Improving the attractiveness and image of VET

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Abstract

Making vocational education and training (VET) systems more open, flexible and attractive has been identified as a major part of the European economic, employment and social agenda. Opening and consolidating a range of new pathways between VET and higher education as well as VET at tertiary level are defined as key aspects of improving education and training systems which have a dynamic role in developing labour force, human skills and economy. Some of the measures to making VET more attractive include improved vertical and horizontal mobility, workplace learning and recognition of prior learning.

Improving attractiveness of VET is one of the education and training policy priorities and objectives set by the Lisbon-Copenhagen processes and its follow-ups such as the Maastricht and Helsinki communiqués (EC, 2004; 2006). Attractiveness is observed as preferences, attitudes and related behaviour of individuals and groups as well as their families. The objectives of this study are:

(a) to elaborate some factors that constitute and are related to attractiveness of VET;

(b) to survey the statistics of the enrolments in upper secondary general and vocational education between females and males, and in vocational higher education between different fields;

(c) to compare the unemployment rates and salaries between persons with different education attainments;

(d) to map the Member States' policy measures to improve attractiveness of VET and to some extent continuing vocational training.

The statistical analysis in this study shows that the policy goal of improving the attractiveness of VET seems to have progressed in the EU-15 countries, whereas in the NMS-10 from the Baltic, Central and Mediterranean Europe, which joined the EU in 2004, the attractiveness of VET appears to have shown some decrease in recent years. Parents' educational and occupational backgrounds as well as their attitudes towards different options have significant influence when students are choosing between pathways after compulsory education. The study explores the different policy approaches and strategies implemented by the European countries to open up access, pathways and progression, including into higher education, for VET routes and to increase the links with working life. Several issues are raised for reflection and future research concerning among others, quality, teacher education, governance and the role of students in designing their own pathways.

Improving the attractiveness and image of VET is likely to remain on the agenda of education systems in the coming future. One of the main challenges of improving the image of VET is to recognise the value of academic research on VET and its pedagogy, and accordingly to invest on and organise it systematically.

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1. Introduction

In recent decades, public authorities in the EU Member States and the EEA/EFTA ([1]) countries have been obliged to review their systems of VET in response to fluctuating economic and demand situations. Learning has undergone major developments, adapting to new students and trainees and a range of sometimes conflicting requirements, through the introduction of more flexibility to the content and delivery of courses, approaches to recognising prior learning, new awards and qualification structures and frameworks and, in some countries, major organisational changes. In the NMS-10 and the accession countries, the economic pressures of transition have also led to substantial review and reform of the education and training systems and provision with many of the same aims and challenges.

The European employment strategy and the agenda agreed in Lisbon by the Member States in March 2000 have set an ambitious agenda of building a strong knowledge-based economy and society throughout the EU by the year 2010. This crucial priority for the 27 EU Member States (EU-27) emphasises stability, cohesion and growth in terms of employment and hence investment in VET as crucial contributions to developing robust strategies for lifelong learning. It has been frequently reported that poor levels of qualification among the active population remain a challenge facing the EU. Quality improvements on the European labour market are a precondition for further reductions in the various age-, gender- and skill-related gaps. The Communication from the Commission *Modernising education and training: a vital contribution to prosperity and social cohesion in Europe* (EC, 2005a), stresses the fact that the improvement of the quality and attractiveness of VET continues to be a key challenge for the future (see also Armstrong et al.; 2008). The *Helsinki communiqué* (EC, 2006) calls again for more attention to be given to the image, status and attractiveness of VET.

The Communication from the Commission also sends a strong key message of policy-makers about the need to ensure the development of high quality systems, which are both efficient and equitable with no trade-off between the two dimensions. It advocates the search for excellence going hand in hand with a search for greater access, social inclusion, and active citizenship. This is clearly an important base point from which to analyse policies and measures to improve the image and attractiveness of VET.

Making VET systems more open, flexible and attractive is now identified as a major part of the European economic, employment and social agenda. Opening and consolidating a range of new pathways between VET and higher education as well as VET at tertiary level are defined as key aspects of improving education and training systems which have a dynamic role in developing labour force and human skills. Furthermore, achieving this objective is also intended to open up more flexible opportunities for learners – potentially all citizens – as European countries move towards the model of a learning society. These opportunities should equally limit the dead ends and barriers to further progression that have often been associated

([1]) European economic area/European free trade association.

with VET pathways.

The development of high quality VET has been a crucial and integral part of the Lisbon strategy (2000) ([2]) in terms of promoting social inclusion, cohesion, mobility, employability and competitiveness. The report *Concrete future objectives of education systems* (EC, 2001) ([3]) identified new areas for joint actions at European level to achieve the goals set at the Lisbon European Council. These areas are based on the three strategic objectives of the report:

(a) improving the quality and effectiveness of education and training systems in the EU;

(b) facilitating access for all to education and training systems;

(c) opening up education and training systems to the wider world.

The Copenhagen Declaration (EC, 2002) ([4]) and the *Council resolution on promotion of enhanced European cooperation in vocational education and training* (Council, 2003) identified concrete outputs in quality assurance, transparency and recognition to improve the overall performance and attractiveness of VET and to foster mobility. The first joint review of the process took place at a ministerial meeting in Maastricht. Based on the Education Council conclusions adopted on 15 November 2004, the *Maastricht communiqué* (EC, 2004) set out priorities for the next phase of the process. The *Maastricht communiqué* linked the Copenhagen process more closely with the education and training 2010 work programme and introduced national priorities. The necessary reforms and investment should focus on:

(a) the image and attractiveness of the vocational route for employers and individuals to increase participation in VET;

(b) achieving high quality and innovation in VET systems to benefit all learners and make European VET globally competitive;

(c) linking VET with the labour-market requirements of the knowledge economy for a highly skilled workforce, and especially, due to the strong impact of demographic change, the upgrading and competence development of older workers;

(d) the needs of low-skilled (about 80 million persons aged between 25-64 years in the EU) and disadvantaged groups for the purpose of achieving social cohesion and increasing labour market participation.

VET is increasingly taking place at all educational levels and, therefore, the parity of esteem and links between VET and general education, in particular with higher education, need to be fostered by innovative strategies and instruments at the national and European levels. This should include designing VET systems which attract more students to higher qualifications

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([2]) Lisbon Strategy available from Internet: http://ec.europa.eu/growthandjobs/index_en.htm [cited 1.10.2007].

([3]) The report was endorsed by the Stockholm European Council in March 2001.

([4]) Copenhagen process, available from Internet: http://ec.europa.eu/education/copenhagen/index_en.html [1.10.2007].

which is assumed to contribute to innovation and competitiveness.

The progress of the Lisbon strategy was assessed in the *Helsinki communiqué* (EC, 2006) as follows: the enhanced cooperation in VET has proved successful and has produced encouraging results. The process should therefore be continued in the spirit of Copenhagen and Maastricht. Continuity of the ongoing work and a holistic approach where the different initiatives and tools are interlinked and mutually supportive and where VET is seen as a major element in lifelong learning are of particular importance. To strengthen and focus the process, priorities should be limited and clear targets set.

The *Helsinki communiqué* set four priorities as from 2007:

(a) policy focused on improving the attractiveness and quality of VET;

(b) development of common instruments and tools to enhance a European area of VET and a European labour market;

(c) strengthening learning from others ([5]);

(d) taking all stakeholders on board.

Particularly, Priority 1 refers to Policy focused on improving the attractiveness and quality of VET (EC, 2006, p. 5). This calls for:

(a) strong links between VET and working life, both in school-based VET and continuing workplace learning for employees;

(b) better counselling and information in preparation for working life and better guidance throughout life;

(c) permeable VET systems offering access to flexible, individualised pathways and progression to further education and training, for example higher education;

(d) highlighting excellence in skills – for example by greater use of skills competitions. In delivering the VET agenda, more emphasis should be put on good governance. This calls for:

    (i) development of funding and investment mechanisms;

([5]) In 2000, the Lisbon European Council introduced a new mode of governance to education policy, the open method of coordination, whose main elements include agenda setting, establishing European indicators and benchmark as well as monitoring and evaluating progress done by the EU. It also organises mutual learning processes between the Member States. In 2001, the White Paper on European Governance indicated the principles of good governance: openness, participation, accountability, effectiveness and coherence. Governance refers to the functional and structural whole formed by the rules, processes, action and practice through which the activities of the EU have been organised and managed. Since the introduction of the open method of coordination, some changes in VET governance may have occurred in process, cooperation, systematisation and coordination. The cooperation between institutional, national and European levels and stakeholders has increased. The content of education and training policies has become more systematic.
See also Grootings and Nielsen’s (2008) article that elaborates policy learning in this report

(ii) responsiveness to changes in labour-market and individuals' needs (demand as a driver – e.g. identification and anticipation of new and changing skill needs);

(iii) interplay between different stakeholders and decision-makers;

(iv) national quality assurance and improvement in line with the common quality assurance framework;

(v) strong leadership at provider level and recognition of the key role of teachers and trainers.

