge. It enabled the European Commission, Member States [and other countries participating ^(*)] and social partners to work together on modernising VET. By involving candidate countries it also supported EU enlargement (from 15 to 25 Member States in 2004 and from 25 to 27 in 2007). In supporting VET reform, the Copenhagen process acted as a bridge to the future.

A combination of bottom-up and top down initiatives, coordinated through the Copenhagen process, laid the foundation for developing several common European instruments and principles (see Box A) and for raising the profile of VET in related policy areas at European level. This cooperation also proved flexible as progress was reviewed every two years and priorities revised over time. Consequently, work carried out under the Copenhagen process remains relevant to Europe's strategic policy framework for the next decade.

VET must allow and encourage individuals to learn throughout their lives, both inside and outside the formal education and training system. The common European instruments and principles (Chapter 2) developed through voluntary cooperation have this lifelong learning perspective. Their implementation is influencing national VET policies to varying degrees. They are based on learning outcomes, which are statements of what an individual learner is able to do and understand following the completion of a learning process. In some countries, this represents an important change and learning outcomes are being used in all types and levels of education and training, but in particular to reform VET standards and curricula.

The European qualifications framework has been a catalyst for countries to develop national qualifications frameworks (NQFs). NQFs describe what learners should know, understand

^(*) Countries currently participating in the Copenhagen process are the members of the European Economic Area (EEA – the 27 EU Member States, Iceland, Norway and Liechtenstein) and the EU candidate countries Croatia, the former Yugoslav Republic of Macedonia (FYROM) and Turkey.

Box A. Common European instruments and principles developed under the Copenhagen process

Common European instruments	
European qualifications framework (EQF)	Helps to compare qualifications throughout Europe to support lifelong learning and educational and job mobility
European credit system for VET (ECVET)	Helps validate, recognise and accumulate work-related skills and knowledge acquired during a stay in another country or in different situations, so that these experiences contribute to vocational qualifications
European quality assurance framework for VET (EQAVET)	Helps countries develop, improve, guide and assess the quality of their VET systems and develop quality management practices
Europass	A portfolio of documents to support job and geographical mobility to enable people to present their qualifications and skills using a standard format understandable to employers throughout Europe. Europass documents are the Europass CV, language passport, Europass mobility, diploma supplement and certificate supplement
Common principles and guidelines	
Guidance and counselling	Strengthens the role of lifelong guidance in developing European policies for education, training and employment. It addresses four priority areas: career management skills, access to services, quality of guidance provision and policy cooperation
Identification and validation of non-formal and informal learning	Sets out common principles to encourage and guide development of high quality, trustworthy approaches and systems to identify and validate non-formal and informal learning

and be able to do based on a given qualification and how learners can move from one qualification to another within a system. This makes national qualifications easier to understand. All countries have developed or are developing NQFs. Most NQFs cover all levels and types of qualifications, not just VET. Importantly, in some cases, NQFs are redefining how different parts of the national education and training system, for example VET and higher education, relate to each other. ECVET is encouraging cross-border mobility and flexibility in national systems.

The 2004 European principles on identifying and validating non-formal and informal learning have been used by several countries. Validation is seen as a way to make VET systems more flexible by recognising skills and competences

that qualifications systems do not normally capture. The economic crisis in 2008, showed a need for people to be able to demonstrate their skills and competences to receive training tailored to their needs to help them find a job quickly.

However, individuals, institutions and employers need to have confidence in instruments that promote cross-border mobility and greater flexibility in VET systems. Qualifications and award processes need to be trustworthy. EQAVET is helping to promote common trust between different parts of national VET systems and between different countries.

Council resolutions in 2004 and 2008 have encouraged countries to strengthen lifelong guidance and counselling. Countries have improved national cooperation in lifelong

guidance by removing administrative, financial, structural, jurisdiction and sectoral barriers. Europass is increasingly used across the EU. Since its launch in February 2005, more than 29 million people have visited the Europass website and nearly 9.7 million Europass curriculum vitae were completed online by the end of September 2010.

Making VET more attractive, as a learning option, has been a central aim of the Copenhagen process (Chapter 3). Countries are working to develop VET systems that are comprehensive and inclusive, tailored to the needs of the best and brightest students, as well as diverse groups at risk of social exclusion.

Countries have worked to make progression from upper-secondary VET to tertiary education easier. There is something of a revival in apprenticeship and other forms of work-based and workplace learning for young people.

To promote social inclusion, countries are making education and training and related services more easily accessible and flexible to cater for different learning needs and styles. Countries have developed partial qualifications, modular courses and validation to help integrate young people and adults at risk of social exclusion into the labour market. Countries also provide financial incentives, such as loans and tax relief, for enterprises and individuals to encourage investment and participation in training.

Countries committed themselves from the beginning of the Copenhagen process to improve the quality of VET (Chapter 4). Although they are important, there is a clear recognition that quality goes beyond evaluation mechanisms.

The quality of VET is clearly dependent on the quality of teaching. Countries have raised qualification requirements to enter VET teaching. They are working to improve initial training and provide systematic opportunities for continuing professional development for VET teachers. New ways are also being devised to attract people from other professions into VET teaching.

All countries are developing the capacity of labour market actors to play a greater role in VET development to ensure the relevance of VET curricula to labour market needs. Even countries with a long tradition of involving social partners and other labour market actors in developing VET are giving greater impetus to these relationships. Supported by the European level, countries are improving labour market models and forecasting methods that will give greater insights into labour market needs and will enable VET systems to prepare better for the future.

The Copenhagen process added the aspect of excellence, for all students, through VET. This requires future VET students to have a good grounding in key competences to perform well in their chosen studies. There is evidence of countries working to reinforce key competences such as entrepreneurship and active citizenship through VET.

Encouraging investment by governments, enterprises and individuals in VET has also been a constant theme of the Copenhagen process (Chapter 5). Throughout 2002-08 countries, often with support from European funds, made a considerable investment in VET. They found resources to provide VET for young people and adults and to improve infrastructure. Countries also invested in VET reform. Some of the money was also spent better. Since 2002, countries have worked hard to make their VET systems more efficient and provide better value. The trend towards decentralised governance and cooperation, which in some countries started before the Copenhagen process, has continued. Countries have also introduced new ways to allocate resources.

Although data are not yet available, the indications are that there was a considerable increase in public spending on VET as part of European and national measures to combat the 2008 economic crisis. Public money, including from the European Social Fund, was made available for enterprises to keep jobs on the condition that their employees participate in training. This was, arguably, successful in helping stave off higher unemployment.

The impact of the Copenhagen process

For all of the achievements of and VET reforms supported by the Copenhagen process, it has had a limited impact on the performance of education and training systems as measured by the education and training benchmarks of the Lisbon strategy (Table A). Many of the benchmarks were not reached. The economic crisis certainly set back Europe's performance, but on pre-crisis trends, it is unlikely that the targets missed would have been achieved.

It is not clear whether changes have made VET more 'attractive'. In most countries the number of VET students has increased. However, in the EU as a whole, VET students as a proportion of all students in upper-secondary education has fallen from 60% in 2000 to 50% in 2008. There do not appear to be readily identifiable reasons for this trend and no clear correlation between a fall in VET students and types of VET.

Adult participation in lifelong learning at 9.5% of the working population aged 25 to 64, remains well below the benchmark of 12.5%. This is disappointing given that adults already in the workforce need to improve their skills to meet future demand. Despite the efforts to

promote social inclusion, still more than one in eight young people leave education and training early with low levels of qualification.

Although EU programmes have increased mobility opportunities for VET learners and teachers during 2000-09, countries do not appear to have comprehensive national policies to encourage it. In absolute terms, mobility is still low. VET students are far from enjoying the opportunities for mobility that those in higher education have through, for example, the Erasmus programme.

It may be time to rethink financial incentives to encourage continuing training and lifelong learning in enterprises. Despite costs of training being a clear problem in newer Member States a key issue is the high proportion of enterprises that do not train because they see no need, despite the very clear trend towards more knowledge- and skill-intensive jobs and an ageing workforce. Perhaps a difference should be drawn between enterprises that, as a rule, do not provide continuing training and are unlikely to change their behaviour and 'incidental trainers', who just might be encouraged either to provide, or invest more in continuing training.

There also remain considerable challenges to ensuring VET systems are of the highest quality. VET teachers and trainers are carrying a heavy

Table A. 2010 targets related to education and training

ET benchmarks for 2010	State-of-play 2010 (reference year 2009) EU-average
Raise the average employment rate in the EU to as close as possible to 70%	64.6 %
Increase the number of women in employment to an EU average over 60%	58.6 %
Raise the average EU employment rate among men and women aged 55 to 64 to 50%	46.0 %
An EU average rate of no more than 10% of early school leavers	14.4 %
Ensure that at least 85% of young people complete upper secondary education (76.6% in 2010) – upper secondary	78.6 %
EU average participation in lifelong learning should be at least 12.5% of the adult working population(25 to 64 age group)	9.3 %
Total number of graduates in mathematics, science, technology in the EU should increase by at least 15% by 2010, while at the same time the gender imbalance should decrease	+ 33.8 % (*)

(*) data refer to the period 2000-2008.

load. They face challenges of learning new pedagogies, keeping up with technological developments, new labour market demands and more diverse classrooms. Integrating skill needs into VET provision is complex. Ensuring curricula are relevant to labour market needs is still hampered by lack of national strategies for economic development that set out which sectors and skills are most important for the future. Data to identify sector as well as occupational and qualification-level developments remains inadequate. There is also a dilemma over the correct balance between key competences and job-specific skills. Employers focus on short-term, quickly learned, specific skills. Employees' skills needs are long term and more general.

Available data on investment in VET indicate that before the economic crisis there was no substantial increase of annual per capita investment in human resources, as proposed by the Lisbon strategy, either by governments, enterprises, or individuals. Public spending on VET to combat the economic crisis' effect on unemployment was an emergency measure, not a planned sustained increase in investment in human resources.

According to data from the third continuing training survey (which relates to 2005), enterprises appear to have reduced investment in continuing training in 2005 compared to 1999. This is a point for concern as the period was one of economic growth, where enterprises would be more likely to have resources and the need to invest in training. Data are not yet available, but anecdotal evidence suggests that enterprises reduced expenditure on VET due to weak economic growth and budgetary constraints following the economic crisis.

Although the EU did not reach all of the benchmarks in 2010, the performance of countries varies considerably. Some countries have exceeded the benchmarks for many years, even before the Lisbon strategy. VET reforms supported by the Copenhagen process have created momentum.

Collectively, the common European instruments and principles have the potential to make it easier to understand qualifications and support lifelong learning, job and geographical

mobility by making education and training systems more flexible. The fact that implementation of European instruments and principles and other reforms is still at an early stage argues that their full potential has yet to be realised. Countries believe that more time is needed for the changes to take effect.

Already there are some encouraging signs. Despite the economic crisis, all of the benchmarks show improvement in 2009 (the year for which the latest data are available) compared to 2000.

According to Cedefop's skill forecasts the level of educational attainment among young people is rising. Women are now, on average, better qualified than men. Employment rates for older workers and women increased faster than the overall employment rate. Although it is not possible to quantify, it is likely that VET has made an important contribution. Investment in VET may not have risen during 2003-08, but both youth and long-term unemployment fell. Substantial public investment was made in VET in response to the crisis, acknowledging its key role in helping people to keep and find jobs. Importantly, strengthening the links between VET and the labour market encourages VET reforms to look outward to meet labour market needs.

The challenges Europe faces also indicate that the direction of reforms under the Copenhagen process was and remains the right one for the next decade. Four drivers of change – the legacy of the economic crisis; developing a low-carbon economy; labour market trends towards more skill-intensive jobs; and Europe's future skill supply and demand (Chapter 6) – are expected to shape Europe's economies and societies and, consequently, the demands on its VET systems, over the next 10 years.

Although the crisis will not prevent the return of growth in jobs between now and 2020, it threatens to leave high levels of structural unemployment, particularly among young and long-term unemployed people with low levels of education. This will need to be tackled both to bring more people into the workforce to meet employment rate targets and to reduce the risk of social exclusion. Developing a low-carbon economy requires a sound base of key skills

and adaptation of skills already used at work. Although qualification levels of the workforce are expected to be broadly in line with demand, skill mismatches will occur.

Broadly speaking, Europe faces the same challenge in the next decade as that which launched the Lisbon strategy in 2000 and the Copenhagen process. The rapid and accelerating pace of change risks overtaking the skills of an ageing workforce, threatening jobs and social cohesion.

The drivers of change for the next decade require that Europe's ageing workforce to update, upgrade and broaden its knowledge, skills, and competences in order to perform well in jobs which are likely to become more skill-intensive and demanding at all levels. For Europe to reach its 2020 employment rate target of 75%, more people particularly women and people with low education levels to find jobs. These developments require greater emphasis on continuing training and adult learning

Despite financial constraints, countries, however, seem focused on longer-term reforms. The economic downturn may act as a catalyst and speed up work that has already started and force through change that, in easier times, could be put off.

How successful has the Copenhagen process been over the past eight years?

Overall, participating countries and social partners assess the process positively (Chapter 7). It has strengthened European cooperation in VET and produced tangible results and observable changes. Agreeing and acting on common national priorities and developing a series of interrelated common European instruments and principles in an eight year period 2002-10 represents a significant achievement in an area that relies on voluntary cooperation.

Countries, however, assess the impact of the Copenhagen process differently. Some countries consider the impact of European instruments and principles as moderate, not having changed the direction of their national policies. However, most believe that the Copenhagen process is having a significant impact on national VET and lifelong learning

policies and has led to substantial changes in national policies. The coming decade provides an opportunity to implement the achievements of the Copenhagen process and for them to have a real effect.

The next phase: partnership, resources and maintaining momentum

VET reform will continue. At European level the framework is already in place. There is already some consensus among countries and social partners that future cooperation in VET should focus ⁽⁶⁾:

- implementing European instruments and principles;
- anticipating future skill needs and adapting education and training supply accordingly;
- supporting mobility between jobs and sectors;
- social inclusion and equal opportunities with focus on early school leavers, low-skilled people and migrants and reducing regional disparities;
- adult learning as response to demographic developments;
- environmental issues, sustainable development and related green jobs.

A smaller group of countries also suggest increasing opportunities for geographic mobility, particularly in Europe. Other countries want more emphasis on improving the quality of VET and professional development of VET teachers and trainers.

VET reform still has an ambitious and demanding agenda, but implementation will be difficult and it is not certain that the potential of the progress made so far will be realised. Among other things, it is suggested that success depends on three issues; partnership, resources and maintaining momentum.

To modernise VET successfully the partnerships that developed European instruments and principles should be deepened and broadened.

⁽⁶⁾ Mainly based on replies by Directors General for Vocational Training and social partners to specific question in the questionnaire supported by additional evidence (replies to other questions of the Cedefop questionnaires).

The years 2011-13, include deadlines to review progress in implementing some of the European instruments and principles. For them to realise their potential, they must be implemented consistently, coherently and integrated, not only with one another, but also with European and national strategies on VET, lifelong learning and skill development. VET teachers and trainers are central to reform, without them it cannot succeed. They have to be not only well-trained but should help shape and be committed to the reforms taking place. Dialogue is needed to discuss challenges openly. Various different interests in education, including higher education, VET and the labour market have to be reconciled and solutions found. This will take time, willingness and determination.

Resources will also be needed. The legacy of the economic crisis raises uncertainty about the sustainability of VET financing. This may bring tough choices on whether to invest more limited resources in general education or VET and on how much to spend on continuing and initial training. European and countries' money has been invested in VET reform, including NQFs. As European instruments and principles enter a crucial implementation phase, extra resources may be needed to put them into effect. High quality VET that keeps pace with technological and organisational change is not cheap.

Some countries have found reporting on progress in VET every two years rather burdensome, especially where this clashes with other reporting obligations. Understandably, countries want simpler reporting procedures. However, under the Copenhagen process, specific reporting on developments in VET that went to responsible ministers who provided political leadership and a mandate for the next phase proved invaluable in continuing momentum for VET reform. Coordination through the Copenhagen process has given VET a voice and enabled a comprehensive European VET policy to emerge, which did not exist before the Lisbon strategy.

To maintain momentum it is also important to understand why VET reform needs to continue. There needs to be an unequivocal understanding of the purpose and benefits of VET

reform. Some countries also argue that communication strategies are needed to explain the benefits of VET reforms to individuals and employers.

The Lisbon strategy launched a programme to modernise education and training systems. It set out a series of benchmarks to monitor performance, but it did not define what modern VET systems should look like. However, through the Copenhagen process, countries have done more than align policies. By agreeing consistent common priorities they have identified some of the key features of modern VET systems by working to develop VET that:

- imparts key competences as the basis for learning and work-related skills to improve job and career prospects;
- is comprehensive, inclusive and flexible enough to cope with different learning needs at different points in life;
- builds on people's formal and non-formal learning and their work experience to adapt existing skills to new demands;
- is responsive and relevant to labour market needs;
- has a European dimension which includes opportunities for mobility;
- is supported by lifelong guidance;
- is cost-effective, with an appropriate balance of funding between government, enterprises and individuals;
- acts in coordination with other services, such as welfare and health where appropriate to the person concerned;
- develops through cooperation and partnership, at all levels European, national regional and sectoral, with all relevant stakeholders to draw from their expertise to build consensus and a share of ownership.

It is for Member States to decide the features of modern VET systems. Debating, agreeing and translating those features into a shared vision of what modern VET systems should look like in 2020 may help to focus VET reform during a period when difficult decisions will need to be taken. The European Commission's communication on a new impetus for VET provides a starting point for this debate (Box B).

Box B. A new impetus for VET

Europe by 2020 should contribute to both excellence and equity in EU lifelong learning systems and thereby to the Europe 2020 objectives of smart and inclusive growth, with:

- IVET as an attractive learning option with high relevance to labour market needs and pathways to higher education;
- easily accessible CVET for people in different life situations simplifying skills development and career changes;
- flexible systems based on recognition of learning outcomes, including diplomas, and supporting individual learning pathways;
- adequate support for those at a disadvantage;
- Cross-border mobility as an integral part of VET practices.

Source: European Commission, 2010.

The case for continuing VET reform and the Copenhagen process is compelling. The work of the past decade will continue, but maintaining momentum needs a combination of short-term objectives that measure progress towards a long-term vision.

Modernising VET will probably always be a work in progress. This underlines the case for having a point of reference setting out the features of modern VET systems that can be modified from time to time. The Copenhagen process, as a bridge to the future, should lead to a clear destination.

CHAPTER 1

The Copenhagen process – The policy path

‘On the basis of these priorities we aim to increase voluntary cooperation in vocational education and training in order to promote mutual trust, transparency and recognition of competences and qualifications and thereby establishing a basis for increasing mobility and facilitating access to lifelong learning.’

(Copenhagen declaration, 2002)

The Copenhagen process on enhanced cooperation in vocational education and training (VET) (European Commission, 2002) was launched on 30 November 2002. Its roots lie in helping to achieve the objectives of the Lisbon strategy launched by the European Council in March 2000 (Council of the EU, 2000).

The Lisbon strategy was a package of economic and social reforms which aimed to improve Europe’s competitiveness, create more jobs and strengthen social cohesion. Modernising education and training systems was part of the strategy. The Copenhagen process was also designed to prepare for European Union (EU) enlargement (from 15 to 25 Member States in 2004 and to 27 in 2007) by helping candidate countries to align their VET policies with those of Member States.

As an example of the open method of coordination, the Copenhagen process incorporated voluntary cooperation and periodic reporting on progress in implementing VET-related common objectives, priorities and benchmarks. From 2002 to 2010, participating countries (1) agreed priorities to improve VET and worked on them together, with support from the European Commission and involvement of the social partners. The year 2010 marks the end of the 2000-10 Lisbon strategy for growth and jobs and the transition to Europe’s 2020

strategy for ‘smart, sustainable and inclusive growth’ (European Commission, 2010a). Moving to a new strategy is a good time to assess the Copenhagen process to build on the progress made and learn lessons from the past.

This chapter explains the origins of the Copenhagen process and discusses its evolution during 2002-10. It then reflects on the results of the process and goes on to look at developments in the EU’s strategic policy framework for the period 2010-20 and how they relate to VET. Overall the chapter concludes that the Copenhagen process is an effective working method and strengthened European cooperation in VET. It provided the basis to develop common European instruments and principles, influenced national reforms and raised the profile of VET in other policy areas at European level. Its work also remains relevant to European strategic policy framework for the next decade.

1.1. Origins of the Copenhagen process

The Lisbon strategy of 2000 was an answer to rapid and accelerating change that threatened to overtake the skills of an ageing workforce (Council of the EU, 2000). Employment rates were low and structural unemployment was persistently high despite a favourable macroeconomic situation. The then 15 EU Member States were also planning to take in 12 new members which were at various stages of transition to market economies.

The Lisbon strategy set an employment rate target of 70% and, along with other policy initiatives, set out benchmarks to monitor progress in modernising education and training. From the outset, Member States underlined the close links between education and training and employment policies. Employment guidelines

(1) Countries currently participating in the Copenhagen process are the members of the European Economic Area (EEA – the 27 EU Member States, Iceland, Norway and Liechtenstein) and the EU candidate countries Croatia, the former Yugoslav Republic of Macedonia (FYROM) and Turkey.

included measures to encourage and improve lifelong learning in Member States.

As part of the Lisbon strategy, concrete future objectives for education and training were agreed in 2001 (European Commission, 2001a). The three main objectives were improving the quality and effectiveness of education and training systems in the EU, easing access of all to education and training and opening up education and training systems to the wider world. The European Commission initiated the Education and training 2010 work programme⁽²⁾ (Council of the EU, 2002a) a series of thematic working groups, clusters and ad hoc groups to take forward the concrete future objectives and related issues.

Benchmarks agreed at Lisbon were developed by the European Council in Stockholm, in 2001 (Council of the EU, 2001) and Barcelona in 2002 (Council of the EU, 2002b). The Barcelona Council called for European education and training to become a world quality reference by 2010 and to develop instruments to improve transparency of qualifications. Five benchmarks were set for 2010 (Council of the EU, 2003) to help measure progress in addressing priority areas at all levels of learning (Box 1). Although there was no specific benchmark, the Lisbon strategy also called for Member States to increase investment 'substantially' in education and training.

Box 1. Education and training targets 2010

- Maximum 10% early school leavers.
- Cut the percentage of low-achieving pupils in reading by at least 20%.
- Ensure that at least 85% of 22-year olds should have completed upper secondary education.
- Increase the number of university graduates in mathematics, science and technology (MST) by at least 15%, and decrease the gender imbalance in these subjects.
- At least 12.5% of adults (25-64) participate in lifelong learning.

Source: Council of the EU. Education, Youth and Culture. 8430/03. Brussels 5-6 May 2003.

The overall aim of the various European Council conclusions, benchmarks and Education and training work programme 2010 was to create a European lifelong learning area (European Commission 2001, Council of the EU 2002c). This would enable people to move between countries and jobs using their qualifications and competences as a 'common currency'. It would be the VET equivalent of the Bologna process⁽³⁾ designed to create a European higher education area by 2010.

A Council resolution to promote closer cooperation in VET (Council of the EU, 2002c), became the basis for the Copenhagen declaration. The declaration built on a process of voluntary, 'bottom-up' cooperation started by Directors General for Vocational Training at a meeting in Bruges, in October 2001. The 'Bruges initiative' working group, chaired by the European Commission, was invited to coordinate implementation of the priorities agreed in the Copenhagen declaration. The Bruges initiative became the Copenhagen process.

1.2. Evolving VET priorities and closer links with other policy areas 2002-10

Priorities agreed in the Copenhagen declaration were to make qualifications more easily understood, improve VET quality and information and guidance. Common reference levels and principles were recognised as central to achieving these priorities. It was also agreed to review progress regularly. Consequently, every two years, the European Commission, ministers responsible for VET in participating countries and the European social partners met to evaluate progress and adjust or set new short-term priorities. Joint reports of the Council and European Commission reviewed progress on the overall Education and training 2010 work programme, while reports from Cedefop (Cedefop: Tessaring and Wannan, 2004;

⁽²⁾ See http://ec.europa.eu/education/policies/2010/doc/compendium05_en.pdf

⁽³⁾ See: <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/>

Cedefop 2007; Cedefop 2009a) focused more on the achievements, challenges and specificities of VET.

The declaration and subsequent communiqués defined the scope of the Copenhagen process and the issues on which Member States would report about progress. Over the period 2002-10, the priorities remained consistent (Box 2), but were adapted to reflect progress and ensure the Copenhagen process's relevance in a changing economic and social environment.

Box 2. From Copenhagen to Bordeaux, priorities for VET under the Copenhagen process

2002: Copenhagen declaration

- Strengthen the European dimension
- Improve transparency, information and guidance systems
- Recognise competences and qualifications
- Promote quality assurance

2004: Maastricht communiqué

- Put Copenhagen tools into practice
- Improve public/private investments
- Address the needs of groups at risk
- Develop progression and individualised paths
- Strengthen planning and partnerships; identify skill needs
- Develop learning methods and environments
- Expand teachers' and trainers' competences
- Improve VET statistics

2006: Helsinki communiqué

- Improve image, status, attractiveness of VET; good governance
- Develop further, test and implement common tools by 2010
- More systematic mutual learning; more and better VET statistics
- Take all stakeholders on board

2008: Bordeaux communiqué

- Implement tools and mechanisms
- Raise quality and attractiveness
- Improve the links between VET and the labour market
- Strengthen cooperation arrangements

The Maastricht communiqué (European Commission 2004) broadened the range of the Copenhagen process, which at that point covered only European priorities. At Maastricht, countries agreed to work together on shared national priorities, including promoting the attractiveness of VET. Other issues such as improving the statistical evidence-base for VET policy-making, reinforcing partnerships and improving investment in and incentives for VET became part of the Copenhagen process. Countries also endorsed using EU structural funds, particularly the European Social Fund, to carry out work in the Education and training work programme 2010, including the Copenhagen process.

The Maastricht communiqué provided the main framework for the Copenhagen process during 2004-10. The Helsinki communiqué (European Commission, 2006a) largely consolidated the issues covered under the Copenhagen process. With an eye to the question of parity of esteem between VET and general education, the Helsinki communiqué underlined VET's dual challenge, namely to deliver excellence to attract the best and brightest students and to support inclusion by helping integrate those at risk into the labour market. Helsinki also emphasised the importance of completing and implementing coherently the common European instruments and principles that were already being developed and set a deadline of 2010 for them to be in place.

The Bordeaux communiqué (European Commission, 2008a) reinforced the importance of implementing common European instruments and principles. It also coincided with the first effects of the economic crisis in late 2008 and underlined the need to encourage investment in people's skills despite the downturn.

1.3. Results of eight years of European cooperation in VET

Results of the Copenhagen process are evident. Work on common European instruments and principles has progressed from concepts to practical tools and guidelines agreed by Member

States which are influencing national reforms and raising the profile of VET in other policy areas at European level. Progress can be defined by three broad stages (with some overlaps): 2002-04, developing policy documents; 2005-07, drafting instruments and principles; 2008-10 agreeing recommendations (Box 3).

Box 3. Stages in developing European instruments and principles

2002-04: initial phase and working groups that led to several policy documents, such as validation of non-formal and informal learning, and Europass; the process was coordinated by a group that was closely linked to the DGVT and coordinated initiatives with the European Commission.

2005-07: working group outcomes translated into draft versions of European instruments such as the qualifications framework, the credit systems and a common quality assurance framework; the specific Copenhagen coordination group was discontinued, as a broader coordination mechanism was set up for the Education and training 2010 work programme to cover all education subsystems.

2008-10: recommendations on EQF, EVCET and EQAVET were endorsed; the French Presidency initiated a joint meeting of ministers responsible for VET and those for higher education; universities committed themselves to open up to wider groups of (non-traditional) learners and different kinds of further training; stakeholders of the Bologna process participated in working groups and conferences related to qualifications systems, credit systems and quality in VET.

Source: Belgium, DGVT, 2010.

Four instruments were adopted and two common principles and guidelines endorsed (Box 4).

Also agreed under the Education and training 2010 work programme was the recommendation on key competences for lifelong learning (Council of the EU, 2006a).

Despite their voluntary nature, countries are implementing them (see Chapter 2) and have agreed target dates for putting them into

Box 4. European instruments and principles developed as part of the Copenhagen process

Common European instruments:

- a European qualifications framework (EQF) (Council of the EU, 2008a);
- a European credit system for VET (ECVET) (Council of the EU, 2009a);
- a European quality assurance framework for VET (EQAVET) (Council of the EU, 2009b);
- Europass (Council of the EU, 2004a).

Common principles and guidelines:

- guidance and counselling (Council of the EU 2004b and 2008b);
- identification and validation of non-formal and informal learning (Council of the EU 2004c).

practice. Europass is already widely used by citizens.

Although decisions about and implementation of VET policy rest with countries, the Copenhagen process has influenced national policies in several ways. Agreeing shared priorities has helped to align European and national VET policies in face of common challenges.

Countries are at very different stages of VET reform. For example, the benchmarks are European averages. Some countries have recently reached some or all of the benchmarks. Other countries have exceeded some, or all the benchmarks and for many years. Others are still working towards them. Reporting every two years has enabled the European Commission and countries to assess progress, agree new priorities as appropriate and encouraged exchanges of information and good practice. This process has also helped stimulate VET reform in countries which already have high performing VET systems.

Perhaps the clearest evidence of influence on national policies is development by countries of national qualifications frameworks (NQFs). The European qualifications framework (EQF), a tool

for making qualifications easier to understand, was designed initially to support mobility. To link to the EQF, countries have developed NQFs which, in some countries, are changing the relationship between different qualifications making it easier to move between different parts of the national education and training system. Developing NQFs has also encouraged a shift in some countries to using learning outcomes as the building blocks of their VET systems, which, in some countries, is a major development.

Countries are implementing VET reforms in partnership, both at European and national levels. At European level, the social partners launched their own framework of actions for the lifelong development of competences and qualifications (ETUC, 2002) to complement the Lisbon strategy. At national level, social partners have become increasingly involved in implementing European instruments and in developing NQFs. Social partners' participation in the Copenhagen process reflects the shared responsibility for reaching VET-related targets.

The Copenhagen process also supported EU enlargement. All 12 countries that have joined the EU since the Copenhagen process began in 2002 were involved from the beginning to help align their VET policies with the rest of the EU. Candidate countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey) have also been included in the Copenhagen process as part of the accession process (see Annex 1).

By developing instruments and principles that have a value and implications for other policies, the Copenhagen process has helped raise VET's profile and relevance to other policies at European level. VET's important role in lifelong learning is increasingly acknowledged and was emphasised in the European Commission's action plan on adult learning (European Commission 2006b). As discussed above, development of the EQF and NQFs has opened up the debate in several countries about the relationship between VET and higher education and the links between the Copenhagen and Bologna processes.

VET has also been prominent in employment policies. Following a streamlined and relaunched Lisbon strategy in 2005 (European

Commission 2005a; Council of the EU 2005a), the new partnership for growth and the European youth pact, (European Commission, 2005b) reflected the importance of investing and encouraging participation in education and training to improve people's employment prospects. 'Flexicurity' principles (European Commission, 2007a) combined active labour market policies, including VET, social protection and lifelong learning strategies. VET's role in supporting social inclusion and labour market integration was emphasised in Europe's new social agenda (European Commission 2008b). Investment in VET was also an important element of recovery packages at European and national levels to respond to the economic crisis in 2008 (see Chapter 5).

However, the strongest links between VET and labour market policies have developed through the connection between the Copenhagen process and the new skills for new jobs initiative (Council of the EU, 2007), which bridges employment and education and training policies through the need to improve the match between skill supply and demand (European Commission, 2008c). The new skills for new jobs initiative includes regular pan-European forecasts for skill demand and supply to 2020 and takes account of the work under the Copenhagen process (Council of the EU, 2009c; Council of the EU 2010a; European Commission, 2010b).

The Copenhagen process and its associated working groups, coordination, reporting and review have been resource intensive. Countries generally wish for simpler reporting processes. Problems can arise when national reporting periods for VET overlap with EU reporting obligations on related issues, for example on the European employment strategy. As policies need time to implement and have an impact, less frequent progress reports will give more time for reforms to produce measurable results. Partnerships, particularly with the social partners, are, understandably, strong in those countries with a long established tradition of social dialogue, but not so well developed elsewhere. Where VET reform is concerned, partnerships are also stronger at European than national and sector levels.

1.4. Towards 2020

The importance of VET is also recognised in ‘Europe 2020: a European strategy for smart, sustainable and inclusive growth’ (European Commission, 2010a, Council of the EU, 2010b), which replaces the Lisbon strategy and was adopted by the European Council in June 2010 (European Council, 2010). Europe 2020 asserts that the route to lasting economic recovery and social cohesion is knowledge and innovation. It argues for giving priority to investment in education and training even as budgets are consolidated following the economic crisis.

Europe 2020 sets benchmarks for education and training. Countries will be invited to define and implement their own quantitative targets to reflect their different situations. It also sets an employment rate target of 75% and other targets for combating climate change, reducing poverty and increasing investment in research and development. The targets are underpinned by seven flagship initiatives (Box 5).

In 2009, the European Commission already took the initiative to pave the way for work on European VET policy after 2010 by providing a new strategic the policy framework in Education and training 2020 (European Commission,

Box 5. Europe 2020 benchmarks and flagship initiatives

Education and training targets

- Less than 10% early leavers from education and training
- At least 40% of 30 to 34 year-olds should have tertiary educational attainment or equivalent

Other targets

- Raise to 75% the employment rate for women and men aged 20 to 64, including greater participation of young people, older workers and low-skilled workers and better integration of legal migrants
- Improve conditions for research and development and raising combined public and private investment to 3% of GDP
- Reduce greenhouse gas emissions by 20% compared to 1990 levels; increase the share of renewables in final energy consumption to 20%; move towards a 20% increase in energy efficiency
- Promote social inclusion, by reducing poverty by lifting at least 20 million people out of the risk of poverty and exclusion

Flagship initiatives

- ‘Innovation union’ to improve conditions and access to finance for research and innovation to turn ideas into products and services that create growth and jobs

- ‘Youth on the move’ to improve the performance of education systems and ease the entry of young people into the labour market
- ‘A digital agenda for Europe’ to speed up the roll-out of high-speed Internet and reap the benefits of a digital single market for households and firms
- ‘Resource efficient Europe’ to help decouple economic growth from use of resources, support the shift to a low-carbon economy, increase use of renewable energy sources, modernise transport and promote energy efficiency
- ‘An industrial policy for the globalisation era’ to improve the business environment, notably for small- and medium-sized enterprises, and to support development of a strong, sustainable and globally competitive industrial base
- ‘An agenda for new skills and jobs’ to modernise labour markets and empower people by developing their skills throughout life to increase labour participation and match labour supply and demand better, including through labour mobility
- ‘European platform against poverty’ to ensure social and territorial cohesion that shares the benefits of growth and jobs widely so people experiencing poverty and social exclusion can live in dignity and take an active part in society

Source: European Commission, 2010a and European Council 2010.

2009a). This combines strategic long-term objectives with short-term priorities and is built on four pillars:

- lifelong learning and mobility;
- quality and efficiency of education and training;
- equity and social cohesion; and
- creativity and innovation.

Although not listed in the Europe 2020 document, the Education and training 2020 policy framework sets the benchmark of an average of at least 15% of adults to participate in lifelong learning by 2020.

Building on Education and training 2020 and to support the Europe 2020 strategy, the European Commission's communication, 'A new impetus for European cooperation in VET to support the Europe 2020 strategy' (European Commission, 2010c) looks to spur on reforms begun under the Lisbon strategy. It emphasises the need to implement common European instruments and principles, encourage more adults to take up continuing training and to value better the skills and competences people acquire at work or in their lives.

1.5. Conclusions: an effective process that remains relevant

The Bordeaux communiqué (European Commission, 2008a) gave a brief assessment of the Copenhagen process. It concluded that, up to that point, the process had proved effective and that: 'From Copenhagen, Maastricht, Helsinki and Bordeaux, a European VET area is being built, based on transparency and mutual trust'.

As a working method, the Copenhagen process has provided the basis for a very fruitful period of European cooperation in VET over the last eight years.

Agreeing the concepts and developing interrelated common European instruments and principles in an eight-year period 2002-10, supporting national reforms, helping align European and national VET policies and raising

VET's profile in policy areas such as employment and social exclusion are important achievements of the Copenhagen process. They are evidence of the strength and depth of European cooperation in VET in an area which relies on voluntary agreement between Member States.

Compared to general education, VET is more fragmented. General education is usually the responsibility of a single ministry. In contrast, responsibility for VET is often divided between the ministries for education, employment and economic affairs, as well as regional governments and social partners. In summary, the Copenhagen process has brought these interests together at European level and provided VET with a voice. This has enabled construction of a comprehensive European VET policy that supports and complements action in Member States. This, too, is an important achievement.

The Copenhagen process appears highly relevant to the Europe 2020 strategy that is to guide Europe over the next decade. Although particularly relevant to 'an agenda for new skills and jobs' and 'youth on the move', to some degree education and training are important to meeting the targets and implementing other flagship initiatives.

High employment rates require mobile workers with skills that match labour market requirements and which they can adapt throughout their working lives. Improving research and development requires creativity and innovation in curricula and knowledge partnerships between education, business and research. For the EU to lead in green technologies, develop a competitive, job-creating green economy and take advantage of a digital single market based on ultra fast Internet, its workforce must have high levels of digital literacy and graduates in maths, science and engineering. New business needs entrepreneurs. Reducing poverty requires investment in education and training to empower individuals through skills.

For the majority in an ageing workforce, these new skills will be acquired through VET. The European Commission's communication on new emphasis for VET makes that clear and makes a strong case for continuing the work started.

The Copenhagen process has acted as a bridge to the future by supporting reforms by Member States to create modern VET systems. Although improvements can be made, the Copenhagen process, as a mechanism for strengthening European cooperation in VET is arguably even more important in 2010 than it was in 2002.

CHAPTER 2

Developing and implementing European instruments and principles

The Copenhagen process has laid the foundation for an extensive development of common European instruments and principles. Each of them has a specific, but related purpose (Box 6) and their objectives, guidelines, requirements and timetable are agreed at European level, with implementation left to Member States.

This chapter looks at progress in developing and implementing common European instruments and principles. It begins with a look at the use of learning outcomes which have become the basis for implementing them. It then considers the emergence of national qualifications frameworks (NQFs), which have become integral to implementing the European

Box 6. A summary of European instruments and principles

Common European instruments

European qualifications framework (EQF) (Council of the EU, 2008a)	Helps to compare qualifications throughout Europe to support lifelong learning and educational and job mobility
European credit system for VET (ECVET) (Council of the EU, 2009a)	Helps validate, recognise and accumulate work-related skills and knowledge acquired during a stay in another country or in different situations, so that these experiences contribute to vocational qualifications
European quality assurance framework for VET (EQAVET) (Council of the EU 2009b)	Helps countries develop, improve, guide and assess the quality of their VET systems and develop quality management practices
Europass (Council of the EU, 2004a)	A portfolio of documents to support job and geographical mobility to enable people to present their qualifications and skills using a standard format understandable to employers throughout Europe. Europass documents are the Europass CV, language passport, Europass mobility, diploma supplement and certificate supplement

Common principles and guidelines

Guidance and counselling (Council of the EU 2004b and 2008b)	Strengthens the role of lifelong guidance in developing European policies for education, training and employment. It addresses four priority areas: career management skills, access to services, quality of guidance provision and policy cooperation
Identification and validation of non-formal and informal learning (Council of the EU 2004c)	Sets out common principles to encourage and guide development of high quality, trustworthy approaches and systems to identify and validate non-formal and informal learning

qualifications framework (EQF) before discussing the other common European instruments and principles in turn.

Considering their lifelong learning perspective (namely that VET must be structured and developed to enable and motivate individuals to learn throughout their lives both inside and outside formal education and training institutions) the chapter concludes that collectively, common European instruments and principles have the potential to make it easier to understand qualifications, support lifelong learning and job and geographical mobility. However, they need to be integrated and implemented coherently. This requires careful consideration of how they relate to one another and associated issues.

2.1. Learning outcomes – The defining perspective

Developing common European instruments and principles, such as the EQF and validation of non-formal and informal learning, has encouraged a shift to using learning outcomes (see Box 7) in all types and levels of education and training to support lifelong learning. This shift is endorsed by almost all countries and social partners.

Box 7. The learning outcomes principle

Learning outcomes are statements of what an individual learner knows, is able to do and understand following completion of a learning process. In some countries, for example Germany and the Netherlands, the term competence is used instead of learning outcomes.

Learning outcomes-based systems use competence-based standards for their qualifications systems. Use of learning outcomes varies between countries. In some, such as France, Finland, Sweden and the UK learning outcomes have been an important part of the education and training system for some time. Countries such as Denmark, the Netherlands and Norway have made substantial

progress in using learning outcomes, while others, for example Poland and Romania, stimulated by European cooperation, are just starting to use them.

Learning outcomes-based approaches are particularly strong in VET as many countries have traditionally used functional (and task) analysis to define VET curricula and standards to ensure their relevance to the labour market. Reform of VET standards and curricula is an area where implementing learning outcomes is most visible. Countries such as Estonia, Lithuania, Hungary, the Netherlands, Austria, Poland, Slovakia, Slovenia and Sweden have carried, or are carrying out learning outcomes or competence-based developments or revisions of their VET standards. Some countries, for example Hungary, are using this process to redefine and reduce VET profiles.

Concerning VET curricula, a recent study (Cedefop, 2010a) on curriculum reform in nine countries (Germany, Ireland, Spain, France, the Netherlands, Poland, Romania, Slovenia, and the UK) shows all have been, or are, reforming VET curricula and introducing learning outcomes and competence-based approaches. Other countries such as Austria, Italy and Norway are also reforming VET curricula along these lines.

Implementing learning outcomes has raised many issues. For example, whether learning outcomes in VET standards should only be narrow and task-related or also capture broader social and personal skills and competences regarded by many as fundamental to modern working life (Cedefop, 2009b).

Several countries, for example Hungary, Poland, and Slovakia, point out that learning outcomes-based curricula have important implications for content, assessment, teaching methods and learning conditions (Cedefop, 2010a), which require changes in attitudes of teachers and trainers and in the culture of education and training institutions. Teachers and trainers will, eventually, interpret standards, follow or develop curricula and assess the students. Their weak involvement in developing learning outcomes in many countries could, potentially, undermine progress. Support is needed to develop strong professional

communities of practice to implement agreed standards.

There are also differences between and within countries and even between institutions over the understanding, function and role of learning outcomes. Learning outcomes can be defined as overarching goals of VET, or the results of a study programme or teaching unit. Learning outcomes also have different names, such as competence, or objectives. Malta, Austria, Romania and Slovenia, for example, point to diverse references to learning outcomes, which can undermine national and European consistency and coherence.

If learning outcomes are defined and introduced inconsistently it may seriously undermine the credibility of qualifications and raise questions about the validity and reliability of assessments. A consistent application of the learning outcomes principle is critical to integrate developments at local, regional and federal levels. The UK underlines that consistency does not mean top-down ‘one-size-fits-all’ standardisation, but requires tailored ‘fit-for-purpose’ solutions.

This emphasises the importance of quality assurance arrangements to support the shift to learning outcomes-based frameworks, standards, curricula, certification processes, assessment and teaching methods. Progress with learning outcomes and strengthening quality assurance requires close cooperation at national and European levels in sharing experience in defining and writing learning outcomes for different purposes. Italy and Poland, for example, are promoting systematic exchanges of experience to describe, define and apply learning outcomes.

Italy describes the shift to the learning outcomes principle as a gradual and complex process of evolution, which, potentially, can help to integrate better a national education and training system characterised by strong regional autonomy and considerable diversity. This underlines the long-term character of the shift to learning outcomes, a process which requires ownership and involvement of all actors at all levels.

2.2. The key instrument – National qualifications frameworks

National qualifications frameworks (NQFs) describe what learners should know, understand and be able to do based on a given qualification as well as how learners can move from one qualification to another within a system. They have become integral to implementing the European qualifications framework (EQF). All countries have developed or are developing NQFs (Cedefop, 2010b). The objectives of NQFs, shared by almost all countries, are wide-ranging (Box 8).

Box 8. Objectives of national qualifications frameworks (NQFs)

NQFs aim to:

- make national qualifications systems easier to understand and more transparent at national and international levels;
- strengthen coherence of qualifications systems by connecting different parts of education and training;
- improve permeability by clarifying and strengthening the horizontal and vertical links within the existing education and training system;
- support lifelong learning by making learning pathways visible and by easing access, participation and progression;
- simplify recognition of a broader range of learning outcomes (including those acquired through non-formal and informal learning);
- strengthen the link and improve the communication between education and training and the labour market;
- open up national qualification systems to qualifications awarded outside formal education and training (for example awarded by sectors);
- create a platform for cooperation and dialogue with a broad range of stakeholders;
- provide a reference point for quality assurance.

Progress in developing NQFs depends on various factors such as the extent to which learning outcomes are used to define and describe qualifications (Cedefop, 2009c),

cooperation with labour market actors and use of validation of non-formal and informal learning in the qualifications system.

Development and implementation of NQFs can be summarised as follows:

- **conceptualisation and design;** countries such as Belgium (Wallonia), Italy, the Netherlands, Norway, Slovakia and Sweden are deciding the scope and structure of their NQFs. Bulgaria, Cyprus, Hungary, Iceland, Latvia, Poland, Romania, Slovenia, Spain and Turkey have, largely, decided the scope and structure and are focusing on completing (defining and agreeing) level descriptors, the roles of different stakeholders, responsibilities of institutions and relationships between different parts of the education and training system and, in particular, between VET and higher education;
- **consultation and testing;** many countries have tested proposed NQF level descriptors through projects in selected economic sectors. Some, such as Germany, Austria and Finland consulted and tested extensively during 2008-10 and are now moving towards formal adoption and practical implementation. Greece launched a consultation in 2010;
- **official establishment/adoption;** countries such as Belgium (Flanders), Denmark, Estonia, Lithuania and Portugal have formally adopted their frameworks;
- **practical implementation;** this stage moves the NQF into full operation. Institutions comply with the new structures and methods and potential end-users (individuals and employers) are aware of the NQFs' purposes and benefits. Countries such as Ireland, France and the UK have been working on NQFs for the past decade or more and implementation is advanced. These first generation NQFs are currently undergoing (or have recently completed) reform and revision.

While the EQF's eight-level structure has influenced NQFs, the number of levels varies between countries to reflect different situations and systems. The UK (Scotland) NQF has 12 and NQFs in Iceland and Ireland have 10 levels. The draft NQF in Poland proposes seven levels. Hungary, Italy, the Netherlands, Norway, Slovakia and Sweden still have to decide. Most

other countries have proposed or adopted eight levels.

Defining the levels has proved more challenging, for example, how to decide the priority to give to theoretical knowledge, the balance between knowledge and skills and the role of social competences and personal attitudes. Countries are developing descriptors specific to national contexts which vary considerably in concept and detail. This reflects important national debates on priorities for national education, training and learning strategies (Cedefop, 2010b). However, there is a strong common perspective. Most countries use variations of the EQF learning outcomes principle broken down into knowledge, skills and competence. Several countries, for example, the Czech Republic, Germany and Lithuania, use competence as the overarching concept. These differences do not significantly reduce comparability of national descriptors with the EQF or other national descriptors. National descriptors are now complete in Belgium (Flanders), Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Lithuania, Malta, Portugal and the UK.

By the end of 2010, five countries will have completed their formal referencing to the EQF, Ireland, France, the Netherlands, Malta and the UK. Most of the remaining countries are expecting to finalise their referencing in 2011 and 2012.

Countries are developing NQFs to be compatible with the framework of qualifications of the European higher education area under the Bologna process (Box 9). They are increasingly trying to link NQF-EQF referencing and their self-certification which connects their higher education qualifications to the three levels or cycles of the Bologna process. Malta was the first country to choose such an integrated approach. Other countries, for example Finland, have signalled that they will do the same.

Most NQFs can be defined as comprehensive frameworks, covering all levels and types of qualifications not just VET. There are three main trends in the design of NQFs to strengthen integration of the education and training system.

NQFs in Germany, Iceland, Lithuania and

Box 9. **Creating a European higher education area: the Bologna process**

Under the Bologna process countries aim to base their higher education on three cycles (for example, bachelor, master and doctorate). The aim is to make degrees easily readable and comparable, establish a credit transfer system, cooperate in quality assurance, promote a European dimension in their curricula and support mobility for students, teachers and researchers.

The process was launched by the Bologna declaration in 1999. The signatory countries included the then 15 EU Member States, three EEA countries (Iceland, Norway and Switzerland), and 11 EU candidate countries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia). International institutions such as the European Commission, the Council of Europe and associations of universities, rectors and European students participated in drafting the declaration.

Source: Bologna process secretariat, 2009 ^(*).

Poland, for example have descriptors spanning all levels of education. These frameworks show how qualifications can be combined and make it possible to judge if, for example a VET qualification can provide a basis for a higher qualification. These NQFs also underline that higher level qualifications may be awarded by bodies other than traditional higher education institutions covered by the Bologna process. NQFs, in France, Ireland, Malta and the UK (Scotland), for example also emphasise the need for people to be able to move easily between different parts and levels of the education and training system.

Countries such as Belgium (Wallonia), Denmark and Romania, have distinguished between qualifications at levels equivalent to 1-5 and 6-8 of the EQF. They restrict the higher levels to qualifications awarded by higher education institutions in accordance with the

Bologna process. In Denmark this distinction has led to the use of different referencing principles to EQF levels 1-5 and 6-8 respectively. While a 'best fit' approach is used for the lower levels, a 'full fit' (meaning full correspondence to Bologna) is used for the higher levels. These NQFs are still comprehensive as they cover all levels and types of qualifications. However, questions may be raised regarding the extent to which these frameworks will ease integration or not.

Other countries have divided levels 6-8 into parallel strands, one covering academic qualifications awarded according to the Bologna process and the other vocational or professional higher level qualifications not awarded by higher education institutions. In Belgium (Flanders), for example, the same level descriptors are used for both strands. In countries such as Austria, the two strands use different descriptors.

Countries recognise that for NQFs and the EQF to work, qualifications and related certification and awarding processes need to become even more transparent and trustworthy. Consequently, countries increasingly reflect on how to assure the quality of learning outcomes and certification processes. Ireland, Malta, and the UK, for instance, refer to the European quality assurance reference framework, discussed below, when considering quality assurance for referencing their NQFs to the EQF.

2.3. Quality assurance – Promoting mutual trust

Success of the European VET agenda and of EQF and ECVET in particular depends on trust being in place. At European level, quality assurance mechanisms have been developed to promote that trust.

Some countries have a tradition of quality assurance. However, since the European forum on quality in VET was established in 2001 and agreement on the common principles, guidelines and tools in the Council resolution in 2004, there has been some convergence in Europe. This led to the recommendation establishing a European quality assurance

^(*) See: <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/>

reference framework for vocational education and training (EQAVET) of June 2009. It invites Member States, by 2011, to develop an approach to improve their quality assurance systems, make best use of the framework and participate fully in the European quality assurance reference framework network ⁽⁵⁾.

Implementing EQAVET is complex and will take time. The quality model on which the EQAVET recommendation is based has been used in several Member States including Denmark, Hungary, Norway, Romania and Finland to guide development of their national quality systems. EQAVET indicators are under discussion in many countries, including Belgium (Wallonia), Bulgaria, Denmark, Germany, Greece, Spain, Austria, Romania, Slovenia and the UK (Northern Ireland and Scotland). Other countries such as Belgium (Flanders), Denmark, the Netherlands, Slovenia and the UK (England and Wales) have aligned their indicators to EQAVET. In Italy, regulations approved in 2010 for the new system of technical and vocational education encourage establishing indicators aligned with EQAVET for technical and vocational schools.

Countries that have had VET quality mechanisms for many years such as Austria, Denmark, Germany, Norway, Sweden and the UK tend to apply more comprehensive approaches. For instance, the Austrian VET quality initiative launched in 2005/06 covers all quality dimensions. Denmark and Sweden have introduced more frequent school inspections. Denmark has also made recent changes in self-evaluation systems, quality benchmarking and networking among vocational colleges and added indicator-based inspection to VET quality assurance policy. The Danish approach to quality also refers to reinforcing international cooperation and exchange of experience. Recent years have also seen a shift to measuring the effectiveness of VET delivery in response, in part, to demands for better services of quality. Output standards and targets are

progressively used rather than input and process standards together. Financing is also being linked to results, with incentives for reaching targets. However, countries are increasingly using internal and external evaluation of their VET systems to improve quality (Cedefop, 2009d). Peer review for training organisations is used in Italy, Austria and Romania.

Accrediting training providers is more frequent in continuing than initial training. National accreditation of VET providers helps assess compliance with national standards and training regulations. Sectoral accreditation frameworks concentrate mainly on examination and testing procedures and certification of individuals.

Germany is moving from local, internal self-evaluation of training providers towards national external output-monitoring. In the UK, a central body approves awarding bodies to deliver qualifications through centres of learning including colleges, employers, and private training providers. Ireland has a similar approach (Box 10). In Latvia and Romania, VET providers can only offer programmes that meet educational and occupational standards and lead to State-recognised certification. In Hungary and Portugal accreditation is not obligatory, but only accredited VET providers

Box 10. Ireland's FETAC's quality assurance process

All VET providers offering FETAC (Further Education and Training Awards Council) awards are required to meet its standards. Providers must demonstrate their capacity to monitor, evaluate and improve programme and service quality to learners. Successful providers register with FETAC and may offer awards from the national qualifications framework (levels 1 to 6). The validation process examines how programmes meet the specifications for an award. This involves evaluation and review by FETAC of VET providers' published quality assessment criteria and procedures. Providers must implement evaluation findings. FETAC reviews provider registration agreements within five years of the agreement.

Source: Ireland ReferNet, 2010.

⁽⁵⁾ If they do not have one, Member States are recommended to set up a quality assurance national reference point for VET linked to their particular structures and requirements to bring together relevant bodies, social partners and national and regional stakeholders.
See <http://www.eqavet.eu/gns/home.aspx>

are eligible for European and national funding. In Greece, accreditation is only required for vocational training centres, trainers and programmes providing continuing training. Slovakia has left quality control to market forces and feedback from clients.

There is increasing awareness that quality assurance is more than accreditation procedures which by themselves do not guarantee quality of provision. Almost all countries have produced strategic documents or specific regulations to introduce or improve quality assurance in VET and to promote a quality culture. Malta, Romania and Slovenia are among the countries pointing out that this is not easy given the wide range of institutions involved. Legislation to improve VET quality has been adopted in Slovenia (2006), Lithuania (2007) and France (2009). Tripartite VET agreements on quality were introduced in Portugal (2007) and Bulgaria (2009).

Some countries, for example Italy and Luxembourg have restructured VET institutions to achieve higher standards. New institutions were set up to deal with quality issues. For instance, in Belgium (Flanders), a new agency took responsibility for quality issues from other services and departments. In Germany quality-related tasks were transferred to the Federal Institute for Vocational Education and Training in 2008. Ireland is merging the three bodies responsible for quality for a more coherent approach to quality assurance across all areas of further, higher education, and training.

Countries such as Belgium (Flanders), Estonia and Cyprus have made considerable investment in infrastructure to improve. The Belgian view is that students' competences will improve in better learning environments. Other issues related to quality such as curricula, teaching and links with the labour market are discussed in Chapter 4.

Promoting VET quality through skill competitions and awards has a long tradition in most countries, usually at VET upper secondary level. Worldskills' competitions started in the middle of the last century. EuroSkills were organised for the first time in 2008. In countries like the Czech Republic, skill competitions are important for increasing interest in VET in recent years. Estonia developed its vocational

competitions in 2008. Finland's annual national skills competition also includes a competition for students with disabilities and special needs. Austria, in 2008, introduced a prize for the best enterprises providing apprenticeships. The UK recognises further education institutions through the award of 'Learning and skills beacon status'. Slovenia has a national award for excellent education professionals.

2.4. Validation of non-formal and informal learning – Addressing the individual learner

Interest in validation of non-formal and informal learning is growing because it can make a real difference to someone's learning and employment prospects. It is seen as a way to make institutions and systems more flexible and to increase the value of learning at work.

The economic crisis revealed a need for validation measures to be put in place to enable people to demonstrate the value of their skills and competences so that they can transfer them to jobs in other enterprises or sectors, or both. Validation is also seen as a way to help groups with particular needs (such as migrants, early school leavers and people returning to the labour market) to progress to further education and training or find jobs based on their actual, but uncertified, skills and competences. Cost-efficient validation arrangements for career and human development in enterprises and sectors to complement national qualification systems may become increasingly important.

The shift to learning outcomes and implementing NQFs has encouraged validation of non-formal and informal learning which now is a priority for around half of the countries in the Copenhagen process. The 2004 European principles on identifying and validating non-formal and informal learning along with the European inventory and guidelines on validation (Cedefop, 2009e) were used by several countries, for example Denmark, Ireland and Portugal as a reference point for national developments. The EU lifelong learning programme (Council of the EU, 2006b) has also supported experimentation and

exchange of experiences over the past decade.

In France and Portugal, for example, validation is influencing lifelong learning policies and practice. The French system established in 2002 is an integrated part of the national qualifications framework and based on the principle that any national qualification (or part of one) can be acquired based on learning outside formal education and training. The Portuguese system, in particular addressing adults with limited formal education, has since 2005 become an extensive national network of more than 250 centres. It has changed the mindset in a country where it was quite usual to leave education and training early.

This contrasts with the experience of other countries which have worked hard to develop validation systems, but take-up and overall impact is still relatively low. Denmark, for example, formally introduced a validation system in public adult education and training in 2007 and points to several factors to explain its limited progress so far. These include lack of awareness among citizens and difficulties in implementing the legal framework, procedures, methods and financing.

Developing validation is closely linked to the shift to learning outcomes and success of NQFs. Several countries, for example Austria, Belgium, the Czech Republic, Estonia, Germany, Iceland, Ireland, Italy, Poland and Slovakia see NQFs as a condition for taking forward validation. Having NQFs with learning outcome-based qualification levels makes validation easier to introduce as an integrated and visible part of the education and training system. It also makes it easier to introduce quality assurance approaches to strengthen validation's credibility and prevent emergence of first and second class qualifications.

2.5. Lifelong guidance

Lifelong guidance aims to help people discover their potential and manage opportunities and challenges along their learning and career paths. It is central to career progression, skill development and employment prospects. Changing labour market conditions require

people to develop continually career management skills to identify their existing skills and learning goals to improve their job prospects. The challenge is to give people ready access to lifelong guidance services that support the diverse needs of different groups in different contexts throughout life.

Supported by European cooperation, during 2002-10 and two resolutions on lifelong guidance in 2004 and 2008 all countries have developed strategies to strengthen lifelong guidance and counselling. Countries such as Austria, the Czech Republic, Denmark, Germany, Greece, Estonia, Hungary, Iceland, Latvia, Lithuania, Luxembourg, Slovakia and Slovenia have established national lifelong guidance policy forums comprising education and employment ministries, as well as others, for example social partners, guidance counsellor associations and training institutions for guidance practitioners. The forums improve policy- and decision-making and cross-sectoral cooperation arrangements. Countries have also strengthened national cooperation in lifelong guidance by removing administrative, financial, structural, jurisdiction and sectoral barriers. In this way they have sought to create a new ethos of collective responsibility and a shared sense of purpose where joint action is required. Countries are also developing cost-efficient online guidance services to meet increased demand at reasonable cost. However, it is also important to ensure that those that need personal counselling, or cannot use web-based services, still get the help they need.

2.6. European credit system for VET – Mixed take-up

To help people develop learning paths or acquire qualifications building on what they have achieved in different learning contexts at home or abroad at different periods of time, countries agreed in 2002 to explore a credit system for VET. The European credit system for VET (ECVET) enables citizens to transfer learning outcomes and have them recognised by different qualifications systems, or by general and vocational education.

Austria, Poland and Finland are giving ECVET high priority. The Decvet initiative (2008-12) in Germany is part of reforms to make it easier to move between different parts of the VET system. The Finnish Finecvet initiative (2005-11) uses ECVET to increase European mobility in initial training in selected occupations to widen the abilities and skills of students. It aims to make it easier to recognise learning outcomes acquired at home and abroad, treating those acquired abroad as a normal part of the training process.

Most countries have national ECVET testing and implementation strategies and are developing it alongside their NQFs and validation mechanisms. However, some, for example Belgium (Flanders), see shifting to learning outcomes and implementing NQFs as conditions for developing ECVET. A few countries point to ECVET's complexity as a reason for not going ahead. For example,

Norway has concerns over ECVET's relevance to and compatibility with its VET system.

Implementing ECVET presents considerable challenges, but several countries have many years of experience. For example, Spain, France, Finland and Sweden, have been using credits or units in education and training for many years. New qualifications and credit frameworks for England, Wales and Northern Ireland and the Maltese qualifications framework strengthen credit transfer and recognition. Belgium (Wallonia), Latvia and Luxemburg, are also updating national regulations to accommodate credit transfer and accumulation. ECVET's success depends on developing practical solutions, at national and European levels, to transfer and recognise learning outcomes (Cedefop, 2010c) and its links with validation, learning outcomes and existing mobility agreements and experience.

Table 1. Use of Europass, February 2005 to September 2010

Total visits since launch

29 007 969

Total visits since launch (by year)

Year	Total visits
2005	1 210 586
2006	2 768 666
2007	4 158 137
2008	6 047 691
2009	7 487 763
2010	7 335 126

Documents downloaded since launch

25 129 815

Documents downloaded since launch (by year)

Year	Total downloads
2005	518 520
2006	2 623 052
2007	3 916 107
2008	5 625 527
2009	6 505 213
2010	5 941 396

Europass CVs and language passports completed online since launch (by year)

Year	Europass CV	Europass language passport	Total
2005	116 259	7 003	123 262
2006	717 733	27 164	744 897
2007	1 416 889	35 607	1 452 496
2008	2 026 194	44 071	2 070 265
2009	2 691 193	51 405	2 742 598
2010	2 726 134	44 404	2 770 538
Total	9 694 402	209 654	9 904 056

Source: Cedefop, September 2010.

2.7. Europass – Helping citizens

The Copenhagen declaration proposed in 2002 integrating the European CV, certificate and diploma supplements and common European framework of reference for languages and Europass into a single framework.

Europass was established in 2004 to support geographical and job mobility. Europass is a portfolio of five instruments to make people's skills and qualifications more easily understood in Europe. In a few countries, for example Belgium (Flanders), Europass has not caught on due to the existence of well-established national portfolios, but most are generally positive about Europass's role in promoting transparency of qualifications. Since its launch in 2005, over 29 million people had visited the Europass website by the end of September 2010. Use of all Europass instruments has increased significantly in recent years, demonstrating its value to learners, workers and citizens across Europe (Table 1).

While the curriculum vitae and diploma supplements are most used, countries such as the Czech Republic, Hungary, Norway and Poland report a rise in use of the certificate supplement, while Germany and Austria report increased take-up of the Europass mobility instrument. Several countries, such as Greece and France, point to Europass promoting learning outcomes and preparing the way for the EQF, ECVET and validation of non-formal and informal learning. Europass centres (NEC) play a key role in promoting and disseminating Europass nationally, for example in Estonia, Finland, Greece, Hungary and Norway.

2.8. Conclusions: coherence, integration and partnership

The common European instruments and principles developed through voluntary cooperation have the potential to make it easier to understand qualifications. They can support lifelong learning by making education and training systems more flexible. They can also support job and geographical mobility, but, individually, they cannot change existing practice.

Progress in implementing them demonstrates their close interdependence. To develop transparent, flexible and inclusive national qualification systems it is important to look at the relationship between each of them, how they fit into national education and training strategies and link with other European initiatives.

Learning outcomes is the 'glue' binding the common European instruments and principles together. Learning outcomes are accepted as relevant by most countries and sectors, but their practical implementation is uneven and sometimes slow. Unless learning outcomes are developed and applied systematically and consistently at European and national levels the different instruments and principles cannot be implemented coherently, effectively and with the trust of end-users.

If learning outcomes are not implemented consistently, NQFs will not succeed. Problems in the consistent use of learning outcomes across regions, systems and institutions point to a need for quality assurance in this area. However, national and European (exemplified by EQAVET) quality assurance arrangements focus, only to a limited extent, on how learning outcomes are defined and used in standards, curricula, certification processes, assessment mechanisms and teaching methods. European cooperation could also define common guidelines for rules and criteria for accreditation of training providers that take account of the EQAVET recommendation to streamline approaches (Cedefop, 2009d).

NQFs, for some countries present an opportunity to improve coordination and implement national reforms. Some countries, for example Croatia, Iceland and Poland, point to the reforming role of the new frameworks. For them, NQFs present an opportunity to change systematically existing education and training. Rules on design, provision and award of qualifications are traditionally the responsibility of the different parts of the education and training system. However, in some cases NQFs directly influence the design, provision and award of qualifications, for example in the UK (England and Wales, and Northern Ireland) (Ofqual, 2008). In France, the national certification committee decides which

qualifications should be part of the NQF, how they are described and the criteria to use.

In some cases, NQFs are helping to redefine how different parts of the education and training system and their qualifications relate to one another. Design and implementation of NQFs have created a forum for dialogue with broad groups of stakeholders. The breadth and depth of these (new) dialogues shows the importance of NQFs in different countries. Disagreement and controversy have signalled NQFs' effects on existing structures, practices and interests.

However, there is no guarantee that NQFs will fulfil their potential. The EQF and Bologna process have acted as catalysts, speeding up developments. NQFs are being developed under considerable external pressure. Countries may be tempted to create NQFs insufficiently embedded in national structures and practices. Comprehensive NQFs must be 'fit for purpose' to coordinate and be relevant to different parts of the education and training system. A balance is needed between flexibility and ease of movement between, for example general education and VET and sector specialisation and specificity.

To increase access to and progression in education and training NQFs need to integrate validation of non-formal and informal learning and ECVET, which must also mutually complement each other. These different elements need to be combined with the strategy on learning outcomes. The potential of learning outcomes, NQFs, ECVET and Europass to add value to current guidance services and help clarify existing skills and learning and career choices must be explored. NQF development and updating also needs to be sustained financially. Many countries are using money from the European Social Fund to develop their NQFs. It is unclear if this will continue.

It is also important to use the opportunity NQFs offer to link various initiatives including the Copenhagen and Bologna processes to clarify the links between VET and higher education. It will also ensure better integration of the diploma supplement into the Europass framework and support consideration of the relationship between ECVET and the European credit transfer system (ECTS) used in higher education

(Cedefop, 2010c). The relationship between the emerging NQFs and existing national centres for academic recognition (ENIC/NARIC) must be also addressed in the coming period.

There is also need for consistency at European level between instruments such as the EQF, ECVET and Europass and the Directive on recognition of professional qualifications (2005/36) (Council of the EU, 2005b). Several countries note that learning outcomes-based principles and instruments are, to some extent, out of tune with the input and duration principles used by the directive. Validating non-formal and informal learning, referring to learning outcomes or competence-based standards, has, in some cases, come into conflict with the specifications on duration of study periods in the directive. A revision of the directive began in 2010 and will continue in 2011. The objective must be to ensure a consistent European policy for transparency, recognition of qualifications and learning outcomes.

Despite its central importance to other policy developments, there is concern that guidance strategies are not sufficiently linked to the other initiatives, suggesting scope for greater cooperation between guidance and other issues. For example, guidance is often one of several policy measures, provided by different services, to help those at risk of social exclusion, all of which need close coordination to be effective.

In short, all the different European instruments and principles need not only to be integrated with one another, but also rooted in overall European and national strategies on VET, lifelong learning and skill development. This is essential to clarify their use and value to learners and the labour market. If they are not part of the bigger picture, people will not use them and their credibility will be suspect. Some countries, for example Estonia and Finland, have brought national Europass centres and national EQF and ECVET coordination points' functions together in one organisation. This rationalisation may encourage more coherent implementation of Europass, EQF, ECVET and learning outcomes and work on the recognition directive.

Potential users (learners, employees, employers, education and training providers, guidance and employment services and recognition authorities) must be made aware of the benefits of European instruments and principles. A step in this direction would be to put EQF levels on national certificates and diplomas to show that learning outcomes-based levels are part of the European and national education and training landscape.

A strategic perspective requires broadening the partnerships working on the different European instruments and principles at the appropriate time. Experts working on guidance may not be those working on learning outcomes, which may be different from those working on NQFs or ECVET. These various interests need to be reconciled, not only with one another, but also with broader interests on the labour market, including the social partners and different economic sectors. This is not an easy task. Success will require openness, dialogue, patience and determination. One priority is to intensify exchanges of experience at European and national levels on defining, applying and interpreting learning outcomes. Developing a common, learning outcomes-based language is critical to the future success of European instruments and principles. Monitoring, research, evaluation strategies and indicators are needed to help understand conditions for success.

Promoting attractiveness of VET for everyone

VET is highly diversified across Europe. VET qualifications are sometimes difficult to understand and not easily recognised in other countries. Even within countries progress to further or higher education after completing VET studies was often hampered. VET programmes were not sufficiently open or the knowledge, skills and competences people acquired clearly understood.

Consequently, making VET more attractive, as a learning option, has been a central aim of the Copenhagen process (European Commission 2002 and 2004). In the Helsinki communiqué (European Commission, 2006a) making VET more attractive became a priority area in its own right. The Bordeaux communiqué (European Commission, 2008a) emphasised the importance of people being able to progress from one level of qualification to another by strengthening the links between VET, general and higher education and adult learning.

This chapter groups various measures taken by countries to promote the attractiveness of VET. It discusses how countries are providing more opportunities for further learning through their VET systems. It goes on to consider how workplace learning is seen as a key element for young people and adults to ensure that skills are relevant to the labour market. The chapter then looks at the opportunities for VET students and teachers and trainers to partake in mobility programmes to support their learning. The chapter also looks at how VET is used as a tool to promote social inclusion and then examines financial incentives for individuals and enterprises to participate and provide training.

The chapter concludes that countries are aiming to develop VET systems that are comprehensive and inclusive, tailored to the needs of the best and brightest students, as well as those diverse groups at risk of social exclusion. However, it is not clear whether the

changes made have made VET more 'attractive' as the proportion of VET students in upper-secondary education has fallen as a proportion of the total number of students in upper-secondary education the EU as a whole. Although promoting mobility is a central aim of the Copenhagen process it remains low in absolute terms for those in VET, despite the substantial contribution of the Leonardo da Vinci strand of the lifelong learning programme.

All countries are committed to promoting social inclusion by making education and training and related services more easily accessible and flexible to cater for different learning needs and styles. Financial incentives for individuals to invest in their own training do not appear, so far, to have made access to VET more equitable. It may also be time to rethink strategies to encourage continuing training and lifelong learning in enterprises as a high proportion do not provide training for their employees.

3.1. VET's image

There is no definition of how to make VET 'attractive'. VET's image derives from a complex interplay between each country's labour market characteristics and VET programmes, as well as social background, traditions and aspirations. Perceptions of potential learning and career opportunities also play a key role. In several countries VET suffers from a lack of parity of esteem compared to general education.

In 2002, when the Copenhagen process began, more than 60% of upper secondary students were enrolled in VET. Its share was still rising in the then 15 EU Member States, while in the 12 candidate countries it was falling. However, enrolment patterns are diverse and such clear cut patterns no longer exist (Table 2).

Table 2. **Enrolment trends of students in vocational upper secondary education, 2000-2008 (*)**

Increasing number and share	Belgium, Finland, Iceland, Ireland, Liechtenstein, Malta, Portugal, Romania, Spain, Sweden
Increasing number but decreasing share	Austria, Czech Republic, Denmark, Estonia, Italy, Luxembourg, Netherlands, Norway, Slovakia, Turkey
Decreasing number and share	Bulgaria, Croatia, Cyprus, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Slovenia, former Yugoslav Republic of Macedonia

(*) Number of students in upper secondary vocational education and training and enrolment in vocational education and training as share of students enrolled in upper secondary education and training.

Source: Cedefop calculations based on Eurostat, UOE data collection on education systems, date of extraction 18.8.2010.

NB: UK and France are not included as their data are not fully comparable over time.

In 10 countries, VET seems to have become more popular overall. Nevertheless, despite the number of VET students in upper-secondary education increasing in 20 countries, the proportion of VET students as a whole has fallen to around 50% in 2008. Whether the crisis has led to increases in enrolment, as some individual country information suggests, is however not evident from these data.

3.2. More learning options through VET

Between 2002 and 2010 countries have worked to make systems more flexible and open and make it easier for people to construct and follow their own individual learning path. National qualification frameworks (NQFs) are influencing these developments. Countries are working to offer learners a wider variety of upper-secondary VET options that make it easier to move between different types of learning at the same level and to progress to higher level studies.

In some countries it has been possible to move between different types of learning, for example, between school-based VET and apprenticeships, or between general education and VET, for many years. Since 2009, for instance, it has been possible to move between general and vocational education in France and in Italy. It is possible to move from general education to VET, but not the other way around in Greece, Poland and Portugal. Germany's

Decvet initiative aims to make it easier for learners to move between different types of VET, for example from school-based VET to apprenticeship by having previous learning taken into account.

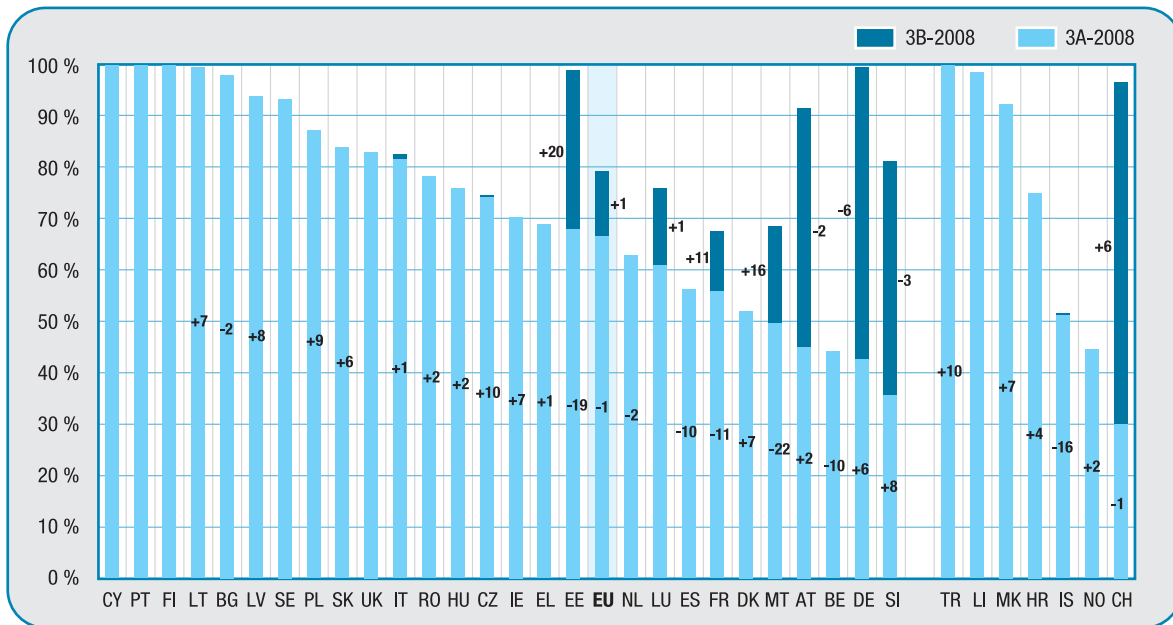
While many initial VET programmes combine technical theory, hands-on experience in training workshops or enterprises and general education, the balance between them varies depending on the sectors and qualifications the programme leads to. Programmes giving direct access to tertiary level education usually include more theory and general education elements.

Consequently, flexibility is influenced by occupational profiles and the different emphasis programmes give to technical theory, practical and key competences or generic subjects. More regulated labour markets have traditionally linked access to certain occupations or functions to specific qualifications and VET programmes. Previous studies (OECD, 2009a; Ecotec, 2008) suggest that strong employment protection also attributes a stronger role to the type and level of VET prior to labour market entry.

The same studies also suggest an increasing trend in programmes that prepare learners for occupations and give access to tertiary level studies. Experience in Sweden illustrates the need for more differentiated VET provision to allow all learners to develop their talents and complete upper-secondary level education.

To cater for different learner needs, countries have introduced programmes with higher shares of practical training, modularised existing

Figure 1. **Students enrolled in upper secondary education giving direct access to tertiary education (ISCED 3A and 3B programmes), 2000 and 2008 (% of all students in upper secondary education)**



Source: Cedefop's calculation based on Eurostat, UOE data collection on education systems, date of extraction 17.8.2010.
NB: ISCED 3A and 3B cannot be differentiated by programme-orientation and therefore comprise both general education and VET. EU averages exclude Sweden and UK. Data for Switzerland refer to 2002 instead of 2000. Data for Croatia and Liechtenstein refer to 2003 instead of 2000. Figures represent variations between 2008 and 2000 in the related shares (in percentage points). Only figures different from zero are reported. Trends are not available for UK, Sweden and Liechtenstein. Hungary also reported a -2 percentage points in the 3B share.

programmes or introduced partial qualifications. Some countries such as Finland, Iceland and Lithuania have combined general and vocational programmes. In Finland, for instance, general education students can add VET studies to their upper secondary qualification or vice versa. Lithuania has introduced VET modules into general education, which can be recognised as part of VET programmes. In particular, countries have supported apprenticeships and other forms of workplace learning.

Recent VET reforms have improved access to further studies. In some cases access is limited to specific types of programmes or studies in the same field as those followed at upper-secondary level. Generally, transition from VET to higher education takes place either through exams at the end of upper-secondary

programmes designed to lead on to higher education or through additional preparation courses and/or additional exams. Where VET is differentiated, several progression routes coexist⁽⁶⁾.

Access through (national) exams at the end of upper secondary VET programmes is possible, for instance, in the Czech Republic, Estonia, Finland, Lithuania, Hungary, Austria, Poland, Slovenia and Slovakia. While this has been the case for 30 years or more in many countries, others like Lithuania and Denmark, have recently set up such programmes or integrated higher education entry qualifications into (part of) their VET programmes.

In Austria the *Berufsreifepprüfung* exam can be taken by graduates of apprenticeship and school-based VET who also have work experience. A more recent initiative aims to prepare young people for the exam in parallel with their apprenticeship or intermediate school-based programme.

⁽⁶⁾ For detailed country information, see Cedefop's VET in Europe country reports. <http://www.cedefop.europa.eu/EN/Information-services/browse-national-vet-systems.aspx>

In Sweden, where upper secondary VET-oriented programmes used to give direct access, learners will be required to take additional courses in Swedish and English to progress to higher education. VET graduates in Estonia can prepare, free of charge, in schools for adults, to take general education examinations to access higher education. In Estonia, numbers going on to higher education by this route have been growing year by year. A quota of 10% of state commissioned study places is reserved for them.

According to a recent study carried out for the European Commission, 'There are now very few structural dead ends within initial VET although progression can still be difficult. The more significant differences between countries probably lie in the extent to which systems are open for people to return later on in life' (Ecotec, 2008). Figure 1 shows that in the EU, on average 80% of upper secondary students participate in general education or VET programmes that give direct access to higher education.

In Germany, government and regions agreed in 2008 that universities should acknowledge equivalent vocational qualifications for academic study courses. Higher education entrance will be possible for vocationally-qualified persons after successful final VET examinations and three-year on-the-job experience.

Higher education institutions are being reorganised and highly specialised and vocational-oriented courses introduced. For example, Austria moved teacher training to higher education in 2005 and transferred healthcare professions and midwifery training to tertiary education in 2006. In Denmark, Academies of Professional Higher Education took over the responsibility for short-cycle vocational higher education in 2009. In the same year, Sweden introduced a new national agency for higher vocational education. Belgium (Flanders), Latvia and Poland also provide higher level VET qualifications in VET through 'short cycles' of higher education. Post-secondary non-tertiary education provided by secondary schools and by higher education institutions can also lead to high level qualifications in countries such as Belgium

(Flanders), Estonia, Norway, Portugal and Sweden. Slovakia, in 2008, introduced higher professional education lasting for two or three years. In some countries such as Germany, France, Italy (Box 11) and the UK apprenticeship type training is integrated into tertiary education.

Box 11. **Recent developments in the Italian apprenticeship contracts**

In Italy, apprenticeship contracts can be valid until the apprentice is 30 years old and lead to high level qualifications.

They strengthen cooperation between enterprises and universities. Enterprises can benefit from research by PhD students/apprentices for longer and the students can learn the specific needs of enterprises. From 2010, PhD courses will last 36 months, and be based on cooperation between universities, enterprises and a PhD school.

Source: ReferNet Italy, 2010.

3.3. **Promoting apprenticeships and workplace learning**

Workplace learning is gaining value as a way of improving people's job prospects and as a bridge between education, training and work. Workplace learning/apprenticeship is a central feature of VET policies and provision in most European countries. It has been strengthened in some countries to make for more successful transitions from school to work and to develop competence-based qualifications. Countries have sought to promote workplace learning for young people through apprenticeships and develop in further for adults.

Even countries with a long tradition of apprenticeships have given them fresh impetus, for example, Austria, Denmark, Germany (Box 12), Liechtenstein and the Netherlands. Many countries use financial incentives to encourage enterprises to provide apprenticeship places. Austria introduced a scheme in 2008, following a proposal by the social partners, comprising a basic subsidy and additional subsidies subject to

meeting quality criteria. There is also a bonus for enterprises that offer apprenticeship for the first time or after a three year break. Germany also introduced, in 2008, a bonus for enterprises to provide apprenticeship places for young people who, after completing school, had unsuccessfully applied for an apprenticeship for a year or more. Denmark provides funds to enterprises concluding new apprenticeship contracts with VET students.