1.1. Objectives and scope

Understanding the dynamics of the ongoing processes is important when analysing and assessing the policies and measures that are determined and implemented. The different national contexts and approaches show a variety of VET philosophies in Europe. Improving the attractiveness of VET is a process which is multifaceted and not strictly linear. It is built on the socioeconomic and cultural base of each Member State.

This study contributes to the fourth research report on VET and to the background analysis for the review of the priorities for reforming VET identified in the Copenhagen process of enhanced cooperation in VET. More specifically, the study seeks to assess policies which have been implemented to improve the attractiveness and image of VET. For this purpose it builds on previous work in this field. It also presents and discusses a panorama of policies and measures which are currently being developed and implemented to improve the attractiveness of VET. Though the scope of the study is mainly initial VET (ISCED-3), data concerning adult provision is introduced in Section 4 which maps the range of policies currently developed and implemented with a view to highlighting possibilities of pathways and progression including through the recognition of prior learning.

The study mainly shows the recent statistics and research results in the light of the issues of attractiveness of VET. Furthermore, the outcomes and effects of related measures and current developments in education and training are evaluated. The objectives of the study are:

(a) to elaborate some factors that constitute and are related to attractiveness of VET;

(b) to review why and how the issue of attractiveness of VET has been raised;

(c) to survey the statistics of the enrolments in upper secondary general and vocational education between females and males, and in vocational higher education between occupational fields;

(d) to compare the unemployment rates and salaries between persons with different education attainments;

(e) to map the Member States' policy measures to improve attractiveness of VET.

Additionally, some attention will be paid to the enrolment and graduation patterns in non-

European countries as compared with the EU-27.

The assessment of the attractiveness of VET is based on the choices of young people seeking to enrol and proceeding through the education and training system. Access to qualifications at higher levels is reviewed through differentiated pathways and an examination based on available data. Statistical indicators of attractiveness of and esteem for VET are presented by:

(a) the number of students in the vocational and general upper secondary education and in tertiary education;

(b) employment rates according to educational attainments;

(c) the professional fields of academic and vocational education;

(d) income returns of education and training.

Figures and tables demonstrate the statistical data and parameters. National reports (2004 and 2006 DGVT (6) reports (7) and the Helsinki Communiqué) will be reviewed to show the measures of attractiveness of VET.

The scope of the policies and measures covers both those to build and extend pathways and progression and those to ensure better links with the economic sectors. On the one hand, the measures include those that aim to provide bridges from vocational/technical provision towards general provision at secondary level and/or for entrance to higher education based on student enrolment. The main focus is on initial VET and transition to working life, and subsidiary focus on lifelong learning. The measures also include those designed to improve the links with the labour market.

The geographical scope of the study is predominantly the EU-27 and the EEA countries (Iceland, Norway, Liechtenstein). Some reference is made to Switzerland, to candidate countries (Turkey and Croatia) and to competitor countries such as the US and Japan, with reference to the progress in policies to make VET more attractive in these countries. Reference will also be made, where feasible, to progress and priorities in the selected OECD countries.

1.2. Sources and methods

The primary purpose of the study is to inform policy development and implementation at European level and nationally within the context of VET development and lifelong learning linked to the Lisbon process, particularly concerning the objectives of promoting the attractiveness of VET. Existing data on trends in qualifications flows and outcomes (from

(6) Directors General of Vocational Training.

(7) Available from Internet: http://ec.europa.eu/education/policies/2010/nationalreport_en.html [cited 13.11.2007].

OECD, Eurostat, the European Training Foundation, and national sources) are used to assess progress towards the 2010 goals concerning the attractiveness of VET. The qualitative aspects of the examination are provided through data drawn from recent country reports drafted in response to reporting processes put in place by the Commission of the EU, linked to the reporting on the Lisbon process.

The analysis of VET progression routes and related student flows and how well these meet labour-market demands will be based on existing international data sets where possible (OECD *Education at a Glance*, Eurostat, the European Training Foundation, the EU Labour force survey 2000). European labour force survey data on highest qualifications for individuals in different occupational categories may be used to assess how well the output of skills meets the requirements for different occupations and sectors in different countries.

1.3. Outline of the report and some limitations

In this study, we focus first on phenomena and concepts related to the attractiveness of VET to reflect on what we have learned from past studies and research on the attractiveness of VET and parity of esteem (Section 2). Section 3 introduces available statistical data related to the attractiveness of VET. It asks the question whether the measures implemented in the last decade succeeded in improving the attractiveness of VET and for which aspects. The fourth main section seeks to map policy measures that the Member States have recently introduced and/or are currently implementing. This section put the emphasis on what is new and in the process of changing. A conclusions section proposes some issues and areas for further research.

Although the data availability of participation in education and training has improved during this decade, there are still limitations on having detailed and consistent statistics on VET in order to compare them reliably among the EU-27. Although the cautious interpretation of statistics is recommended, they provide quite relevant tendencies of enrolment and rewards indications. The policy measures of attractiveness of VET have been mapped from the country report that the Member States have produced. Again, the authors have been dependent on the available data.

2. What do we learn from past studies on attractiveness, esteem, status and prestige of VET

European efforts to find innovative relationships between general and vocational education have taken various approaches, from curriculum development to system-level reforms. European countries, as a part of the Western industrial community, have faced similar challenges in their vocational education concerning its attractiveness and quality. There is an additional question about the kinds of working life and citizenship qualifications and skills needed for the future and accordingly, the quality of VET and the type of skills and qualifications they deliver. Although both general/academic and VET systems are changing to adjust to the perceived needs of knowledge societies, they still tend to build on their historical and cultural traditions and function separately, although with a certain degree of cooperation and integration.

2.1. Some key terms

Attractiveness of VET has been discussed in comparison with general/academic education which has traditionally been assumed to be a more attractive pathway than VET for students and their parents. However, the attractiveness of VET varies between countries and social groups. The main terms used in this chapter are as follows:

(a) attractiveness (of) and esteem (for VET) refer to

 (i) improving access and entry to employment, career development and progression;

 (ii) the diversity of quality learning environments (meeting the needs and aspirations of different learners);

 (iii) self-development choices as a citizen and individual;

 (iv) willingness to invest in VET.

 Attractiveness is observed as preferences, attitudes and related behaviour of individuals and groups. Improving attractiveness of VET is one of the education and training policy priorities and objectives set by the Lisbon-Copenhagen processes and its follow-ups such as the Maastricht and Helsinki communiqués;

(b) Tsakarissianos (2008) indicates that 'social status is the standing, the recognition, influence or prestige attached to one's position in society. Even if social status is determined to a great extent by social position, it is often perceived in a broader sense that involves several elements identifiable in a specific social context'. In this report, standing/prestige refers to the social status of a type of education and training measured as progression chances and income returns later in young people's life;

(c) occupational status corresponds to prestige, socioeconomic status of an occupation and to class measures in the past;

(d) in the context of education and training systems, parity of esteem ([8]) considers:

(i) the flexible and transparent education and training systems and job markets that provide chances for all individuals in learning, career chances and in life histories;

(ii) relevant lifelong learning visions and options for all.

Parity of esteem has been analysed between different pathways and/or different groups of people (e.g. gender, ethnicity, social class) to examine the results of possible streaming and allocation of resources. The focus can thus be on the future and looking for learning opportunities for all with relevance to individuals' quality of life.

Improving attractiveness of VET is an educational policy goal in the EU. Attractiveness is a policy term rather than a theoretical concept. Some variables, such as equal access to progression through different education and training pathways, that determine esteem for VET are also assumed to improve the attractiveness of VET. Disparity of esteem between vocational and academic education may have its roots in occupational status based on a traditional conception of social class structure. The next section summarises more traditional studies on occupational stratification.

2.2. Previous studies on occupational status or prestige

Earlier empirical and theoretical analyses have shown that occupations have been ranked on the basis of their rewards for individuals and, as a result, their value for society. Empirical research on the classification of occupations has been a part of stratification research. Ganzeboom and Treiman (1996, p. 202) indicated that '[...] the division of labour is the kernel of social inequality and occupation therefore is the main dimension of social stratification [...] Stratification researchers have developed ways to derive status measures from information of occupations.' Three main international measures of occupational status have been used to develop a standard classification of occupations (ISCO68 and ISCO88) by the International Labour Office (ILO) of the United Nations:

(a) Treiman's (1977) standard international occupational prestige scale (SIOPS);

(b) international socio-economic index of occupational status (ISEI) (Ganzeboom et al., 1992);

(c) Erikson and Goldthorpe's (1992) class categories (EGP).

Featherman and Hauser (1976) argued that the socioeconomic scores for occupational

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([8]) Parity of esteem has been used in political philosophy to analyse inter-communal conflicts and in equity. Hennessey and Wilson (1997) indicated that parity of esteem provides "a language for negotiation of a post-conflict equilibrium'. The aim of the measures is a peaceful coexistence in a shared physical space despite their cultural, religious, ethnic and other differences. Parity of esteem has been a concept to the peace process in Northern Ireland.

achievement are more valid indicators of occupational achievement than prestige scores ([9]). The research results suggested that the process of stratification in both Australia and the US was best described as a distribution of persons both within and between generations over occupations hierarchically ordered by socioeconomic status rather than by prestige. In other words, the fundamental dimension of occupational mobility is about socioeconomic status rather than prestige. In conclusion, attractiveness of VET is related to the hierarchy of socioeconomic status rather than to the status hierarchy of occupations. However, many earlier research results are leaning to the categories produced by statistical research in some countries' contexts.