Countries such as Cyprus, Latvia, Malta, Austria, Portugal, Slovenia and Sweden have a minimum requirement of work-based learning in upper-secondary and higher VET. In Latvia, school-based vocational education programmes include practical learning at schools and enterprises. Two years of school-based VET are followed by two years' training in an enterprise in Norway. The Cypriot new modern apprenticeship will engage young people between 14 and 25 at three apprenticeship levels (preparatory, core and post- secondary). Even in countries with little, apprenticeship tradition, such as Belgium, Estonia, Spain, France, Italy, Cyprus and Finland, strengthening work-based learning is a national priority. In 2008, Sweden, where

Box 12. National pact for training and young skilled staff in Germany

The German national pact for training and young skilled staff was introduced in 2004 to improve the supply of young skilled workers and extended for three more years in 2007 doubling industries' commitment to provide 60 000 new apprenticeship places per year and recruit and additional 30 000 new training companies annually.

The target for in-company introductory training programmes was raised from 25 000 to 40 000. The training pact for 2008 led to 86 500 new training places and 52 700 new companies providing training. Every young applicant received a training offer. In 2009, despite the unfavourable economic situation, placement of young people into training was very good.

Source: ReferNet Germany, 2010.

upper secondary VET is mainly school-based, launched an apprenticeship pilot scheme which is to become part of mainstream VET in 2011. Participating companies receive grants.

Table 3. Training enterprises by type/form of training and size class (% of all enterprises)

	Training enterprises (% of all enterprises)							
	Total		Small size		Medium size		Large size	
	1999	2005	1999	2005	1999	2005	1999	2005
1. CVT courses	51	49	46	44	70	68	88	84
2. Other types of CVT	50	48	46	43	67	65	85	80
2.1. Continuing vocational training in work situation	35	33	30	29	51	47	69	67
2.2. Job rotation, exchanges or secondments	15	11	13	9	20	17	37	31
2.3. Learning/quality circles	11	10	9	9	19	16	32	26
2.4. Self-learning	14	13	12	11	22	17	40	33
2.5. Continued training at conferences, workshops, lectures and seminars	35	33	30	29	52	49	75	66

Source: Eurostat, Continuing Vocational Training Survey (CVTS 2 1999 and CVTS 3 2005), date of extraction 10.8.2010

NB: Small size refers to enterprises with 10-49 employees; medium size to 50-249 employees and large size to 250 and more.

Data for the EU 27 aggregates are estimated based on the countries providing data. 1999 data are not available for Malta, Cyprus and Slovakia. 1999 data for Poland only refer to Pomorsky region.

For adults, much skill development, especially for highly skilled workers, takes place outside formal training (Brown and Bimrose, 2010) and at the workplace. Some countries, such as Denmark, Ireland, Italy, Latvia, and Portugal have specifically linked validation of non-formal and informal learning to work-based learning to broaden access to qualifications. Table 3 shows that enterprises of all sizes use different types of workplace training. However, the most popular form of continuing training remains attending courses.

Several national strategies and sector initiatives encourage private and public enterprises to broaden access to and increase motivation for workplace learning in countries such as Germany, Ireland, Norway and the UK. In Ireland, sector-based initiatives promote workplace learning and target transferable skills including literacy (Box 13).

Box 13. Skillnets in Ireland

Skillnets, state-supported and employer-led, provide financial support for in-company training of up to 75% of the cost incurred by enterprise-led training networks. More funds can be provided for certified training and for training lower skilled workers. In 2008 there were 123 networks including 22 724 companies.

In 2006 Skillnets set up a forum to develop recognition of prior learning in the workplace, including for apprenticeships.

Source: ReferNet Ireland, 2010.

Belgium (Flanders), in 2008, introduced a guideline on qualitative learning in the workplace. Germany has developed a national network of around 800 inter-company vocational training centres which provide more than 90 000 places for small and medium-sized enterprises. Germany's Jobstarter initiative, launched in 2006, provides support for in-company traineeships, recruitment of trainees, and other measures. The programme has a strong regional base and includes cross-border training.

Innovative work-based learning schemes are

based on partnership or infrastructure, sustained by reforms and revisions in contractual agreements and financial arrangements. Denmark, France and Hungary have new contractual agreements that vary the times and duration of training in enterprises. Many financial arrangements take the form of subsidies to enterprises linked to quality assurance mechanisms, as for example, in Hungary, Austria, Poland and Slovenia. In 2007, Lithuania started to create sector training centres (Box 14).

Box 14. Sector practical training centres in Lithuania

Concept and development programme of sector practical training centres (SPTC; *sektoriniai praktinio mokymo centrai*) were approved in 2007-08. SPTCs aim at enabling learners to gain skills matching labour market needs using the latest technologies and equipment. They are open to students from VET, higher education institutions, employees from sector enterprises, vocational teachers and others.

In 2009, eight agreements to establish SPTCs were signed in engineering industry, railway transport, wood technologies and furniture production, hair dressing, beauty and related services, tailoring and textile production, hotels, restaurant and trade, wholesale and retail trade and agriculture. Financing is awarded according to quality management criteria, implementation of modular training programmes, the training of teaching staff and the effectiveness of the services offered. The framework is funded from the 2007-13 operational programme to promote cohesion. At least 33 SPTCs are planned.

Source: ReferNet Lithuania, 2010.

Some problems remain. Countries report a weak connection between education and training and work. Finding work-based learning training places is difficult in small and medium-sized enterprises and economically deprived areas. Often this is down to finance, but also because sometimes equipment in enterprises which offered workplace learning does not meet training needs.

3.4. Mobility for learning in VET

A European dimension is important to enable national systems to keep in contact with the wider world to remain up-to-date and competitive. VET qualifications need strong roots in local markets, but should also convey an international perspective, providing an understanding of foreign markets, languages and intercultural skills (Cedefop, 2003).

All countries implement mobility activities under different strands of the lifelong learning programme, such as Leonardo da Vinci, Comenius, Grundtvig and study visits. Several countries have bilateral cooperation programmes and regional schemes. Some also have internationalisation strategies for VET.

Participation in EU transnational mobility programmes has been rising since 2000 (Figure 2). However, actual numbers of participants are low. Participation of VET students in Leonardo da Vinci programme, was around 50 000 in total in 2009, although the number of applicants is higher. However, this is a substantial increase compared to 2000 when the figure was around 18 000 participants. The

Box 15. France objectives and resources contracts

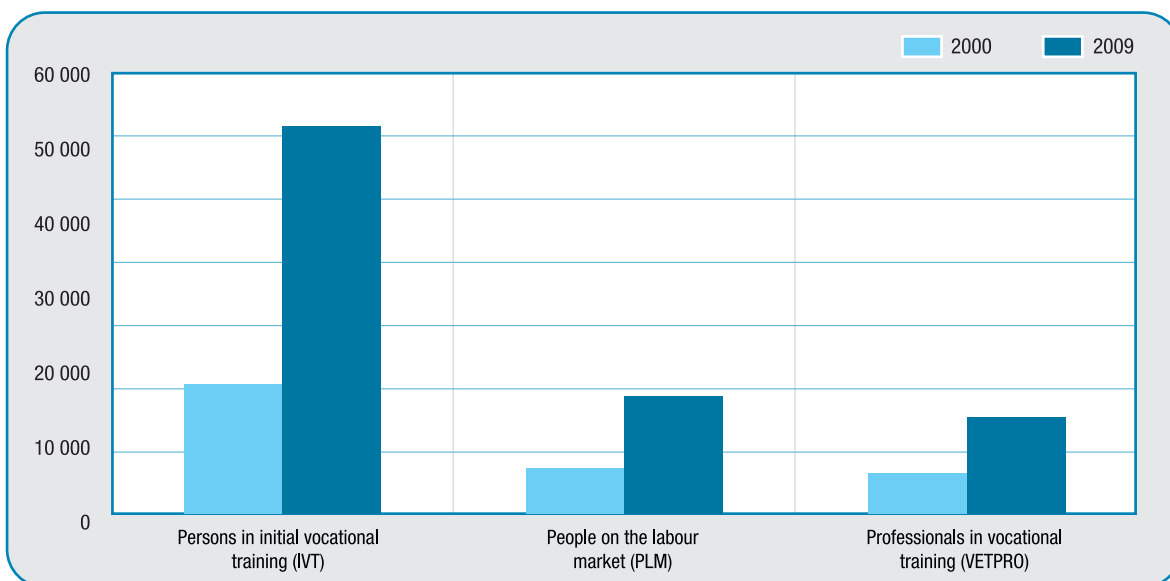
France, in 2005, introduced objectives and resources contracts (*contrats d'objectifs et de moyen*) between the state and regions to develop apprenticeships. They make European mobility of apprentices a funding priority. Central government and regions share the costs.

Source: ReferNet France, 2010.

numbers of teachers and trainers participating in mobility through the Leonardo da Vinci has more than doubled from around 5 000 in 2000 to 12 000 in 2009. Nevertheless, some countries, for example Belgium, argue that mobility in VET remains marginal and the contribution of the Leonardo da Vinci programme is 'rather limited'.

In addition to EU programmes, France, the Netherlands, Norway and the UK have signed bilateral cooperation agreements with Germany, to promote mobility for apprentices. The Nordic Nordplus Programme supports mobility for

Figure 2. Number of participants in Leonardo da Vinci programme (selected target groups), 2000 and 2009



Source: European Commission, DG EAC, date of extraction 4.5.2010.
NB: 2009 data are provisional.

Table 4. **Internationalising VET**

Overall objectives	Measures	Countries
Keeping VET up-to-date and competitive	Benchmarking performance against third countries	Norway, Poland, the UK
	Participation in skill competitions	Belgium, Denmark, Germany, Estonia, Spain, France, Luxembourg, Hungary, the Netherlands, Austria, Portugal, Finland, Sweden, the UK
Training international students	Attracting international students (*)	Austria, Ireland, the Netherlands, Norway, the UK (mainly higher education)
	Building capacity and provision abroad	Denmark, the Netherlands, Austria, the UK
VET with an international perspective	Outgoing mobility (**)	the Czech Republic, Denmark, Ireland, Lithuania, the Netherlands, Austria, Poland, Finland, Sweden, the UK
	International skills and competences, including foreign languages	Austria, the Czech Republic, Estonia, Hungary, the Netherlands, Norway, Poland
	Involving multi-nationals in VET provision	Estonia, Hungary, the Netherlands, Norway

(*) excluding EU students

(**) with third countries.

Source: Cedefop based on ReferNet, 2010.

10 000 people every year. Regions also promote transnational learner mobility, for example in France (Box 15).

There are no data on finances or numbers of people participating in national, regional or local mobility, only for EU programmes.

Some countries, such as Denmark, the Netherlands, Norway and the UK, have internationalisation strategies for VET. Other countries are taking a more step-by-step approach, but most are looking to open their VET systems to the wider world (Table 4). However, Denmark argues that there is still a 'long way to go to internationalise VET'.

Most measures to promote mobility aim to make skills and competences acquired abroad transparent and recognised in the country of origin. Work on European tools is seen by many countries and social partners as the most important measure to promote transnational mobility in VET. Europass and ECVET are the

most cited instruments in making skills and competences acquired abroad more transparent and 'readable'.

Several countries, for example, Lithuania, Austria, Slovakia and Finland, institutions organise their own mobility initiatives as part of their curricula. France plans incentives to promote transnational mobility for apprentices such as increasing funding and government meeting social security and wage costs. Other measures include teaching foreign languages and promotional measures to boost participation among all target groups. ICT promotional tools are used extensively. Denmark, for example, has a web portal providing information for young people about international mobility and possibilities of studying outside. Lithuania and Norway have mobility networks.

Schools are also encouraged to initiate mobility projects and training programmes with an international dimension. According to

Denmark all programmes should, in principle, comprise at least one international project. In Finland, internationalisation and mobility have been included in the new national core curricula for upper secondary VET. More Irish VET programmes and courses now incorporate a period of work placement and provide opportunities for this to take place in a company located in Europe with the financial support from the Leonardo da Vinci programme. Most work placements are accredited by the sending institutions. In the Netherlands, the national agency implementing lifelong learning programme urges schools to make better use of existing resources and be more open in view of the changes that will affect the VET sector in the years to come.

Countries face several obstacles to promoting mobility. Finance and recognition are the two main barriers. Participation in mobility schemes under European programmes is directly linked to the available funding. Recognition problems are linked to a lack of understanding of qualifications and education and training systems of other countries and a lack of quality assurance. Finland links this problem to slow implementation of the European credit transfer for VET.

Although statistics on mobility of apprentices are not available, many countries are of the opinion that the number of work placements abroad is still fairly low. There is a lack of information as students and employers are unaware of the opportunities created by mobility programmes. Further, it is more difficult, for example, to fit in placements abroad in a dual training programme than it is in school-based VET programmes. Companies are often reluctant to allow apprentices to leave for more than a week. At the European level, the European Commission will finance a three-year project (2009-11), led by UEAPME and the French *Assemblée Permanente des Chambres de Métiers* to establish a transnational network and web-based platform to support mobility for apprentices.

Unwillingness of schools to participate is linked to the high level of bureaucracy. Hungary, Ireland and Norway underline the need to streamline the application process for the

Leonardo da Vinci programme, while maintaining financial and quality standards, Hungary and Norway are considering introducing a 'mobility certification' to ease the work of institutions following the success of this approach in applying for and managing European mobility projects.

3.5. VET-related measures to support people at risk

Low levels of educational attainment and insufficient knowledge, skills and competence are major causes of poor labour market performance which can contribute to poverty, inequality and social exclusion. The European Commission's communication *A new impetus for European cooperation in vocational education and training to support the Europe 2020 strategy* (2010b) sees a clear role for VET in promoting equity, social inclusion (Box 16) and active citizenship in particular by empowering citizens and increasing their capacity to choose and act according to those choices.

Box 16. Equity and social inclusion

Equity in education and training can be understood as the extent to which individuals can take advantage of education and training in terms of opportunities, access, treatment and outcomes. Equity in education combines two main aspects:

- (a) fairness – ensuring that personal characteristics or social circumstances are not obstacles to achieving educational potential;
- (b) inclusion – ensuring a basic minimum standard of education for all.

Social inclusion refers to involving individuals in various aspects of society. It can be measured by analysing income and life quality levels, participation in social networks, awareness of and access to services, such as further learning opportunities.

Source: European Commission, 2010d; Cedefop, 2009f.

Measures for people at a disadvantage in the labour market should not be seen in isolation. Many people at risk of social exclusion are best

helped through mainstream measures tailored to their specific needs rather than through programmes that segregate and sometimes stigmatise them. Nevertheless, many groups at risk need more help than others. Consequently, all countries provide additional support for those at risk.

3.5.1. Supporting young people and early school leavers

Among those at risk of social exclusion are early school leavers (people aged 18-24 with at most lower secondary education who are not in further education or training) and drop-outs (persons leaving an education or training programme before its completion).

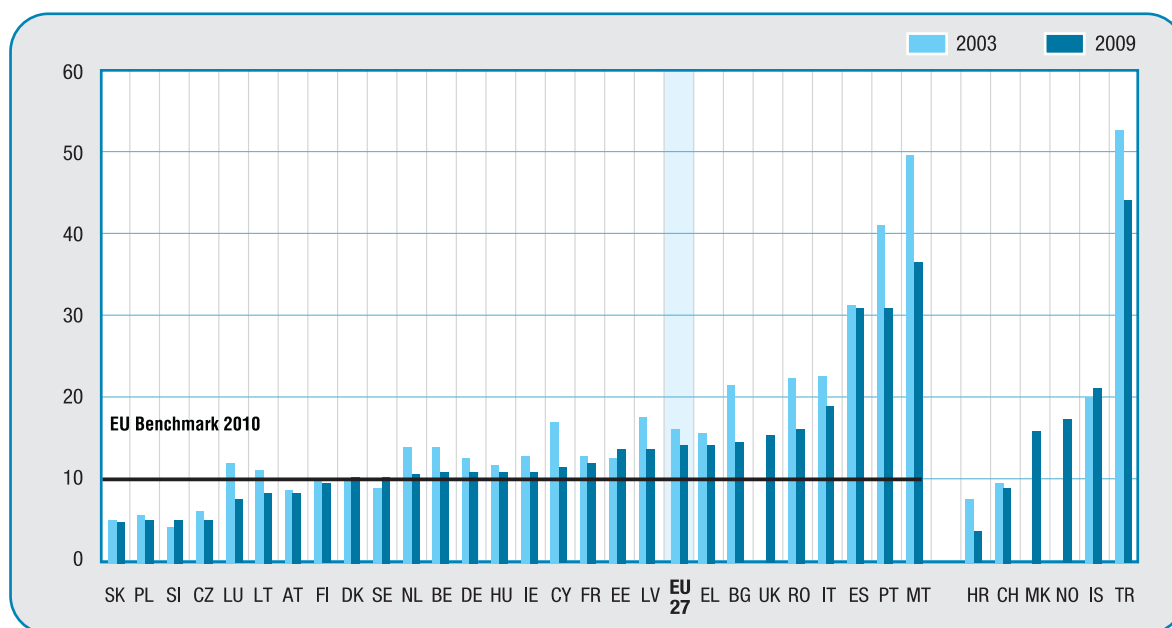
High unemployment among young people is a serious problem in many EU countries and threatens their future careers (European Commission, 2010d). Young people have proved to be particularly vulnerable to the effects of the economic crisis. In the first quarter of 2010, the unemployment rate for those below

the age of 25 went up to 20.6%, an increase of 5.9 percentage points compared to the first quarter 2008. A study by ISFOL found that school-to-work transition in 19 out of 27 EU countries is very long, ranging from 28 months in the Netherlands to 103 months in Romania (ISFOL, 2008).

Lower-secondary education is no longer a guarantee of finding a job. Completing upper-secondary education is seen as necessary to enter and have reasonably good prospects in the labour market. All countries have programmes to help young people acquire key competences or a minimal set of vocational qualifications by encouraging them to stay in, or return to education and training.

Young people leaving education and training early with only low levels of educational attainment have poor job prospects. Many end up doing unskilled work combined with periods of unemployment (Eurostat, 2009). According to the European benchmark the share of early school leavers should be less than 10%. Latest

Figure 3. Early leavers from education and training 2003-2009* (%)



(*) Percentage of the population aged 18-24 with at most lower secondary education and not in further education or training.

Source: Eurostat, Labour Force Survey, date of extraction 18.8.2010

NB: Data for Sweden are provisional. Slovenia and Croatia: lack of reliability due to small sample size. Luxemburg: break in series in 2009. Denmark and the UK: break in series in 2007. Norway break in series in 2006. Germany, Spain, Cyprus: break in series in 2005. Belgium, Lithuania, Malta, Poland, Portugal and Romania: break in series in 2004. Students living abroad for one year or more and conscripts on compulsory military service are not covered by the EU Labour Force Survey (possibly implying higher rates than those available at national level). This is especially relevant for CY.

available statistics show a European average of around 14%. Even though several countries are close to the benchmark, only eight countries are at it or below (Figure 3).

Measures to prevent young people from leaving school early are preferable to those to reintegrate them. Countries tailor measures to the particular needs of individuals (Box 17), taking into account different socio-economic and cultural backgrounds or other issues affecting their lives, such as disability. All countries use educational and vocational guidance and counselling, often accompanied by pedagogical-psychological and social support. There is a growing consensus that guidance should start as early as possible. However, career education and guidance in primary school is very limited or non-existent in most cases. The better guidance is integrated from primary to tertiary education, the better it supports not only transition from school to work, but also transitions between different types of schools (primary, lower and upper secondary) and between general education and VET. In addition to guidance, in some countries, for example Belgium (Flanders), the Netherlands, Poland, students from poor backgrounds receive financial support to encourage them to stay in, or return to education or training. Luxembourg is extending financial help to all young people.

Box 17. **School reintegration programme in Germany**

In Germany, a school reintegration programme provides individual support plans tailored to the personal situation of the girls and boys concerned. They are accompanied by contact partners, parents and teaching staff. These services are available to young people at around 200 project locations nationwide.

Source: ReferNet Germany, 2010.

Some countries, for example Denmark and Austria have adapted curricula to the different learning paces of different types of learners to encourage people to stay in school. Other

changes to curricula include introducing vocational subjects in lower secondary school and moving out of the classroom for prevocational work experience. As well as providing practical experience to motivate them to take up and complete VET, work experience is used to smooth the transition from school to work. Internships, work placements, charity or community work are also used as a bridge to encourage young people back into formal education and training. Some countries, for example Greece, Hungary, Romania and Slovakia have second chance programmes provide opportunities for primary or secondary education for early school leavers (and low-skilled adults) to enable people to complete basic or secondary education, acquire key competences, or vocational qualifications, or both.

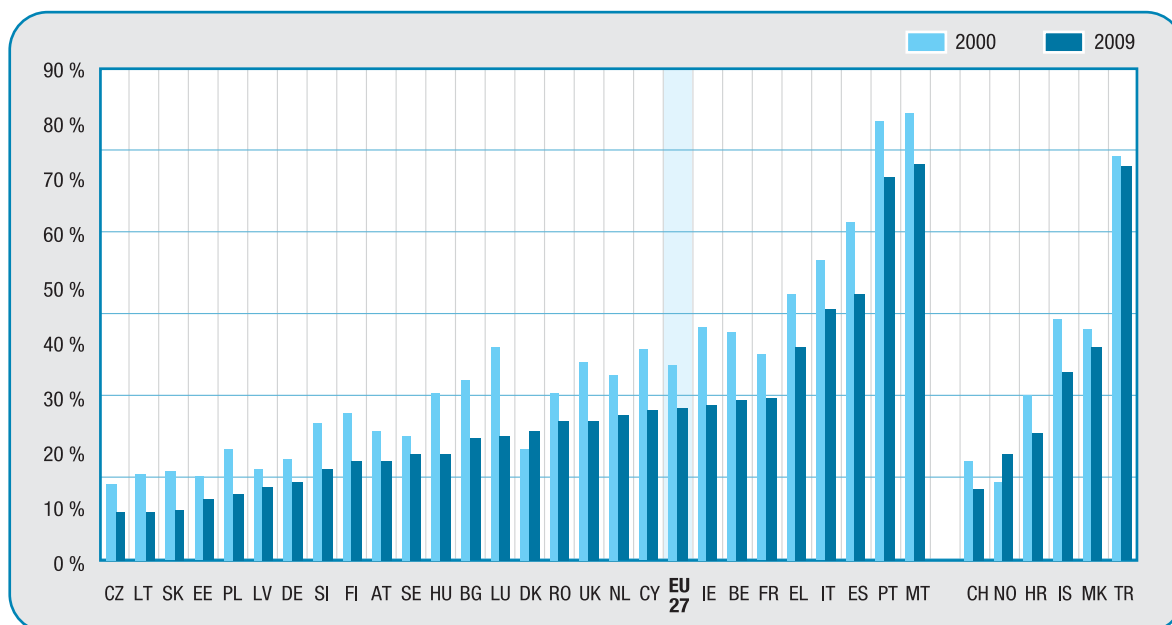
As discussed earlier in this chapter, countries are working to make it easier to move between different parts and levels of the education and training system. Greater flexibility provides more options and possibilities for young people to find the types of study that are appropriate to them, for example a move from general education to VET, or different types of VET. All countries are introducing or planning to introduce arrangements to validate and recognise non-formal and informal learning to make systems more flexible. By not requiring them to learn some things over again and acknowledging the things they can do, recognising non-formal and informal learning can also encourage young people back into the formal education and training system.

3.5.2. **Addressing the needs of low-skilled and older people**

A recent Eurobarometer survey ⁽⁷⁾ shows that people consider low educational attainment as a main cause of poverty and social exclusion. In particular, interviewees considered people with low levels of education and training or skills as the third group most at risk of poverty (31%), just after unemployed and elderly people (41%). Data show that, at European level, the risk of

⁽⁷⁾ Eurobarometer. Special Eurobarometer 321 on Poverty and social exclusion. February 2010.

Figure 4. **Adults with low education attainment, 2000 and 2009* (%)**



(*) Percentage of the population aged 25-to 64 with at most lower secondary education

Source: Cedefop's calculations, based on Eurostat, Labour Force Survey, date of extraction 10.8.2010.

NB: Croatia 2002 instead of 2000. former Yugoslav Republic of Macedonia and Turkey 2006 instead of 2000. Denmark break in series in 2007. Spain and Sweden break in series in 2005. Italy and Austria break in series in 2004. Romania break in series in 2002.

poverty for people with low educational attainment (23.5%) is almost twice as high as for the medium-skilled (13.0%) and 3.5 times as high as for the highly-skilled (6.6%)⁽⁸⁾.

However, despite a decrease of almost 8 percentage points in the last decade, 76 million people, around 28% of the European working age population (aged 25-64) are low-skilled. Figure 4 shows significant differences among countries under 10% in the Czech Republic, Lithuania and Slovakia to 70% or more in Malta and Portugal.

Low education and qualification levels do not necessarily indicate low skills. People may have acquired skills during their life. This emphasises the importance of all countries' plans to develop validation of non-formal and informal learning.

Learning opportunities for low-skilled and older people (especially low-skilled older people) remain limited. Most countries find it difficult to increase lifelong learning participation rates of these groups. Figure 5 shows two

clusters of countries. In Denmark, Finland, Iceland, the Netherlands, Norway, Sweden and UK more older and low-skilled people participate. However, in most countries, participation of these groups in lifelong learning is well below the 12.5% EU benchmark for the working age population⁽⁹⁾ by 2010).

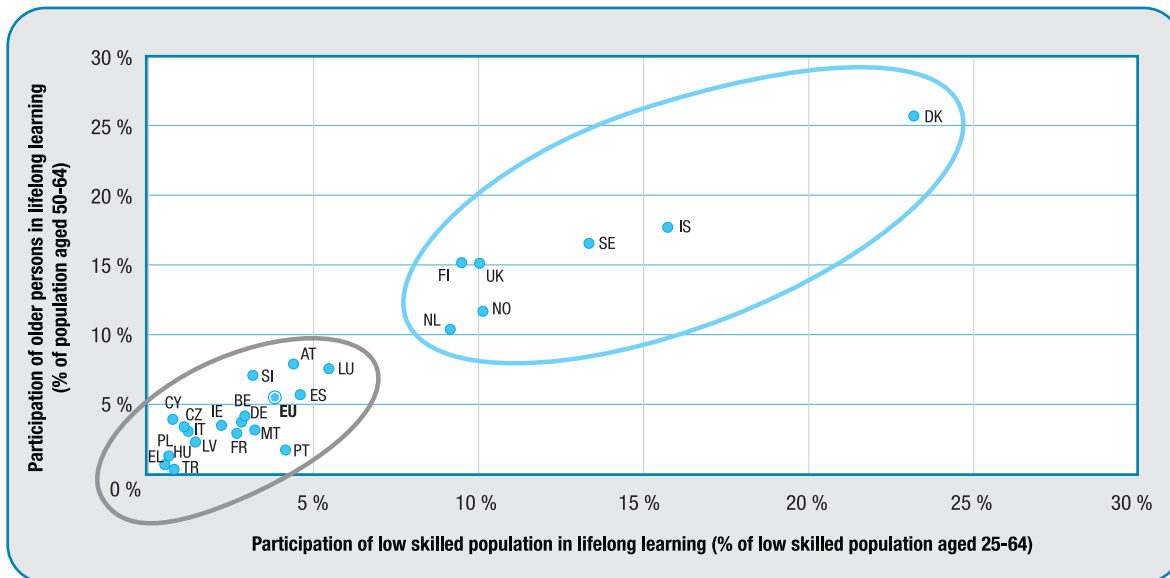
Countries are aiming to make lifelong learning accessible to everyone irrespective of age, for example the Noste programme in Finland or the Swedish adult VET initiative (Box 18). Policies also aim to find the balance between learning for the labour market and personal development by improving the flexibility in provision (for example through adult apprenticeship schemes), targeting learning to the needs and learning styles of older learners and providing incentives. However, more needs be done to ensure that ageing workers can participate more in various types of learning.

Ireland, offers free tuition to adults with less than upper-secondary level education. In 2009,

⁽⁸⁾ Eurostat. survey on income and living conditions, date of extraction 18.8.2010.

⁽⁹⁾ According to the Labour Force Survey, this is people who have participated in lifelong learning in the four weeks prior to responding to the question.

Figure 5. Participation of low skilled (at most lower secondary education) and older persons (aged 50 to 64) in lifelong learning, 2009 (%)



Source: Eurostat, Labour Force Survey, date of extraction 18.6.2010
Notes: Participation refers to the 4 weeks prior to the survey. Data for Sweden, Luxembourg and EU27 are provisional. Low skilled related data for Cyprus, Latvia, Poland and Slovenia may lack reliability due to small sample sizes.

Box 18. The Finnish Noste programme and the Swedish adult VET initiative

Noste is a programme launched by the Finnish Ministry of Education to increase participation by adults in education and training. Between 2003 and 2008, more than half of the Noste participants achieved a vocational qualification. The most important lessons learnt from the programme are:

- involving adults in their own education and training can increase motivation;
- education and training for adults should be work-based;
- education providers and employment administration should cooperate closely and provide guidance and counselling;
- active involvement of employers and employees is needed to address real skill needs.

In Sweden municipalities offer adults learning opportunities based on their knowledge, skills and competences and tailored to their individual needs. This includes making up for compulsory or upper secondary education. Outreach activities, guidance, validation, easy access and study support form the corner stones of these adult learning programmes. In 2009, the government launched an initiative to increase VET offers for adults (*Yrkesvux*) through municipal adult education. It targets specifically those who either lack upper secondary qualifications or need to complement them. The aim is to empower individuals through short and flexible programmes that meet individual as well as local and regional needs.

Source: ReferNet Finland, ReferNet Sweden, 2010.

Poland introduced a scheme reimbursing up to 50% of training costs (not exceeding the average monthly salary per employee) for employees and employers aged 45 and below.

For those over 45, reimbursement is up to 80% of training costs (not exceeding 300% of the average monthly salary per employee) for employees and employers aged over 45.

3.5.3. Supporting migrants and ethnic minorities

Migrants are a very diverse group in terms of qualification levels. Some may be well qualified, but their qualifications are not recognised and so undervalued in the host country (European Commission, 2010e). Compared to host country nationals, many young people with migrant backgrounds are more than twice as likely to leave school early (European Commission, 2009b).

Most countries support ethnic minorities and adult migrants through language training, often combined with training on the culture and political system of the host country. Training is also provided in key competences and basic vocational skills to improve job prospects. Luxembourg, for example, also provides cultural mediation, mentoring and psychosocial support for migrants.

Some ethnic minorities, for example Roma communities, live in isolated rural areas or move frequently from place to place and services need to adapt to these cultural characteristics. Romania, for example, sends out mobile units through their 'caravan' programme, to reach Roma communities. Ireland provides integrated services (combining education, training, health, etc.) to its Traveller community.

3.5.4. Learners with special education needs

Countries define special needs differently. Commonly, the term includes learning difficulties due to emotional or behavioural problems or social disadvantage, as disabilities (European Commission, 2009b).

Qualifications obtained at a separate facility are often less highly esteemed on the labour market than those acquired in mainstream education and training, as studies of different EU countries show. Integration in mainstream education and training not only leads to comparable results, but also to higher participation in society than education and training in segregated settings (Cedefop, 2009f). Only Italy has a fully inclusive policy and only in exceptional cases do pupils with disabilities learn in segregated schools or classes

(European Commission, 2009b).

For adult job seekers with disabilities countries provide on-the-job-training, work trials or job training with special assistance from a coach. Employment services in, for example, Italy, Portugal and the UK, provide in some cases, sign-language interpretation. There is a trend across Europe to provide guidance and counselling to jobseekers with disabilities as part of the mainstream rather than as a segregated service. Studies suggest a lack of awareness of the specific needs for people with disabilities and a need for a wider range of specially targeted initiatives for them (Eurofound, 2006).

3.5.5. Lifelong guidance for those at risk

Developments in lifelong guidance are discussed in Chapter 2, however, it is worth emphasising that people at risk of social exclusion need more than most help to discover their potential and manage the opportunities and challenges they encounter. Mainstream guidance needs to be able to cope with the very different demands of groups at risk of social exclusion. To prevent young people leaving school early they may need to be accompanied by social support as family background can significantly affect a person's educational achievement and their chances of finding a job. Older workers need guidance that is age-aware, for example in understanding skills and experience that have been accumulated over many years, but have never been recognised. For migrants and ethnic minorities guidance needs to be adapted to the cultural characteristics of different communities. Guidance also needs to be sensitive to gender to challenge stereotyping and encourage girls and boys to study non-traditional subjects.

All countries acknowledge the contribution of guidance and counselling to social inclusion have worked to improve access to guidance for all citizens. Further, out-reach work to identify and the hardest-to-help groups has, in many countries, increased network- and partnership-based cooperation across professional boundaries to offer more effective guidance to people at risk of social exclusion (Cedefop, 2010d).

3.6. Financial incentives

Financial incentives are provided to ‘attract’ individuals to participate in VET and to enterprises to encourage them to invest more in human resources.

3.6.1. Financial incentives for individuals

Countries use various financial incentives to encourage individuals to undertake more training. The most common are vouchers/individual learning accounts, loans and tax incentives.

Vouchers/individual learning accounts allocate money directly to learners to purchase training. These instruments reflect the trend towards a more demand-led approach that finances learners who decide what training they want. This approach can positively influence attitude, motivation, personal development and participation in training (Cedefop, 2009g).

Vouchers/individual learning accounts are direct, fixed government payments usually requiring cofinancing by the beneficiary. They can target specific groups, for example according to income, or participation in training over a certain period. They are used in many countries, for example Belgium, the Czech Republic, Germany, Estonia, Ireland, Spain, Italy, the Netherlands, Austria and the UK. For some schemes guidance and counseling is mandatory.

Loans to cover education or training expenses are available in all EU countries (Cedefop, forthcoming). Loans repaid in fixed installments are more widespread than those where the size of repayments depends on the individual’s income level. Loans for continuing training are less common than for higher education, but some countries including Denmark, the Netherlands, Finland and Sweden grant loans to VET students at secondary level.

Loans cover tuition fees and less frequently living expenses such as in Denmark and Sweden. Sometimes the loans will cover costs of study abroad. Eligibility criteria vary considerably, but most have income criteria. Some loans are for those from low-income families. Others are only available on commercial terms. Amounts

available also vary. Interest rates are often subsidised and range from 0%, for example, in Spain to the market rate in Hungary.

Countries such as Austria and Finland also have reduced personal income tax to encourage individuals to spend on job-related VET. France has a range of different incentives for apprentices and those in secondary and higher education. Luxembourg has tax incentives to encourage people to stay on in further education. There are also examples of support for specific training courses such as foreign languages and, for example in Ireland, ICT. Some tax incentives include education and training abroad. Not only participants in education and training who can benefit from tax incentives. For example, in Germany and Ireland parents can claim a tax deduction on tuition fees for dependent children.

3.6.2. Financial incentives for enterprises

Countries also use financial incentives to increase investment by enterprises. The most common are training funds and tax incentives.

Many countries secure a certain level of investment by enterprises through special levies (ranging 0.1% and 2.5% of payroll) for training funds. Belgium, Denmark, France, Cyprus, Hungary and the Netherlands, for example, created training funds in the 1970s and 1980s. Bulgaria, Iceland, Ireland, Italy, Poland, Romania and Slovenia (craft sector) have set up their funds in the last 10 years (Cedefop, 2008; Cedefop, 2009h).

Training funds can be established through voluntary arrangements between social partners at sector level under collective agreements as in, for example, Belgium, Denmark and the Netherlands. In France and Italy similar arrangements exist, but the state has to authorise the fund before it can operate. Italy has 18 sector training funds, France around 100 and Denmark around 1 000. Other countries, such as Spain and Cyprus have single national funds jointly managed by government and the social partners. In Ireland, social partners are consulted.

Funds are used generally to improve employees’ skills but also help other groups. In

Table 5. **Examples of tax incentives for enterprises for education and training in some Member States**

Country	Tax incentive	Main goal(s)
France	Tax credit for training expenses for entrepreneurs	Favours training activities of entrepreneurs who are not wage earners
	Tax credit in favour of apprenticeship	Encourages employment and education of apprentices
	Tax credit for training expenses of employees in enterprise economy and financial participation	Supports small and medium-sized enterprises in these areas
Netherlands	Payment reduction for education	Encourages enterprises to carry out education and training activities for their employees
Austria	Training tax allowance Training tax credit	Foster enterprises' investments in human resources

NB: These tax incentives affect personal income, or corporate taxes (depending on the legal status of the enterprise), except for the Dutch tax incentive, which reduces the salary tax paid by enterprises.

Source: Cedefop 2009i, updated information (ReferNet Austria, 2010).

Italy some training funds support managers and employers, while in Spain the training fund also supports self-employed people. Training funds can also provide opportunities for under-represented groups such as low-skilled and older workers, unemployed people, women and small and medium-sized enterprises. In Hungary, enterprises can use the levy to support up to 60% of the costs of general and 25% for specific training for employees. Enterprises can also fund up to 100% of the costs of organising practical training for VET students.

Most European countries have tax incentives for companies, or individuals to encourage investment in education and training. Among the countries to introduce tax incentives recently are Austria, in 2000, France and Lithuania in 2005 and the Czech Republic in 2009.

Concerning tax incentives for the purposes of corporate income tax countries regard expenditure on training as a business cost and is 100% deductible from taxable income. However, what is a business cost depends on national interpretations. For example, in Finland, spending on training to maintain and develop skills for the current job is deductible. Basic

education or training for employees leading to a degree or certification is not. Some countries, such as France, the Netherlands and Austria allow employers to deduct more than 100% of training costs. Tax incentives can be for training in general, or targeted to encourage specific types, such as apprenticeships, training for entrepreneurs and small and medium-sized enterprises (Table 5).

Tax incentives usually apply to VET purchased from recognised training providers. Countries often tax providers of education and training services differently. For example, Germany, Ireland, the Netherlands, Austria and Finland, tax private education and training providers at the same rate as other private enterprises (France taxes only private providers of continuing vocational training at corporate rates). Publicly owned providers do not pay corporate taxes. France exempts non-profit organisations providing education services from corporate income tax provided they meet specified criteria.

Despite the incentives, according to the continuing vocational training survey (Cedefop 2010e), which provides the latest data which is

for 2005 around 40% of enterprises in the EU did not provide continuing training for their employees, the same figure as in 1999. In 2005, these 'non-trainers' ranged from 15% in Denmark to 79% in Greece.

In 2005, the most common reason enterprises gave for not providing training is that they saw no need. This reason is more common than lack of time or cost (except in Bulgaria, Latvia, Lithuania and Romania where cost remains a significant obstacle), indicating that a large proportion of enterprises do not believe it necessary to invest in the skills of their workforce.

The survey reports that, in nearly all countries, most enterprises do not change their behaviour over time. They either provide training for their employees, or they do not. However, results for selected countries show that about 20% of enterprises are 'incidental trainers' who do change their attitude providing continuing training over two years.

In looking at enterprises that already provide training, the survey indicates that they see the effects of incentives as rather patchy. Only 36% of EU enterprises that provide continuing training stated that incentives influenced their training practice. Incentives were seen as more helpful in Belgium, Greece, France, Cyprus, the Netherlands and Portugal where the figure was 50%, but less influential in Germany, Estonia, Lithuania and Romania, where the figure was 20% or less. Few enterprises, particularly those in newer Member States (except Cyprus) and small enterprises throughout Europe, feel that financial subsidies have an effect on the continuing training they provide for their employees.

Incentives appear to have more effect on large and medium-sized enterprises than small ones. This is the case in all Member States, but the disparities between large and medium-sized enterprises that take up incentives and small enterprises that do not is particularly high in some Member States from the south and east of Europe.

3.7. Conclusions: towards more comprehensive and inclusive VET systems

Countries are aiming to develop VET systems that are comprehensive and inclusive, tailored to the needs of the best and brightest students, as well as those diverse groups at risk of social exclusion. It is difficult to say if changes made by countries have made VET more 'attractive'.

The period 2002-10 has seen an overall decrease in enrolment by young people in VET as a proportion of the total number of students in upper-secondary education from around 60% to around 50%. However, there are more upper-secondary VET students in around two-thirds of the countries participating in the Copenhagen process now than there were eight years ago.

There do not appear to be readily identifiable reasons for this trend. The situation varies across countries there seem to be no clear correlations between a fall in VET students and types of VET. There are incompatibilities between VET studies, increasingly based on learning outcomes and other parts of the education and training system, particularly higher education where qualifications are sometimes distinguished by the institutions that award them. However, all countries have worked to make progression from upper-secondary VET to tertiary education easier through courses which provide direct access, or bridging courses and additional exams. Some countries are also using validation methods. However, easier access to tertiary has not prevented the overall fall in the proportion of VET students.

In the final analysis it could be that perceptions of having greater choice and keeping options open, along with the influence of parents and peers that makes general education more 'attractive'. For example, jobs in the growing services sector do not have the same strong ties that existed between VET and occupations in the manufacturing sector. General education may provide a perfectly good route to various jobs in services. It could be that more and more young people go on to upper-secondary education without a clear idea of

what they want to do and choose general education.

VET's main aim is to prepare people to enter the labour market, but it needs to enable people to keep their options open. It is important to enable VET students to return to the same level of learning in a different subject, or to go on the tertiary education at a later date, perhaps after spending some time in the labour market, if they wish to.

The importance of work-based learning to a qualified workforce is acknowledged and there appears to be some revival in apprenticeship and other forms of work-based and workplace learning for young people. Small and medium-sized enterprises continue to face capacity building problems in providing workplace training places.

Although promoting mobility is a central aim of the Copenhagen process and there are some national initiatives, generally, other than using EU programmes, countries do not appear to have comprehensive national policies to encourage geographical mobility of learners. Mobility in absolute terms is still low, despite a substantial increase during 2000-09, principally through the Leonardo da Vinci strand of the lifelong learning programme.

Mobility in learning can encourage mobility later on and help people acquire key competences, but as yet, mobility is not integral to VET. VET students are far from enjoying the opportunities for mobility that those in higher education have through, for example, the Erasmus programme. Apprentices are at a disadvantage to school-based VET students in taking part in mobility programmes owing to the problems of organising placements abroad and the reluctance of some employers to participate. Bureaucracy also discourages participation in mobility programmes.

All countries are committed to promoting social inclusion by making education and training and related services more easily accessible and flexible. More differentiated VET systems to cater for different learning needs and styles also helps promote social inclusion. VET programmes are used to try to prevent young people leaving school with low education levels

and try to reintegrate those who do. Countries have also developed partial qualifications, modular courses and validation that are not just for young people, but also adults. Different forms of learning, including work-based and workplace learning are being used to support young people and adults who do not do well in traditional classroom settings.

Keeping options open and being aware of different options and ways of learning underlines the importance of lifelong guidance and counselling for everyone, including those at risk of social inclusion who may need more support than others. An effective VET strategy to promote social inclusion requires comprehensive and coordinated approaches and inter-institutional cooperation.

All countries provide incentives for continuing training. However, financial incentives for individuals to invest in their own training do not appear, so far, to have made access to VET more equitable. Inequalities in access to training persist, especially for low-skilled people and existing financial arrangements have difficulty in reaching specific groups.

It may also be time to rethink strategies to encourage continuing training and lifelong learning in enterprises. Despite costs being a clear problem in newer Member States a key issue is the high proportion of enterprises that do not train despite the very clear trend towards more knowledge- and skill-intensive jobs and an ageing workforce. This suggests that enterprises need to be much more aware of their skill requirements. Even among those enterprises that provide training, only 26% assess their future skill needs (Cedefop, 2010e). Enterprises need cost-effective tools to forecast skill needs more regularly and accurately.

Evidence from the 2005 survey also indicates that large rather than smaller enterprises use incentives for continuing training. This is a sign that the problems that small enterprises face in providing training for their employees are not being addressed adequately. Incentives to encourage training also need to be more sophisticated to overcome the obstacles that hold back investment in VET, particularly by small enterprises. Perhaps a difference should

be drawn between enterprises that, as a rule, do not provide continuing training and are unlikely to change their behaviour and ‘incidental trainers’, who just might be encouraged either to provide, or invest more in continuing training.

A fall in the number of VET students as a proportion of all students in upper-secondary education, too many early school leavers and participation in lifelong learning remains well below the benchmark of 12.5% of adults aged between 25 and 64 suggest that more needs to be done to develop attractive and equitable VET systems. The challenge lies in integrating the various parts of the VET system more closely. In short, to secure the skills for the future, we need to bridge different aspects of learning and working better.

CHAPTER 4

Promoting excellence and quality in VET

Opening up lifelong learning opportunities and making occupational and geographical mobility easier, requires learning outcomes and qualifications that people and institutions can trust. Consequently, countries committed themselves from the outset to improving the quality of VET and maintained that commitment throughout 2002-10.

The Copenhagen declaration (European Commission, 2002) advocated cooperation in quality assurance, with a focus on exchanging models and methods and common criteria and principles (see Chapter 2). However, recognising that quality went beyond evaluation mechanisms, the Copenhagen declaration as part of quality assurance emphasised giving attention to the learning needs of VET teachers and trainers.

The Maastricht communiqué (European Commission, 2004) repeated the importance of responding to VET teachers and trainers learning needs. However, it went a step further and linked quality assurance with enabling and encouraging VET institutions to participate in relevant partnerships. The Helsinki communiqué (European Commission, 2006a), stressed the importance of VET providing a broad knowledge and skills base relevant to working life highlighting excellence at all levels. The Bordeaux communiqué (European Commission, 2008a), linked more clearly quality with promoting excellence in VET.

All VET reforms aim, in some way, to improve its quality. This chapter groups together the above issues cited in the various communiqués and considers the measures taken by countries in those areas to promote excellence and quality in VET. The chapter first considers steps to recruit and provide initial and continuing training for VET teachers and trainers. It then goes on to look at measures to strengthen the links between VET and the labour market, particularly in VET policy and curricula development. It also looks at

efforts to improve skill demand and supply anticipation and forecasting. Finally, the chapter looks at developing key competences in VET.

The chapter concludes that there is a clear realisation among countries that excellence and quality in VET require the very best VET teachers and trainers, strong links with the labour market and balanced curricula that provide both key competences and job-specific skills.

The demands on VET teachers and trainers, who are indispensable partners in reform, are considerable. Successful reforms require, not only that they are well trained, but committed to the changes being made. However, some countries face shortages of VET teachers and trainers and in some the profession is ageing.

Considerable efforts have been made to strengthen links between VET and the labour market to ensure VET curricula are relevant to labour market needs. However, matching curricula to labour market needs is hampered by a lack of data to identify sector as well as occupational and qualification-level developments. A start to overcoming this problem has been made. Supported by the European level, countries are improving labour market models and forecasting methods that will give greater insights into labour market needs and will enable VET systems to prepare better for the future.

There is strong evidence of countries working to reinforce key competences such as entrepreneurship and active citizenship through VET. There is, however, a dilemma over the correct balance between key competences and job-specific skills that make people immediately productive in an enterprise and attractive to employers. VET systems and curricula will probably always be behind labour market developments. The key factor is that VET systems must be flexible enough to respond to changes as quickly as possible.

4.1. VET teachers and trainers: the key to high quality VET

High quality VET needs excellent VET teachers and trainers. The role of VET teachers and trainers is changing. Bulgaria, the Czech Republic, Spain, Hungary, Portugal, Romania and Slovenia are just some countries pointing out that VET teachers and trainers' development needs to be seen against a background of the shift to learning outcomes, learner-centred pedagogies, use of ICT, changes in skill demand and the needs of an increasingly diverse workforce.

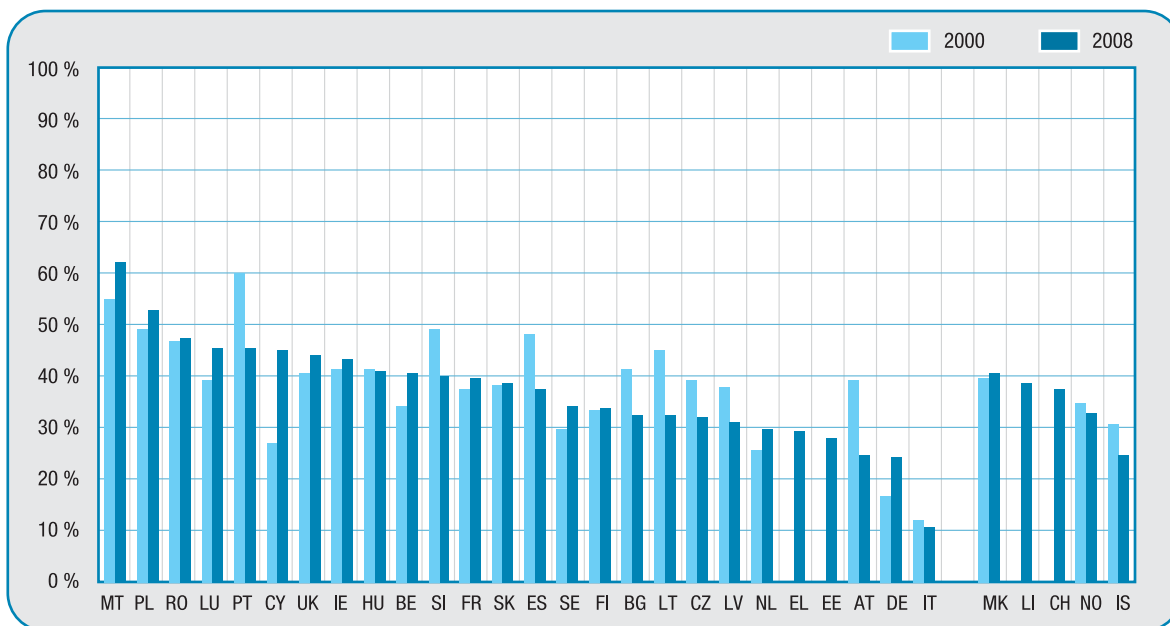
4.1.1. Seeking more highly qualified professionals

Some countries, for example, Belgium (Flanders), Germany, Poland, Sweden and the UK face teacher shortages and are concerned about attracting people into the profession. In 10 EU Member States the teaching profession is ageing, for example in Spain, Lithuania and

Portugal (Figure 6 – please note that the data do not separate teachers in VET and general education). In some countries, low pay, inefficient resource management and lack of career prospects are cited as reasons why people do not become VET teachers and trainers. Others suggest that social expectations and changing responsibilities may discourage people. Sweden argues that the status of VET teachers and trainers should be raised to attract more people to the profession. However, there are indications in some countries that the economic crisis encouraged some into lower paid but more stable teaching positions.

The period 2002-10, has seen a rise in the qualification levels required to enter VET teaching. More countries, including Belgium (Flanders), Denmark, Estonia, Iceland, Italy, Latvia, Spain and the UK require, or will require, VET teachers to have a tertiary level qualification. Several countries including Cyprus, Malta and Austria have converted teacher-training organisations into tertiary level institutions.

Figure 6. Teaching staff in secondary education aged less than 40, 2000 and 2008 (% of all teaching staff)



NB: Greece 2007 instead of 2008. Cyprus, Poland and Lithuania 2001 instead of 2000. Hungary and Austria 2002 instead of 2000. 2000 data for Luxembourg only refer to public sector. Data include post-secondary non-tertiary staff (ISCED 4) for the following countries: Czech Republic, Ireland, Finland, the Netherlands (2008), Estonia (2008), Portugal (2008), United Kingdom (2008) and Spain (2000). Changes in coverage have occurred in Greece (2005), Italy (2007), Latvia (2008, break in series). 2000 data for Norway include ISCED 4. 2000 data for Iceland do not cover ISCED2 and partly include ISCED 4.

Source: Cedefop's calculations based on Eurostat, UOE data collection on education systems, date of extraction 17.8.2010.

Some countries, such as Denmark, Germany, Estonia, Austria and Sweden require VET teachers and trainers to combine an academic degree with occupational and didactical skills. More VET teachers and trainers now hold a masters degree. In Germany and Ireland, for example, full-time trainers generally have a master level qualification.

4.1.2. VET teachers and trainers as lifelong learners

Most countries see a need to modernise initial training for VET teachers. The prevailing opinion in countries such as the Czech Republic, Estonia, France, Latvia, Lithuania, the Netherlands, Slovakia and the UK is that initial training for teachers of initial VET should be outcome-oriented and competence-based. More countries are developing minimum standards, a competence framework, or professional profile for VET teachers.

Several countries, such as Germany, Estonia, Hungary, Sweden and the UK, are creating new ways for specialists from business and civil society to enter teaching. In France, such certification already exists. A new reform for teacher education is planned in Sweden, where qualified workers can validate their knowledge and skills and then go on to study pedagogy.

For VET trainers, the trend in Greece, Cyprus, Romania and the UK, for example, is to define a profile and create regulations or standards. Some countries, such as Austria and the UK, have comprehensive initial training programmes for VET trainers. Other countries, such as Italy and Finland, provide training at regional level. In France, training organisations are autonomous, but the skills required are prescribed. Countries such as Czech Republic and Cyprus have industrial placement programmes or internships of varying periods for trainers and Hungary is piloting such a scheme. In France, engineers and managers are seconded to schools to share their experience. For in-company trainers the most important requirement is relevant knowledge and some teaching expertise.

Changes in VET teachers' and trainers' roles have placed greater emphasis on continuing professional development, not least because it

is imperative for implementing VET reforms successfully.

Teaching (and learning) in VET, using the competence-based approach and learning outcomes, is a priority in Belgium (Flanders), Malta and Austria. Other countries, including the Netherlands and Sweden, state that new methodological and didactic approaches in VET demand considerable professional commitment and still need to be fully understood and introduced. Some countries use EU funds for projects to introduce new pedagogies (Estonia, Latvia, Lithuania, Malta, Poland, Romania and Slovenia).

Countries such as Denmark, Estonia, Cyprus, Latvia, Lithuania, Hungary, Austria and Romania support continuing professional development systematically. As in Sweden, in Finland, education providers will be legally obliged to ensure systematic continuing professional development activities for teaching personnel. In Hungary, participation in continuing professional development every seven years is compulsory. The Czech Republic, Greece, Slovakia and the UK have made continuing professional development statutory.

Lack of substitution cover and value given to professional mobility as well as conflicts with other commitments are among the main obstacles hampering VET teachers' and trainers' professional development and their participation in mobility programmes. In response Cyprus, for example, has introduced paid leave for absences for professional development. Sweden's programme encouraging teachers to pursue higher education as part of their in-service training will, from autumn 2010, include university courses abroad.

VET teachers and trainers are also increasingly involved in providing training for literacy (Box 19) and active citizenship to promote social inclusion, targeting migrants and minorities. Training programmes, special websites and initiatives for trainers with a migration/minority background in the areas of literacy, basic education and second-language acquisition are currently being developed in Austria and Romania. In the Czech Republic, Hungary and Slovakia networks of counselling centres and projects support teachers and

advisers. There is also a trend in many countries to provide teaching assistants to support for those at risk of social exclusion.

Box 19. 'L-coaches' for literacy

In Belgium (Flanders), a project to develop a methodology for literacy training to keep lower-skilled workers employable was launched in 2008. It created an L-coach to teach literacy. Findings from the project will be disseminated and implemented further within vocational training programmes both in secondary and adult education.

Source: Belgium DGVT, 2010.

Teachers say that they need more training or new competences in dealing with difficult students and new contexts of assessment and evaluation. Teachers do not feel adequately equipped to deal with disruption and lack of motivation in classrooms. They also believe that assessment and evaluation have become more complex.

These demand VET teachers and trainers to take on new roles which require competences in administration, marketing, financial management, organisational culture, innovation and in creating learning environments. This is a difficult task. In Denmark there is a debate that instead of VET teachers and trainers trying to cover all of these roles, it may be better to promote cooperation among different groups of professionals (teachers, social workers, guidance counsellors, consultants) in the VET system.

4.2. Developing the right skills through links with the labour market

4.2.1. Involving labour market actors in VET strategy and curricula development

VET has a long tradition of involving labour market actors (enterprises, social partners, professional organisations, etc.) through councils, committees, projects and agreements at national, regional and sector levels, to

develop VET strategy and curricula.

In Germany and Austria, for example, labour market actors are members of permanent bodies at federal and regional levels. In Cyprus they are members of apprenticeship boards. The Confederation of Finnish Industries is involved in school boards. In France, labour market actors are involved in all committees in charge of qualifications and in agreements linked to labour market developments.

Countries strengthened involvement of labour market actors during 2002-10. In the Czech Republic involvement of stakeholders, especially enterprises, has been strengthened by the lifelong learning strategy approved in 2007. In Greece, social partners were closely involved in the 2007 agreement for VET reform and in developing the national qualifications framework. In 2008, France set up a new national employment council. In Austria, the social partners are members of a new standing committee on qualifications requirements for continuing training. Denmark, where initial and continuing training are governed by tripartite agreements, Norway, Finland and Sweden have all introduced changes (Box 20). Some countries, for example for example Ireland, France, the Netherlands, Austria, Poland, Sweden and the UK have increased involvement of labour market actors at regional level.

Most countries integrate changing skill needs into VET provision when updating standards and definitions of occupations. Countries have procedures to update standards which involve labour market actors at various stages coordinated at national, sector, local, or training provider levels to ensure their relevance to the labour market. In Cyprus, for example, the Ministry of Education and Culture identifies needs and updates the curricula when requested by major stakeholders, using annual suggestions by teachers and an analysis of lower secondary graduates. In France, various ministries, advisory vocational committees and joint committees of national employment are involved in updating vocational qualifications standards. In Estonia, the national examination and qualifications centre is responsible for designing and updating national curricula and helping schools to update theirs.

Most countries have sector skills councils (or transversal skills councils that cover more than one sector) whose role is to identify skill needs and adapt provision. The structure varies within countries. Poland and Portugal, for example, have sector councils at national level for initial training. The Czech Republic also has sector councils at national level but with responsibility for both initial and continuing training. France has different sector councils for initial and continuing training at national level and, at regional level, has different transversal sector councils for initial and for continuing training. An important difference is that councils dealing with initial training are often statutory bodies comprising policy-makers and training organisations as well as social partners. Councils covering continuing training are usually

organisations jointly managed by social partners (Ecorys, 2010).

The European Commission aims to reinforce European cooperation in skills anticipation by analysing the feasibility of establishing sector councils on employment and skills at EU level (Box 21).

Procedures to respond to new skill needs, however, can take time and be too slow to adjust to more immediate demands on the labour market. Consequently, some countries have built in rapid responses into their VET systems. Austria provides specific tertiary-level VET and Sweden (Box 22) higher vocational education programmes which are developed based on a demonstrable labour market need. Each programme has a limited lifespan after which a new application is submitted in competition with

Box 20. New aspects of improved cooperation and partnerships

Since 2002, **Denmark** has fine-tuned existing structures and mechanisms, resulting in:

- stronger ties between the Ministry of Education and trade committees in anticipating skill needs;
- special development committees (*Særlige udviklingsudvalg*) to support reforms, counter inertia in VET programmes and identify the need for new VET programmes outside the jurisdiction of trade committees;
- 13 newly-established adult and continuing education and training centres (*Voksen- og Efteruddannelses Centre*) that also identify and integrate skill needs.

In **Finland** the 34 national education and training committees comprising representatives of the national education and training administration, teachers, employers and employees, were set up in 2007. They cover vocational upper secondary, adult education and higher education. They follow, evaluate, anticipate and analyse development of skills needed in the labour market. They also suggest changes to develop training.

In 2008, the committees confirmed the targets in education and research of the development plan for 2007-12. They presented proposals to develop a systematic tool for anticipation and follow-up and advised a cluster approach by field or profession for in-depth anticipation.

As part of the reform of upper secondary education, including IVET, the **Swedish** National Agency for Education will develop programme councils (*Programråd*), including representatives from employers, employees and other experts, at national and local levels for all upper secondary programmes from 2011. The councils will contribute to higher completion rates and greater relevance.

In **Norway**, the knowledge promotion reform of 2006, changed the institutional structure of tripartite cooperation in VET. The background for reform was a wish for greater flexibility. Vocational training councils are directly involved in deciding new job profiles upon which education and training is based. They evaluate the adaptability of VET provision to changes and initiate measures for new training occupations/crafts. They also advise on assessment, competence development and quality.

Box 21. Sector councils on employment and skills at EU level

Sector councils on employment and skills at EU level would comprise representatives of trade unions, employer organisations, education and training systems and others such as those involved in economic development.

The objectives would be to:

- collect, analyse and summarise sector skill studies at European and national levels;
- compare information on skill needs with that on skills supply;
- discuss the findings between sector stakeholders and those designing education and training programmes;
- consider the role of existing European instruments and principles in education and training, such as the European qualifications framework, the European credit transfer and accumulation system, the European credit system for VET and Europass;
- help set up partnerships for anticipating skill needs.

Source: Ecorys, 2010.

others. In Denmark, short competence-based courses are developed in continuing training. In Lithuania, initial training programmes are decentralised to respond better to labour market trends. In Belgium (Wallonia), the public employment service has developed a network of sector-related skill centres since 1998 to provide training linked to new technologies and ensure a better match between training supply and labour market needs.

Despite clear trends to involve labour market actors in VET, some countries experience difficulties. The most cited is availability of experienced and knowledgeable stakeholder representatives. Another is reliability of data, particularly in newer Member States. Generally, increased involvement requires more resources, especially time and motivation. Many countries quote the difficulty of balancing diverging interests. However, some experiencing difficulties still believe that the level of involvement is satisfactory.

Box 22. Sweden’s national agency for higher vocational education

Sweden’s national agency for higher vocational education, introduced in 2009, has a mandate that includes quality management and analysing future labour market skill needs. It has established a labour market council of representatives from industry, social partners and the public employment service. Higher vocational programmes cover a wide range of occupations tailored to the needs of the labour market. Most of these programmes include a significant proportion of training at the workplace. The agency has also developed a national structure for validating vocational education, skills and competences and is the Swedish EQF coordinator. New higher vocational education is a rapidly growing form of post-secondary VET.

Source: ReferNet Sweden, 2010.

Integrating changing skill needs into VET provision in the long term means being more proactive. It is necessary to get a better grasp of emerging sectors and skills, and changes in existing occupations. This requires improved systems and methods to anticipate skills in partnership with all labour market actors. To capture these trends and requirements, occupational and education/training standards need to be revised regularly with relevant stakeholders.

The European level has an important role in developing anticipation systems by providing comparable data on future challenges. Regular forecasts, produced since 2008 (Cedefop, 2010f) provide projections for the EU and each Member State up to 2020 for skill supply and demand according to broad educational levels. The forecasts are updated every two years and the current forecasts (Box 23) are discussed in more detail in Chapter 6. To complement the quantitative forecasts, the European Commission and the European Foundation for the Improvement of Living and Working Conditions (Eurofound) have published a series of studies of emerging trends in 18 economic sectors. To involve business in forecasting jobs and skill needs, the EU is developing a

Box 23. Skill anticipation

Skill anticipation is the process of identifying future skills or qualifications expected or required by the economy in a short, medium or longer term. It is based on various qualitative and quantitative methods to identify the jobs that will be available in the different sectors of an economy, and the corresponding skill or qualification requirements.

European-wide employers' survey.

Most countries are developing systems to anticipate skill demand and supply (Box 23) to improve the match on the labour market between demand and supply in quantitative (jobs) and/or qualitative (skills and competences) terms. The main methods used combine quantitative and semi-quantitative approaches, such as employers' surveys, case studies, job advertisement analyses, scenarios and observatories. Other approaches are studies of sectors, occupations, qualifications and skill requirements for specific target groups. Approaches vary in scope, time and frequency.

Many countries carry out regular skill

Box 24. National foresight programme Poland 2020

In 2006, Poland started its national foresight programme to provide a vision of Poland's development until 2020 and help define policies for a knowledge-based economy.

Methods comprise Delphi, PEST (political, economic, social and technological factors) and cross-impact analyses. Poland's is currently the only nationwide programme dealing with such issues as forecasting intellectual capital.

Source: ReferNet Poland, 2010.

forecasts, usually at national level, for example Cyprus, France, Germany, Malta, Norway and the UK. Short-term forecasts are undertaken more generally at regional or local levels, for example in Latvia, Austria, Poland and Slovenia. Other countries such as Romania and Slovakia have started developing forecasting methodologies or national strategies of skill anticipation as in Bulgaria, the Czech Republic, Latvia and Poland (Box 24).

Table 6. Skill needs anticipation by public employment services, involvement of relevant stakeholders in France

Level	Initiator	Main focus	Example of initiative
National	Prime Minister, Ministries of Employment and of Education	Recruitment, sector development	Prospective study contracts; state of sectors; actions to be taken
Regional	Employment and training observatory (tripartite, funded within 2007-13 State-regional councils contracts)	Analysis, forecast for school training, continuing training and training in enterprises	Regional employment and training observatories; 2009 periodic analysis of quantitative and qualitative development of sector activities and professions
Sectoral	Industry branch joint observatory; set-up of professions and qualifications forecast observatory in 2004	Forecast on development of branch professions at regional, national and European levels	Observatory of automobile trades entrusted since 2004 with all related studies following a diagnostic and forecasting approach

Source: Cedefop 2010f.

Box 25. Spain's job market observatory network

The job market observatory network comprises observatories of the national public employment service (SPEE), autonomous communities and Instituto Nacional de las Cualificaciones (Incial).

This network promotes cooperation among sector and geographical observatories. To anticipate job market requirements, the SPEE analyses, national and regional trends in the job market and occupations. The autonomous communities and SPEE inform how demand and supply of occupations, activities and job profiles develop in the labour market. The Incial observatory is also involved in defining, developing and updating the *catálogo nacional de cualificaciones profesionales* (national catalogue of professional qualifications). and regularly reports on evolution (from an economic and vocational perspective) of the 26 professional groups.

Source: ReferNet Spain, 2010.

Bulgaria, Germany, Spain, Estonia, France, Italy, Cyprus, Lithuania, Luxembourg, Hungary, Poland, Slovakia and Finland are among the countries that conduct employer surveys and annual labour market forecasts to inform VET planning. Cyprus, Finland, France, Ireland, Lithuania, Malta, Norway and Portugal conduct sector skill needs studies. In many newer Member States information on skill needs is collected in one-off studies. They lack an institutional and financial framework to anticipate skill needs systematically.

Several countries, for example, Germany, Spain, France (Table 6), Latvia, Portugal and Romania have multilevel schemes for policy-making and research in anticipating skill needs that link national, regional and sector levels.

Countries acknowledge that methods to anticipate skill needs have to improve. Quantitative and qualitative anticipation methods and results are not always consistent. Regional anticipation systems also need improving. Most countries plan to develop models and improve methodologies. Norway

and Sweden will broaden the tasks of existing bodies to include anticipation and identification of skills needs. Spain has already set up a national job market observatory network (Box 25). Social partners too, refer to plans to establish national information systems, develop networks for skills assessment and participate in EU studies.

4.2.2. Developing key competences through VET

As well as job-specific skills people also need key competences. VET has always provided more than narrow occupational skills training and includes key competences in the curricula. There are sometimes conflicts of interests between employers and employees about the skills needed. Employers focus on short-term, quickly learned, specific skills. Employees' skill needs are long term and more general. Consequently, the problem lies in finding the right balance. This can vary between countries and the type of initial training. Many apprenticeships have a smaller element of key competences compared to job-specific skills than school-based VET (OECD, 2009a). Development of all types of skills depends on a good basis of literacy and numeracy. However, many people enter the VET stream with weak literacy and numeracy skills.

The recommendation of the European Parliament and of the Council on key competences for lifelong learning 2006 (Council of the

Box 26. Key competences for lifelong learning

The eight key competences in the recommendation of the European Parliament and of the Council on key competences for lifelong learning are:

- communication in mother tongue;
- learning to learn;
- communication in foreign languages;
- social and civic competences;
- competences in maths, science, technology;
- sense of initiative and entrepreneurship;
- digital competences;
- cultural awareness and expression.

EU, 2006a) defines eight key competences (Box 26) that all young people should develop by the end of initial education to a level that equips them for further learning and work throughout life. The recommendation outlines broad European objectives leaving countries to decide on implementation.

The recommendation stresses that while the framework promotes key competences for young people completing initial education and training, it should also help adults develop and update key competences throughout their lives. Some of the key competences in the framework are being particularly developed in VET, in particular entrepreneurship, active citizenship and foreign languages.

4.2.2.1. *Entrepreneurship – A clearer concept and new developments*

Focus is on developing entrepreneurial attitudes in line with the recommendation on key competences (Council of the EU, 2006a). Entrepreneurship is understood as an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as planning and managing projects to achieve objectives. This definition applies to traditional ideas of entrepreneurship, such as business start-ups and expanding one's own business, but also use of such skills by employees to improve the performance of an enterprise.

Entrepreneurship is part of VET curricula in most countries and is compulsory in some. In Estonia and Poland, entrepreneurship is part of the core curricula for all professions. Denmark, Norway, Portugal and Sweden have national strategies to strengthen and integrate entrepreneurship into all levels of education and training. Finland will revise its initial VET core curricula for competence-based qualifications to include credits for entrepreneurship and business studies. In the UK, in 2007, over 90% of secondary schools provided enterprise education for students aged 14 to 16.

However, there are differences in the way entrepreneurship is taught. Some countries teach it as a separate subject in the curricula. Others teach entrepreneurship principles in the context of other related subjects. Countries,

such as Lithuania, Luxembourg, Malta, Norway, Romania, Slovakia and Slovenia have 'practice' firms, often in partnership with real companies, to simulate business activities to develop entrepreneurial skills. In Austria, 'practice' firms have been mandatory in upper secondary business programmes since the 1990s. In the academic year 2008/09, Romania introduced a national competition for the best practice firm business plan.

Developing entrepreneurship is, however, hampered by several factors. In particular, teachers are not trained to teach entrepreneurship. A few countries provide teachers and trainers with courses on entrepreneurship, but rarely systematically. Entrepreneurship is still not included in all parts of VET and participation of students in certain countries is limited.

Closer links between entrepreneurs and VET teachers and students would also help. Certainly the image of entrepreneur is worse in the EU, in particular in newer Member States, than in the US (European Commission, 2007b). UEAPME, the European Association of Small and Medium-Sized Enterprises has called for a European programme to encourage highly-educated people to set up their own businesses and restore the image of entrepreneurs, underlining their role as creators of jobs, products and services.

4.2.2.2. *Active citizenship*

Another key competence being developed in VET is active citizenship, which is a priority in all countries. Depending on traditions and history, there are differences in practice. One reason may be the difficulty of defining active citizenship (Box 27) and confusion between 'citizenship', 'volunteering' and 'participation'. All involve degrees of action or activity, but alone they do not necessarily equate to 'active citizenship' (Nelson and Kerr, 2005). Several countries have policies to encourage active citizenship. For example, the Polish national programme (PNP, 2008) 'integration through activation' focuses on bringing those at risk of social exclusion back into society and the labour market.

Box 27. Defining and encouraging active citizenship

Active citizenship can be defined as the ability to participate in a society's political, social and cultural life. It includes new and less conventional forms of active citizenship, as well as traditional forms of voting and membership in parties and NGOs. Its limits are set by ethical boundaries. People's activities should support the community and should not contravene principles of human rights and the rule of law (CRELL, 2006).

The **Hungarian** 'Life skills for employability programme' develops 13 to 18 year-old students' social competences to become active, responsible adults. Emphasis is on ideas and proposals initiated by students themselves and communal activities.

In **Ireland**, the Europa diary is used in the classroom to inform young people on their role as European citizens and about topics such as the environment and consumer issues.

In **Norway**, in the working and business life curricula, students study civic and social life and deal with questions on employment and unemployment.

Source: ReferNet Ireland Norway, 2010, ReferNet Hungary, 2010, ReferNet Norway, 2010.

Student councils play a significant role in active citizenship. In Austria, for example, national representatives can comment on draft legislation concerning education. Student councils, in the school and wider communities through local regional and national associations, encourage social, cultural and other extra-curricular events. Internet-based virtual youth councils have been set up in Denmark, Romania and the UK. Learner and teacher councils in several countries for example, Latvia, Lithuania and Slovakia have also been set up. School governing bodies, comprising learner, teacher and parent representatives can play a significant role in decision-making. These bodies sometimes include regional stakeholders or business representatives, as, for example, in Slovakia.

Many countries underline the importance of proper teacher training and adequate teaching

methods for active citizenship education. Countries such as Italy, Latvia, Lithuania, Malta, Austria, Finland and the UK have guidelines for training and awareness campaigns to experiment with teaching of different citizenship-related subjects. However, so far, there seems to be a lack of citizenship-related teaching practice across the EU (Peterson, Knowles, 2009).

No international data are available on citizenship education for adults. There are some examples of training for trade union members and initiatives for immigrants to integrate them better into social and civic activities. Countries believe that greater participation in lifelong learning will have a positive effect on active citizenship, especially, if training gradually integrates various active citizenship knowledge and competences.

4.2.2.3. Foreign languages

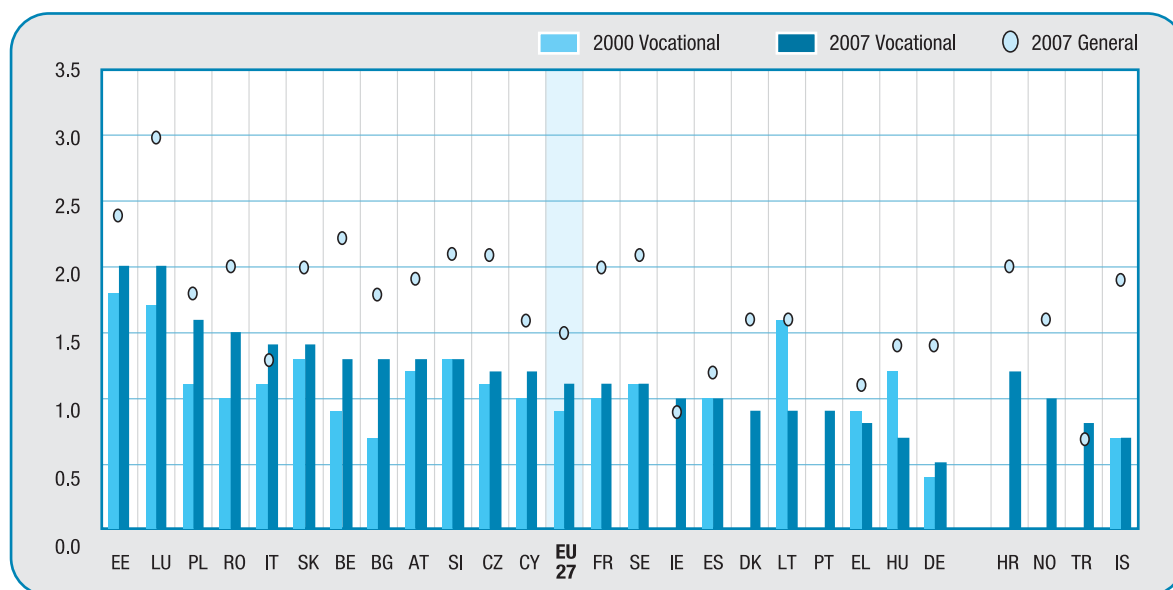
Language skills benefit enterprises and improve people's job prospects. Some businesses are increasingly dependent on language skills, for example, help desks, call centres, and nursing (European Commission, 2010b). Lack of foreign language skills, not just English, remains a barrier to mobility in VET. Some countries are emphasising teaching of foreign languages as part of developing mobility and a European dimension to their VET systems (see Chapter 3). Fewer foreign languages are learned in VET than in general education, but there has been an increasing trend during 2000-07 (Figure 7).

While generally, VET learners seem to acquire fewer foreign languages than those in general streams, the number may vary considerably between sectors. For example, VET students of tourism are likely to acquire more languages than in other sectors.

Adults also seek to improve foreign language skills through continuing vocational training. In many cases the language being learned is English, but other languages are also in demand including French, German, Russian, Spanish and Mandarin Chinese (European Commission, 2010b).

In the EU, 63% of the adult population say they know at least one foreign language, but only 31% say they know it well (at a good or proficient level). Knowledge of a foreign

Figure 7. **Average number of foreign languages learned per student in vocational upper secondary education (2000 and 2007) and in general upper secondary education (2007)**



Source: Eurostat, UOE data collection on education systems, date of extraction 10.8.2010.

Notes: France: data only refer to institutions monitored by the Ministry of Education. United Kingdom: data are based on the number of pupils taking exams and only refer to the public sector. Greece data refer to 2006 instead of 2007 and to 2001 instead of 2000. Croatia, Iceland, Norway and Portugal data refer to 2006 instead of 2007.

language is widespread in Lithuania, Sweden, Latvia and Slovakia. In these countries, more than 90% of adults know at least one foreign language and more than two thirds of them know it at a good or proficient level (data based on self reported statements). In Hungary, Bulgaria, and the UK, less than 20% adults say they know a foreign language at a good or proficient level. Young adults are more comfortable with languages. Compared to the EU average of 63%, the knowledge of at least one foreign language rises to 74% for people aged 25 to 34 years and drops to 47% for those between 55 and 64 years ⁽¹⁰⁾.

4.3. Conclusions: higher expectations of VET

There is clear realisation that excellence and quality in VET go well beyond mechanisms for evaluating performance of VET systems. They

require the very best VET teachers and trainers, strong links with the labour market and balanced curricula that provide both key competences and job-specific skills.

Greater expectations of higher quality from VET systems and success of VET reform fall largely on the shoulders of VET teachers and trainers. Currently, they face challenges of learning new pedagogies following the shift to learning outcomes and developments in work-based learning. They have to keep up with technological developments and new labour market demands and more diverse classrooms. It is with some justification that countries such as Lithuania argue that VET teachers and trainers are among the most affected by globalisation. This underlines the need to attract good candidates into VET teaching and training and provide them with high quality initial training and systematic opportunities for continued professional development.

Given their crucial role several countries, including Bulgaria, Italy, the Netherlands, Norway, Portugal, Romania and Slovakia, point to the fact that VET teachers and trainers need

⁽¹⁰⁾ Cedefop's calculation based on Eurostat, Adult Education Survey, date of extraction 7.10.2010.

not only the skills to implement VET reform, but that they should also help shape it through involvement in developments such as national qualifications frameworks. VET teachers and trainers are indispensable partners in reform. Successful reforms require, not only that they are well trained, but also committed to the changes being made.

Even countries with a long tradition of involving social partners and other labour market actors in developing VET have rethought and given greater impetus to these relationships. Others have sought to develop the capacity of labour market institutions to play a greater role in VET development. These partnerships play a key role in ensuring the relevance of VET curricula to labour market needs and are increasingly found at different levels – European national, regional and sector.

However, integrating skill needs into VET provision is complex. Ensuring curricula are relevant to labour market needs is hampered by lack of national strategies for economic development that set out which sectors and skills are most important for the future and lack of data to identify sector as well as occupational and qualification-level developments.

A start to overcoming this problem has been made. Supported by the European level, countries are improving labour market models and forecasting methods that will give greater insights into labour market needs and will enable VET systems to prepare better for the future. Anticipation based on a common description language for knowledge, skills and competence in the labour market and in education/training could provide better and more focused information on future skill needs and improve the matching of skills supply and demand. A European taxonomy of skills, competences and occupations (ESCO) could make labour market and skill research more comparable and encourage international research. For international comparison ISCED and ISCO are indispensable, but for details on skills and competences, no international standards are available and most studies build upon ad hoc classifications.

Forecasts cannot predict the future precisely, but they can signal trends and complement other

labour market information. This can help to devise long-term and proactive VET policy. Forecasts also benefit people who choose or need to change education and training or career paths, education and training providers, guidance and placement services and enterprises. The better they are informed, the more effective will be their decisions on skill investment.

The pace of change that can transform the specific tasks of a particular job underlines the importance of key competences as a basis for people to manage technological and organisational progress. Developing key competences in the early years of education, particularly literacy and numeracy, is important. Excellence in VET requires future VET students to have a good grounding in key competences to perform well in their chosen studies. Sometimes VET's importance to delivering excellence is overshadowed by the support it provides to the less able. VET should not be seen purely as a remedial route for those who need extra help.

Many countries are using the opportunity of the shift to learning outcomes to revise VET curricula to give a higher priority to key competences.

Key competences and the relative importance of each one can change over time and according to the situation. Consequently, key competences need to be reinforced through VET. There is strong evidence of countries working to reinforce key competences such as entrepreneurship and active citizenship through VET. This lifelong learning perspective underlines the importance of implementing the European framework of key competences (European Parliament and the Council of the EU, 2006a) beyond compulsory education and its relationship with common European instruments and principles.

Linking the levels in the European qualifications framework more closely to the key competence descriptors would show that key competences are not fixed but change according to age, experience and situation ⁽¹¹⁾. The different levels in the EQF could also help

⁽¹¹⁾ For a more detailed discussion, see background note to EQF advisory group AG6-10, 10-11 June 2010. 'Reflections on the relationship between the European qualifications framework and the European framework for key competences'.

outline developments and progression in key competences. Key competences also need to be included in national qualifications frameworks. This would show how key competences can be developed by formal education and training institutions and introduced in qualifications and developed at different levels and across sectors.

There is, however, a dilemma over the correct balance between key competences and job-specific skills that make people immediately productive in an enterprise and attractive to employers. There are conflicts of interests between employers and employees about the skills needed. Employers focus on short-term, quickly learned, specific skills. Employees' skills needs are long term and more general. Reconciling these perspectives and deciding which skills should be developed with the support of government and which are the responsibility of enterprises and individuals to achieve a good balance in developing VET curricula, requires open dialogue.

VET systems and curricula will probably always be behind labour market developments. The key factor is that VET systems must be flexible enough to respond to changes as quickly as possible.

Investment in VET and the initial effects of the economic crisis

The Lisbon strategy called on Member States to make ‘a substantial annual increase in per capita investment in human resources’. Effective use of resources was also one of the concrete future objectives for education and training (European Commission, 2001). The Maastricht and Helsinki communiqués (European Commission 2004 and 2006a), echoed the calls to improve public and private investment in VET, while the Bordeaux communiqué emphasised EU funds should support implementation of the Copenhagen process priorities. The European Council, in 2008, reaffirmed, ‘the importance of investing more and more effectively in human capital and creativity throughout people’s lives’ (Council of the EU, 2008c).

This chapter examines public expenditure, including support from European funds, on education and training. As the most recent data on expenditure on education and training relate to 2008 the impact of the crisis on public expenditure on VET is not yet known, but the chapter looks at how VET was used in response to the economic crisis. It then reviews available data on expenditure by enterprises and individuals on continuing training and finally discusses how countries have sought to make their VET systems more efficient.