Hope (1982) took a liberal approach to prestige. She argued that the prestige of occupations was a simple average of the two dimensions of the rewards of an occupation and its societal value, implying that prestige has both a factual and a normative component. This argument was theoretical rather than inductive, as it starts from the assumption that assessments of prestige involve considerations of economic reward and use the data that support this assumption. Her findings suggested that there was a normative consensus. However, this consensus showed a weak relation to prestige in its traditional sense. 'The traditional prestige which bolsters the elite is a fragile thing, whereas the normative consensus on occupational prestige may constitute an important source of legitimacy of the distribution of social reward' (Hope, 1982, p. 1011). In this report, prestige is not isolated from persons' educational choices in their particular situations and contexts. Deliberate choices of developing VET and its sectors are assumed to provide prestige for individuals and economy.

Some sociological studies, of which just few were introduced above, conclude that a prestigious field and good salaries seem to attract people. The prestige and status of occupations have been measured by standardised status scales which may give quite static picture of attractiveness of VET. At the level of individuals, the prestige of occupations is now based increasingly on employment prospects, salary and possibilities to self-fulfilment. However, some physical jobs and occupations involving hygienic and health risks, for instance, may carry rather low prestige. People's attitudes towards different types of education arise largely from images associated with particular occupations. Lamont's (2000) study illustrates even more complex and dynamic picture of the occupations that shape their carriers' identity and values.

Lamont (2000), in her comparative ethnographic research on France and the US, aimed at explaining how workers construct similarities and differences between themselves and other groups, how workers define 'us' and 'them' and draw the line between the worthy and the less worthy in the socioeconomic hierarchy. She examined their attitudes towards immigrants, whether the opinion of black and white workers differed from each other, and how they

([9]) This argument was premised on evidence from parallel results from Australia and the US in which estimates for the structural equations of 'status attainment' models with occupations scaled in units of Duncan's socioeconomic model (SEI) yield higher coefficients of multiple determination (R2) than do those scaled in units of the National Opinion Research Center prestige.

perceived ʽpeople above' and ʽpeople below'. She interviewed 150 workers in New York and Paris. Workers' sense of identity was also analysed through interviews. American and French workers represent different cultural repertoires based on their distinct historical, social and economic structures. While French workers come from republicanism, Catholicism and socialism, American workers come from Protestantism, traditional religious morality, and individualism. The informants of the research called themselves a ʽlower middle class', ʽmiddle class proletariat', ʽblue-collar worker', or ʽworker'. The American workers had stable, but not very well paid jobs, being high school graduates with limited access to the labour-market and life chances because they did not hold a college degree. The author focused her comparison on moral boundaries of American in comparison with French workers, especially of two groups among them: African Americans in the US and North African immigrants in France. Both of these groups were the prime victims of racism in these countries, due to the fact that they had low skill and low paid jobs. They occupied similar positions in the American and French economies and had limited occupational mobility. They had higher rates of unemployment than other ethnic groups. Lamont concluded that morality was at the centre of the world of the black and white workers she interviewed. Moral standards helped them to maintain dignity and self-worth, make sense of their life and define their own identity. Traditional morality and also for some of them religion, allowed to 'keep pollution at bay'. They liked people who cared, who were clean, and not disruptive, and disliked those who were irresponsible, who lived for the moment, who got into fights, and who had forgotten where they came from. What they valued most was honesty, responsibility, personal integrity, and being hardworking, and at the same time they scorned dishonesty, irresponsibility, and laziness. They wanted to be good family protectors and providers. There were some differences between black and white workers. Black workers more than whites tended to protect their families and guard themselves against criminality through religion and traditional morality. Black workers underlined the collective dimension of morality and emphasised the ʽcaring self' rather than the ʽdisciplined self' more than white workers. Although blacks and whites lived in largely overlapping worlds, there were cultural differences between them which could be explained by the fact that both of these social groups were fabricated by different cultural models. Although American and French worldviews overlapped, their models of inclusion and exclusion differed. Lamont argues that black workers are more likely to experience exploitation and to express more solidarity with the poor than the white workers do. African Americans seemed to disassociate socioeconomic status and moral worth when judging the poor. Similarly, they equated socioeconomic status with moral worth when judging the middle class, believing that class advantages transcended disadvantage. This is the strategy that significantly allows African American workers to claim moral worth when faced with overwhelming obstacles to socioeconomic mobility. The study denies the presumption of the declining role of class and race in creating identity. Identity seems to be structurally embedded and shaped by the context of workers' lives. The study showed that class was still an important basis in the lives of working people in France and the US. The workers' definition of themselves is based on a comparison with ʽpeople above' and ʽpeople below'. Lamont argues that workers in both countries become empowered by using a measure of social value that discerns moral worth and respect from social status, rather than through socialist collectivism.

Social origin measured as family background still seems to influence young people's education and career choices in many countries. Iannelli's (2002) studies the country differences and the extent to which social origin affects young people's educational and occupational outcomes, supporting earlier research findings. The percentages of young people leaving education at the stage of ISCED 1-2 are much higher among those whose parents have low education than among students who have more educated parents. The differences are also statistically significant, with the only exception of Finland. There are significant country variations. The relative advantage of having more educated parents emerges especially stronger in the Eastern European countries (with the exception of Slovenia) and weaker in the Nordic European countries (Finland and Sweden). Females are significantly less likely than males to leave education at lower secondary level (ISCED 1-2) in 7 out of 12 countries (Belgium, Spain, France, Greece, Italy, Slovenia and Finland). In the rest of the countries, women's chances to leave education early are not significantly different from men's chances. However, young people with highly educated parents (ISCED 5-6) very often have higher chances of graduation than youngsters with less educated parents. The countries (e.g. Italy, Hungary, Romania and Slovakia) with low tertiary education leavers are those where attainment differences among young people are high based on social background varieties. Iannelli (2002) concludes that more universal welfare State policies in the Nordic countries and the increasing social and economic disparities in the Eastern European countries, during the transition period towards a capitalist economy, could have played an important part in the polarisation of these two groups of countries at the two extremes in this study. More particularly, young people's occupational outcomes have been indicated by the length of time before starting the first significant job and its occupational status, measured by the international social and economic index of occupational status (ISEI). Iannelli analysed the relationship between social origin and young people's occupational outcomes. The study revealed that the young people, whose parents had low education, seemed to wait longer before acquiring the first significant job than the youngsters with parents who had graduated from tertiary education. In all 12 countries under the examination (Belgium, Spain, Greece, France, Italy, Hungary, Austria, Romania, Slovenia, Slovakia, Finland, and Sweden), young people with different social backgrounds tend to achieve different occupational statuses, that is, the parents' educational attainment correlates to their children's occupational status.

The status of VET teachers also has an influence on the status of VET overall. The position of VET teachers varies widely across different European countries (Parson et al., 2008). Some countries have detailed selection criteria including both university-based qualifications and specific periods of relevant employment. In others, colleges are free to recruit as they wish. However, in terms of qualifications, work experience and pedagogic skills as well as closer equivalence with general education teachers, there is greater emphasis on developing and broadening the skills of vocational teachers so as to also raise their status. 'Concern for quality assurance in teacher education is closely linked to the broader context of the development of higher education and the follow-up of the Bologna process' (Eurydice, 2006, p. 3). The prestige of VET is reflected in the status of vocational teachers and their education, and vice versa. Prestigious VET is essentially based on broadly competent vocational teachers who respect their own work. The demands set for their expertise have evolved from vocational pedagogics into broad professional mastery of relevant sections of the education system and economic sector. The curricular development of vocational teacher education with respect to education strategic competence and international educational knowledge are some of the challenges of quality assurance.

2.3. Parity of esteem between vocational and general education

Parity of esteem between vocational and general/academic education is related to the societal rewards resulting from education and training whereby the concept is linked to the attractiveness of VET. Such rewards may be social status, the salary, prestige and chances for further education and career development. Educational pathways should not restrict citizens' chances to access the open options of further education and higher ranks.

It seems that since the end of the 1990s no further studies on parity of esteem between academic and vocational education have been carried out at the European level. The synthesis of the results of four European collaborative projects, which focused on the upper secondary education reform strategies and schemes, showed potential to reduce the disparity of vocational education and training. The conclusion of the strategies of improving the attractiveness of VET and of promoting the parity of esteem between vocational and general education is based on the research results provided by major partnership projects, including Post-16 strategies/SPES-net and Intequal/Duoqual (Lasonen and Manning, 2001).

The post-16 strategies project identified four reform strategies to promote the parity of esteem between vocational and general/academic education in European upper secondary education systems. These are vocational enhancement, mutual enrichment, links and unification. Vocational enhancement stressed the distinctive nature of vocational education on the basis of its characteristic content and links between employers and the providers of education of this kind. The German, Austrian, Czech and Swiss educational systems have been founded mostly on this strategy. They have enhanced vocational education and made it more attractive to potential students through measures that have maintained and strengthened its distinctive ethos and its separate character alongside general education. Mutual enrichment brought various types of school, such as vocational and academic institutions, closer by encouraging cooperation between vocational education establishments, enterprises and upper secondary schools with the aim of providing students with a wider range of options and offering them stimulating learning methods and environments. The educational systems of Finland and Norway were examples of this strategy. It has enriched both vocational and general education through measures that allow each educational track to draw from the best features of the other one. The strategy has lowered the traditional barriers between these two types of education whilst maintaining a distinct identity for each. Link sought to make vocational and general education formally more equal by connecting them through such measures as a common certification framework, arrangements for credit recognition and transfer, and common curricular elements. The English and French educational systems, which have been attempting to make their vocational education more attractive to parents and students, have adopted this approach. Traditionally in these systems, academic education has tended to prepare middle-class children and young people for high-status jobs. Unification was about merging vocational and general education into a single system of post-16 education. The educational systems in Sweden and Scotland were based on this strategy, where the goal has been to offer all students a core programme of common general subjects and abolish the distinction between vocational and general learning. The distinction between vocational and academic students and vocational and academic teachers, however, remains even after the administrative unification and modularisation of study programmes.

Box 1: Applications at the local level

Jyväskylä Catering College, as all other vocational colleges in Finland, has participated in curricular cooperation both with other educational institutions and with workplaces since 1997. This work has taken place in the frame of curricular decisions, renewed education and training legislation, and new stipulations on vocational qualifications. The vocational institutions and upper secondary schools in the Jyväskylä district set up a planning group in spring 1996, to seek such forms of cooperation that would serve the students as versatile as possible. The first step was to compile a shared course menu involving the surrounding institutions in the locality. For the cooperation period the institutions were offering courses of their respective speciality areas: for example the Catering College offered courses in cooking, the College of Health and Social Care provided a course of sign language, among others, while the upper secondary schools offered courses in communication, Latin, etc. The shared course menu enabled students to choose studies from other institutions. General upper secondary school students typically have selected courses from other such schools, while vocational students have tended to choose courses from other vocational colleges. Within vocational qualification requirements, the courses on the shared menu belong to free-choice studies, while in general upper secondary schools the courses offered by vocational colleges are credited as applied studies. During the cooperation period, students may also take separate courses in the partner institutions. In addition, vocational students have had an opportunity to take upper secondary school courses for matriculation examination in A-levels. This cooperation between vocational and academic upper secondary education institutions first yielded two projects aiming at dual qualifications, starting in autumn 1997 with about 50 students. The dropout rate during the first year was about 25–30%. Next year 1998 about 60 new students started the dual qualification programme and with fewer dropouts. Presently, up to 10% of vocational students are aiming at a dual qualification. The opportunity of studying for both A-levels and vocational diplomas has been more attractive among talented vocational students than among academic students in Finland.

Additionally, workplace learning periods in enterprises has been systematically added to each field of vocational education since 1998. Now on-the-job learning period, in minimum six months, is included in three-year vocational education in upper secondary schools (ISCED 3). Training for vocational teachers and workplace trainers has been organised (Lasonen, 1999).

The case description above (Box 1), which was analysed in the national dissemination project (Lasonen, 1999), shows that within one single local area, three European school reform strategies were applied (enrichment, enhancement and links). In Finland, the local decisions are based on VET legislation (on-the-job learning periods in all vocational upper secondary qualifications, work placement, individual study plans based on the available provision by appropriate institutions, credit transfer, general eligibility for further studies after a vocational qualification) (Vocational education and training Act 1998). The example above dealt with the reciprocal enrichment of general and vocational education and of vocational schools and enterprises. The extensive course menu drawn from vocational and general education programmes provided a variety of choices and thus made possible more varied study programmes for different learners.

Cooperation with companies has been rapidly gaining momentum in mutual understanding. Strengthening the vocational aspects in VET has brought it closer to working life. The influence of the labour market is reflected in the content of studies, as vocational components are designed on the basis of work tasks. Parts of these components are taken on-the-job under workplace instructor's supervision. Learning on-the-job has always been used in apprenticeship training, and in the 1990s it became part of vocational upper secondary education. The amount of such learning varies by institution, field, or student, although the minimum requirement for all qualifications is approximately six months in Finland. The practices of on-the-job learning have been influenced by many factors such as the field, location, and size of companies. As a method, on-the-job learning brings new challenges to classroom teaching and guidance given at school. Instructional differentiation and individual guidance are increasing, while the on-the-job components consist of the tasks at the workplace and also depend on the student's personal goals. The involvement of business life in the curricular work of educational institutions leads to a better match between education and work tasks and brings theory closer to practice.

Increasing the eligibility and readiness for further studies given by vocational upper secondary qualifications poses a challenge to vocational institutions. The law guarantees eligibility for higher education after the three-year programmes of vocational upper secondary education, hence implementing also the third post-16 strategy: linking general and vocational qualifications on an equal basis. The possibility to take a dual qualification is one way of improving eligibility for further studies. Cooperation with polytechnics aims not only at wider study options, but also at content development of the studies and introduction of new teaching methodology.

In the secondary analysis of strategies and qualifications across 17 countries (Lasonen and Manning, 2001), a distinction was made between the following types of national settings for relating education and work: a close relationship between the education system and the labour market, including a tracked system of education and a qualification structure which has direct relevance for occupational entry; a loose relationship between the education system and the labour market, allowing for predominantly school-based, broad vocational education and subsequent on-the-job training; and a varied relationship between the education system and the labour market, calling for coherent education and qualification frameworks. These three types of national settings provide a context for identifying different approaches towards the esteem of vocational education.

According to political theory, parity of esteem refers to a founding principle of recognition and a just and stable political order that allow all citizens to enjoy recognition and dignity in the communities with cultural, social and ethnic diversity (du Toit, 2004; Thompson, 2002). Promoting parity of esteem between vocational and general education has been an education and training policy goal that was followed by some reforms, especially in the UK and Scotland (Raffe et al., 2001). The first cycle of the Leonardo da Vinci programme attracted several R&D projects that evaluated European education and training systems and upper secondary education reforms in the extent to which education and training policies promote parity of esteem between academic and vocational education.

In their contribution to this background report, Preston and Green (2008) analysed social inclusion and social cohesion as being important policy objectives to provide equal opportunities for all in VET. They indicate that 'In terms of social exclusion, although VET arguably has a large role in increasing labour-market participation (a narrow form of inclusion) when wider issues of social inclusion are considered (such as citizenship) it is arguable whether models of VET premised on competences and employment alone can deliver the types of social inclusion desired by EU Member States. We have shown that social exclusion is much broader than employment and that it is best defined by outcomes (for example, in terms of income or other social categories). [...]. In terms of enhancing social cohesion, value formation, institutional integrity and reducing inequalities are areas where education – and VET – can make a contribution. With regard to the latter, we found that within European countries educational equality was particularly important in maintaining civil and political rights. On the basis of current evidence we cannot conclude that there is a strong association between vocational enrolments and/or vocational equity and general educational equity. However, from the vocational and professional socialisation literature there is strong evidence for a value socialisation mechanism for VET and social cohesion'.

Preston and Green's statements reflect a modern conception of the function of VET to serve diverse customers in whose life it can make a difference by improving the quality of their lives.

2.4. The attractiveness of VET

The *Maastricht communiqué* reviewed the priorities for VET as defined in Copenhagen and mentioned explicitly the need to increase the attractiveness of VET, including secondary, higher and adult education, in Europe. The Maastricth study conducted by Leney et al. (2004b) found that the EU-25 Member States sought to raise the attractiveness of VET and the flexibility of initial VET. The Member States identified the following measures:

(a) modernising VET programmes and curricula through modularisation (13 countries);

(b) establishing national qualifications systems or framework (7 countries);

(c) establishing competence-based programmes (11 countries);

(d) increasing access to higher education (7 countries);

(e) improving the quality of VET (5 countries);

(f) diversification of VET programmes (3 countries) and pathways (1 country);

(g) integrating vocational subjects into general programmes and vice versa (9 countries), and

(h) strengthening information, advice and guidance activities (8 countries).

The Member States have understood improving the attractiveness of VET very comprehensively. However, hardly any information on particular measures and indicators could be found.

At the end of the 1990s, the Intequal project investigated some particular measures and related indicators to improve the attractiveness of VET. The trainees or students were given the option of vocational programmes that provided qualifications for higher education access alongside vocational qualifications (Manning, 1996; 1997). The dual qualification systems ([10]) used within the Member States differed from each other by function, scope, and structure. The basic idea of dual qualifications was to integrate general and vocational education as well as work- and school-based learning. The best qualification practices were found in school-based full-time education (e.g. Austria and Finland). Most dual qualification systems have evolved within VET as part of a qualifying process. Within Europe, the percentage of the age cohort studying for dual qualifications ranged from 1 to 45%, depending on the country (Brown and Manning, 1998). The graduates either entered the labour market or continued their studies, preferably in vocational tertiary education. However, in most countries the emphasis has been on employment. In programmes aiming at dual qualifications the work-orientation and the degree of integration have varied from low through average to high. The employment rate of these graduates has been high. Dual qualifications have maintained their position or even gained popularity in many countries, such as in Finland, for example, where the number of students has gradually increased. The challenge facing educational policy is, therefore, to ensure that dual qualification schemes are part of a transparent and flexible system, accessible from any point and linking up with other parts of education and training providing chances for lifelong learning.