The chapter concludes that prior to the crisis in the EU as a whole there does not appear to have been a ‘substantial’ per capita increase in expenditure in human resources as proposed by the Lisbon strategy either by governments, enterprises, or individuals. However, there are strong indications that there was a large increase in public spending on VET as part of European and national measures to combat the economic crisis’s effect on unemployment. However, these were emergency measures not a planned sustained increase in investment in human resources. Consequently, the likely scale of future budget cuts by countries will bring tough choices over where it is best to invest

limited resources on VET. Cooperation between VET stakeholders strengthened in response to the economic crisis and may provide a basis for new financial partnerships to stimulate investment in human resources.

5.1. Public expenditure on education and training 2000-07: before the economic crisis

Public expenditure on education and training ⁽¹²⁾, as percentage of EU GDP, remained fairly stable during 2000-07, at around 5% (Figure 8). Between 2000 and 2003, expenditure increased from 4.88% to 5.14% of GDP. Since then it has fallen back a little to 4.96% in 2007. Four countries Ireland, Spain, Romania and the UK increased spending on education and training in 2007.

Figure 9 shows that, in 2007, spending on vocational programmes ranged from between 0.1% (Romania) and 1.1% of GDP (the Netherlands and Finland). In comparison with 2003, spending on vocational programmes fell in seven countries (the Czech Republic, Germany, Cyprus, Luxembourg, Hungary ⁽¹³⁾, Poland and Slovakia). Only the Netherlands increased expenditure on vocational programmes. Member States (for which data are available) invested a larger share of GDP in general than in vocational education ⁽¹⁴⁾ at secondary and post-secondary (non-tertiary) levels. The only exception is the Netherlands.

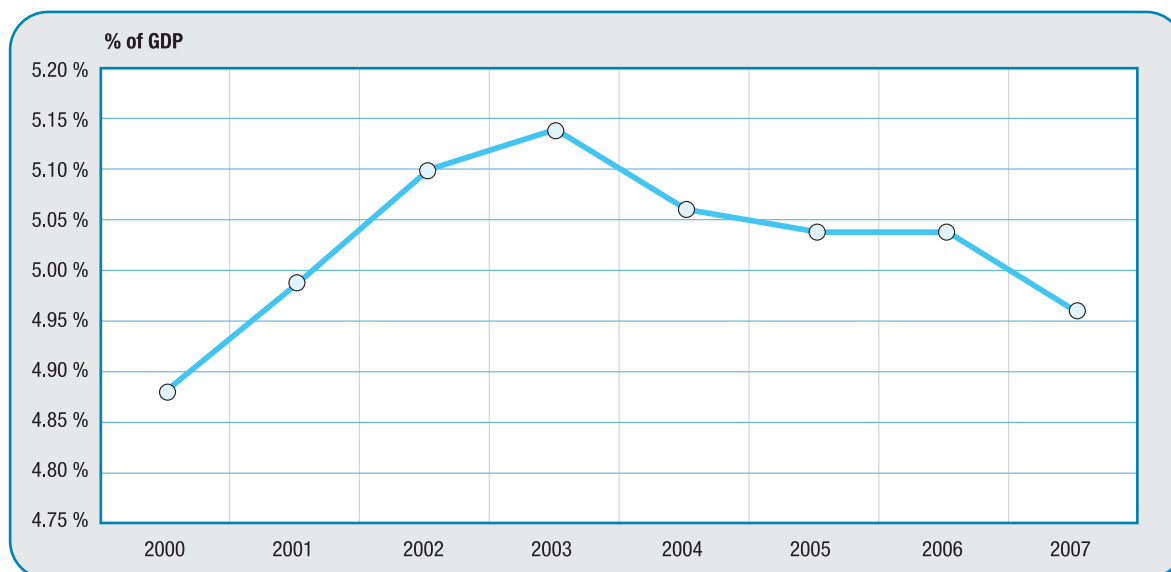
However, when comparing public expenditure on VET versus general education and between

⁽¹²⁾ Data cover spending on education and initial training.

⁽¹³⁾ A review of the curricula and subject system applied in vocational schools in Hungary resulted in reclassification in 2003. This explains the big drop in expenditure on vocational programmes.

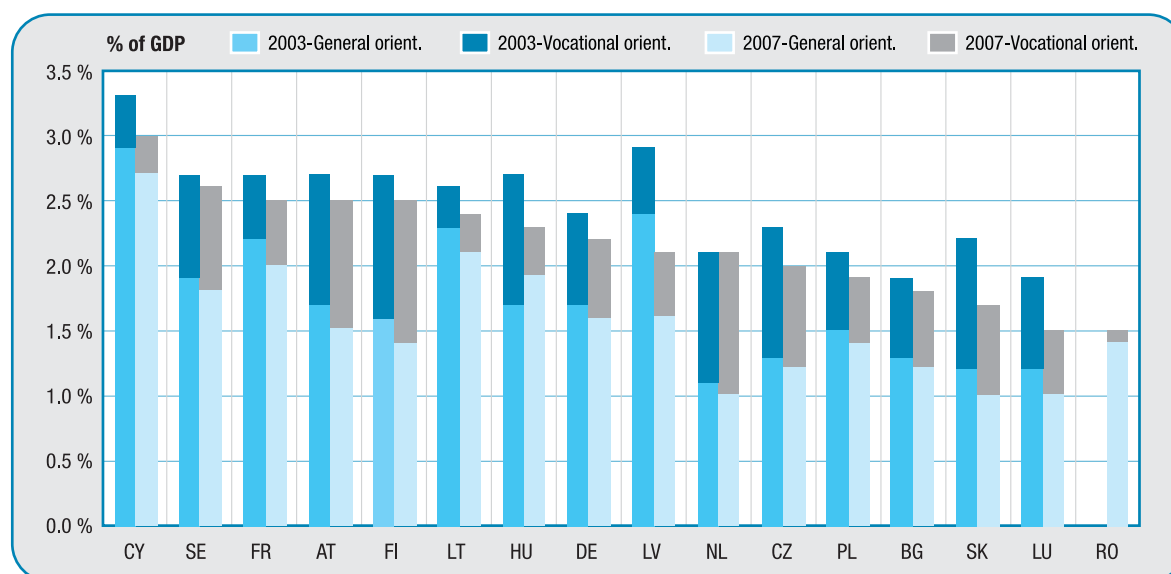
⁽¹⁴⁾ Including prevocational programmes.

Figure 8. **Public expenditure on education and training, EU-27, 2000-07 (% of GDP)**



Source: Eurostat, UOE data collection on education systems, date of extraction 17.8.2010.

Figure 9. **Total public expenditure on secondary and post-secondary non-tertiary education (ISCED 2-4) by programme orientation, 2003-07 (% of GDP)**



Source: Eurostat, UOE data collection on education systems, date of extraction 26.7.2010.

NB: data for Latvia refer to 2004 instead of 2003, data for France refer to 2005 instead of 2003.

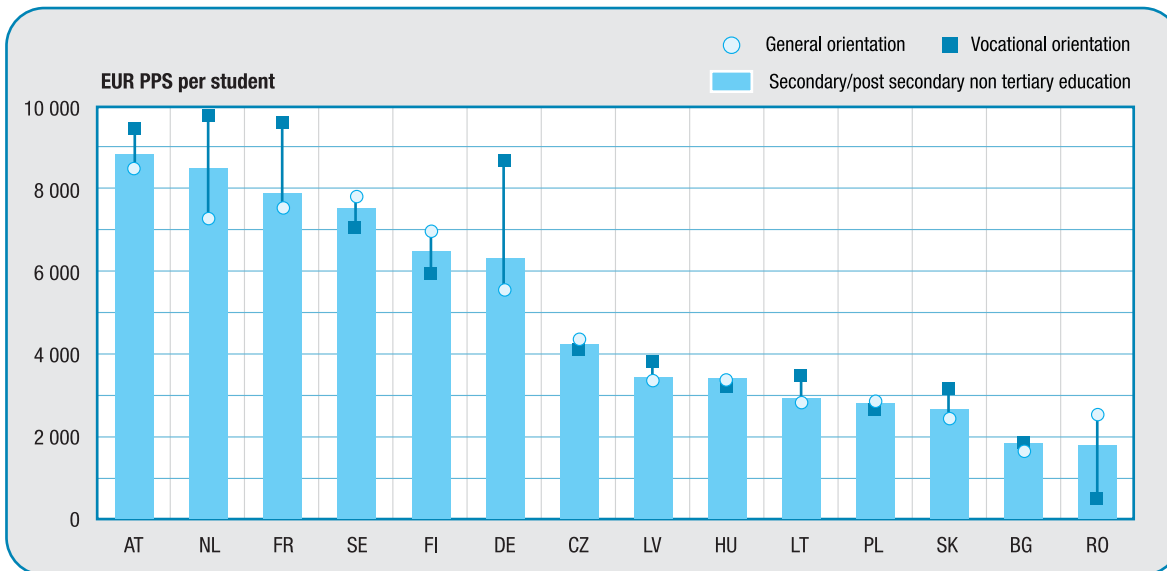
Luxembourg data does not include ISCED 4 and some transfers to other private entities. Slovakia: data include ISCED 5B.

countries it is important to note that the figures do not include the contribution of enterprises to training costs. In addition, it should be noted that the figures include lower secondary education, which is typically general. This may cause some

overestimation in the differences in expenditure between general and vocational orientation.

Upper-secondary and post-secondary VET tends to be more expensive than general education at these levels. Figure 10 shows that

Figure 10. **Expenditure on educational institutions in secondary and post-secondary non-tertiary education by programme orientation, 2007 (EUR PPS per student)**



Source: Eurostat, UOE data collection on education systems, date of extraction 26.7.2010.
NB: Data for the Czech Republic, Germany and Hungary refer to 2006 instead of 2007. Data for Slovakia include level 5B.

eight of the 14 countries for which data are available, invested more per student in VET than in general education in 2007. The period 2003-07 shows an increase in investment per student for nine of the 14 countries (complete time series data are not available for Hungary, Poland and Romania).

5.1.1. Pre-crisis – The shift to adult learning

Before the economic crisis, many Member States, including Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Poland and the UK were encouraging more investment in adult learning (Box 28). This may, to some extent, reflect demographic trends as some of the funding was redirected from initial VET.

5.1.2. Public expenditure on training as an active labour market policy

Reflecting higher employment rates, prior to the economic crisis, between 2005 and 2008 there was a small decrease in spending on VET on active labour market policies (programmes such as public employment services and training to

Box 28. Investment in adult learning in selected EU Member States

In **Austria**, in 2007, public financing for adult learning increased by a third, mainly due to a shift from school to adult learning in ESF funding 2007-13.

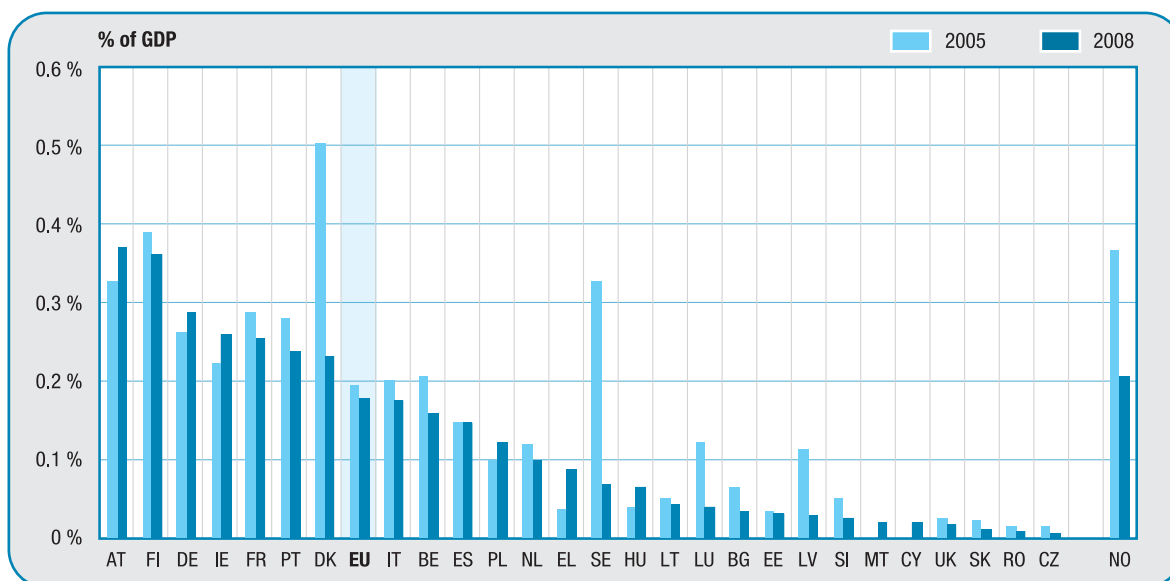
Ireland increased expenditure on adult and further education during 2002-09 by more than 60% and maintained funding levels in 2010.

In **Denmark**, the government agreed with the social partners in 2006 to increase funding for continuing training over 2008-11. Social partners were required to agree collective agreements establishing collective funds for competence development, which they did in 2007.

In **Italy** spending on employees' training increased particularly during 2005-08 from 15% to 28.2% of total training expenditure. Over the same period expenditure on education fell from 49% to 31% of total training expenditure.

Source: ReferNet national policy reports, 2010.

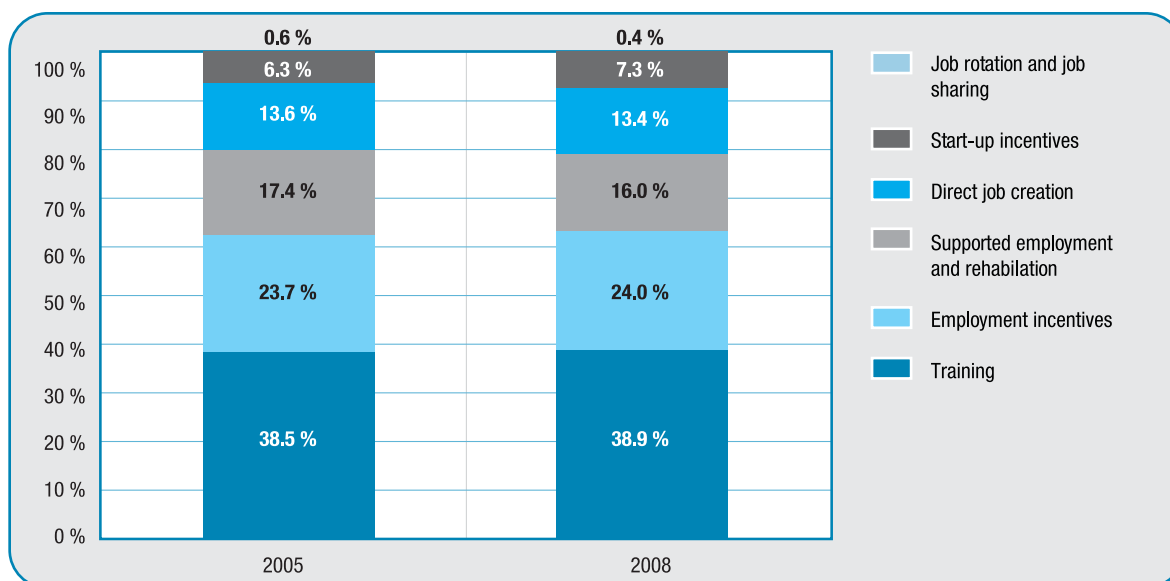
Figure 11. Public expenditure on training for people with difficulties in the labour market, 2005 and 2008, % GDP



Source: Eurostat, labour market policy database, date of extraction 20.7.2010.

NB: Data refer to the unemployed, employed at risk of involuntary job loss and inactive people who would like to enter the labour market and are disadvantaged in some way. Data for Germany, Greece, France, Latvia, the Netherlands, Austria and the UK (for 2005 and 2008) are estimates; data for Belgium, Luxembourg and Sweden (for 2008) are estimates; data for Spain (for 2005) are estimates.

Figure 12. Share of expenditure on active labour market policies by category, 2005 and 2008, EU-27

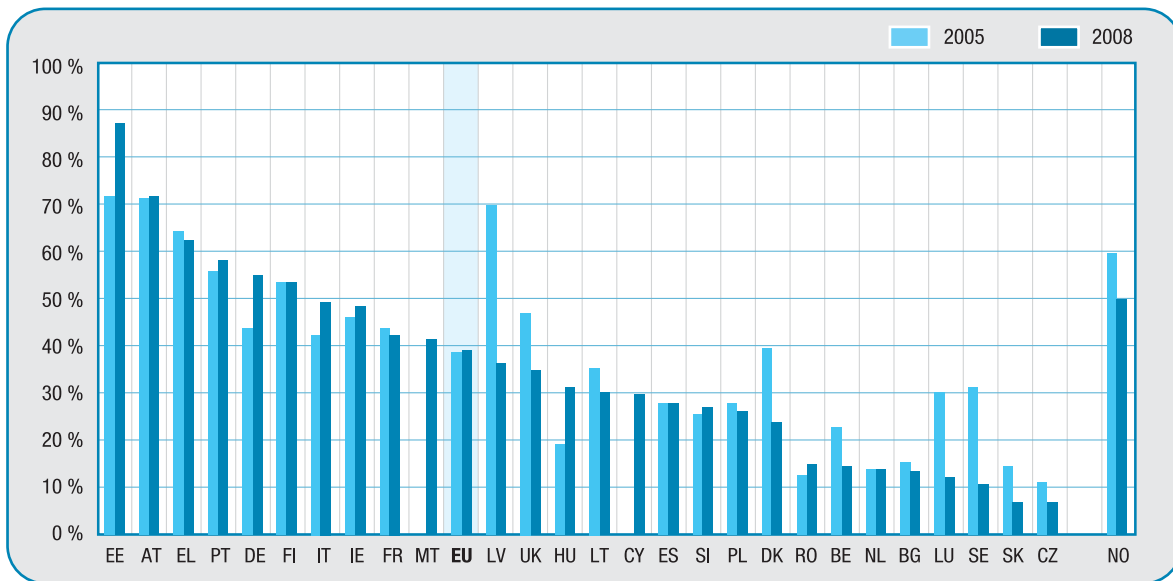


Source: Cedefop calculation based on Eurostat, labour market policy database, date of extraction 20.7.2010.

help unemployed people find jobs or help those at risk of involuntary job loss). It fell from an EU average of 0.195% in 2005 to 0.172% in 2007. EU average expenditure on training for those at

risk increased slightly in 2008 to 0.177%, as 11 Member States increased their spending (Figure 11) which was, perhaps, the first sign of the crisis.

Figure 13. **Spending on training 2005 and 2008 (% of total spending on all active labour market policies for people with difficulties in the labour market), 2005 and 2008**



Source: Cedefop calculation based on Eurostat, Labour Market Policy database, date of extraction 20.7.2010.
NB: Data for Belgium, Germany, Greece, France, Latvia, Luxembourg, the Netherlands, Austria and the UK (for 2005 and 2008); data for Sweden (for 2008); data for Spain and Italy (for 2005) are estimates.

Training accounts for almost 40% of total public expenditure on active labour market policies, with a small increase to 38.9 in 2008, compared to 38.5% in 2005 (Figure 12).

There are large variations across countries (Figure 13). Compared to 2005, training expenditure as a proportion of spending on active labour market policies increased significantly in 2008 in Estonia (15.5 percentage points), Hungary (12 percentage points) and Germany (around 11 percentage points).

5.1.3. European funds complementing national VET expenditure

The Copenhagen declaration (European Commission, 2002) identified Leonardo da Vinci as a source of funds to support projects related to VET reform. The Maastricht communiqué reflecting the emerging wider scope of the Copenhagen process said that the European Social Fund and the European Regional Development Fund should be used to support the Education and training 2010 work programme. Different European funds, used to support VET and the Copenhagen process, are discussed briefly below. Overall, countries acknowledge the importance of EU funding.

Austria argues that ‘without the subsidies from EU funds many initiatives/projects would not have been carried out’.

5.1.3.1. European Social Fund (ESF)

The European Social Fund (ESF) ⁽¹⁵⁾ is the main EU financial instrument for supporting employment, economic and social cohesion. The ESF financial package from 2007-13 is worth around EUR 75 billion – close to 10% of the EU budget. Its investment priorities over this period are:

- improving human capital (34% of total funding);
- improving access to employment and sustainability (30%);
- increasing the adaptability of workers and firms, enterprises and entrepreneurs (18%);
- improving the social inclusion of less-favoured persons (14%);
- strengthening institutional capacity at national, regional and local levels (3%);
- mobilising reforms in employment and inclusion (1%).

⁽¹⁵⁾ See http://ec.europa.eu/employment_social/esf/index_en.htm

Table 7. **Examples of using the European Social Fund**

Funding aim	Country and target group or purpose
Integrating those at risk of social exclusion into the labour market	<p>Cyprus (training for unemployed people) Denmark (programmes for older workers, low-qualified and low-skilled people, and workers in small and medium-sized enterprises) Ireland (travellers, ethnic minorities and immigrants) Austria (early school leavers) Portugal (people with disabilities) UK (young people, single parents and people made redundant or facing redundancy)</p>
Development and implementation of common European instruments and principles, for example national qualifications frameworks and guidance and counselling.	<p>Estonia, Cyprus, Latvia, Lithuania, Hungary, Austria, Poland, Romania and Slovenia</p>
Curricula reform	<p>Cyprus (key competences) Hungary and Austria (foreign languages) Belgium, Italy, Portugal, Romania and Slovakia (entrepreneurship) Poland (distance learning) Estonia (e-learning) Lithuania and Poland (training course modules)</p>
Strengthening links between VET and the labour market	<p>Poland (identifying regional and labour market needs) Belgium, Portugal and Slovakia (supporting transitions to work) Estonia, Lithuania, Hungary and Slovakia (workplace learning)</p>
Professional development for VET teachers and trainers	<p>Estonia, Latvia, Hungary, Austria, Romania and Slovakia</p>

Use of the ESF varies according to the particular priorities of countries (Table 7). Some of the examples shown will have been funded under the 2000-06 ESF programming period

5.1.3.2. *Lifelong learning programme (Leonardo da Vinci)*

The lifelong learning programme (Council of the EU, 2006b) has a budget of nearly EUR 7 billion for 2007-13. It funds various actions including exchanges, study visits and networking activities. There are four subprogrammes which fund projects at different levels of education and training: Comenius for schools, Erasmus for higher education, Grundtvig for adult education and Leonardo da Vinci for VET.

Most countries used the Leonardo da Vinci programme to help finance mobility projects for students, teachers and VET experts. Some, for example, the Netherlands and Austria, believe

that the Leonardo da Vinci programme has made an important contribution to developing a European dimension to VET (see Chapter 3).

Countries such as Austria, Iceland, Lithuania and Romania have used the Leonardo da Vinci programme to support implementation of common European instruments and principles (see Chapter 2). Several countries, such as the Czech Republic, Estonia, Iceland, Lithuania, Norway and Sweden emphasised the importance of innovation-related projects under the programme. It appears, however, that the potential of the programme to transfer innovation has not been fully used. According to Sweden, there is 'not much room for real innovation and development'. The Czech Republic points to difficulty in accessing funds from the 'transfer of innovation' part of the programme, with only seven successful applicants as the narrow definition of the project themes limits potential beneficiaries.

Suggestions to improve the programme include increased funding, more support for mobility (particularly for young people in VET), include non-EU countries, assist further development of common European tools, focus more on developing skills (for example green jobs and entrepreneurship) and, unsurprisingly, reduce the administrative burden.

5.1.3.3. *Other European funds*

Investment in VET also came from the European Regional Development Fund (ERDF). For example, the Czech Republic, Estonia, Latvia, Malta, the Netherlands, Finland and the UK, used it mainly to develop VET infrastructure. The ERDF also supported innovation and new technologies. For example, in the Czech Republic the ERDF funded a special research and development programme for mainly tertiary professional schools and higher education institutions. The Netherlands used the ERDF to support the work of entrepreneurial institutions and local or regional authorities to create new learning environments (for example small and medium-sized enterprises located in schools).

The European Investment Bank (EIB) is a less common source of funding for VET reform. However, in the UK, the EIB lent Barclays Bank PLC EUR 250 million, in 2009, to finance construction and upgrading of over 50 further education campuses and to help develop vocational programmes for young adults and the UK's workforce.

The European Globalisation Adjustment Fund (EGF) ⁽¹⁶⁾ has an annual budget of around EUR 500 million. It supports workers made redundant due to globalisation and has been extended to help those affected directly by the economic crisis (Box 29). By the end of June 2010, over 60 applications were submitted by 18 countries for assistance for almost 70 000 people. The main sectors involved were: textile, motor industry, automotive, machinery, (electronic) equipment. The funds can be spent only on active labour market measures, including training. The financial aid covers up to 65% of the total cost.

Box 29. **Support from the European Globalisation Adjustment Fund for Ireland**

Ireland applied for EGF funds in 2009 to tackle unemployment due to the closure of three large multinational enterprise installations – Dell computers in Limerick, Waterford Crystal in Waterford and SR Technics (an aircraft maintenance company in Dublin). In January 2010 the application for Limerick, which covers 2 400 employees, was approved. Redundant workers are provided with personal support such as occupational guidance, job-search assistance, training courses, advice on starting a new business and progression opportunities – accelerated paths to tertiary and further education.

Source: ReferNet national policy report, Ireland.

5.2. **VET to the rescue: public expenditure on education and training during the economic crisis 2008-09**

Data for expenditure on education and training during the crisis are not yet available. However, the signs are that the crisis increased public expenditure on VET at European and national levels.

5.2.1. **EU initiatives**

To combat the crisis a EUR 200 billion recovery package was adopted in November 2008 (European Commission, 2008d), EUR 170 billion of which came from Member States and the remaining EUR 30 billion from the EU budget and the European Investment Bank. VET was one of the main features of European and national recovery plans.

The communication on a shared commitment for employment (European Commission, 2009c) called for investment in training and skills during the crisis. Some EUR 19 billion were made available from the European Social Fund in 2009-10 to help Member States reinforce their

⁽¹⁶⁾ See <http://ec.europa.eu/social/main.jsp?catId=326&langId=en>

active labour market policies, refocus support on the most vulnerable and step up action to boost skills. The usual cofinancing conditions were relaxed to make it easier and quicker to invest the money. Access to the European Globalisation Adjustment Fund was speeded up to provide cash to help redundant workers get back to work and for training and job placement schemes. A new European microfinance scheme was introduced to provide credit to small businesses and to people who had lost their jobs and wanted to start their own small businesses.

5.2.2. Government initiatives

Some countries increased overall expenditure on VET, or at least maintained its level despite falls in revenues. The Netherlands and Finland were among those Member States that increased funding for places in basic vocational education. A consensus also emerged among governments and social partners to try to keep people in work. Enterprises often had problems in finding skilled workers before the crisis and were keen to keep the skills they needed for the recovery.

Cyprus, under its national prevention action plan, provided subsidies for employers in hotel and catering, retail trade and construction to train employees that they retained who otherwise would have been laid off. Ireland operated a similar scheme for its automobile sector, assuring 80% of the wages of workers participating in training as long as enterprises did not make people redundant at least until 2010. Ireland also introduced a pilot scheme to support enterprises where personnel work for three and train for two days in the week. At the start of 2009, Germany also set up a fund to train workers on short time, providing between 25% and 80% of the training course costs, depending on the type of training, enterprise size and the participants. Romania also introduced subsidies of 60% to 80% of eligible costs, depending on enterprise size, for employees to train at the workplace.

Countries, for example Iceland, Ireland and Italy spent more on those at risk of redundancy and unemployed people. Cyprus' prevention action plan also included money for training to

Box 30. Ireland – saving apprenticeships

FÁS (the Irish Employment and Training Agency), launched four initiatives to help apprentices and worked with large employers to create opportunities for redundant apprentices:

- Ireland's electricity utility agreed to recruit up to 500 redundant apprentice electricians who were unable to complete their craft qualification because of the economic downturn;
- apprenticeship rules were amended to permit redundant apprentices to progress immediately from one off-the-job phase to the next, without doing the next on-the-job phase first;
- the 'employer-based redundant apprentice rotation scheme' was introduced to assist employers to provide on-the-job training for redundant apprentices while their own apprentices were attending off-the-job training in FÁS or in the Institutes of Technology. The scheme aims to provide up to 500 redundant apprentices with on-the-job training on a rotation basis;
- an 11-week certified training programme for up to 700 redundant apprentices per year was also established to help redundant apprentices to progress to higher education training programmes.

upgrade the skills of unemployed people (including tertiary education graduates), particularly in occupations in demand. Sweden increased funding to provide sufficient VET training places for adults. However, it took a slightly different approach by letting individuals, rather than enterprises or sectors, decide which VET course to follow.

Belgium, Portugal, Slovenia, Finland and the UK are among those who increased funding to encourage employers to take on young people. Support was also provided to help apprentices to continue or finish their training by finding other employers or by moving them to school-based VET programmes. Ireland introduced a scheme in 2008 to provide redundant apprentices with on-the-job training with approved employers on a rotation basis (Box 30).

Despite overall increases in investments there were also setbacks. Not all countries were

able to spend more on education and training to respond to the crisis. Some, for example Greece, were obliged to cut investment in schools, teachers' salaries and spending on VET. Estonia had plans to increase expenditure per VET student to a ratio 1.5:1 compared to students in general education by 2008. Expenditure per student increased by 45% in the period 2005-09, but was reduced in both 2009 and 2010. Latvia, for example, paid the bills to help employed adults affected by the crisis by transferring money from its initial education and training budget (Box 31).

Box 31. Effects of the crisis on VET funding in Latvia

The economic recession has greatly affected the level of funding for initial VET in Latvia. Since 2008, funding has been reduced, but in 2009 it was 20.9% lower than in the previous year.

According to cabinet regulation (2007), annual expenditure per vocational student in programmes should be EUR 547.81, but in 2009 it was EUR 274.61. Monthly scholarships for students decreased from EUR 28.5 in 2007 to between EUR 10 and EUR 14 in 2010.

Reduction of funding has made it difficult for vocational schools to perform as they are unable to pay for many services, for example heating and are accumulating debts.

In comparison, expenditure on active labour market policies almost doubled in 2008 compared to 2007. Before the crisis, spending on active labour market policies was low in Latvia, limited to a maximum of 10% of the special employment budget.

Source: ReferNet national policy report, Latvia.

on continuing rather than initial VET. The best source is the third continuing vocational training survey (Annex 2). It provides the latest data which are for 2005 and so does not show the impact of the economic crisis.

According to these data, European enterprises in 2005 spent less on continuing training than in 1999 (Cedefop, 2010e), particularly in Italy, the Netherlands, Finland and Sweden (however, in the case of these last three spending in 1999 was quite high). Overall, spending on continuing training per employee by European enterprises fell by more than a quarter. In Greece, spending fell by 45% and in Latvia by 57%. European countries are converging in terms of continuing training provided by enterprises, but higher spending by enterprises in almost all newer Member States failed to offset lower spending in older ones and the downward trend in the EU as a whole.

Lower spending may not necessarily indicate worsening continuing training provision. More efficient and effective training markets could have reduced prices and lowered expenditure. However, the trend of less spending combined with falls or stagnation in other key continuing training indicators implies lack of progress in performance by Europe's enterprises. For example, in 2005, the percentage of employees (all enterprises) participating in continuing training courses in the EU fell from 37% in 1999 to 33% in 2005 on EU average (Cedefop 2010e).

Generally, the larger the enterprise the more it spends on continuing training. In 2005, in the EU as a whole, small enterprises invested 0.7% of total labour costs, compared to 0.8% in medium-sized enterprises and 1% in large enterprises. There are significant differences across countries. In Ireland, Estonia, France and Hungary small enterprises spent at least 1% of total labour costs on continuing training, while in Greece, Latvia, Poland and Portugal they spent 0.3% or less. Comparisons between 1999 and 2005 show a significant fall in spending on continuing training by medium-sized enterprises from 1.7% to 0.8% of total labour costs.

The pattern of continuing training expenditure per employee in all enterprises follows the usual trend with large enterprises spending more. However, when looking at expenditure per

5.3. Expenditure by enterprises and individuals on continuing training

5.3.1. Expenditure by enterprises

Comparative data on enterprise expenditure on VET during 2002-10 are rather limited and are

employee only for enterprises that invest in training, the pattern changes. In 2005, in Bulgaria, Greece, Estonia and Slovenia small enterprises spent more per employee than medium-sized ones and medium-sized enterprises spent more than large ones. It is interesting to note that small enterprises that invest in training rival the performance of large and medium-sized ones. This argues for policy to motivate, through various incentives, small enterprises to invest in training as, once they do, their investment per employee is higher than one might expect.

The balance between continuing training courses and other forms of training has not changed between 1999 and 2005. In all Member States, except Denmark, participation in courses is notably higher than in on-the-job training, the most popular type of training after training courses. Even in countries where the proportion of enterprises that provide other forms of training is relatively high, participation rates are well below those for training courses.

The survey does not support the view that small enterprises provide other forms of training more frequently than courses. This suggests that other forms of training do not replace courses but complement them.

Although their involvement in training management is limited to general issues like objective setting, there is evidence that employee representatives and agreements between social partners have a positive effect on participation in and the number of hours spent on continuing training. However, in the EU, only around 12% of enterprises providing continuing training reported about collective agreements between social partners that cover continuing training. This figure ranges from 2% in Poland to 27% in Denmark. In most of the selected countries, the proportion of enterprises providing continuing training where employee representatives play a role in managing continuing training is below 10%. Italy has the highest rate at just above 20%.

5.3.2. Responding to the economic crisis: social partner initiatives

The social dialogue agreed measures to keep people in work and invest in skills to respond to

the economic crisis, in many Member States, including Belgium, France, Iceland and Italy. In France, despite the downturn many enterprises committed themselves to investing more in training than they are legally obliged to under their levy rules. At the start of 2009, they created a career security joint fund to promote lifelong learning, strengthen job security and develop funding for groups in most need. Public money supplements the fund and regions can contribute. The fund will provide resources to (re)qualify employees as well as jobseekers. The social partners also agreed to double the number of employees with access to training during a year from 500 000 to a million and to increase by a third the number of jobseekers benefiting from training to 200 000 persons per year. In Iceland, social partners took the initiative to provide financial assistance themselves for VET measures because of public budget constraints due to the crisis (Box 32).

Box 32. Federation of Icelandic Industries' workplace training fund

In Iceland, demand for workplace training greatly exceeds supply in many sectors. In 2009, the government established a new fund providing subsidies to employers hiring apprentices. However, owing to the economic crisis it was uncertain when the fund would start to operate and how much it would contribute. Consequently, the Federation of Icelandic Industries set up its own fund. Enterprises can apply for grants twice a year and receive up to 50% of the cost of hiring an apprentice. IKR 10 million is allocated to the fund annually. The federation has asked the government to contribute at least the same amount.

New partnerships also emerged, for example between sectors and regional and local authorities, between enterprises and public employment services and, as in the Czech Republic and Malta, between VET providers and enterprises. In Belgium, enterprises employing people working on research projects in partnership with universities, high schools and research institutions can retain part of the taxes on salaries.

Despite the best efforts of the social partners, anecdotal evidence suggests that enterprises cut back their training budgets during the economic crisis. Of particular concern is that the number of training places for apprentices, already in short supply, will fall once government subsidies to save apprenticeships during the economic crisis end.

As the economy picks up enterprises' investment in people may recover and even overtake pre-crisis levels. However, the fact that enterprises' spending on continuing training was higher in 1999 than in 2005 is discouraging. More optimistically, the willingness of enterprises to retain people and their skills, albeit with considerable government support, may signal some recognition of the importance to develop skilled people to take advantage of the recovery.

5.3.3. Expenditure by individuals

Data on spending by individuals on VET can be found in the adult education survey (Annex 2). Again data that could show the impact of the economic crisis are not yet available.

According to the survey, cost is the third most important obstacle preventing European adults from participating in education and training (family responsibilities and conflicts with work are the first two). The importance of cost differs across countries. Bulgaria, Estonia, Latvia, Lithuania, Poland and Slovenia cite cost most frequently as the main obstacle for not participating in education and training.

In the EU, private spending on educational institutions⁽¹⁷⁾ increased during 2002-07 from 0.6% to 0.7% of GDP. This is less than half the rate in Japan (1.64%) and around a quarter of that spent in the US (2.55%). The highest levels of private funding in the EU in 2007 were in the UK (1.75%) and Cyprus (1.25%). Overall, in 2007, the share of private expenditure on education institutions is 13.6%, with the other 86.4% coming from public funds.

The adult education survey reports that European adults aged 25 to 64 who participated in education and training in 2005-07 spent an average of EUR 246 a year on learning (Figure 14). Adults in Cyprus, Austria and Portugal spent the most, over EUR 400 a year. The lowest was in Bulgaria, just over EUR 50 a year. On average in the EU, individuals spent four times more on formal than on non-formal learning (EUR 611 compared to EUR 146).

In all countries surveyed⁽¹⁸⁾, young people aged 25-34 spent more on education and training, formal and non-formal, than other age groups. The biggest differences in spending between the age groups were in Bulgaria, Lithuania and Poland where young people aged 25-34 spent eight times more per person per year than those aged 55-64. In Belgium, the Netherlands, Slovenia and Finland people aged 55-64 spent more on non-formal learning than younger age groups. In Germany, Greece, Latvia, Hungary and Poland, older people spent less than the youngest group but more than the middle-age group.

Those with a high level of educational attainment (ISCED 5-6) spent the most on their learning both formal and non-formal whereas those with a low level (ISCED 0-2) spent the least. Norway is an exception. Concerning labour status, economically inactive adults aged 25-64⁽¹⁹⁾ invested the most in education and training, compared to employed and unemployed people.

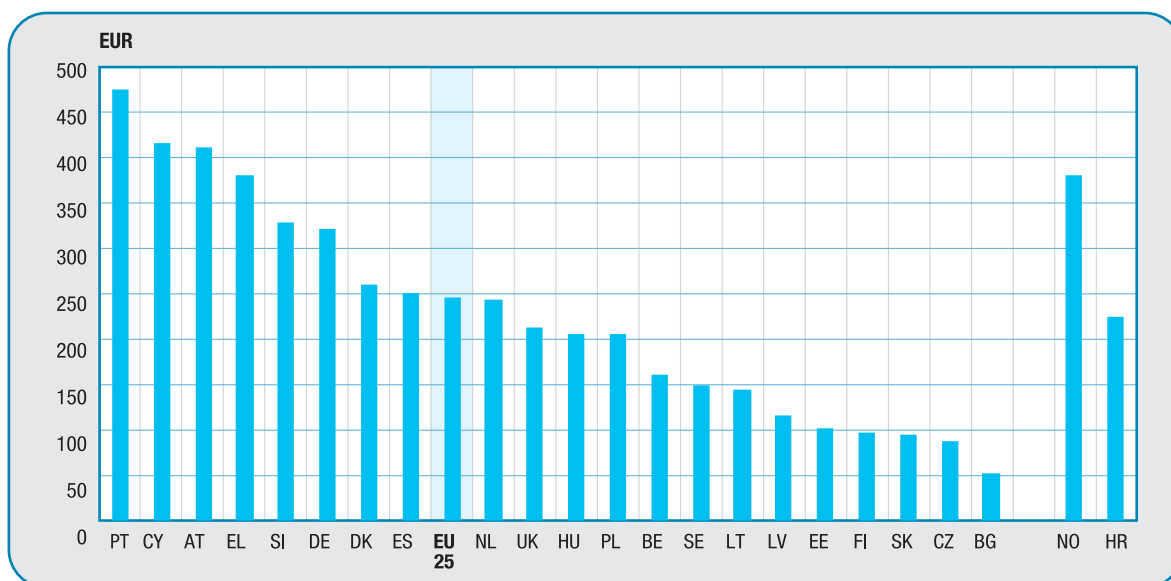
For individuals investing in their own learning the picture following the economic crisis is unclear. Some may decide to cut back because they have lost their jobs and possibly financial help from their employers to participate in continuing training. Others may decide to invest more in their learning to improve their job prospects.

⁽¹⁷⁾ This comprises: school fees; materials such as textbooks and teaching equipment; boarding fees; meals and transport provided by the school; and expenditure by employers on initial vocational training.

⁽¹⁸⁾ All EU Member States except Ireland, Malta, Portugal and Romania, but including Croatia and Norway.

⁽¹⁹⁾ Economically inactive population are people who are neither employed (work for pay or profit or are temporarily absent from work) nor unemployed (not in a job, actively seek and are ready to start work), for example pre-school and school children, students, pensioners and men and women of working age neither in gainful employment or unemployed.

Figure 14. **Average amount of money spent by adult participant (25-64) on education and training, 2007 (EUR)**



Source: Eurostat, AES, date of extraction 24.9.2010.

5.4. Improving efficiency

Throughout 2000-10, countries have striven for greater efficiency in their spending. They have taken three different approaches to ensuring more efficient investment, namely decentralisation, new ways of allocating funds and mergers and partnerships.

5.4.1. Decentralisation of funding and institutional autonomy

Devolving decision-making, including budgetary responsibility, from central government to regional or local self-governing bodies is a clear trend, predating the Copenhagen process. The rationale is that education and training resources will be more efficiently and effectively allocated if decisions are made by those closer to and more aware of regional or local labour market needs. Many countries have, to some extent, decentralised their systems in the past decade, including Bulgaria, the Czech Republic, Lithuania, Romania, Slovenia and Slovakia. In France, regions became responsible for training jobseekers in 2007.