In the Maastricht study, Leney et al. (2004a) showed the significance of the attractiveness of VET as a European policy goal. The attractiveness of VET and continuing vocational training is related to the measures of quality of and progression from VET and to lifelong learning opportunities for all. In their contribution to this background report, Armstrong et al. (2008)

([10]) Dual qualification refers to the possibility of a student to pursue parallel studies for vocational upper secondary qualification and matriculation examination.

anticipate that, as a policy goal, attractiveness of VET and its research continues to be one of main development measures for the future of Europe.

Nevertheless, the nature of the term attractiveness of VET is a political concern that has not been thoroughly analysed in research. Concerning the attractiveness of the careers of VET teachers and trainers, Parson et al. (2008) indicate that 'esteem remains an illusory concept, and without firmer measures which can contrast, and track, changes between different education professionals and between education professionals and others, this is set to remain an intangible and controversial issue, especially in those Member States where this is felt to hold back the quality of those taking up professional training, and their subsequent retention within the career'.

The status and esteem of VET professionals vary between the Member States. The VET teachers in the Czech Republic, Cyprus, Denmark and Finland enjoy relatively high status compared with the other European counterparts. In these countries, the status is associated with the prestige of teaching job rather than to wages. In the countries where the VET teachers and trainers have a lower status than other professional, it seems that they also earn less. The attractiveness of the careers of VET teachers and trainers ensures availability of qualified teachers and teaching quality which, in turn, improves the attractiveness of VET.

Attempts have been made to increase the involvement of employers in decisions about the form, content, context, and resourcing of vocational education. Employer involvement varies from taking on advisory roles as members of national, local, and institutional governing bodies and consultative curricular committees, or assuming key roles in standard setting bodies for vocational qualifications, up to direct delivery roles in relation to work-based training. Employers' own interest in selection and recruitment of new employees will, of course, also shape their attitudes and the advice they give. Work-based learning and on-the-job training programmes arrangements can provide opportunities for employers to get acquainted with their future employees in both school-based and apprenticeship-based education and training systems.

2.5. Concluding remarks

One of the major tools in the Lisbon process and the EU's employment strategy is to support full employment and to promote social inclusion and a competitive labour market through delivery of quality VET. Therefore, improving the attractiveness of VET is one of the key education policy objectives in the EU. Rising educational attainment is supposed to give the best preconditions for active citizenship and employment. By the same token, European countries have adopted educational reform strategies for improving the progression from vocational secondary education to higher education and for enhancing the status and quality of vocational education. Three criteria – personal competence, educational mobility, and occupational mobility – underpin the assumption that esteem correlates to the quality of vocational education and to access to further studies through which VET is seen as attractive as the other educational pathways.

Traditional research on occupational status seems to be based on an assumption that classification of occupations follows a pattern of social stratification. Could this kind of assumption be a barrier for modernising VET?

Family background is related to young people's education and career choices to varying degrees in different European countries. In addition to equity policy and its implementation, relevant career guidance and quality of VET can improve the attractiveness of VET.

Vocational teachers and trainers are the important facilitators of learning and role models of their occupations for young people. Therefore, the status of VET teachers is also related to the attractiveness of VET. The Bologna process challenges also VET teachers and trainers training in terms of transparency, flexibility and lifelong learning.

Progression opportunities including choices for double qualifications and access to higher education, prestige of occupations and interesting learning environments are assumed to attract young people to VET. From the perspective of lifelong learning, it does not matter which type of education was chosen by young and older people, but it matters if education and training produce transparent and flexible competences for continuous education and training at any point in individual life spans.

3. Statistical data on enrolment in VET

The expected length of time spent in education has increased since 1995 along with greater participation in preschool, secondary, and higher education. In the majority of European countries the expected duration of studies for the current 5-year-olds is more than 16 years. The highest expectancy figures are found in Belgium, Finland, Iceland, Sweden, and the UK; ranging from 18.5 to 20 years. The mean of the years of educational attainment in formal education was 11.9 years in the OECD countries in 2004 (OECD, 2006).

On average, 53% of the youth of industrialised countries will participate in some sort of higher education in universities or polytechnics. In 2003, some 16% of higher education students were enrolled in educational institutions other than universities (OECD, 2005a). The increasing demand for higher education also calls for a broader and better educational choice, diverse learning environments of good quality, and opportunities for further studies.

Some enrolment statistics can provide indications of the attractiveness of VET. The figures in this chapter show the statistics of :

(a) enrolment distributions of upper-secondary education (ISCED 3) students in general/academic and vocational programmes compared EU-27 Member States with EEA/EFTA, candidate and non-European countries;

(b) graduate distributions of ISCED 3 vocational and general programmes in 2004;

(c) student enrolments in vocational tertiary programmes, ISCED 5B (vocational) programme by fields in 2004;

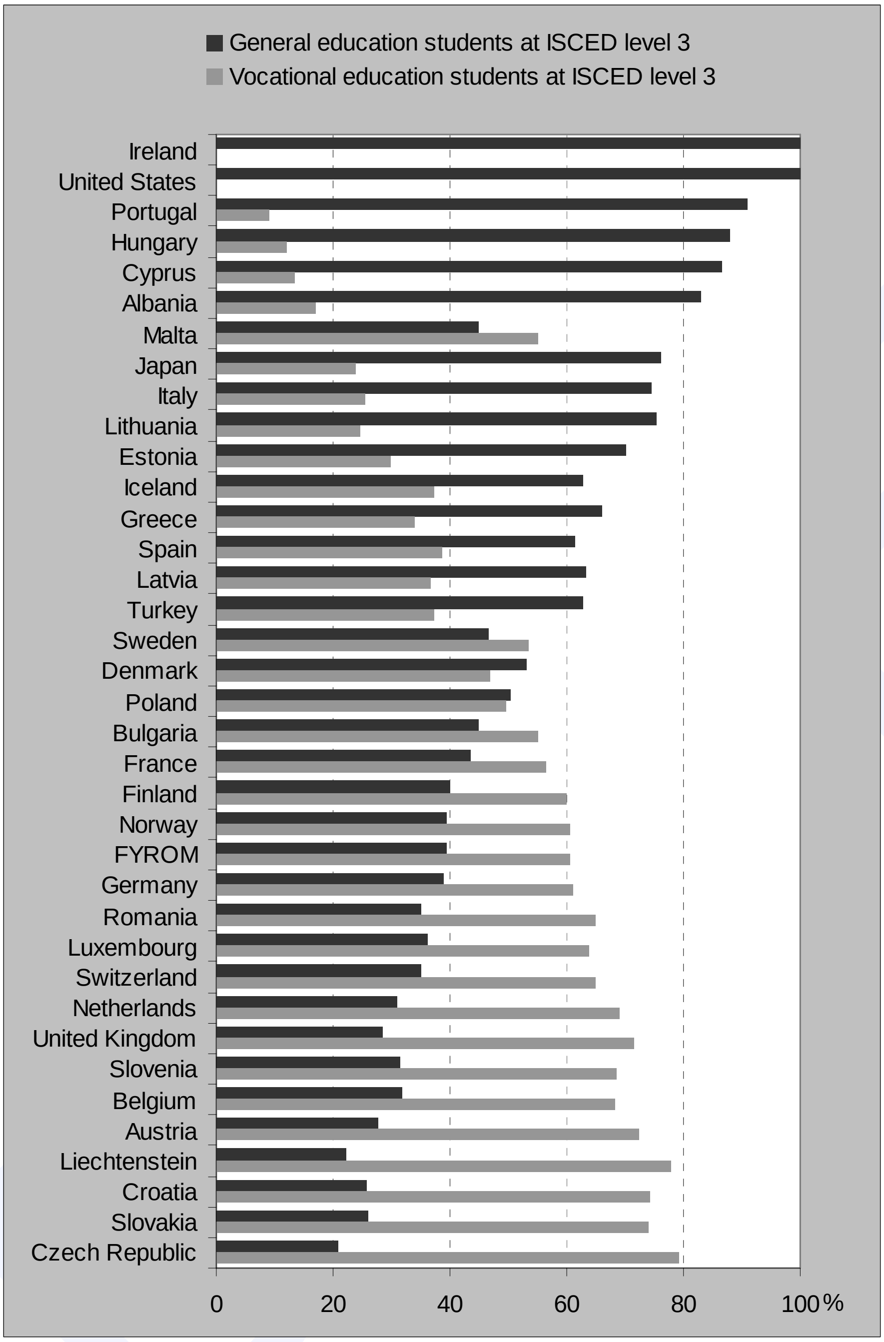
(d) unemployment by educational attainment, age groups and gender;

(e) income distribution according to education attainments.

3.1. Student enrolment in and graduates from upper secondary education programmes

The enrolment numbers in vocational and general programmes at the upper secondary level show which programmes are favoured by young people. Student distributions in general and vocational programmes at the upper secondary level (ISCED 3) have been illustrated by countries and by gender (Figures 1, 2 and 3, and Tables 6 and 7 in the Annex). The countries include the EU-27, EEA/EFTA countries (Iceland, Norway, Liechtenstein, and Switzerland), candidate countries (Albania, Croatia and Turkey), and non-European countries such as Japan and the US.

Figure 1: *General and vocational education students in % of all students at ISCED 3 in 2004 by countries*



In 2004, vocational programmes accounted for more than half of the upper secondary students in the Czech Republic (79.2%), Liechtenstein (77.7%), Slovakia (74.1%), Croatia (74.3%), Austria (72.4%), the UK (71.5%), the Netherlands (69.1%), Slovenia (68.6%), Belgium (68.2%), Switzerland (64.8%), Romania (64.5%), Luxembourg (63.9%), Germany (61.2%), the former Yugoslav Republic of Macedonia (60.5%), Norway (60.5%), Finland (60.1%), France (56.5%), Bulgaria (55.2%), Malta (55%), Sweden (53.4%), and for almost half in Poland (49.5%). In more than half (n=21) of the 37 countries the students enrol in vocational education programmes at the ISCED 3 levels (Figure 1 and Table 7 in the Annex).

In Ireland and the US, upper secondary provision consists of academically oriented programmes only. However, many Irish youngsters (34%) graduate from pre-vocational programmes (Figure 4). Both Irish and American education and training systems deliver the post-upper secondary/post-high school vocational programmes (ISCED 4) for their students (Table 8 in the Annex).

In fourteen countries, the majority of upper secondary students (ISCED 3) are enrolled in academic education programmes: Portugal (90.9%), Hungary (87.9%), Cyprus (86.6%), Albania (83.12%), Japan (76.7%), Lithuania (75.3%), Italy (74.5%), Estonia (70.1%), Greece (66%), Iceland (62.8%), Latvia (63.2%), Turkey (62.7%), Spain (61.7%), Denmark (53.2%), and Poland (50.5) (Table 7 in the Annex). Compared to the other countries in this group, Italy and Portugal have significant pre-vocational programmes from which 34% and 15% of students graduate respectively.

In the EU-27 Member States and in candidate, EEA/EFTA and non-European countries, vocational education programmes are more popular among male students than among females, except in Sweden, the UK, Ireland and the US (see also Tables 6 and 7 in the Annex).

Table 1: Distribution of upper secondary students across vocational and general programmes (ISCED 3) by gender in 2004

Programme choices (ISCED 3)	**Vocational education programmes**		**Academic/general education programmes**	
Country groups by gender	**Females (%)**	**Males (%)**	**Females (%)**	**Males (%)**
EU-25	57.6	63.5	42.4	36.5
EU-15	60.3	64.7	39.7	35.3
NMS-10	42.9	57.8	57.1	42.2
United States	0	0	100	100
Japan	21	26	79	74

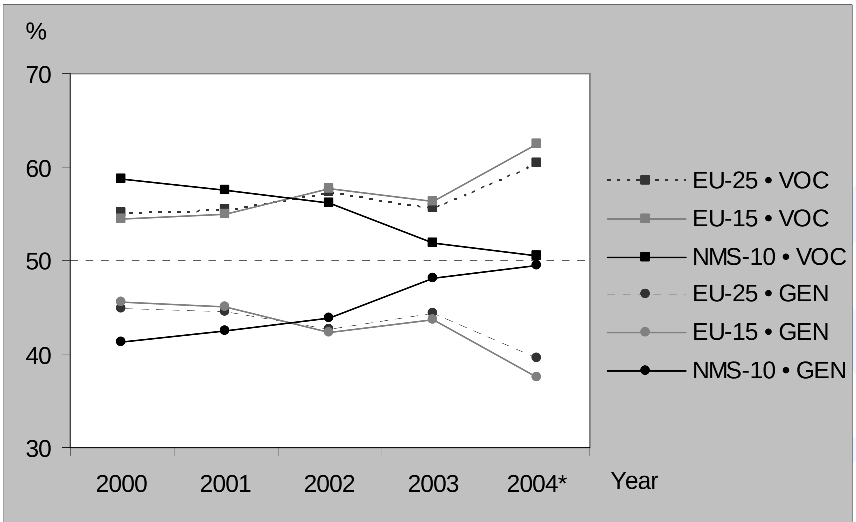
Between 2000 and 2004, less than 50% of all upper secondary education students enrolled in general/academic programmes in the EU-25. Three quarters or more of Japanese students enrolled in academic programmes. American high school students had only one choice, general/academic programmes pathway.

Only about 25% of the Japanese upper secondary education students chose vocational education programmes, whereas almost 60% of the European students preferred VET programmes. By gender, 63.5% of the male students and 57.6% of female students of the EU-

25 enrolled in VET programmes in 2004. Respective numbers were 26% and 21% in Japan.

Female students prefer general/academic upper secondary programmes compared with males in all countries except Sweden and the UK. Ireland and the US indicated that all their ISCED 3 programmes were academic in nature. The biggest differences in programmes choices between females and males are found in Bulgaria, Cyprus, Denmark, Estonia, Liechtenstein, Lithuania, Latvia, Malta, Poland and Romania.

Figure 2: General and vocational education students in % of all students at ISCED 3 in 2000-04 by country clusters

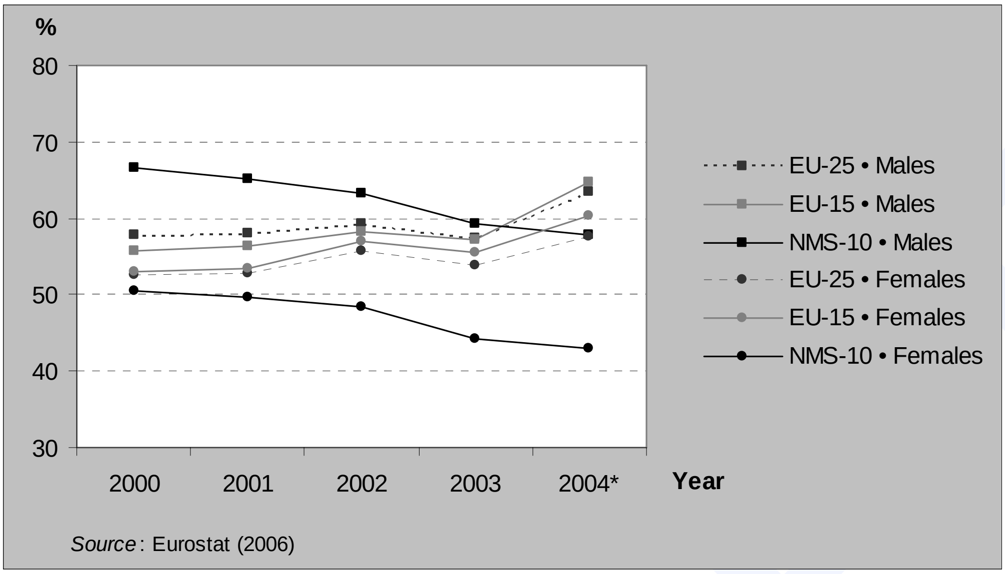


Source: Eurostat (2006)

When comparing the popularity of VET by European country clusters we can see that among the EU-15 countries this popularity has risen steadily during this decade (Figure 2). At the same time, the popularity of academically-oriented programmes has decreased slightly, and according to 2004 statistics, this trend was strongest among EU-15 countries. In contrast, among the NMS-10 VET steadily lost popularity in the years 2000-04.

The popularity of vocational upper secondary education programmes rose more especially in Finland, Iceland, Liechtenstein, Malta, Norway and Spain between 2000 and 2004. On the contrary, the enrolment in VET programmes at the ISCED 3 level, decreased in Estonia, Lithuania, Poland and Portugal (Table 7 in the Annex).