Many countries have also given VET providers more financial independence to provide more flexibility to meet regional or local

labour market needs and encourage participation of local stakeholders in managing the funds. However, some problems have been encountered. Denmark, for example, has had difficulties in finding the right balance between autonomy and quality assurance. Finding such a balance can, for example, raise difficulties about how much flexibility to give VET providers while needing to set central objectives, quality indicators and targets to maintain accountability for public money.

5.4.2. New instruments for allocating funds

Many countries have changed how they allocate funds to VET. In the past 10 years, countries such as Bulgaria, Latvia, Lithuania, Poland, Slovenia and Slovakia have followed the principle of money following the student and introduced per capita funding. Amounts per student are calculated taking into account the number of students and often the type of school and occupation. In 2010, Poland changed how it distributes the education part of the general State subsidy for local governments and increased the weighting for vocational school students.

Allocating funds using quality criteria is another approach which focuses on outcomes

Table 8. Coping with the high costs of technological progress in VET

Solutions to cope with the high costs of keeping pace with technological progress in VET (*)	Countries (**)
Sectoral partnerships and cross-border cooperation	Austria, Belgium, Finland, Germany, Hungary, Iceland, Italy, the Netherlands, Romania (priority), Slovenia
Provision of training at the workplace	Austria, Belgium, Denmark, Finland, Germany, Hungary, Iceland, Latvia

(*) Excluding ICT.

(**) List is not exhaustive but indicative.

Source: Cedefop based on DGVT and ReferNet 2010.

linked to VET policy objectives. Since 2006 in Finland, some 2% of total funding allocated to upper secondary VET is based on performance-measurable criteria, for example completion of study, drop-outs, employment, transition to further study, personal development. Performance-based funding for adult learning is being developed and may account for 3% of state funding. Currently, the allocation is calculated separately for school-based and apprenticeship training based on the number of graduates.

Quality criteria are part of a financial scheme for apprenticeship in Austria introduced in 2008. In addition to the basic subsidy, more money can be granted according to performance, for example a bonus for graduation with an excellent or good mark.

5.4.3. Mergers and partnerships

Many countries promote mergers and partnerships of VET providers to pool and make better use of resources. In Estonia, Latvia, Lithuania and Slovakia State VET schools were merged. Some countries have created regional training centres to provide initial and continuing training to improve access, quality and capacity of VET.

To cope with technological change schools and training providers need up-to-date equipment and this can be expensive. Many countries are struggling to ensure state-of-the-art training while keeping costs down. Some are pooling resources to generate economies of scale (Table 8).

5.5. Conclusions: tough choices ahead

Prior to the crisis, countries were already investing large sums in education and training. However, in the EU there does not appear to have been a ‘substantial’ per capita increase in expenditure on human resources, as proposed by the Lisbon strategy, by governments, enterprises, or individuals. Although the data are not yet available, indications are that there was an increase in public spending on VET as part of European and national measures to combat the economic crisis’s effect on unemployment. However, these were emergency measures not a planned sustained increase in investment in human resources.

As Europe embarks on its strategy for the next 10 years, difficult times seem to lie ahead. The likely scale of future budget cuts by countries will bring tough choices over where it is best to invest limited resources.

When economic growth was healthy, countries kept a tight hold on expenditure on education and training. Public expenditure as a percentage of GDP on education and training in 2007 is roughly the same as in 2000, but has fallen back from a peak in 2003. Spending on active labour market policies, including on training also fell. This is not surprising. Unemployment fell during the middle of the decade and a large amount of public money for VET is spent on those out of work. Enterprises appear to have reduced investment in continuing training in 2005 compared to 1999.

Throughout 2002-10 countries made a considerable investment in VET. They found resources to provide VET for young people and adults and to improve infrastructure (where VET is more expensive than general education, because of the need to invest more in equipment and technology and learn very different crafts). Countries also found money for VET reform.

Since 2002, countries have worked hard to make their VET systems more efficient and provide better value.

The increase in public spending on VET in response to economic crisis was, arguably, successful in helping stave off higher unemployment (Eurostat, 2010a). Public money, including from the European Social Fund, was made available for enterprises to maintain jobs on the condition that their employees participate in training.

Some of the crisis spending on VET is winding down naturally. Many measures were short-term with some programmes due to expire in 2010. As economic growth has slowly returned in some countries, some people on short-time work have gone back to working full-time and some apprentices have found jobs. Short-term measures to combat the economic crisis have not changed countries' long-term strategies of VET reform discussed in earlier chapters. Many crisis measures expanded existing activities.

However, there will be no shortage of competing demands for resources from education and training budgets in the future. As well as national discussions, there will be intense debate over priorities and resources for the European Social Fund and the lifelong learning programme for the period 2014-20.

A legacy of the crisis may be to leave Europe with higher levels of structural unemployment (Chapter 7), which may require investment in VET to improve job prospects of those at risk of social exclusion. This may lead to difficult decisions on whether to allocate resources to general education or VET and on how much to spend on continuing and initial training. There may also be hard decisions on spending on VET reform. Significant resources, including from European funds, have been invested to develop,

for example national qualifications frameworks. These are entering a crucial implementation phase. Extra resources may also be needed to put them into effect. Countries would also like to develop mobility programmes further, but as shown in Chapter 4, mobility opportunities depend on how much money is available.

There must also be concern over investment by enterprises in VET. Although the continuing vocational training survey data are five years old, they are the latest figures. The survey was carried out at the height of an economic boom and still investment by European enterprises in continuing training was lower than in 1999. Although there are no hard data, it is likely that enterprises cut back VET spending during the economic crisis. Although the value of work-based learning is recognised, it is also not yet clear if the crisis will decrease or increase the willingness of companies to provide places.

The effects of the economic crisis on VET will only be evident later. Countries seem focused on longer-term reforms. However, financial constraints may discourage public and private investment in human capital. It may also apply the brakes to reform as short-term emergencies crowd out long-term changes. Alternatively, the downturn may act as a catalyst and speed up work that has already started and force through change that, in easier times, could be put off.

Discussions in earlier chapters show that modern VET systems are built on partnership. With difficult choices ahead, cooperation between VET stakeholders that strengthened in response to the economic crisis needs to continue and explore new financial partnerships to stimulate investment in human resources. Everyone understands the importance of learning and skills to economic recovery. The key thing is to convert this understanding into action.

Drivers of change: Europe's challenges for the next decade

After discussing developments in European VET policy, it is important to consider Europe's future challenges and whether the direction of reforms during 2002-10 remains the right one for the next decade.

The context of VET reform matters because it is complex and, with so many different interests involved, inevitably slow. To maintain momentum, it is necessary to be reminded and understand why changes are needed. This chapter identifies four drivers of change which are expected to shape Europe's economies and societies and, as a consequence the demands on its VET systems, over the next 10 years.

The chapter first discusses the legacy of the economic crisis. It goes on to discuss developing a low-carbon economy for sustainable green growth. The chapter then looks at labour market trends towards more skill-intensive jobs spurred on by skill-biased technological and sectoral change. Finally, the chapter considers Europe's future skill supply and demand.

The chapter concludes that although the crisis will not prevent the return of growth in jobs between now and 2020, it threatens to leave high levels of structural unemployment and limited resources to address the problem. Developing a low-carbon economy provides significant opportunities to create jobs, but requires a sound base of key skills and adaptation of skills already used at work. Although qualification levels of the workforce are expected to be broadly in line with demand, skill mismatches will occur. More people need to be brought into the labour market.

In summary the drivers of change will require people already in the workforce to learn new skills. Consequently, the direction of VET reform under the Copenhagen process is the right one and the case for continuing it remains very strong.

6.1. Legacy of the economic crisis: fewer jobs, higher levels of structural unemployment and less money

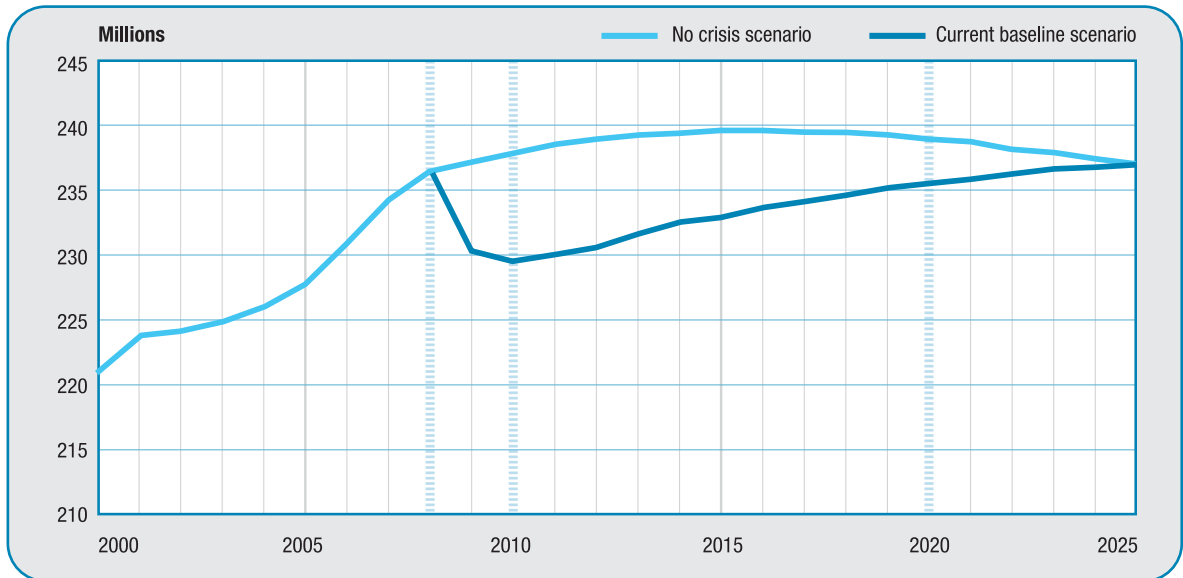
Despite creating many new jobs during 2003-08, the EU failed to meet its employment rate target of 70% by 2010. At its highest, employment reached an annual average of 65.9% in 2008 with a peak of 66.4% in the third quarter of 2008. The economic crisis set that back to an annual average of 64.6% for 2009 and employment stood at 63.7% in the first quarter data of 2010.

Unemployment in the EU rose by 7 million to 23 million between the first quarter of 2008 and the first quarter of 2010. It stood at 23.1 million in the second quarter of 2010. The EU level unemployment rate increased by 2.9 percentage points to 9.6%. Spain, Estonia, Latvia and Lithuania all saw the unemployment rate increase by more than 10 percentage points, to over 17%. The unemployment rate doubled in Ireland to over 13%. According to Cedefop's medium-term forecast (Cedefop, 2010f) due to the economic crisis there are now around 10 million fewer jobs in Europe⁽²⁰⁾ than were expected before the crisis.

The unemployment effects of the crisis were eased due to the huge EUR 200 billion recovery package invested by the EU and its Member States. Some of that money went on VET to try to save jobs and prepare for recovery (see Chapter 5), but the labour market, as shown by the figures above, was badly scarred. The time lag between economic recovery and its effect on employment probably means that job growth can only be expected after 2010. However, Europe's economy has started to recover slowly

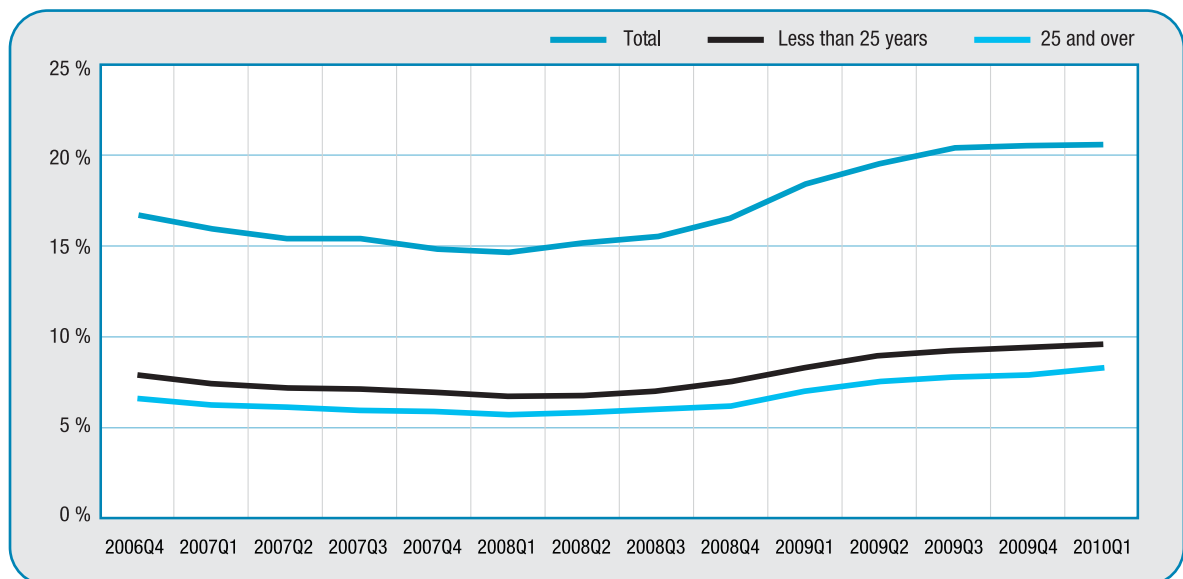
⁽²⁰⁾ The forecast covers 29 European countries (EU-27, Norway and Switzerland); it is referred to as EU-27*.

Figure 15. Impact of the recession on employment (EU-27*)



Source: Cedefop, 2010f.

Figure 16. Unemployment rate by age group, EU-27, 2006-10, quarterly data (%)



Source: Eurostat, EU labour force survey (seasonally adjusted data), date of extraction 17.8.2010.

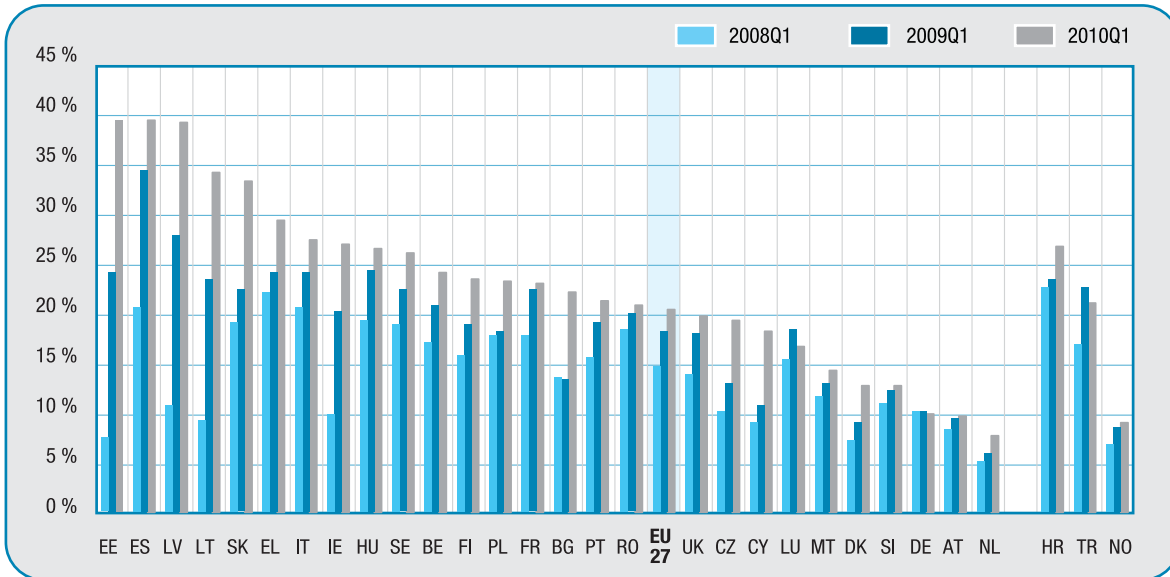
and around seven million new jobs are expected to be created between now and 2020 (Cedefop, 2010f). Assuming a modest recovery employment in 2020 should be just below the peak of around 235 million in 2008 (Figure 15).

Men and young and low-skilled people were most affected by the crisis. Men account for about two-thirds of the overall increase in

unemployment since spring 2008, as the crisis initially had a greater impact on sectors employing mainly men, such as construction and manufacturing. In 2009, the rate of jobless men exceeded that of women for the first time.

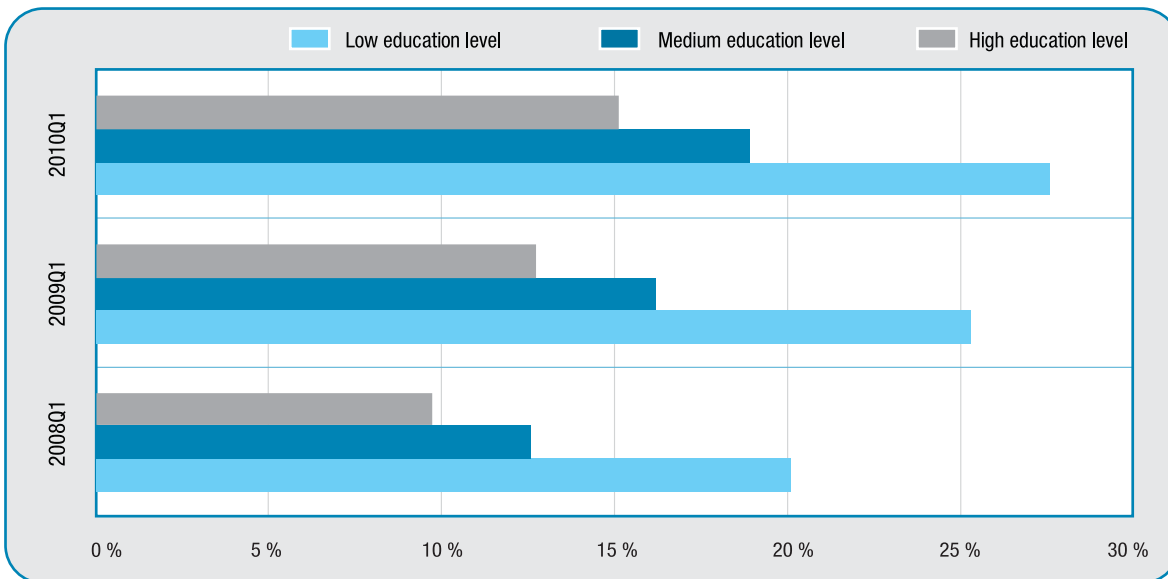
In the first quarter of 2010 the unemployment rate for those below the age of 25 went up to 20.6%, an increase of 5.9 percentage points

Figure 17. Unemployment rate of population aged less than 25 years, 2008, 2009 and 2010, Q1-quarterly data (%)



Source: Eurostat, labour force survey (seasonally adjusted data), date of extraction 17.8.2010.

Figure 18. Unemployment rate of population aged less than 25 years by highest education level, 2008-10, Q1-quarterly data, EU-27 (%)



Source: Eurostat, labour force survey, date of extraction 17.8.2010.

Notes: Low education level corresponds to pre-primary, primary and lower secondary education – levels 0-2 (ISCED 1997). Medium education level corresponds to upper secondary and post-secondary non-tertiary education – levels 3-4 (ISCED 1997). High education level corresponds to tertiary education – levels 5-6 (ISCED 1997).

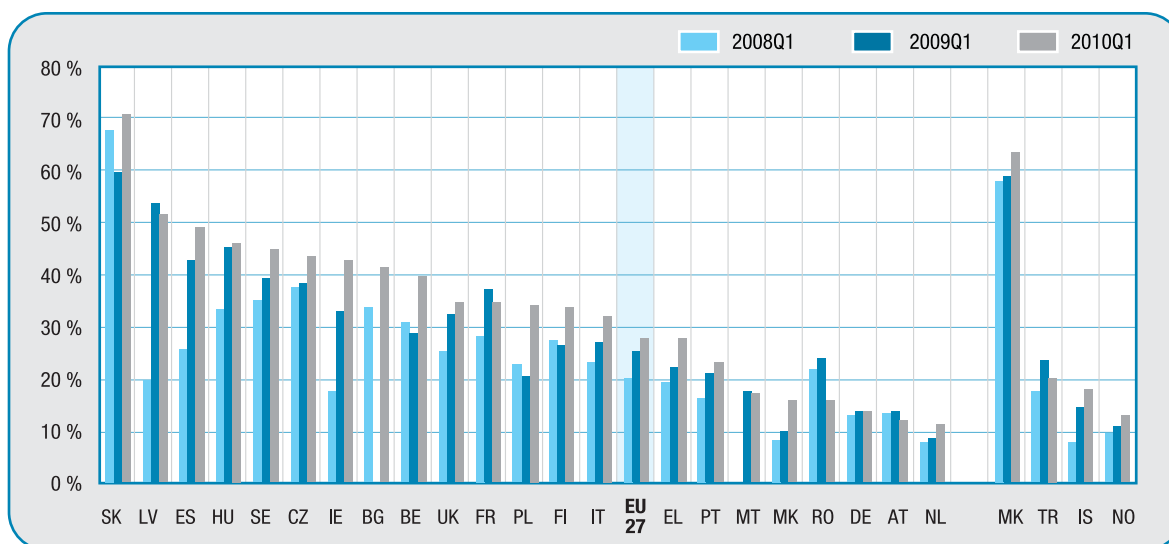
compared to the first quarter of 2008. Over the same period, the unemployment rate for those over 25 rose to 8.2%, an increase of 2.5 percentage points (Figure 16).

Unemployment rates for young people rose by more than ten percentage points in Ireland, Spain, Estonia, Latvia, Lithuania and Slovakia (Figure 17).

Young people with low education levels were hit hard by the crisis. Their EU unemployment rate was 27.6% in the first quarter of 2010, an increase of 7.5 percentage points compared to the first quarter of 2008. This was well above the unemployment rate of 18.9% (a 6.3 percentage

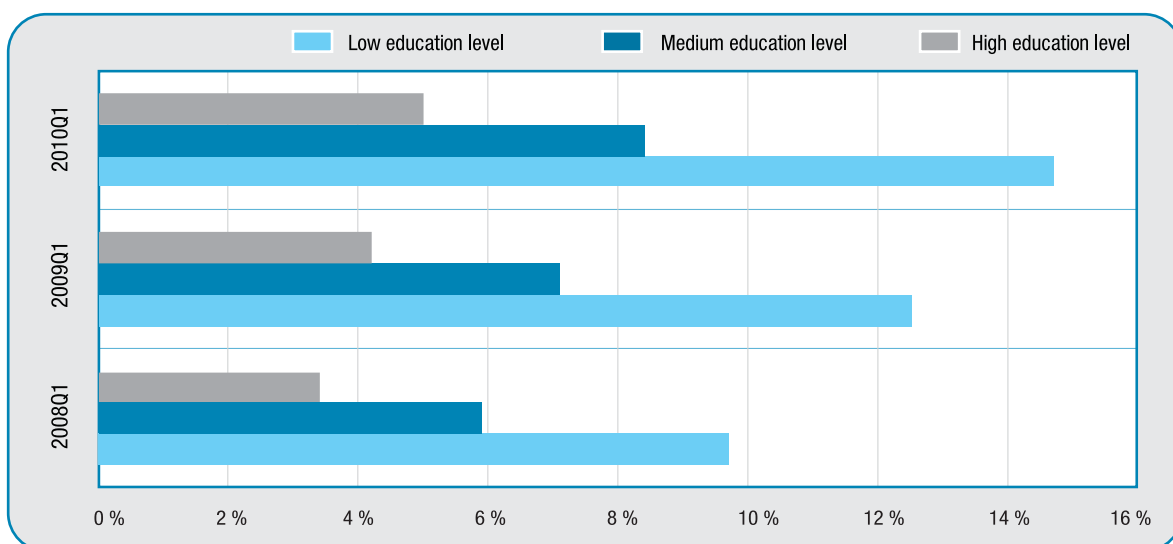
point increase) for young people with medium education levels and an unemployment rate of 15.1% (a 5.4 percentage point increase) for young people with high education levels (Figure 18). In almost every country, unemployment increased sharply among young people with low education

Figure 19. Unemployment rate of population aged less than 25 years, with low education level (at lowest secondary education), 2008, 2009 and 2010, Q1-quarterly data (%)



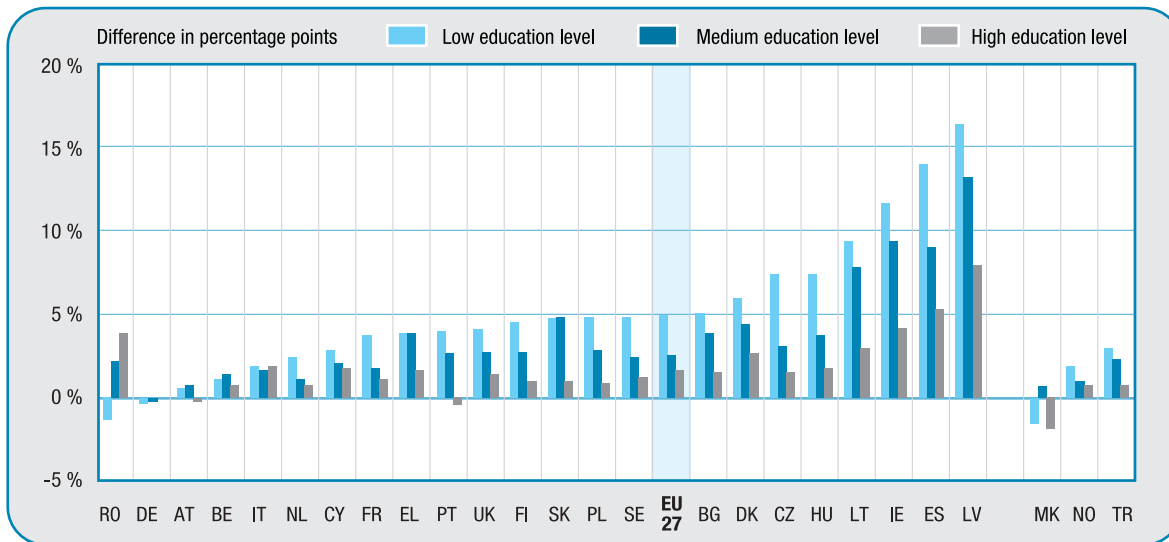
NB: Small sample sizes might affect the reliability of the figures. Only reliable figures are shown. Malta break in series in 2008
Source: Eurostat, labour force survey, date of extraction 17.8.2010.

Figure 20. Unemployment rate of population aged 25-64 by highest education level, EU-27, 2008, 2009 and 2010, Q1-quarterly data (%)



Source: Cedefop's calculation based on Eurostat, labour force survey, date of extraction 17.8.2010.
Notes: Low education level corresponds to pre-primary, primary and lower secondary education – levels 0-2 (ISCED 1997). Medium education level corresponds to upper secondary and post-secondary non-tertiary education – levels 3-4 (ISCED 1997). High education level corresponds to tertiary education – levels 5-6 (ISCED 1997).

Figure 21. **Change in unemployment rates of population aged 25-64 by highest education level, 2008Q1-2010Q1, Q1-quarterly data, (difference in percentage points)**



Source: Eurostat, labour force survey, quarterly data, date of extraction 18.7.2010.

Notes: Small sample size might affect the statistical reliability of the figures. Only statistically reliable figures are shown. Data for Lithuania refer to the period 2009Q1-2010Q1 rather than to the period 2008Q1-2010Q1. Low education level corresponds to pre-primary, primary and lower secondary education – levels 0-2 (ISCED 1997). Medium education level corresponds to upper secondary and post-secondary non-tertiary education – levels 3-4 (ISCED 1997). High education level corresponds to tertiary education – levels 5-6 (ISCED 1997).

levels. Ireland, Spain, Latvia all saw it increase by more than 20 percentage points (Figure 19).

In the EU, unemployment also increased among those over 25 with low education levels by 5.0 percentage points to 14.7% between the first quarters of 2008 and 2010. In contrast, the rate for those with upper secondary education rose by only 2.5 percentage points to 8.4%, while for people with tertiary education the rate moved up by 1.6 percentage points to 5.0%. Consequently, people with low education levels are nearly three times more likely to be unemployed (and out of work for longer) than those with tertiary education (Figure 20).

Based on available data, people with low education levels were hit particularly hard in Ireland, Spain, Latvia and Lithuania (Figure 21).

Concern about increases in unemployment among young people and the low-qualified is that a legacy of the crisis will be a substantial and persistent increase in youth and long-term unemployment, which countries had worked hard and spent a lot of money to reduce throughout 2000-10. Prolonged interruptions in employment, voluntary or not, are often associated with outdated skills and pose

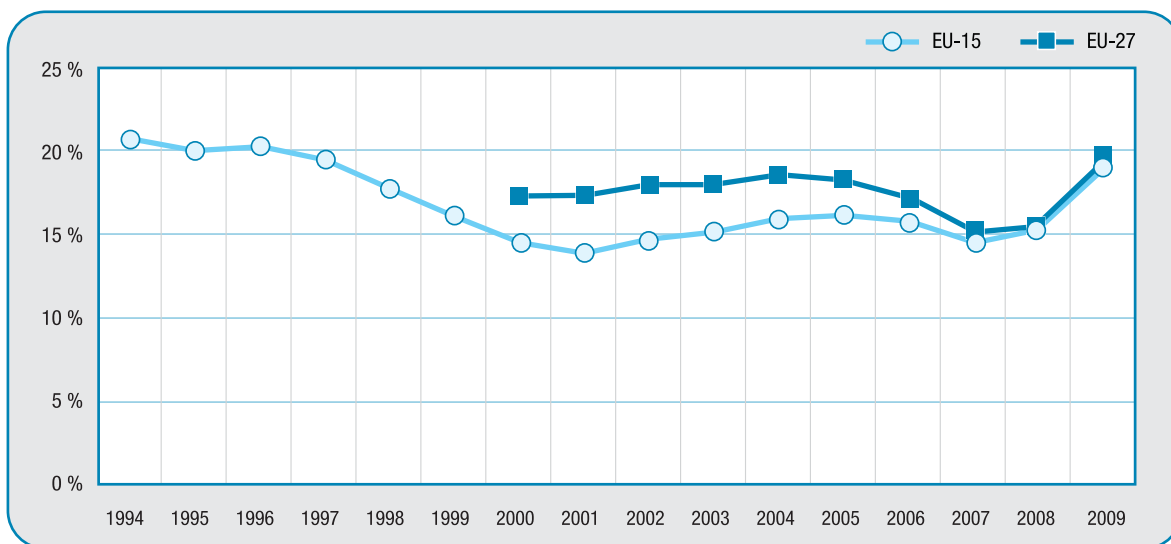
problems for people wanting to return to the labour market. The economic crisis has made it much harder for people who were already unemployed or inactive to find jobs ⁽²¹⁾ (Eurostat, 2010b). Figure 22 shows that unemployment rates among young people are just below levels in the 1990s which prompted the then 15 Member States to launch the European employment strategy at the Luxembourg European Council in 1997 ⁽²²⁾.

More young people stayed in education and training, delaying entry into a depressed labour market. In some countries VET became more popular with vocational schools reporting increasing enrolment. However, apprenticeships and work-experience places offered by enterprises, already in short supply, may become more difficult to find and unemployment among new graduates is increasing. Consequently, although, owing to demographic trends there will be fewer young people entering the labour market

⁽²¹⁾ High percentages of people who have been unemployed for more than two or even four years are found in Belgium, Bulgaria, Germany, Greece, Italy, Portugal and Slovakia.

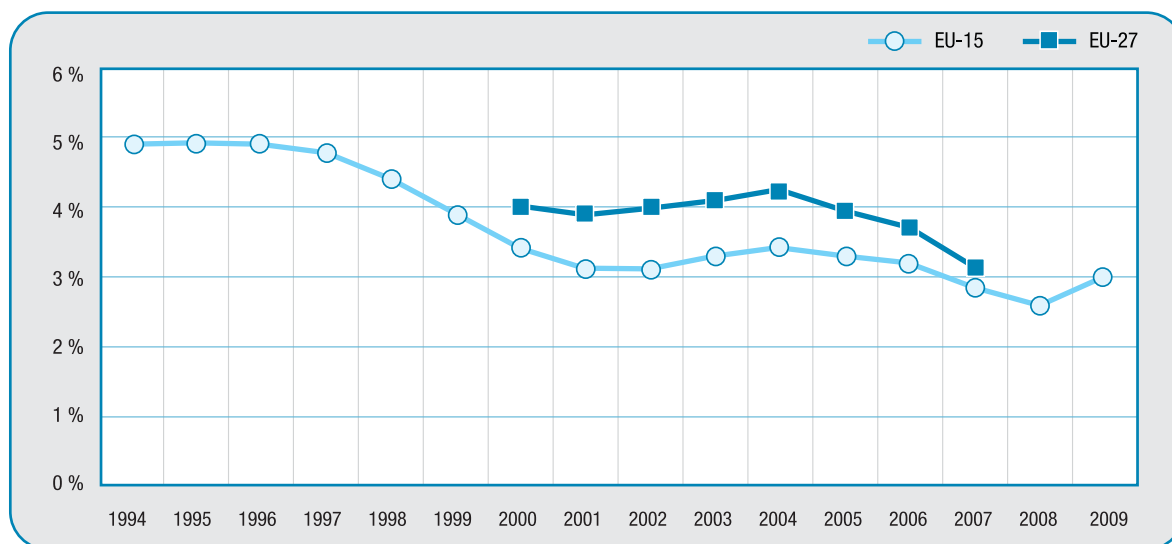
⁽²²⁾ See <http://ec.europa.eu/social/main.jsp?catId=101&langId=en>

Figure 22. **Unemployment rates of population aged less than 25, EU-27 and EU-15, 1994-2009 (%)**



Source: Eurostat, labour force survey, date of extraction 11.10.2010.

Figure 23. **Long-term unemployment rate, EU-27 and EU-15, 1994-2009 (%)**



Source: Eurostat, labour force survey, date of extraction 11.10.2010.
Note: data for 2005 are not available.

(Cedefop, 2009j) they will find it difficult to obtain work experience to complement their learning. Lack of work experience early in working life can damage future job prospects. This could lead to a ‘lost generation’ of people who have difficulties finding a job because their skills do not quite match the needs of the labour market, while the labour market itself experiences skill shortages.

Youth unemployment then becomes long-term unemployment.

Throughout 2000-10 countries worked hard to reduce long-term unemployment, namely people who have been out of work for 12 months. However, this too has increased due to the crisis. In the EU, in 2002, 4% of the workforce had been unemployed for more than

12 months. This fell to 2.6% in 2008, but jumped to 3.0% in 2009 (Figure 23). Half of these have been unemployed for more than two years. Many long-term unemployed people also have low education levels.

One legacy of the economic crisis is more people whose employment prospects are particularly bleak and who are at risk of social exclusion because they have low education levels. Helping these people will be made more difficult by another legacy of the economic crisis, namely financial constraints. Public money for training unemployed people, particularly young and long-term unemployed, may be scarce, but will need to be found to integrate them into the labour market if Europe is to meet its employment rate target of 75% by 2020.

6.2. Green sustainable growth: adapting existing skills

Developing a low-carbon economy for green, sustainable growth and to meet climate change obligations can create jobs.

EU and national policies to tackle climate change can affect skill demand and supply (Cedefop, 2009k). Generally, environmental strategies and programmes acknowledge the potential for job creation. However, often countries' environmental strategies and programmes do not integrate skill development. France is perhaps the most advanced with its 'Mobilisation plan for green jobs' (Box 33).

Cedefop's study *Skills for green jobs* (Cedefop, 2010g), part of a broader study carried out with the International Labour Organisation, looks at the skills needed to develop a low-carbon economy in six Member States (Denmark, Germany, Spain, Estonia, France and the UK). It shows that the boundaries between what is and is not low-carbon work are becoming increasingly blurred. Experience in Denmark, for example, underlines green skills are not confined to the energy sector. A narrow sectoral approach to skills anticipation and development is insufficient to understand the greening of skills and occupations. There is no clear definition of green jobs and the distinction between green

Box 33. France – Initiative on green growth professions

France's initiative on 'green growth' professions, launched in 2010 comprises three parts, all of which have a VET element. The first part – setting up a national strategy – includes awareness raising campaigns about growth for education and career guidance professionals and the need for common core skills and training for teachers and trainers. It also includes an award (an official label) to encourage schools and continuing vocational training institutions to become environmentally friendly. The second and the third parts mobilise sectors and trades and regions. State funding will be increased to adapt training courses, for example in the construction sector to encourage energy saving. All stakeholders – the State, the regions, joint committees for collective training (OPCA – *Organismes paritaires collecteurs agréés*), trades, companies, social partners, associations, training and education bodies – will work together at regional level to help identify and promote green growth professions.

Source: ReferNet France, 2010.

and more conventional sectors is artificial (Business Europe, 2010). Trying to distinguish between jobs and skills that are green and those that are not can be unhelpful.

Information technology skills have become essential to many aspects of working life. Green skills may become equally important. Many skills needed for low-carbon jobs can be found in existing occupations (Cedefop, 2010g). Case studies suggest that, given a sound basis of generic skills, upskilling or 'adding to' existing job-related skills will enable someone to carry out the full range of tasks required by a new green occupation (Table 9).

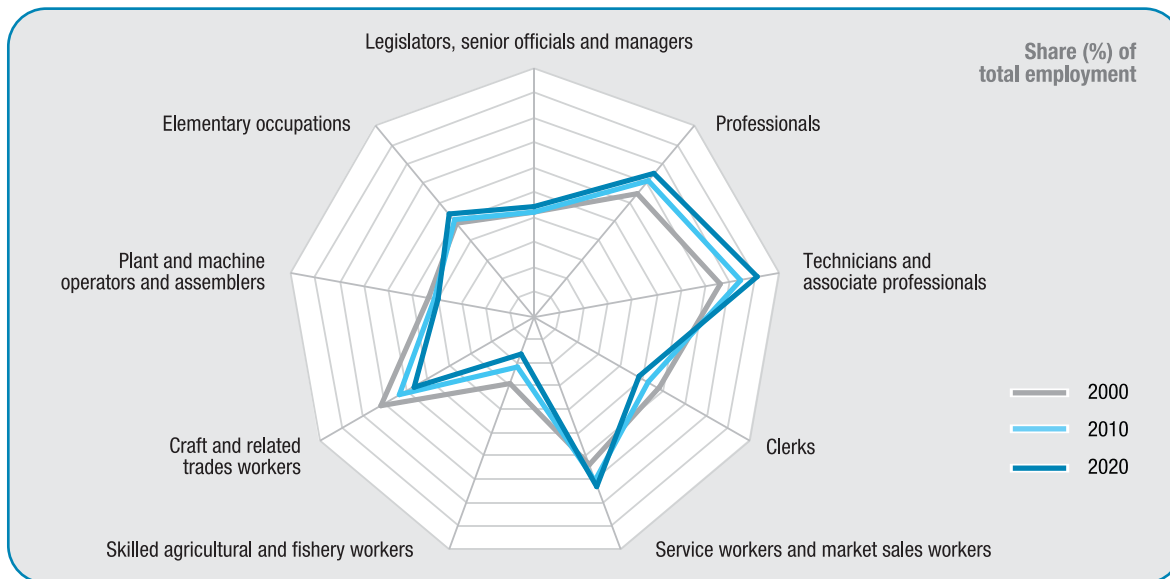
The level of retraining required to convert to an occupation for a 'greener' industry may be less than expected. Skills in 'old' or even declining industries may be valuable to the low-carbon economy. For example, workers with experience in shipbuilding and in the oil and gas sector are highly sought after in the wind turbine industry for their skills in welding, surface treatment and outfitting.

Table 9. **Examples of upskilling to new occupations in Member States**

Member State	Occupation(s)	Core training	Upskilling	New occupation
Denmark	Industry electrician/ energy technologist	VET qualifications/ tertiary engineering qualifications	Knowledge of energy sources, ability to integrate energy systems, project management	Manager in renewable energy
	Industrial operator/ industry electrician	VET qualifications/ upper secondary qualifications	Assembly, installation of parts, use of tools	Wind turbine operator
Estonia	Construction worker	No professional standard	Knowledge of energy systems, data analysis, project management	Energy auditor
France	Recycling sector worker	General certificate of vocational qualification	Sorting and reception techniques, knowledge of conditioning and storage	Waste recycling operator
	Product design and services	22 initial training courses with varying specialisation	Integrating environmental criteria in design process, integrated assessment and life cycle analysis	Eco-designer
Germany	Electronic/ mechatronic technician	Initial vocational training	Electronics and hydraulic systems, safety procedures, operation and services	Wind power service technician
	Plumber/electric and heating fitter	Initial vocational training	Technical training, knowledge of administrative procedures, entrepreneurial skills	Solar energy entrepreneur/ installations project designer
United Kingdom	Engineer in energy sector	Tertiary engineering qualifications	Installation and maintenance of low- carbon technologies, customer service skills	Smart energy expert/smart energy manager
	Commodity trader/ broker	Tertiary qualification	Practical skills on functioning of carbon market, understanding of trading tools	Carbon trader/ broker

Source: Cedefop 2010g.

Figure 24. **The changing occupational structure, 2010-20, EU-27+**



Source: Cedefop, 2010f.