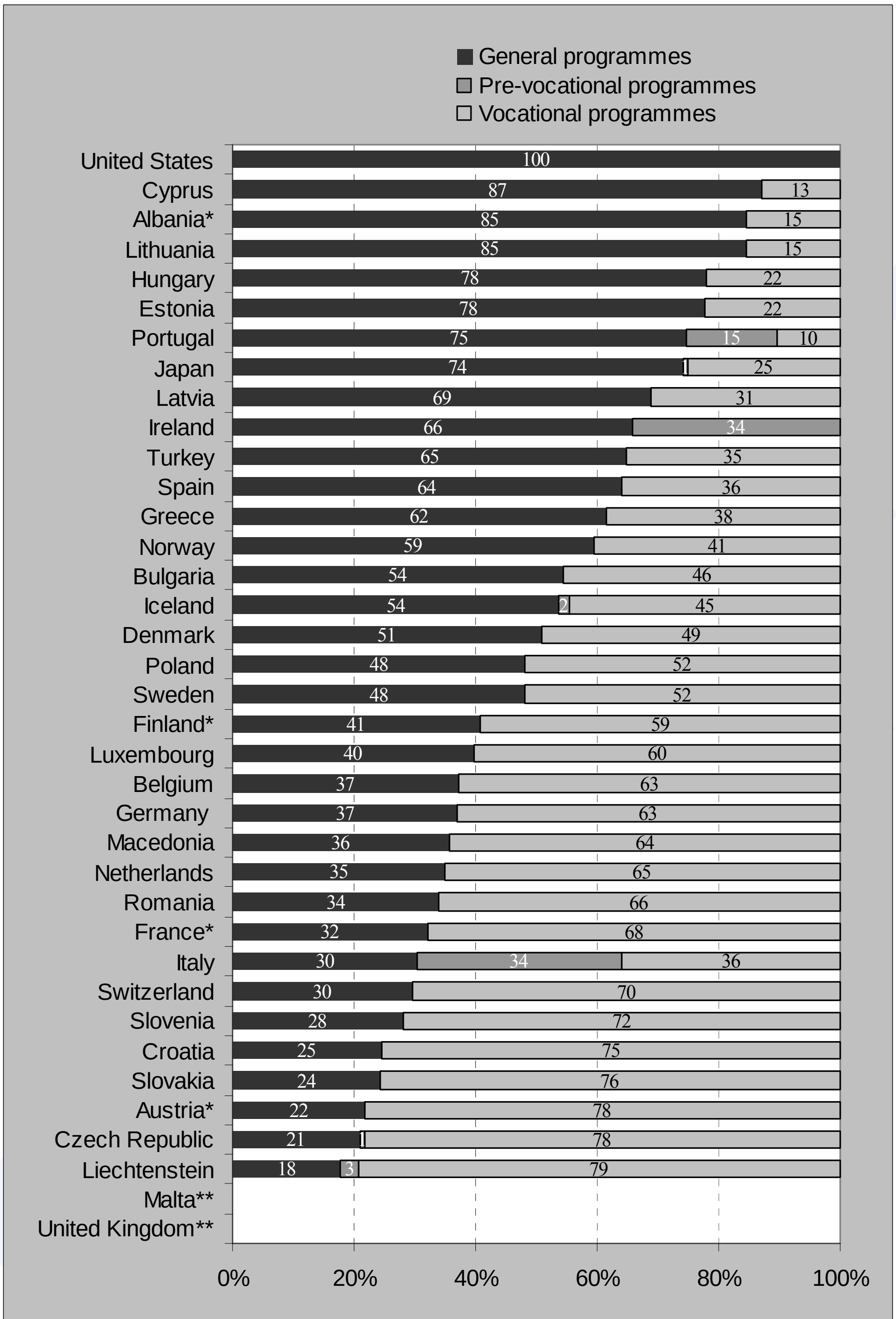
Figure 3: Vocational education students by gender in % of all students at ISCED 3 in 2000-04 by country clusters



Vocational education programmes seem to be most popular among the males of the EU-15 and EU-25. Popularity of VET has arisen more especially among males in Greece, Italy and Malta, and among females and males in Finland. EEA countries, such as Norway and Iceland followed a similar pattern as Finland in 2000-04. In contrast, popularity of VET programmes decreased among the students of the NMS-10, especially among females.

The previous statistics mainly focused on the numbers of student enrolments. Figure 4 shows how many students actually graduated from general and vocational upper secondary programmes in 2004.

Figure 4: *Graduates in ISCED 3 in 2004 (some in 2003) by study programmes*



Source: Eurostat, 2006

In 17 out of 35 countries (missing data from Malta and the UK) more than 50% of upper secondary education students graduated from VET programmes in Europe. The graduation figures follow the pattern of student enrolment statistics. Disparities in education between females and males have decreased throughout the EU. In fact, women have slightly overtaken men in terms of the numbers of those obtaining qualifications.

3.2. Enrolment in tertiary education programmes

In the EU-25, students in vocational higher education (ISCED 5B) mostly chose health and welfare (Table 10 in the Annex). Social sciences, business and law were most often chosen by students with an academic orientation.