Some sectors will require significant investment in skills, because of the scale of upskilling required. Concern over the construction industry's capacity to meet low-carbon requirements with its existing workforce is based more on the number of workers that need to be upskilled – even though the new skills required are not especially complicated (Institute for Public Policy Research, 2009).

Developing skills for green, sustainable growth appears to rest on two bases – a solid foundation of core skills and continuing training to adapt existing skills. The lack of engineers is possibly the biggest problem for the environmental sector in Germany and is being made worse by fewer engineering graduates and apprenticeships in recent years (Cedefop, 2010g). Owing to demographic trends some countries do not have enough engineers to replace those retiring, resulting in a shortage of people with the skills to deliver major infrastructure projects.

6.3. More skill-intensive jobs and sectoral change

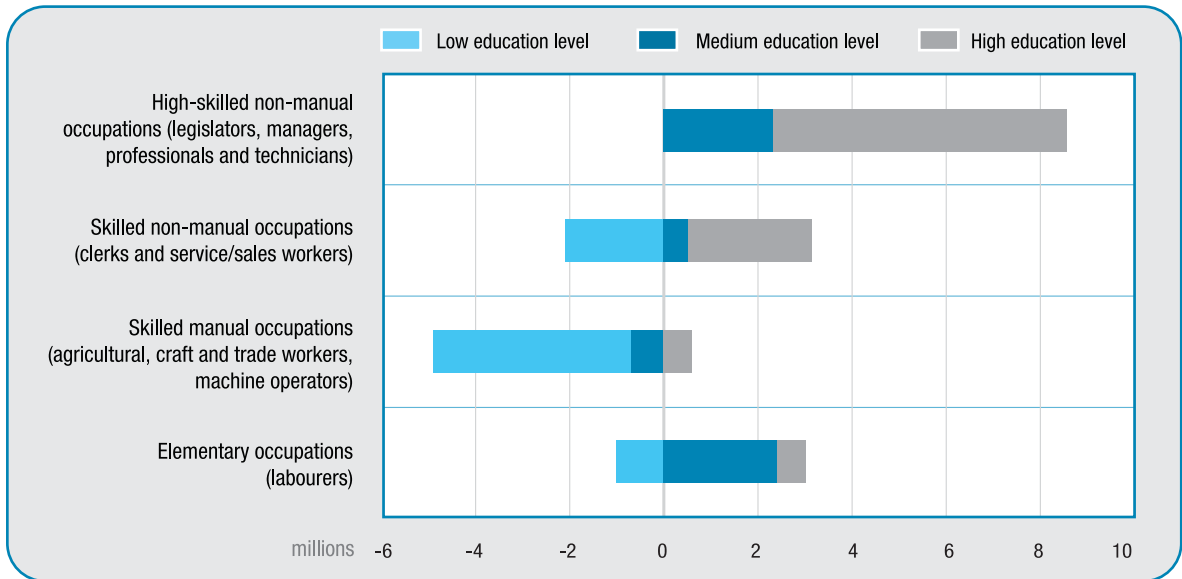
According to Cedefop's latest forecast of skills demand and supply in Europe (Cedefop, 2010f), despite the recession, there will be around

seven million more jobs, (new jobs created minus jobs lost elsewhere) in 2020 than there are today. It is also estimated that there will be around 73 million job opportunities due to the need to replace workers who, for example, retire or change jobs. Consequently, the total number of job opportunities over the next decade is projected to be around 80 million.

Although between now and 2020 there will be job openings for all types of occupations, most new jobs will be in knowledge- and skill-intensive occupations, such as high-level managerial and technical jobs (Figure 24). Almost 40% of people currently work in knowledge- and skill-intensive jobs such as management, professional work of one kind or another or technical assistance for them. Demand in all these areas is expected to rise over the next decade to account for 42% of jobs.

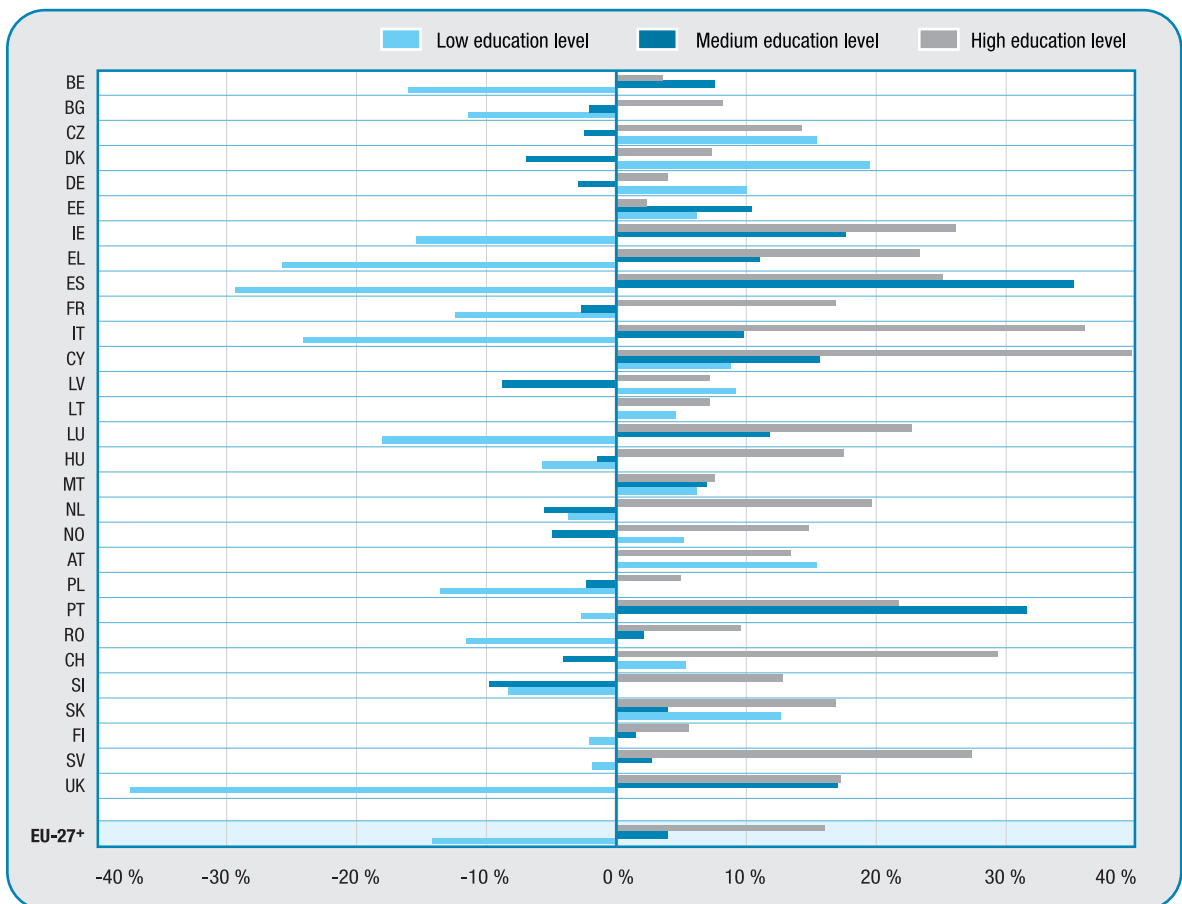
At the other end of the skill spectrum, demand for elementary occupations is also expected to increase, but not to such a great extent. Demand will fall for some intermediary-level jobs, for example skilled manual workers and office clerks. This implies a hollowing out of the job market. Jobs requiring high skills and lower skill jobs involving contact with people will increase, while routine jobs in the middle will be replaced by new machines or information technology. However,

Figure 25. Net employment change by occupation and qualification, 2010-20, EU-27+



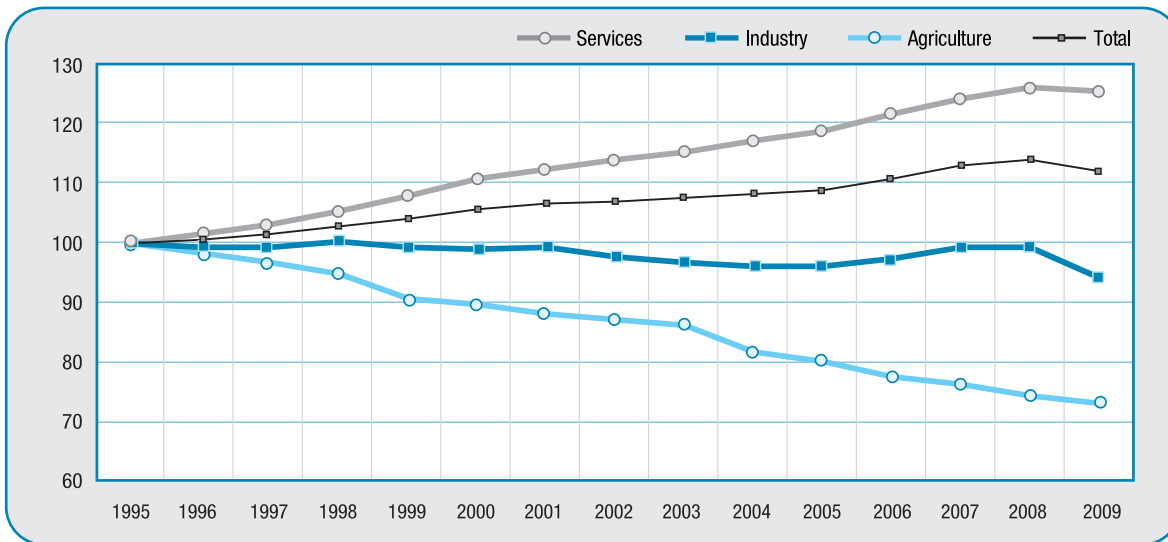
Source: Cedefop, 2010f.

Figure 26. Skills demand: projected change in qualification structure by country, 2010-20 (%)



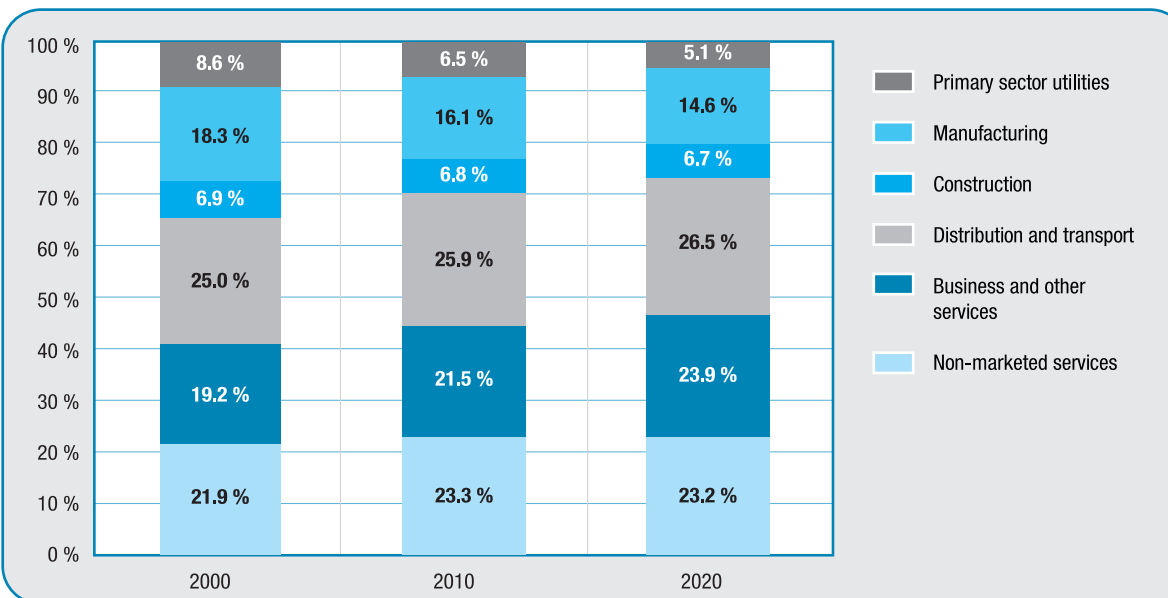
Source: Cedefop, 2010f.

Figure 27. **Employment changes by branch of economic activity, EU-27, 1995-2009 (index numbers, 1995=100)**



Source: Cedefop's calculations based on Eurostat, employment growth statistics (national accounts and LFS), date of extraction 27.10.2010.

Figure 28. **Shares of broad sectors of employment, EU-27+ (%)**



Source: Cedefop, 2010f.

replacement demand will be significant.

Projections suggest that demand for skills, as measured by formal education levels⁽²³⁾, is likely to continue rising. The share of jobs requiring

high-level qualifications will rise from 29% in 2010 to about 35% in 2020, while the number of jobs employing those with low qualifications will fall from 20% to 15%. The share of jobs employing those with medium-level qualifications will remain significant, at around 50%. Figure 25 illustrates that all types of job will require higher levels of qualifications, even elementary

⁽²³⁾ The terms high, medium and low qualifications in the figures are used as a proxy for formal education levels
high = ISCED 5-6; medium = ISCED 3-4; low = ISCED 0-2.

occupations as new technologies and work organisation change the tasks of jobs and how they are carried out.

Reduction in demand for those with low levels of education and qualifications is a trend in most, but not all countries (Figure 26).

Demand for higher skills in all types of occupations is also the result of sectoral change. Competition between Europe and Brazil, China, India, Russia and other fast-developing nations will intensify. Not only do they have lower labour costs than the EU, but they also aim to increase their share of high added-value jobs by raising the skills of their workforces. This will put more pressure on Europe's sectors to restructure and innovate.

During the crisis, the automotive sector in Germany, Ireland, Hungary, Romania, Slovakia and Sweden suffered sharp falls in sales and output. Even though Greece and Cyprus suffered substantial falls in tourism and the UK's banking and finance sector was hit hard, the shift towards a service economy that preceded the crisis (Figure 27) is likely to be accelerated by it.

The forecast is that in the next decade the total share of jobs in the primary sector and utilities will fall from 6.5% to 5.1% (Figure 28). Although the share of jobs in manufacturing and construction may increase in some countries, in Europe overall it is expected to fall slightly from 22.9% in 2010 to 21.3% in 2020. The share of jobs in the service sector is expected to rise from 70.7% to nearly 74%, particularly in business and other services, distribution and transport.

6.4. A more highly qualified, but older workforce

For nearly all countries, the share of high-qualified people in the workforce is projected to be greater in 2020 than in 2010 and the proportion of low-qualified people to fall. These general trends are observed in almost all countries (Figure 29). On average, women are projected to be better qualified, although for medium qualifications the rates of increase are higher for men.

The right balance between supply and demand also means that people need to be a good fit with their jobs. Although forecasted skill levels may be broadly in line, in 2020 the European labour market is likely to have a surplus of some skills and a shortage of others. People may have academic qualifications while employers may want vocational ones. Europe's challenge is not just to improve skills, but to match the people with the right skills to the jobs available.

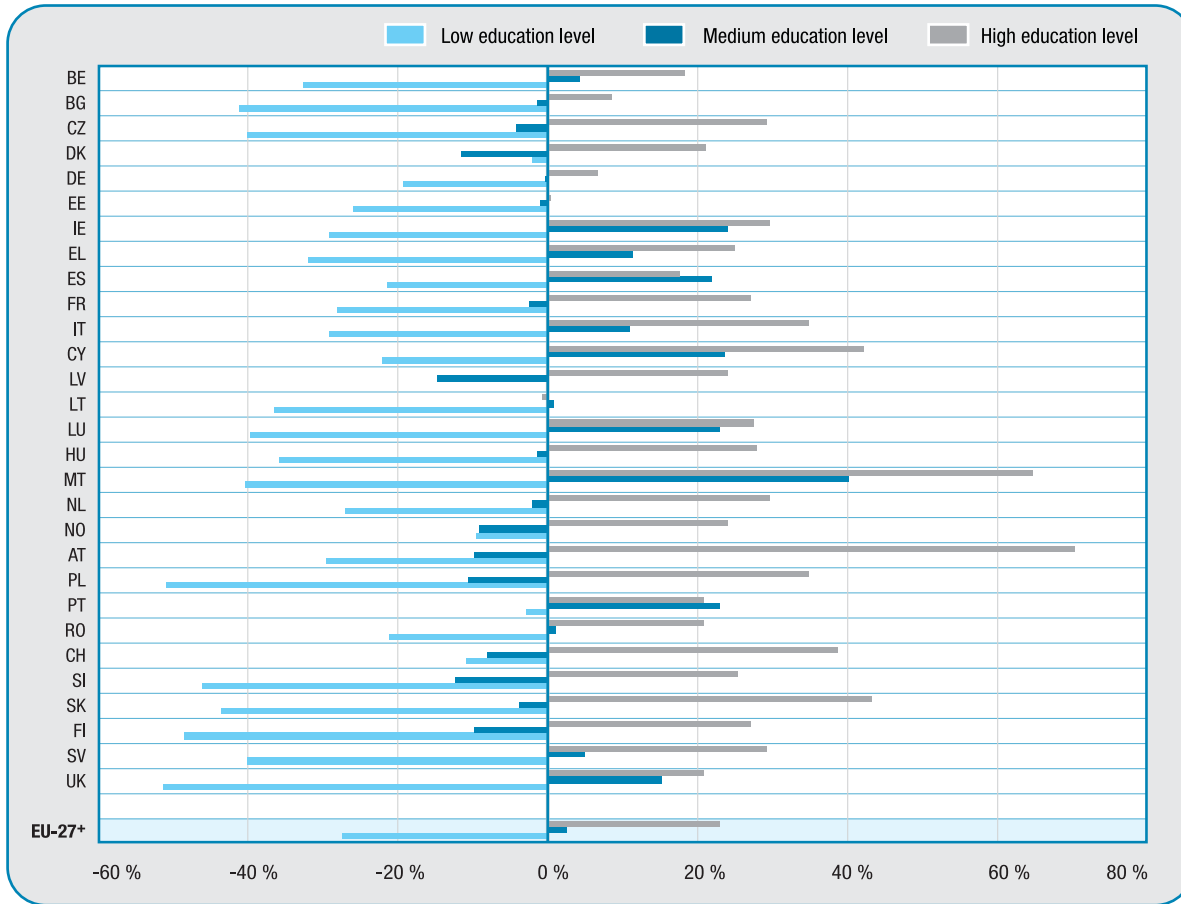
Where there is an imbalance between skill supply and demand, mismatches will occur. For example, some people will take jobs for which they are overqualified or overskilled. With strong job growth this is likely to be only temporary, although there is evidence that this can for some people, become permanent (Cedefop, 2010h). Underusing skills is a potential problem as people can become not only dissatisfied in their jobs but also less attractive for future employers and is likely to restrict career progression opportunities as the skills they have become obsolete. The geographical dimension is another important aspect of imbalances. Structural differences can result in labour shortages in one country or region, while other places experience high unemployment.

Matching skill supply and demand also requires flexibility to labour market changes. However, labour supply by education level or qualification level is largely predetermined by demography and educational and training decisions already made. Europe's workforce is ageing. Increasingly Europe will rely on workers above 45 years of age (Figure 30).

Implications are twofold. First, for Europe to keep pace with global developments, greening economies, technological progress and new working practices it cannot rely on young people leaving schools and universities to enter the labour market. The current generation needs to update, upgrade and broaden its knowledge, skills, and competences.

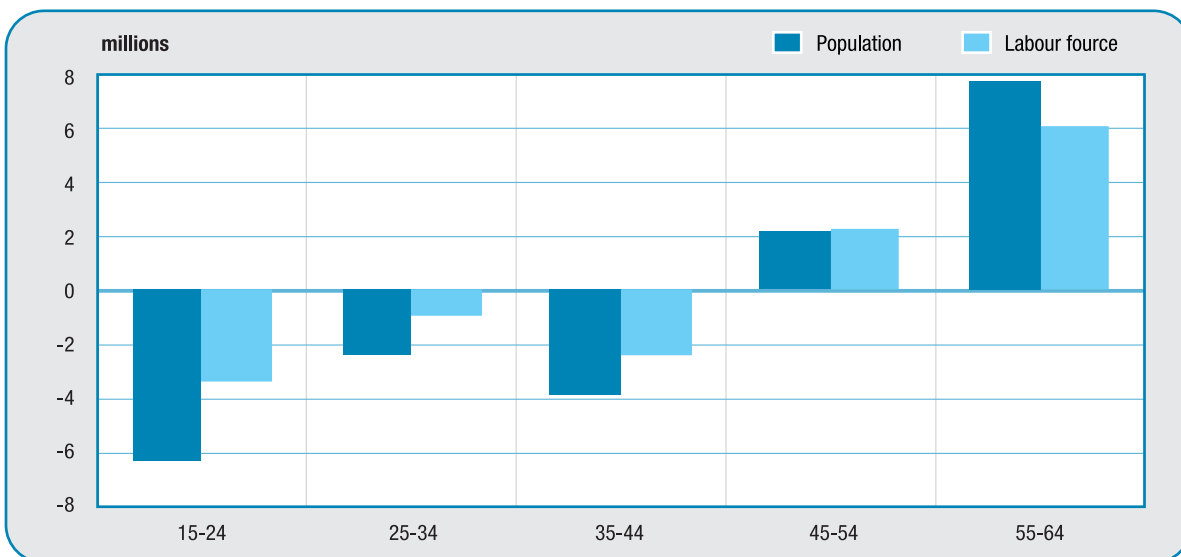
Second, for Europe to reach its 2020 employment rate target of 75%, more people have to be brought into the workforce. To some extent this will happen through higher statutory retirement ages, but it also means bringing more people into the labour market. Higher economic

Figure 29. **Skills supply: projected change in the labour force by qualification and by country, 2010-20 (%)**



Source: Cedefop, 2010f.

Figure 30. **Changes in population and labour force by age, 2010-20, EU-27+**



Source: Cedefop, 2010f.

activity rates of women are particularly important to keep the decline in the labour force lower than that of the general population. It also means helping people with low education levels to find jobs. These people have suffered most from the economic crisis. They are also likely to benefit least from the recovery when the jobs they used to hold are increasingly occupied by others with higher qualifications (Cedefop, 2010f).

6.5. Conclusions: a strong case for continuing VET reform

Broadly speaking, the challenges facing Europe in the next decade are similar to the ones that launched the Lisbon strategy and the Copenhagen process. Namely, the rapid and accelerating pace of change risked overtaking the skills of an ageing workforce, threatening jobs and social cohesion. That risk has not gone away. Rather it has intensified and been reinforced by climate change and the need for sustainable economic and job growth.

In summary, the drivers of change for the next decade require that Europe's ageing workforce improves and widens its skills to perform well in jobs which are likely to become more skill-intensive and demanding at all levels. This requires greater emphasis on continuing training and adult learning.

The EU needs to tackle systemic weaknesses in its skills base which may reduce its capacity to exploit the opportunities offered by green growth. These include deficits in management skills and technical, job-specific skills, many of which are related to science, technology, engineering and mathematics (known sometimes as STEM) which are of greater concern than shortages of 'new' green skills. Across Europe, STEM are declining in popularity at secondary and tertiary education levels.

Continuing training and adult learning are needed to develop key and adapt existing skills to develop a low-carbon economy. The drivers of change also pose particular problems for young and long-term unemployed people, particularly those with low levels of education. High levels of structural unemployment will need to be tackled both to bring more people into the workforce to meet employment rate targets and to reduce the risk of greater social exclusion.

On a positive note the direction of VET reform countries have taken over the past 10 years is aligned with the challenges posed by the drivers of change.

However, VET reform needs to be sustained through the next decade. At European level the VET policy framework and the priorities are set out in the Europe 2020 strategy (European Commission, 2010a) and European policy documents on the framework for cooperation in education and training (European Commission, 2009a, Council of the EU, 2009d), a new impetus for VET (European Commission, 2010c) and new skills for new jobs (European Commission, 2008c).

In addition to the policy framework, however, to sustain VET reform, a clear vision of what countries want reform to achieve may help.

Conclusions: European cooperation in VET – A key to progress

How successful has the Copenhagen process been over the past eight years?

Overall, participating countries and social partners assess the process positively. It has strengthened European cooperation in VET and produced tangible results and observable changes.

This chapter endorses the view that the Copenhagen process has provided a solid foundation for developing European VET policy. In aligning European and national priorities more closely it has enabled countries to focus on shared aspects of VET reform, provided a framework of cooperation to develop solutions and the political support to implement them.

However, the outcomes of the Copenhagen process have had a limited impact on the performance of education and training systems as measured by the Lisbon strategy's benchmarks. The coming decade provides an opportunity to implement those outcomes and for them to have a real effect. But implementation will be difficult and it is not certain that the potential of the progress made so far will be realised.

This chapter argues that, given the challenges Europe faces in the next decade, the direction of VET reform under the Copenhagen process is the right one. However, as we enter the difficult phase of implementing new instruments and wide ranging VET reforms, there is a need to maintain momentum, especially in the light of difficult choices that will need to be made over priorities following the economic crisis.

7.1. Alignment of European and national policies and a voice for VET

The Copenhagen process provided a framework for countries to find areas of common interest

and work together in a voluntary, but systematic, way. This strengthened cooperation and provided the basis for common European instruments and principles to emerge. Consequently, the Copenhagen process's early focus on initial VET shifted to a broader lifelong learning perspective that took in shared national, as well as European priorities.

The Copenhagen process supported EU enlargement. All 12 countries that joined the EU since the Copenhagen process began in 2002 were involved from the beginning to help them to integrate their VET policies with the rest of the EU. Candidate countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey) participate in the Copenhagen process as part of the accession process.

Regular reporting enabled exchanges of information and good practice, and countries and the European Commission to assess progress and agree new priorities as appropriate. This helped countries to reform VET in partnership, not only with one another, but with the social partners at European and national levels. Partnerships reflected shared responsibility for improving VET-related targets and encouraged a sense of common ownership of developments such as the common European instruments and principles.

This combination of bottom-up initiatives and top-down approaches contributed to the overall success of the Copenhagen process. It helped align European and national priorities and supported peer learning. Importantly, the Copenhagen process has given VET a voice. VET's fragmented structure, shared responsibilities, different interests and large and diverse target groups makes it difficult to manage. VET's role in excellence is sometimes eclipsed by its value as a tool to help the less-able which can lead people to hold general education in higher esteem. By providing a framework for cooperation, the Copenhagen

process has brought coherence and consistency to developing European VET policy. Consequently, VET reform is influencing all parts of the education and training system. Separate reporting under the Copenhagen process has also ensured that the wide interests and specificities of VET have been taken into account in modernising education and training systems.

Criticisms of the Copenhagen process focus on the problems of overlapping reporting demands. Countries generally wish for simpler reporting processes. Some countries argue that less frequent progress reports will give more time for reforms to produce measurable results. The criticisms, however, are arguments for improving and adapting the process, not for changing it radically.

7.2. Tangible outcomes influencing national VET policies

According to the Bordeaux communiqué, the Copenhagen process's ambitious priorities have allowed creation of key instruments at European level (European Commission, 2008a).

Under the Copenhagen process six common European instruments and principles have been agreed by Member States, either as recommendations of the European Parliament and the Council or as Council resolutions (Box 33). Also agreed under the Education and training 2010 work programme was the recommendation on key competences for lifelong learning (Council of the EU, 2006a). Countries are also using learning outcomes as the basis for implementing European instruments and principles.

Agreeing the concepts and developing a series of interrelated common European instruments and principles in an eight year period 2002-10 represents a significant achievement in an area that relies on voluntary cooperation between Member States.

The Bordeaux communiqué (European Commission, 2008a) also stated that the Copenhagen process has led to substantial changes in national policies. Countries and social partners agree that the European

Box 34. European instruments and principles developed as part of the Copenhagen process

Common European instruments:

- European qualifications framework (Council of the EU, 2008a)
- European credit system for VET (Council of the EU, 2009a)
- European quality assurance framework for VET (Council of the EU, 2009b)
- Europass (Council of the EU, 2004a)

Common principles and guidelines:

- guidance and counselling (Council of the EU 2004b and 2008b)
- identification and validation of non-formal and informal learning (Council of the EU, 2004c)

instruments and principles, and their lifelong learning perspective are influencing national education and training policies and practice.

VET curricula are being developed using learning outcomes and competence-based approaches. The European qualifications framework (EQF), the European credit system for VET (ECVET), which are based on learning outcomes and the European reference framework for quality assurance in VET (EQAVET) were originally foreseen, along with Europass, as instruments to promote transnational mobility. The EQF has been a catalyst for all countries to develop national qualifications frameworks (NQFs) based on learning outcomes. In some cases NQFs are redefining how different parts of the education and training and qualifications systems relate to one another.

The 2004 European principles on identifying and validating non-formal and informal learning have been used by several countries. ECVET is encouraging cross-border mobility and flexibility in national systems. ECVET will enable people to transfer learning outcomes from one qualifications system to another, or between general and vocational education to promote lifelong learning through VET. EQAVET is

helping to promote common trust between different VET systems.

Europass, established in 2004, is also supporting geographical and job mobility for learners and workers by enabling all skills and competences, not just formal qualifications, to be recorded and shown in a standard format across the EU. Europass is widely and increasingly used by people across the EU. Since its launch in February 2005, more than 29 million people have visited the Europass website and nearly 9.7 million Europass curriculum vitae were completed online by the end of September 2010, demonstrating Europass' value to learners and workers.

Resolutions in 2004 and 2008 have reinforced the role of lifelong guidance in developing and implementing European education, training and employment policy. Supported by European cooperation, during 2002-10 all countries have developed strategies to strengthen lifelong guidance and counselling.

The reforms countries are undertaking and voluntary agreement to implement European instruments and principles represent profound change. They bring the prospect of better performing, high quality and more attractive VET systems aimed for in the Copenhagen declaration.

However, it is important to note that implementation of common European instruments and principles are still at a relatively early stage and are not yet an integral part of the VET system. ECVET, for example is at the pilot stage. In some countries, there are doubts about the reliability and authority of validation processes which, potentially, undermine the value of the qualifications awarded. Validation is not yet established as an integrated part of training and career-development in enterprises and so has limited visibility and relevance.

Countries assess the impact of the European instruments and principles differently and can be divided into two main groups.

One group of countries, notably Denmark, the Netherlands, Norway and the UK, considers the impact of European instruments and principles as moderate. These countries support the objectives but point out that they already have national arrangements for transparency of

qualifications and for people to move within their education and training systems. Consequently, European instruments and principles have not changed the direction of their national policies. For example, the learning outcomes principle was already an important part of the Dutch and Norwegian education and training systems and the UK already had a national qualifications framework firmly established. Validation of non-formal and informal learning has a long tradition in France. Quality assurance in VET has been implemented for many years and countries such as Austria, Denmark, Germany, Norway, Sweden and the UK all apply more comprehensive approaches than that in the EQAVET.

However, most countries belong to a group that believes European instruments and principles are having a significant and strong impact on national policies on VET and lifelong learning. For example, Germany, in developing its qualifications framework, has focused on the importance of the learning outcomes principle and its potential role in making education and training more flexible. In Italy, where regions are responsible for VET, European principles and instruments are being used to integrate the different systems more closely. Some countries, for example Iceland and Poland see NQFs as a reference point for systematic reforms of their education and training systems. The Copenhagen process has undoubtedly produced tangible results.

7.3. Limited impact on system performance, but considerable potential

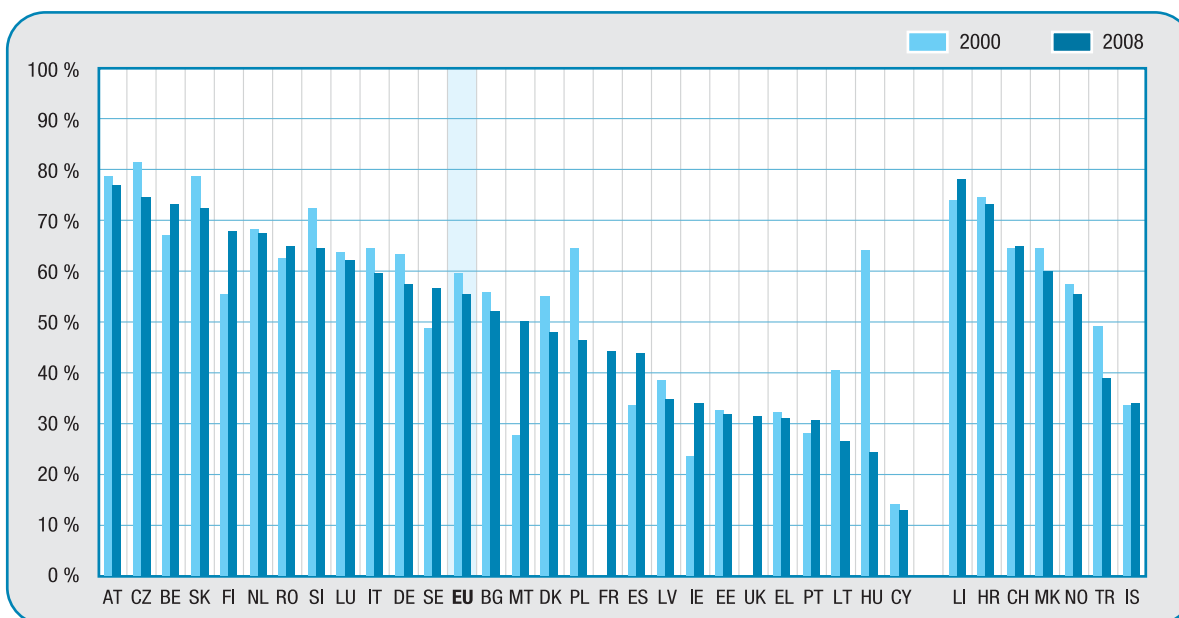
The Lisbon strategy set out benchmarks to measure the performance of education and training systems over the period 2000-10. Under the Copenhagen process, countries agreed shared national priorities to improve VET. In particular, they aimed to promote the attractiveness of VET as a learning option, improve its quality, encourage investment in it and promote mobility. These aims were underpinned by development of the European instruments and principles. Improvements were expected to be reflected in the benchmarks.

Table 10. 2010 targets related to education and training

Benchmarks for 2010	State-of-play 2010 (reference year 2009) EU-average
Raise the average employment rate in the EU to as close as possible to 70%	64.6 %
Increase the number of women in employment to an EU average over 60%	58.6 %
Raise the average EU employment rate among men and women aged 55 to 64 to 50%	46.0 %
An EU average rate of no more than 10% of early school leavers	14.4 %
Ensure that at least 85% of young people complete upper secondary education (76.6% in 2010) – upper secondary	78.6 %
EU average participation in lifelong learning should be at least 12.5% of the adult working population(25 to 64 age group)	9.3 %
Total number of graduates in mathematics, science, technology in the EU should increase by at least 15% by 2010, while at the same time the gender imbalance should decrease	+ 33.8 % (*)

(*) data refer to the period 2000-2008.

Figure 31. Students enrolled in vocational courses in upper secondary education (ISCED 3), 2000-08 (% of all students enrolled in upper secondary education)



Source: Cedefop's calculation based on Eurostat, UOE data collection on education systems, date of extraction 8.6.2010.

NB: To allow comparison, UK and France are not included in the EU average, as their data are not fully comparable over time. 2008 EU average including them is 50.3%. Greece 2007 instead of 2008. Hungary and Liechtenstein 2003 instead of 2000. Switzerland 2002 instead of 2000.

VET reform supported by the Copenhagen process has had a limited impact on the performance of education and training systems as measured by the benchmarks under the Lisbon strategy's education and training. Many

of the benchmarks were not reached (Table 10). The economic crisis certainly set back Europe's performance, but on pre-crisis trends, it is unlikely that the targets would have been reached.

Data do not indicate that VET is any more attractive as a learning path in 2010 than it was in 2000. VET students still account for roughly half of all those in upper-secondary education, but the number of students enrolling at upper-secondary level (ISCED 3) is lower in 2007, than it was in 2000. The demographic trend in many countries is towards fewer VET students (Figure 31).

There are also no indications that adult participation in VET is much higher now than in 2000. Participation in lifelong learning at 9.5% of the working population aged 25 to 64, remains well below the benchmark of 12.5%. This is disappointing given that adults already in the workforce need to improve their skills to meet future demand. A substantial proportion of Europe's workforce, some 76 million, is low-skilled, having only a basic level of educational attainment. Levels of education among young people have risen, but not by as much as was hoped.

Although there are no precise data on investment in VET, those available indicate that before the economic crisis there was no substantial increase of annual per capita investment in human resources. In fact, between 2003 and 2008 public expenditure on VET fell. Spending on active labour market policies for those at risk over the same period also showed no substantial increase and fell markedly in some countries. The latest figures for investment in VET by enterprises relate to 2005, but the signs are that enterprises did not substantially increase investment in VET after then. Weak economic growth and budgetary constraints following the economic crisis are expected to lead to less investment in training by enterprises at least in the short to medium term.

The Copenhagen process has not had much impact on geographical labour market mobility, which was one of its main aims. Most countries do not have specific national policies to promote geographical mobility of learners, or teachers and trainers in VET. Finland is the only country to have set a national target for mobility. However, all countries use EU programmes such as Leonardo da Vinci, Comenius, Grundtvig and study visits. Participation in these programmes has increased since 2000, although the absolute

numbers of participants remain relatively low. For instance, participation of learners in the Leonardo da Vinci programme, by far the largest of the VET-related EU mobility programmes was only around 50 000 in total in 2009.

However, despite the EU not reaching many of the benchmarks in 2010, it should be noted that they are EU targets. The performance of different countries varies considerably. Some countries have exceeded the benchmarks for many years, even before the Lisbon strategy. VET reforms supported by the Copenhagen process have created momentum and are likely to have an impact on the labour market in the future. Implementation of European instruments and principles is still at an early stage and their full potential has yet to be realised. Countries argue that more time is needed for the changes to have an effect.

For example, validation is seen as a way to make VET systems more flexible by recognising skills and competences that traditional qualifications systems fail to capture. This can improve people's employment prospects by making their skills and competences more readily visible. This can help those in danger of losing their jobs to find another one more easily. It can also help groups with particular needs (such as migrants and early school leavers) and those wishing to return to the labour market. This may prove particularly important to achieve the higher employment rate of 75% by 2020 that the EU is aiming for.

Already there are some encouraging signs. Improvements have been made. Despite the economic crisis, all of the benchmarks show improvement in 2009 (the year for which the latest data are available) compared to 2000.

According to Cedefop's skill forecasts the level of educational attainment among young people is rising. Women are now, on average, better qualified than men (Cedefop, 2010f). Employment rates for older workers and women increased faster than the overall employment rate and, although it is not possible to quantify, it is likely that VET has made an important contribution. Investment in training may not have risen, but most public expenditure focused on young people and those at risk and during 2003-08 both youth and long-term unemploy-

ment fell. Substantial public investment was made in VET as a response to the crisis, acknowledging its key role in helping people to keep and find jobs.

Importantly, the recent Council conclusions on new skills for new jobs (Council of the EU, 2010a) emphasised the need to strengthen the links between VET and the labour market. This helps make VET reforms look outward, linking them with developing skills to meet labour market needs. These links are a key priority for VET responsiveness to changing needs (European Commission, 2008a). Countries are developing forward-planning mechanisms which focus on jobs and skills nationally and at European level, identify potential skill gaps and shortages. They are designing institutionalised responses to future skill and competence needs and involving social partners closely in defining and implementing VET policies.

7.4. VET for recovery and beyond

The Copenhagen process has had a positive influence on European VET. The drivers of change for the next decade argue strongly for VET reforms to continue.

A legacy of the economic crisis could well be high levels of structural unemployment, particularly among young and low-qualified people. There is a need to adapt existing skills to develop a low-carbon economy and deliver sustainable green growth. More skill-intensive jobs need to be filled by an ageing European workforce. Job opportunities requiring medium-level qualifications, many of them vocational, may not be filled because of a mismatch in the skills available. More people need to find jobs to meet the Europe 2020 employment rate target of 75%. This will require investment to improve the job prospects of low-qualified people and those at risk of social exclusion.

Given these developments, the trend of VET reform under the Copenhagen process has been the right one. Essentially, the EU, Member States and the social partners have sought to strengthen initial VET through better curricula and more flexible learning options. At the same

time they have aimed to systemise continuing VET by providing opportunities to enter the education and training system at various points throughout working life and to gain recognised qualifications through various routes, including abroad, through validation of informal and non-formal learning.

The signs are that VET reform will continue. At European level the framework is already in place. There is already some consensus among countries and social partners that cooperation in VET should focus on ⁽²⁴⁾:

- implementing European instruments and principles;
- anticipating future skill needs and adapting education and training supply accordingly;
- supporting mobility between jobs and sectors;
- social inclusion and equal opportunities with focus on early school leavers, low-skilled people and migrants and reducing regional disparities;
- adult learning as response to demographic developments;
- environmental issues, sustainable development and related green jobs.

A smaller group of countries also suggest increasing opportunities for geographic mobility, particularly in Europe. Other countries want more emphasis on improving the quality of VET and professional development of VET teachers and trainers.

Some countries and social partners believe that the Copenhagen process lacks visibility and that information about it is not disseminated widely enough. Belgium and UEAPME, the European Association of Small and Medium-Sized Enterprises argue that a better communication policy could make the process and implementation of European instruments and principles more effective.

The next phase of VET reform will probably be harder than the last 10 years. Learning outcomes need to be developed and applied systematically and consistently at European and national levels and their implications for curricula, qualifications,

⁽²⁴⁾ Mainly based on replies by Directors General for Vocational Training and social partners to specific question in the questionnaire supported by additional evidence (replies to other questions of the Cedefop questionnaires).

teaching and assessment understood and worked through. All of the different European instruments and principles need not only to be implemented, but also integrated with one another and with European and national strategies on VET, lifelong learning and skill development. The next few years from 2011 to 2013, include deadlines to review progress in implementing some of the European instruments and principles.

NQFs must be 'fit for purpose' to coordinate and be relevant to different parts of the educational and training system, such as general, VET and higher education, with a balance between flexibility and ease of movement between different parts of the system and sector specialisation. Methodologies for skill anticipation need improving.

7.4.1. Partnership, resources and maintaining momentum

VET reform still has an ambitious and demanding agenda. Among other things, it is suggested that success depends on three issues; partnership, resources and maintaining momentum.

To modernise VET successfully the partnerships that developed European instruments and principles should be deepened and broadened. These various interests of different experts and stakeholders, including those in higher education and the Bologna process need to be reconciled with one another and with broader interests on the labour market, including the social partners and different economic sectors. Dialogue is needed to discuss challenges openly and requires involving representatives of VET teachers and trainers, VET providers and civil society.

Resources will also be needed. VET reform will be time consuming. Substantial amounts of European and countries' money has been spent on VET reform, including NQFs. The legacy of the economic crisis raises uncertainty about the sustainability of VET financing in the future. Increases in VET spending helped to stave off the worst effects of the recession on unemployment. However, future budget cuts in Member States, coupled with increases in youth and long-term unemployment will require tough

choices on VET priorities. High quality VET that keeps pace with technological and organisational change is not cheap.

Understandably, countries want simpler reporting procedures. However, under the Copenhagen process, specific reporting on developments in VET that went to responsible ministers who provided political leadership and a mandate for the next phase proved invaluable in continuing momentum for VET reform. Coordination through the Copenhagen process has given VET a voice and enabled an effective and comprehensive European VET policy to emerge. Such a policy did not exist before the Lisbon strategy (Cedefop: Bainbridge, Murray, 1999).

To maintain momentum it is also important to understand why VET reform needs to continue.

The Lisbon strategy launched a programme to modernise education and training systems. It set out a series of benchmarks to monitor performance, but it did not define what modern VET systems should look like.

However, through the Copenhagen process countries have done more than align policies. By agreeing consistent common priorities they have identified some of the key features of modern VET systems by working to develop VET that:

- imparts key competences as the basis for learning and work-related skills to improve job and career prospects;
- is comprehensive, inclusive and flexible enough to cope with different learning needs at different points in life;
- builds on people's formal and non-formal learning and their work experience to adapt existing skills to new demands;
- is responsive and relevant to labour market needs;
- has a European dimension which includes opportunities for mobility;
- is supported by lifelong guidance;
- is cost-effective, with an appropriate balance of funding between government, enterprises and individuals;
- acts in coordination with other services, such as welfare and health where appropriate to the person concerned;
- develops through cooperation and partner-

ship, at all levels European, national regional and sectoral, with all relevant stakeholders to draw from their expertise to build consensus and a share of ownership.

It is for Member States to decide the features of modern VET systems. However, debating, agreeing and translating those features into a shared vision of what modern VET systems should look like in 2020 may help to focus VET reform during a period when difficult decisions will need to be taken.

The European Commission's communication on a new impetus for VET perhaps provides a starting point for this debate (Box 34).

The case for continuing VET reform and the Copenhagen process is compelling. The work of the past decade will continue, but maintaining momentum needs a combination of short-term objectives that measure progress towards a long term vision. Modernising VET will probably always be a work in progress. This underlines the case for having a point of reference that sets out the features of modern VET systems and which can, from time to time, be updated. The bridge to the future should lead to a clear destination.

Box 35. A new impetus for VET

Europe by 2020 should contribute to both excellence and equity in EU lifelong learning systems and thereby to the Europe 2020 objectives of smart and inclusive growth, with:

- IVET as an attractive learning option with high relevance to labour market needs and pathways to higher education;
- easily accessible CVET for people in different life situations simplifying skills development and career changes;
- flexible systems based on recognition of learning outcomes, including diplomas, and supporting individual learning pathways;
- adequate support for those at a disadvantage;
- cross-border mobility as an integral part of VET practices.

Source: European Commission, 2010b.

Candidate countries: Croatia, the former Yugoslav Republic of Macedonia and Turkey

This annex reviews progress in Croatia, Turkey, and the former Yugoslav Republic of Macedonia as candidate countries of the EU in the priorities of the Copenhagen process.

Each country follows EU policy directions in education and training. Croatia has participated in the Copenhagen process and the Education and training 2010 work programme since 2005. Turkey has been involved in the Leonardo da Vinci programme since 2003 (Croatia started in 2009). The countries participate in the Bologna process: 2001 for Turkey and Croatia; 2003 for the former Yugoslav Republic of Macedonia which will soon join the Copenhagen process. Each country has also cooperated with the EU through its external assistance programmes⁽²⁵⁾, with the ETF, and with Member States through their bilateral cooperation programmes. Through these means European VET has been disseminated. European instruments and principles are a key reference for reforms in VET in the three countries.

Impact and implications of common European instruments and principles

National qualifications frameworks (NQFs)⁽²⁶⁾

Work on the Croatian national qualifications framework (CROQF) started in 2006 and is overseen by a high-level committee chaired by the Deputy Prime Minister. There is a five-year plan 2008-12 to develop the CROQF and

objectives include improving links between education and the labour market, greater consistency and transparency, quality assurance and mobility, pathways, lifelong learning and recognition of prior learning and social inclusion. The CROQF is based on eight levels, with sublevels (at levels 4, 5, 7 and 8) to accommodate traditional major national qualifications. An important development is the move towards learning outcomes in standards and curricula.

A VET law of February 2009 regulates the NQF and set 2012 as the deadline for qualification standards. Specifications are being finalised and work on occupation and qualification standards has started in sector councils and currently focuses on formal education.

Turkey has been improving transparency of skills in vocational qualifications since the 1990s by developing occupational standards. Since 2003, Turkey has been developing modular competence-based curricula in the education system overseen, since 2007, by a Vocational Qualifications Authority (VQA), comprising the Ministry of Labour, the Ministry of National Education (MoNE), the Higher Education Council (YOK) and social partner organisations.

Turkey is developing a single national qualifications framework based on eight levels, which includes vocational qualifications at the highest EQF levels. A framework for higher education qualifications has been developed by YOK and the VQA. Sector committees, set up by the VQA are developing occupational and certification standards. Recognition of prior learning will be introduced and the MoNE will pilot several national vocational qualifications. Improvements in accessing higher education are planned as the sector expands, but capacity development needs to align quality assurance

⁽²⁵⁾ Through different programmes related to VET: PHARE, CARDS, MEDA and now IPA.

⁽²⁶⁾ The following paragraphs draw upon an ETF working document on NQFs (ETF, 2010a) as well as on the country reports.

with the qualifications framework for the European higher education area. The quality improvement of vocational colleges (MYOs) and a short cycle vocationally-oriented higher education qualification certificate will be important for the success of the reforms.

The former Yugoslav Republic of Macedonia has been developing its NQF since 2005. A national commission is managing the project during 2008-10 ⁽²⁷⁾, dealing with the NQF concept, structure, criteria and quality assurance. National levels will be referenced to the EQF by 2012. The NQF for higher education is part of the overall framework. Some 14 occupational standards in 14 sectors of technical education have been developed with significant support from social partners. Standards have also been prepared for occupations in short supply.

Towards national lifelong learning strategies and practices

Developing a lifelong learning strategy and identifying the role of VET in lifelong learning is a key issue in candidate countries.

In Croatia, lifelong learning is a strategic principle for developing the adult education and VET system during 2008-13. This includes developing the Croatian qualifications framework (CROQF). It also includes the European credit system for VET (ECVET) and connects to the European credit transfer system in higher education (ECTS), and to the European quality assurance system for VET (EQAVET). The learning outcomes approach is part of it.

Turkey produced a lifelong learning strategy in 2007. It included setting up the VQA and developing the NQF as well as developing learning centres, e-learning and improving resource allocation. The learning outcomes approach is accepted but implementation is at an early stage. Future challenges include better cooperation between education, sectors and decision-makers. Disseminating good practices and encouraging stakeholders will assist reforms.

In the former Yugoslav Republic of Macedonia, the Ministry of Education and Science plans to implement NQF in reference to EQF and EQAVET.

Guidance and counselling

Career guidance services and career management skills remain limited, but progress is noticeable in all three countries.

The Croatian Employment Service (CES) manages vocational guidance and counselling. An annual employment incentive plan guides the CES in line with the European employment strategy and European resolutions on lifelong guidance. Vocational guidance is a transversal and comprehensive activity for students, unemployed and employed people. The CES helps jobseekers and works to prevent drop-outs. Monitoring and evaluation of vocational guidance and counselling is based on quality standards. The Ministry of Science, Education and Sport (MoSES) and several non-governmental organisations support youth career guidance.

Turkey's career guidance system is well established and its importance is reinforced through World Bank and EU-funded projects. A memorandum of understanding was signed in 2009 between the Ministry of National Education and other stakeholders to provide counselling and guidance in schools in cooperation with the employment service (ISKUR), integrating various initiatives into a coordinated lifelong guidance framework.

In the former Yugoslav Republic of Macedonia small 'career centres' were established in 2006 in all VET schools and linked to work-based learning approaches ⁽²⁸⁾. A recent ministry ordinance to schools includes guidance (as well as entrepreneurship) as new subjects. A pilot project has introduced innovative approaches based on EU principles for lifelong guidance. In higher education career guidance exists in many faculties.

⁽²⁷⁾ Agreement 06 MACO1/11/102.

⁽²⁸⁾ In the former Yugoslavia, schools had their own psychologists and pedagogues specifically educated for this function.

Towards excellence: modernising VET systems

Quality of VET ⁽²⁹⁾

Quality and excellence in education and training are objectives of national strategies in the three countries. Concerning the indicators and benchmarks (Table A1) the situation is challenging in Turkey and the former Yugoslav Republic of Macedonia, for example, PISA results for the rates of early school leavers and the educational attainment of 20-24 years olds. Conversely, Croatia's PISA results are close to the European average with strong results for rates of early school leavers and educational attainment (European Commission, 2009d). Initiatives in Croatia over recent years to improve quality in VET include introducing national exams and the State (Matura) graduation exam, self-evaluation of schools, and reforming the VET system based on learning outcomes.

Candidate countries are increasing the relevance of VET to economic and social needs through curricula reform, teacher training, and national qualifications frameworks. Procedures are being set up to ensure quality assurance of the qualifications provided.

Measures to improve performance and quality include decentralisation and greater school autonomy. They also aim to improve entrance to higher education and to fight corruption in education. In this context, reference is made to ENQAVET in all country reports as an important pillar. The main initiatives include:

- national exams at the end of upper secondary education (Croatia and the former Yugoslav Republic of Macedonia);
- projects to assess reform of four-year secondary vocational education in the former Yugoslav Republic of Macedonia;
- at school level, developing evaluation procedures including external evaluation and

self-assessment in the three countries, sometimes in quality management mechanisms (TQM and ISO procedures in Turkey). Competitions among VET schools are used in Turkey to improve quality and attractiveness.

These changes are supported by dedicated national agencies. For example, in Croatia, the National Centre for External Evaluation and in the former Yugoslav Republic of Macedonia, the Bureau for the Development of Education. In Turkey, the Board of Inspection for Quality, the Department of Management, Evaluation and Development (YOGED), the Directorate General of Personnel in MONE and the VQA have key roles.

During 2010, in the former Yugoslav Republic of Macedonia, the impact of the reform of four-year secondary vocational education was evaluated in partnership with the Ministry of Education and Science, the VET centre and ETF. The study's findings aimed to support future VET system and curriculum development and strengthen quality mechanisms.

Improving horizontal and vertical permeability of education and training systems

In Croatia, permeability is seen as a result of the CROQF and developing ECVET connected to ECTS. In Turkey, it is linked to modularising learning outcome-based curricula which aims to ease horizontal and vertical transitions from formal to non-formal education and vice versa, as well as between fields and branches of training and occupational profiles. This will be further improved when all qualifications have been developed by the VQA.

Progress is ongoing in the former Yugoslav Republic of Macedonia - vertical and horizontal permeability should come from the NQF and an integrated concept for secondary vocational and post-secondary education and training system.

VET fostering higher level qualifications

In the three countries, VET qualifications are at secondary education level. Although Croatia and Turkey have institutions providing qualification at higher education, these institutions belong to higher education and are not seen in continuity with secondary VET.

⁽²⁹⁾ Most of the findings below come from an ETF project involving all candidate and potential candidate countries, thanks to a small survey on the evaluation function in the quality cycle for VET systems and providers; ETF paper January 2010.

However, linked to development of NQFs there are discussions on developing or redeveloping post-secondary VET and/or short higher vocational courses. For example, in Turkey, the link between secondary and post-secondary non-tertiary VET has been improving during the past five years with pilot projects for greater alignment of curricula in the two sectors.

Croatia has a network of 43 higher professional schools, among which two thirds are private. Programmes include 50% lessons and 50% practice and lead to bachelor (three years) or master/specialist (three plus two years) professional degrees. There is substantial demand. The government has asked the Council of University Colleges and Universities of Applied Sciences to improve access to higher professional education.

Turkey has a network of around 180 four-year colleges and 450 two-year vocational colleges (MYOs) with 260 different vocational programmes for around 400 000 students. Vocational colleges are seen as a way to train a high-quality workforce and increase the flow of students.

Teachers and trainers

Substantial efforts have been made in the three countries to increase VET teachers' qualifications particularly by modernising in-service training. Action plans have been designed and implemented following new curricula and technology changes.

In Croatia, the VET Agency is responsible for in-service teacher training, based on analysis of training needs done in schools. An action plan was implemented in 2006-08 and followed by a new two-year plan for continuous professional development. A licence was set up for teachers to be obtained after a professional exam and renewed every five years. Incentives are being introduced into teachers' salary scales to improve their qualifications.

Turkey has also focused on VET teacher training. The pre-service model has changed from a four-year 'parallel' system into a four plus one consecutive system. In-service teacher training provision is being adapted to regional, local and school needs. There is a need to test

new models based on ICT in collaboration with universities offering pre-service education.

The former Yugoslav Republic of Macedonia reports significant progress including specific training plans for instructors of practical training in companies. Improved training should emerge from an improved career system for teachers. Obstacles include lack of pre-service teacher training and limited resources to ensure the professional development of all teachers.

Creativity, innovation and entrepreneurship in VET

All candidate countries have curricula reforms that support introduction of new competences, in line with the European framework of key competences for lifelong learning. Progress has been significant and is welcomed by employers' organisations. All countries participate in policy monitoring and benchmarking on entrepreneurship education. A specific institution Seecel (South Eastern Europe Centre for Entrepreneurial Learning) has been created with support of the European Commission and established in Zagreb with support from Croatia. The objective is to develop networking and exchange of experiences and good practices among all south eastern European countries.

In Croatia, promoting entrepreneurial learning is seen as the way to preparing students to start their own businesses. It is well supported by the Central Office for Training Firms (SUVT) and the Chamber of Economy at national level. Inclusion of 'practice firms' in vocational education has helped build entrepreneurship knowledge and skills. Entrepreneurship has also been introduced into the national curriculum with implications for teacher training.

In Turkey, entrepreneurship and creativity are supported by competitions among schools organised by the Ministry of National Education. Significant support for entrepreneurial learning and development has been delivered through various projects by the Administration of Development and Support for SMEs (Kosgeb) of the Ministry of Industry and Commerce.

In the former Yugoslav Republic of Macedonia, business cooperation is still developing. Entrepreneurial learning is higher on the policy agenda. In 2009, the Ministers for

Economy and the MoES signed a declaration to promote entrepreneurial learning at all levels of education and an environment for entrepreneurship and self-employment. Higher education institutions are the drivers in this strategy. Entrepreneurship is part of the curriculum in technical education. Virtual school companies are part of the practical training of students in economic technician and technician for trade and marketing in economic law and the trade sector. A service centre was established with MONE as the national office for coordination of school companies providing banking, social insurance and tax office services. School companies were established in 44 VET schools in different sectors. Teacher training has been provided in entrepreneurship and business planning.

Investment and efficiency: financing VET

Financing VET

Although in the three countries public expenditure on education is below the European average (particularly the former Yugoslav Republic of Macedonia), recent figures indicate increases. Croatia reports a 30% increase since 2004 ⁽³⁰⁾. The former Yugoslav Republic of Macedonia also reports an increase from 3% to 3.7% of GDP ⁽³¹⁾⁽³²⁾. The ETF country analysis on Turkey indicates an increase from 3.5% of GDP in 2000 to 4.2% in 2007 ⁽³³⁾. VET financing is important in the countries, particularly where VET schools are still often working in two shifts (Croatia and the former Yugoslav Republic of Macedonia) or where the infrastructure has to expand to meet demographic needs (Turkey).

Croatia started decentralising in 2001. Some financing responsibilities were given to counties and a compensation fund was set up at national level. The government sets the minimum financial contribution from counties and/or

municipalities annually. A further initiative is a voucher system issued by local authorities to train adults with low educational attainment. A tax deduction scheme for businesses implementing training was set up.

In Turkey, the Ministry of National Education is working with social partners and relevant NGOs through campaigns such as '100% support to education'. The programme promotes protocols with sector representatives, social partners and local administrations to build and equip new schools and train teachers. In 2006, Turkey's ratio for investing in tertiary education in proportion of total investment was the same as Finland and Norway (European Commission, 2009d). There were significant increases for VET, particularly investment in infrastructure, teacher training and ICT equipment. The formula for attributing funds to schools is based on per-capita lump sum depending on the programmes being provided. Municipalities can open or close schools and appoint school directors. More school autonomy may have increased public funding for some VET schools. Employers welcome the increased public investment in VET, in particular the plan to strengthen public-private partnerships.

Turkey has the second highest level of private financing of education of all OECD countries. Private funding supports general secondary and higher education. Teachers' salaries are high compared to other countries in the region ⁽³⁴⁾, and there is scope for encouraging career development and progress, for example through incentives to improve qualifications.

Impact of the economic crisis on VET

The economic crisis has had a considerable impact in Croatia and in the former Yugoslav Republic of Macedonia, and in Turkey where GDP fell 4.75% in 2009 ⁽³⁵⁾. The three country reports mention increased unemployment. In Turkey, the employment services (ISKUR) transferred resources from passive measures to

⁽³⁰⁾ The 2009 EU report on indicators and benchmarks indicates an increase from 3.7% in 2000 to 4.2% GDP in 2006.

⁽³¹⁾ In 2009 3,95% of GDP and 5,03% with additional resources.

⁽³²⁾ Not confirmed by the EU report.

⁽³³⁾ Increase confirmed by the EU report but at a markedly lower level.

⁽³⁴⁾ In Turkey, teachers' salaries have the highest GDP per capita ratio of all OECD countries, *Education at a glance*, OECD, 2007.

⁽³⁵⁾ IMF executive board consultation and post-program monitoring with Turkey public information notice (PIN) No 10/107, 30.7. 2010.

labour market training. In Croatia, several projects were implemented by the employment agency with employers associations sometimes through cost-sharing schemes. The crisis was also felt in public sector salary cuts, including for VET teachers, and in fewer scholarships to address equity and social inclusion.

Declining demand for VET is observable in the former Yugoslav Republic of Macedonia for lower level VET qualifications. In Turkey, the report indicates some problems in training quality with the closure of workplaces for students by several businesses leading to individuals in vocational training dropping out.

Social inclusion through VET

Each country is working to improve access to VET, equity and social inclusion. This is through active labour market measures and initiatives in initial education.

Croatia is well advanced (European Commission, 2009a). Improvement in the former Yugoslav Republic of Macedonia and Turkey is moderate (European Commission, 2009b; 2009c). In Turkey, people living in rural areas face problems along with early school leavers, particularly Roma children. In the former Yugoslav Republic of Macedonia, children with disabilities, face particular difficulties.

In the former Yugoslav Republic of Macedonia policies are underpinned by the 2001 Ohrid Agreement ⁽³⁶⁾, which addresses equity for the Albanian community (who constitute more than 25% of the population) and other ethnic communities. Good practice in preparing teachers for inclusive education has come from non-governmental organisations and international donors. Significant exclusion factors in education are academic training, practical experience and participation in professional development, student segregation

into special schools or classes and teacher-student ratios for effective work with students from vulnerable groups. Segregation in education and training along ethnic lines remains an issue.

Access and equity

In Croatia, general principles to ease access for groups with special needs and Roma have been included in VET. Free transport and accommodation are provided and employment services operate training programmes for the many categories of people at risk. These include long term unemployed people, war veterans, children and spouses of people killed and missing during the war, children with special needs, disabled, Roma, older workers, and school drop-outs. Social partners are encouraging employers to recruit people at risk. Municipalities are also involved, particularly through scholarships, for example in Zagreb.

In Turkey, equitable access is promoted by VET courses in rural areas, developing Internet use, implementing local projects with the support of NGOs and international donors – particularly for equal opportunity in schooling for girls. Initiatives include vocational open high schools where adults can complete their vocational training. Since 2008, 1.2 million adults have benefited from vocational training courses. Organised in 970 public training centres these courses prepare people to become 'active producers'. Other projects involve seasonal workers, women in rural areas, immigrants and the unemployed in general.

Obstacles to progress include lack of resources, difficulties of identifying training needs of groups at risk, equal opportunities for women, social insurance legislation and lack of awareness of VET as a means for social inclusion.

In the former Yugoslav Republic of Macedonia, the Employment Service Agency addresses the needs of migrants, reduces drop-outs, fights illiteracy and helps the socially excluded through training and financial support. Limits are lack of financial resources and insufficient capacities and insufficient knowledge and analysis of skill needs. VET schools act often as second chance schools for many young

⁽³⁶⁾ The Ohrid framework agreement was signed by the government of the former Yugoslav Republic of Macedonia and ethnic Albanian representatives on 13 August 2001. It ended armed conflict and provides the framework for improving the rights of ethnic Albanians.

adults, who left VET schools and return as registered unemployed people taking VET courses. The mainly three-year VET programmes do not attract many students during normal schooling, but become attractive a few years later.

Active citizenship

In Croatia, active citizenship is a growing feature of curricula and education reform. There is also a strong and developing youth network linked to international cooperation. The Chamber of Crafts indicates that there is scope to improve links between this area and reforms to reorganise schools and teaching.

Active citizenship is a VET subject in the former Yugoslav Republic of Macedonia. It is also promoted through cultural events, fairs, competitions and mobility projects for students and teachers. Limitations are due to lack of financial resources and language training.

In Turkey, active citizenship is addressed through non-formal education. Formal action has been limited by difficulties in covering large rural areas. Key initiatives include reading and writing courses, associating children and parents in training, training on health and planning, improving gender equality, fighting domestic violence and participation in social activities.

Strengthening links between VET and the labour market

Identifying and anticipating skill needs and integrating changing skill needs into VET

This has been the major challenge for VET reforms in all countries. Through revising curricula, teacher training, and developing labour market training, the challenge is to increase the relevance of VET delivery to the needs of the labour market.

In Croatia, this is a task of the VET Agency. Some 13 sector councils were established in 2006 where representatives of the economy constitute about half the members. The aim is to analyse and define labour market needs and prepare occupational standards. To date, 323 professions have been identified as matching

the needs of the modern economy. The CES conducts annual surveys among employers about the employment situation and forecasts and skill needs, in close contact with the Association of Employers and the chambers. Employers' representatives stress the need for good analyses to strengthen the link between education and the labour market, with increased 'buy-in' from teachers. These issues will need to be addressed in the reform to integrate changing skill needs into VET and guidance services.

In Turkey, the national employment service ISKUR has developed and implemented a system to identify and anticipate skill needs in schools. There is need to improve the quality and quantity of statistics. This will be done in close connection with the VQA. In addition, better information on new qualifications prepared by VET schools will be provided to employers by involving social partners in provincial employment and VET councils.

In the former Yugoslav Republic of Macedonia the Employment Service Agency conducts skill needs analyses following sector analyses by the Ministry of Economy. In-depth research could be more systematic and coordinating all relevant institutions is a challenge. Better results are obtained at local level for integrating changing skill needs into VET due to cooperation between VET schools and businesses and decentralisation to municipality level.

Involving labour market actors in VET

Social partners cooperate with national agencies and/or ministries to define occupational standards and prepare the NQF and other European instruments and principles for VET. They are also involved in school boards and the work of public employment services. In general, labour market actors are increasing their roles in VET.

In Croatia, involvement of employers in drafting country reports is a good signal. Sector councils provide practical mechanisms for social partnership in education and training. The VET system development strategy 2008-13 includes the principle of partnership, ensuring involvement of all partners (the State and

economic institutions, private sector and other interested parties) in planning, financing and managing VET.

In Turkey, social partners are involved in VET and employment regional councils. The MoNE would like to see more interest and participation in activities of VET institutions. The trade union HAK-IS sees the need for awareness campaigns for VET. Provincial employment and training councils, established in 2008, link training and local employers. The councils changed VET in two ways. First, by bringing local training and labour market sides together. Second, the councils' responsibility for planning training, allocating resources and supervising the overall effort, has changed the role of ISKUR offices from direct contracting to monitoring (and supporting) delivery of training.

In the former Yugoslav Republic of Macedonia, social partners are members of the VET council, and the council for adult education. Social partners are increasingly involved in VET school boards and in organising practical final exams. The Ministry of Education and Science recognises the need for incentives and more opportunities in business for practical training. In higher education from academic year 2010/11 one month practical work in companies (in the summer time) is obligatory and included in the study programme.

Promoting workplace learning

Croatia has a well developed apprenticeship system with around 50 000 students enrolled in three-year programmes in 93 different professions. Management involves the Ministry of Science, Education and Sports (MoSES) in close cooperation with the Chamber of Crafts. The chamber issues licences to craft businesses, trains the trainers and implements exams. There may be difficulties to expand this cooperation to other enterprises. In response, the MoSES planned development of regional centres to simulate the workplace environment for practical training. Government is introducing financial incentives for employers to provide workplace learning for students. But the Croatian Association of Employers emphasises the need for stronger incentives to develop

training at the workplace for employees.

In Turkey, enterprises are legally obliged to set up education units. Apprenticeships were developing until the crisis. Further developments are undertaken by the Ministry of National Education through campaigns and protocols signed with sector representatives at school level to provide workshops with relevant equipment.

Workplace training is also developing in the former Yugoslav Republic of Macedonia. Teachers have been trained to help learning at the workplace. The VET Centre is now developing cooperation with sectors to promote workplace learning based on occupational standards. Chambers of commerce and crafts are involved. Limiting factors include lack of financial resources, particularly by SMEs, and the legal framework, particularly concerning conditions for students involved in workplaces.

Socioeconomic challenges and priorities for future VET policy development

Socioeconomic challenges

Globalisation, technological change and sustainable development affect all candidate countries. They require developing new qualifications, designing new VET curricula, better teacher training and updated teaching methods. Adapting VET infrastructure to the greener economy is a challenge.

Migration is another challenge. Brain drain affects particularly Turkey and the former Yugoslav Republic of Macedonia, where it has increased due to the economic crisis. Immigration from Armenia, Georgia and Azerbaijan is mentioned in Turkey as an issue for VET. But migration is also internal, for example in Turkey, from rural to urban areas. Employment opportunities for women is still limited in cities.

Demography has a mixed impact. Numbers of students in upper secondary education fell by 5.1% in Croatia between 1998 and 2006. In Turkey, the abundance of young people makes

Table A1. Indicators and benchmarks in education and training

EU benchmarks in education and training	EU	EU	EU	EU	Croatia		Turkey		FYROM	
	average 2000	average 2008	bench. 2010	bench. 2020	2000	2008	2000	2008	2000	2008
Participation in early childhood education	85.60	90.70		95.00	54.10	65.20	11.60	26.70	17.40	26.10
Low achievers in reading (PISA)	21.30	24.30	17.00	15.00		21.50		32.20	6.000	
Low achievers in maths		24.00		15.00		28.60		52.10		
Low achievers in science		20.20		15.00		17.00		46.60		
Early school leavers (2006) % 18-24	17.60	14.90	10.00	10.00	8.00	3.70	59.30	46.60	22.80	19.60
Upper secondary attainment (% 20-24)	76.60	78.50	85.00		90.60	95.40	44.70	47.60		
MST graduates in HE: Increase since 2000		33.60	+15%			41.90		57.30		26.10
MST graduates in HE: share of females		30.70	31.90	Improve gender balance		34.90	31.10	31.10	41.60	39.80
Higher education attainment (30-34)	22.40	31.10		40.00	16.20	18.50		12.40		
Adult participation in lifelong learning (25-64, 4 weeks period)	8.50	9.50	12.50	15.00	1.80	2.20	1.80	1.80	2.30	2.50
Investment in education (public spending in % GDP)	4.91	5.05			3.72	4.11	2.59	2.86	3.35	3.32

Source: Progress towards the Lisbon objectives in education and training; Indicators and benchmarks 2009; Commission staff working document; http://ec.europa.eu/education/lifelong-learning-policy/doc34_en.htm

it compulsory to provide more employment opportunities ⁽³⁷⁾ with greater responsibility for VET in preparing young people for employment.

Candidate countries face considerable labour market challenges (A2). Unemployment remains high in the former Yugoslav Republic of Macedonia, particularly among young people. In Turkey, the female employment rate is low as the informal sector accounts for a high share of the economy. Employment in agriculture remains much higher than in the EU at 17% in Croatia, 20% in the former Yugoslav Republic of

Macedonia (FYROM) and about 30% in Turkey.

In Turkey, there is a need to attract more women into employment, reduce youth unemployment by easing school-to-work transition, keep more people in jobs, improve labour market flexibility and adaptability of enterprises, broaden access to employability measures and strengthen regional labour market institutions, create more and better quality jobs and decrease the share of the informal sector in employment (ETF, 2008a).

In Croatia, the main challenges are to increase labour market flexibility, reduce regulation on setting up new businesses, reinforce active labour market measures, address regional

⁽³⁷⁾ Projections for Turkey foresee a population increase from 74 million in 2005 to 84 million in 2020.

Table A2. **Employment indicators and targets in 2009**

	EU 27	EU 2010	Croatia	Turkey	FYROM
Employment rate	64.60	70.00	56.60	43.30	44.30
Female employment rate	58.60	60.00	51.00	24.20	32.50
Employment rate of older workers	46.00	50.00	38.40	34.60	28.20
Employment in agriculture	5.70		17.30	29.50	19.50
Employment in services	69.20		54.00	45.80	48.00
Unemployment rate	8.90	3.60	9.10	12.50	37.30
Youth unemployment rate	19.64		25.00	22.70	62.60
Long term unemployment	3.00	0.90	5.20	2.80	N:A

Table A3. **Enrolment in VET and trends**

	Croatia		Turkey		FYROM	
	2000	2006	2000	2006	2000	2006
Enrolment in secondary education in % of cohort (TS)			40.00	56.50		
Enrolment in upper secondary education						34.00
General secondary in % of TS		27.00		64.00		39.00
Technical secondary or 4 years in % TS		47.00				52.00
Vocational secondary in 2 or 3 years in % TS		27.00				9.00
Technical and vocational		73.00		36.00		61.00
Higher education in % of a cohort				18.80		
Post secondary VET in % of HE				18.00		

differences, integrate people at a disadvantage with special focus on refugees, the Roma and other minorities, and improve adaptability of workers and enterprises (ETF, 2009b).

The former Yugoslav Republic of Macedonia, needs to combat the grey economy, increase effectiveness of administration, enforce active labour market measures and related services, including guidance and counselling and make

them more effective, particularly for young unemployed people and female ethnic Albanians (ETF, 2009c). Labour market challenges are closely related to low performance by education and training systems shown by high rates of early school leavers in the former Yugoslav Republic of Macedonia and in Turkey (Table A1).

Conclusions

Overall, candidate countries have made a strong commitment to VET reform and European cooperation on VET. They have expressed the need to continue implementing EU instruments and principles and develop lifelong learning policies. Key objectives include increasing quality and attractiveness, promoting equity and social inclusion, and developing entrepreneurship. They use EU good practices and are increasing bilateral and European cooperation. In parallel, enlargement challenges will continue to promote better links between VET and employment in preparation for the European employment strategy.

It is crucial to ensure effective coordination among stakeholders and link social partners to designing and implementing reforms. This is particularly needed to address challenges on early school leaving, adult participation in lifelong learning, youth and long term unemployment. Candidate countries should both benefit from and contribute to the new impetus for European cooperation in VET to support the Europe 2020 strategy.

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Data sources

Qualitative data sources

Findings and country examples of initiatives in this report are based for a large part on a survey conducted by Cedefop in 2009-10 and addressed to Directors General for Vocational Training (DGVTS), social partners represented in the Advisory Committee on Vocational Training (ACVT) and Cedefop's ReferNet (*).

Themes for this survey were selected following a wide consultation process involving the above stakeholders and the European Commission:

Theme 1	Progress in modernising European VET systems in the Copenhagen process and priorities for future cooperation
Theme 2	Socioeconomic challenges and priorities for future VET policy development
Theme 3	Economic crisis – VET policies as recovery measures
Theme 4	Impact and implications of joint work on European principles and tools
Theme 5	Strengthening links between VET and the labour market
Theme 6	Addressing equity, social inclusion and active citizenship
Theme 7	Quality, excellence and attractiveness of VET
Theme 8	Enhancing creativity and innovation
Theme 9	Financing VET

(*) ReferNet is Cedefop's network of reference and expertise on vocational education and training. Each national ReferNet member is backed by a consortium of VET-related organisations.

The whole process of European cooperation in VET which started in 2002 was covered by the survey. Respondents were also asked to identify and outline future priorities for modernising VET systems. However, depending on survey recipients, particular focus of the survey varied:

- the DGVTS questionnaire gathered information on how countries perceive and assess progress, and looked at possible developments and implementation of VET policies beyond 2010 - also considering the European level. Explanations, qualitative and quantitative data or examples of initiatives were required to support progress assessments;
- the ReferNet questionnaire collected detailed information on VET developments in countries, as well as on specific strategies and initiatives. ReferNet also provided examples of national practices related to VET policies;
- the social partners' questionnaire explored how they perceive and evaluate progress and their role, involvement and contribution to the Copenhagen process. It was the first time in monitoring policy developments in education and training policy that social partners were surveyed.

Questionnaires covered both initial and continuing vocational education and training, including training provisions for the unemployed in active labour market policies and vocationally-oriented programmes in higher education.

In total, 27 replies from DGVTS, 14 replies from social partners (13 national social partners from nine countries and one European social partner – UEAPME) and 27 replies from ReferNet were received.

Information from other sources was also integrated into Cedefop's analysis, in particular the outcomes of the Education and training 2010 work programme, such as the joint reports on its implementation and from thematic clusters

(recognition of learning outcomes, teachers and trainers, key competences and curriculum development, etc.), other networks and working groups (on quality assurance, guidance, credit transfer, etc.) as well as Cedefop's Skillsnet network. The analysis also drew on findings of studies and projects carried out by Cedefop, the European Commission, or other European and international institutions.

During the summer 2010, the draft report was sent for consultation to all survey recipients, the European Commission and the Belgian Presidency. Feedback and comments were taken into account when preparing the final draft.

The Annex 1 on candidate countries was prepared by the European Training Foundation (ETF), who analysed the answers to the Cedefop questionnaires by the following representatives of the three candidate countries:

- Croatia, the VET Agency, the Association of Employers (HIP), the Chamber of Economy (HGK), the Croatian Chamber of Crafts (HOK) and the Croatian Employment Agency (CEA);
- the former Yugoslav Republic of Macedonia by the Ministry of Education and Science (MoES), the Ministry of Labour and Social Policy (MoLSP), the VET Centre, the Chamber of Economy, the Chamber of Crafts, the Employment Service Agency, the Centre for Adult Education, VET school, ASUC, 'Boro Petrushevski', and the NGO DVV International Skopje;
- Turkey, the Ministry of National Education and one trade union (HAK-IS).

Annex 1 also used the European Commission's 2009 progress reports on enlargement strategy and the European Commission's 2009 document on progress towards the Lisbon objectives in education and training. It also used ETF analyses developed for national qualifications frameworks, quality assurance, lifelong counselling and guidance, entrepreneurial learning, VET financing, and teacher training for inclusive education listed in the Annex 1's bibliography.

Quantitative data sources

Quantitative data in this report are based predominantly on the Statistical Office of the European Communities (Eurostat). The main sources are the European Union, labour force survey (LFS), the joint Unesco-OECD-Eurostat data collection on education systems and the continuing vocational training survey (CVTS). Each of these sources is described below. They are complemented by data from the European labour market policy database and from Cedefop's medium-term forecast on skills supply and demand in Europe.

EU labour force survey

The European Union labour force survey is the only source of data on employment, unemployment and related variables, which is comparable across EU Member States (and other countries covered by the survey). It also collects data on educational attainment and participation in lifelong learning in the four weeks prior to the survey. It enables structural features of the population and the labour force to be analysed consistently. Since it is based on a survey of households and uses a largely common set of questions and a common methodology, the LFS abstracts from national differences in definitions, classifications and administrative procedures and regulations. Data from national sources may therefore differ from the figures presented in this report.

For further information, please refer to:

http://circa.europa.eu/irc/dsis/employment/info/data/eu_lfs/index.htm

Unesco-OECD-Eurostat (UOE) data collection on education systems

The UOE data collection on education systems is joint data collection carried out by Unesco, OECD and Eurostat. It is based on a common framework with regard to scope, coverage, definitions and classification. It covers financial

and non-financial data related to the various education systems, and their composition with regard to public and private components, educational levels, programmes destination and programme orientations, Non-financial data refer to enrolments, entrants, graduates and repeaters. A wide range, though not a full range, of possible breakdowns are also collected: by age, by part-time/full-time enrolment, etc. Financial data refers to expenditure on education. Data cover different types of institutions (public, private), source of expenditure (public and private), expenditure category, type of transaction, etc.

For further information, please refer to:

http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/educ_esms.htm

See also Eurostat Education and training database:

<http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database>

Continuing vocational training survey (CVTS)

The continuing vocational training survey is an enterprise survey, carried out with a periodicity of five years. It collects data on enterprises' engagement and employees' participation in continuing training. Important information on cost, duration and type of training is collected. Data can be broken down by firm size, economic sector of activity and occupation of employees. Data refer to: (a) enterprises having a size equal to, or bigger than, 10 employees; (b) enterprises belonging to sectors from C to K and O of the NACE Rev. 1.1 classification of economic sectors of activity. It therefore excludes the agriculture and fishery sectors as well as those in the public domain (such as health care, education social services, public administration).

For further information, please refer to:

http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/trng_cvts_esms.htm

See also Eurostat. CVTS database:

<http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database>

Labour market policy database

The Eurostat labour market policy database contains participation and expenditure data related to labour market interventions. Interventions are defined as government actions explicitly targeted at groups of persons with difficulties in the labour market (unemployed, employed at risk of involuntary job loss and persons who are formally inactive but would like to enter the labour market and are disadvantaged in some way. Interventions are classified as: (a) services (services and activities of the public employment services (PES) together with any other publicly-funded services for job-seekers.); (b) measures from categories 2 to 7 (2. Training, 3. Job rotation and job sharing, 4. Employment incentives, 5. Supported employment and rehabilitation, 6. Direct job creation, 7. Start-up incentives); (c) support (8. Out-of-work income maintenance and support, 9. Early retirement).

For further information please refer to:

http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/lmp_esms.htm

Cedefop's medium-term forecast on skills supply and demand in Europe

Cedefop's medium-term forecast has been developed to understand better future trends in skills needs or shortages. From a methodological point of view it represents a set of models, modules and systems which are interconnected using sophisticated econometric and statistical methods. The demand side of this forecast is based on the multisectoral, multicountry model which delivers the results of employment for 29 countries and 41 NACE sectors. These results are further transformed to skills needs by 21 ISCO occupations and three broad qualification levels based on ISCED classification. The supply side is based on an extended multisectoral, multicountry model adopting the assumptions on labour market participation and hours worked. The results are population and labour force by gender and five-

year range age groups. Based on assumptions of education enrolment we obtain the forecast of labour supply by highest education achieved divided by broad ISCED levels. These processes primarily rely on Eurostat sources, in particular Eurostat demographic data, national accounts (NA), the European labour force survey (LFS), and additional data on flows of those acquiring and attaining qualifications (UOE).

For further details on methodology, results and further reference please refer to:

<http://www.cedefop.europa.eu/EN/publications/15540.aspx>

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Convinced of the need to modernise education and training systems, as part of the Lisbon strategy, the European Union launched the Copenhagen process in 2002 to strengthen cooperation in vocational education and training (VET).

The Copenhagen process has coordinated technical and political support for voluntary cooperation and brought together the European Commission and participating countries and European social partners to work on common objectives, priorities and benchmarks for VET. As Europe embarks on a new strategy for smart, sustainable and inclusive growth from now to 2020, this report examines the achievements and impact of Europe's efforts to modernise VET and ease mobility for learning and working.

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