Figure 5: Students enrolment in ISCED 5A and 5 fields in EU-25 countries in 2004

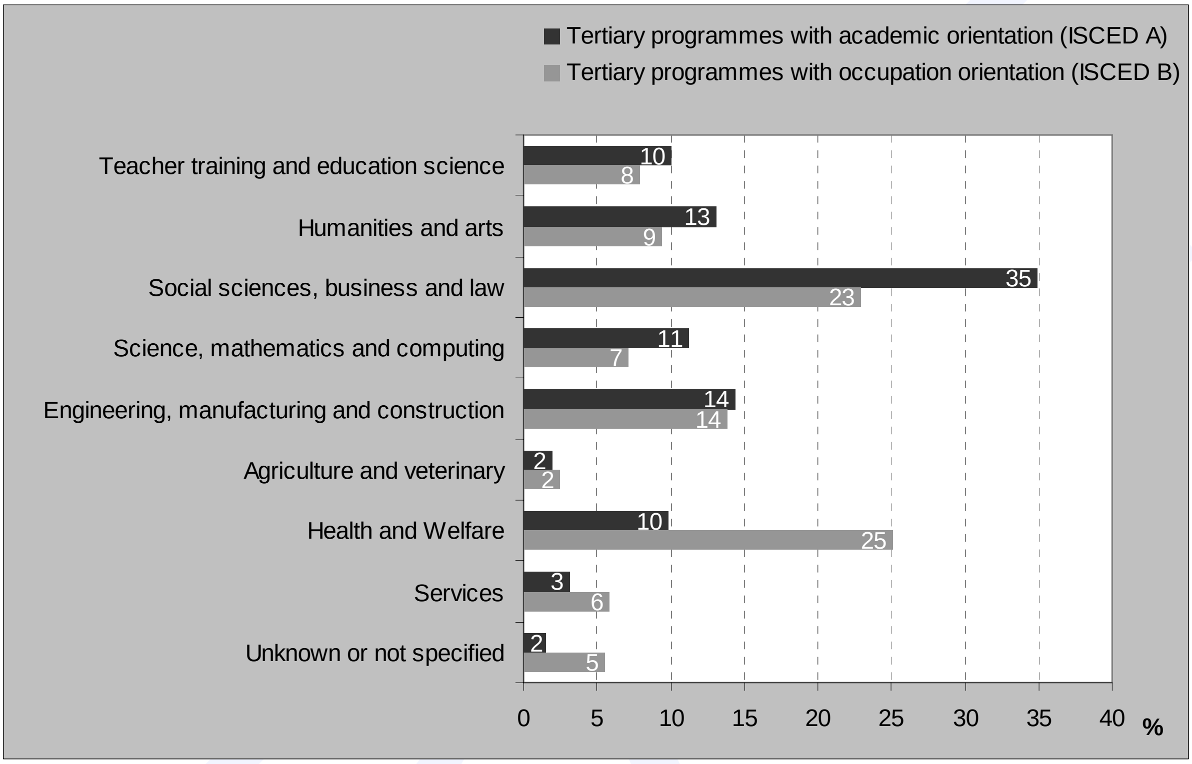
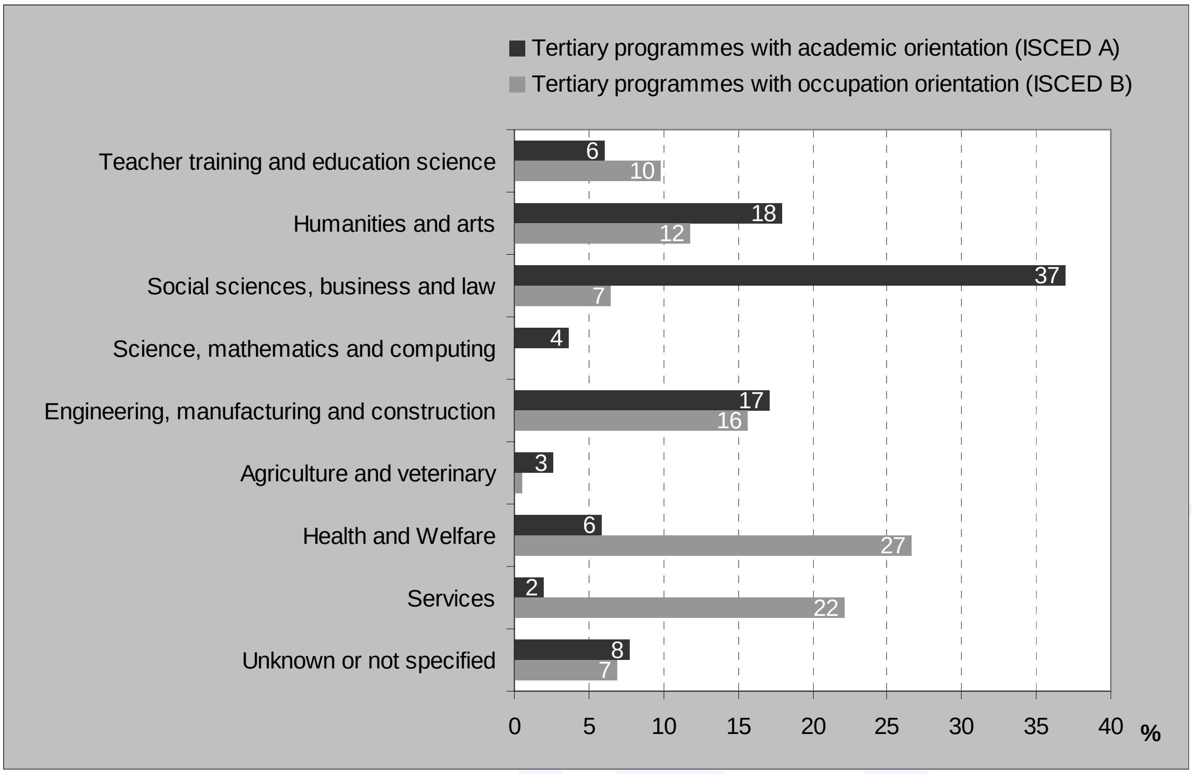
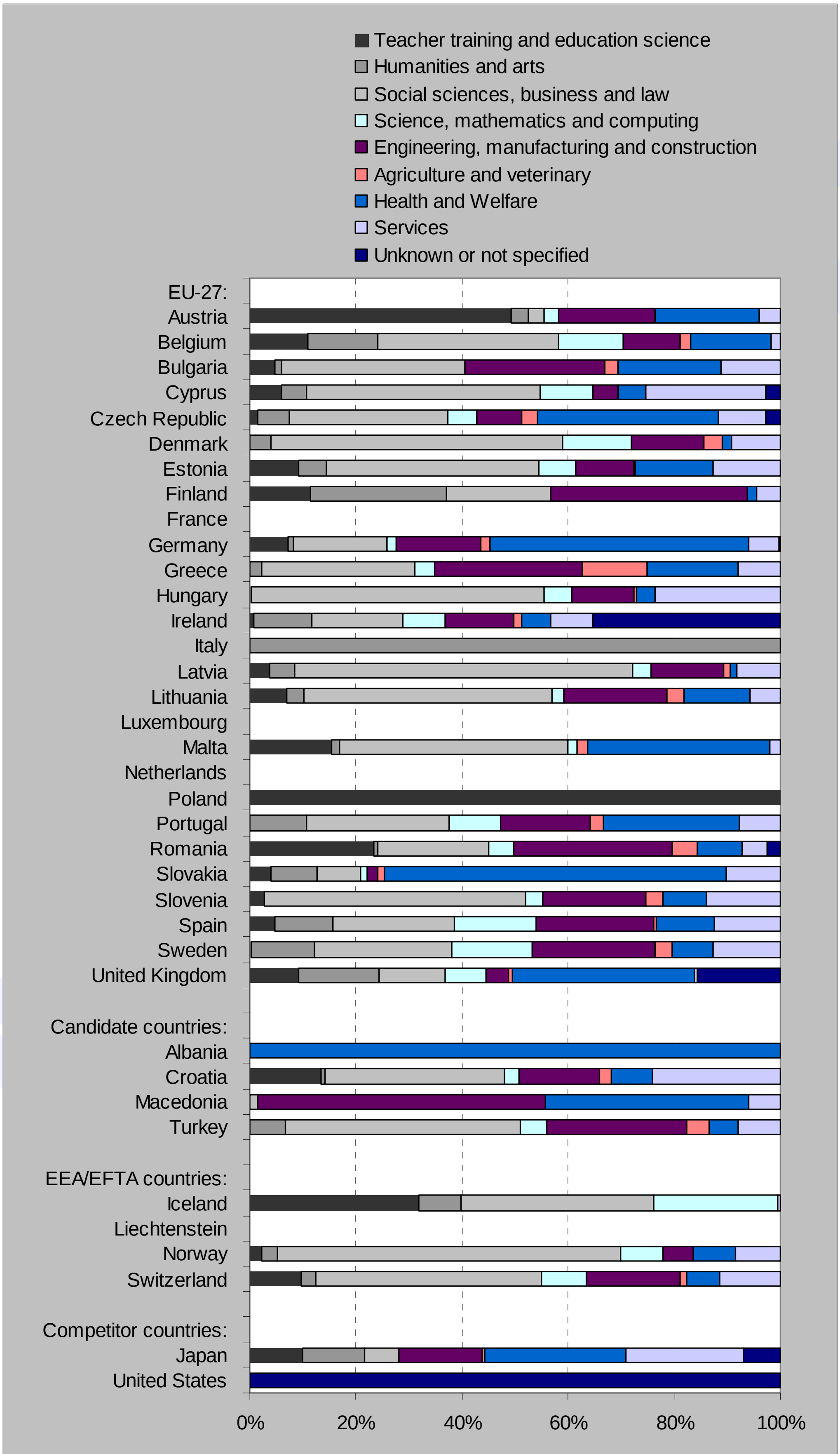


Figure 6: Students enrolment in ISCED 5A and 5B by fields in Japan in 2004



In EU-25 countries and in Japan, health and welfare services, social sciences, business and law, and engineering, manufacturing and construction are most popular tertiary programmes with occupation orientation, whereas social science, business and law programmes were most attractive for the student with an academic orientation. The enrolment figures in Japan differ only slightly from the European ones. Enrolment in agriculture and veterinary is low in all country groups perhaps because of limited occupational fields which do not always require tertiary qualifications. The next figure shows student enrolment in occupational higher education programmes by country.

Figure 7: *A summary of tertiary programmes with occupation education orientation (ISCED 5B) in 2004*



Source: Eurostat (2006)

Tertiary programme enrolments with occupation orientation by country show a great variety of importance of the fields. For instance, in Finland, the highest rates seem to be in engineering, manufacturing and construction, and in humanities and arts. In Japan, services and health and welfare are the biggest areas (Table A6 in the Annex).

Despite the success of female students in terms of educational attainments as compared with males, differences persist in the type of educational courses taken by young women and men. Smyth (2002) examined gender differentiation in early labour-market outcomes across European countries. Countries differ in the extent of the educational segregation by gender but certain regularities are evident. Health/welfare, education and art programmes are dominated by women and engineering programmes are dominated by men. Countries with higher educational segregation by gender were found to have higher occupational segregation by gender. However, marked gender differences were apparent between women and men who had received the same kind of education, regardless of the country considered. Women’s labour force participation is lower than men’s in all countries. It also seems that women experience fewer occupational upgrading opportunities than men. However, no evidence was found that greater segregation within the youth labour market either hindered or facilitated the integration of young women into stable employment.

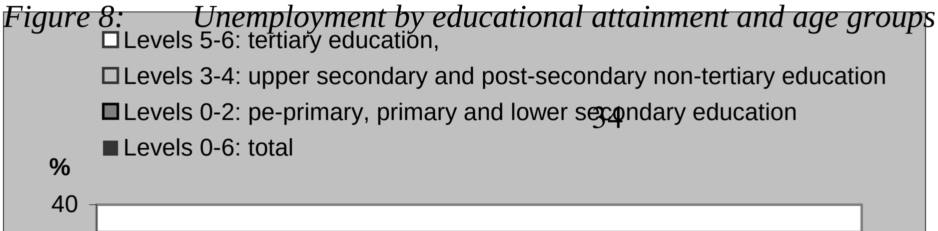
School to work transition indicates the measures and conditions under which the young people move after finishing school or graduation to employment. The next section focuses on employment and unemployment.

3.3. Employment and unemployment

The employment statistics for people with certain qualifications provide some evidence of what kind and level of education are preferred and appreciated in economic life and on the labour market. Unemployment figures may assess the demand for an educated workforce on the labour market, the success of the planning for educational provision, as well as the flexibility of professional qualifications and competences amidst the structural changes of working life. At the individual level, employment and consequent rewards indicate how profitable the previous studies and achievements turn out to be, and the chances of a person for active participation in societal life and in contributing to economy. However, employment is not solely or directly associated with educational success but is a result of several factors, including economic aspects, labour-market situation, employers’ recruitment policies, the candidate’s personal qualities and other circumstances.

Figure 8 presents unemployment rates for the EU-25 in 2005 by education attainment and age groups.

Figure 8: Unemployment by educational attainment and age groups in the EU-25 in



2005

There are considerable differences between the unemployment rates of youths (15-24 year olds) and adults (25-64 year olds). On average, unemployment in both age groups has stayed relatively stable during the years 2000-05. Youth unemployment seems to be a common challenge in European countries. According to the statistics for 2005, the youth unemployment rate (range 7.9%-38.6%) is in many countries two- or even three-fold compared to unemployment among the older age group (25-64 years; range 1.7%-15.15%). However, the higher the educational attainment of the individual, the easier the transition to the labour market. The picture hardly changes when reviewing the trends of unemployment in five years among different age groups (Tables A7 and A8 in the Annex).

Figure 9 shows unemployment in each country by educational attainments among people over the age of 15.

Figure 9: Unemployment by age groups in 2000-05 in EU-25 countries

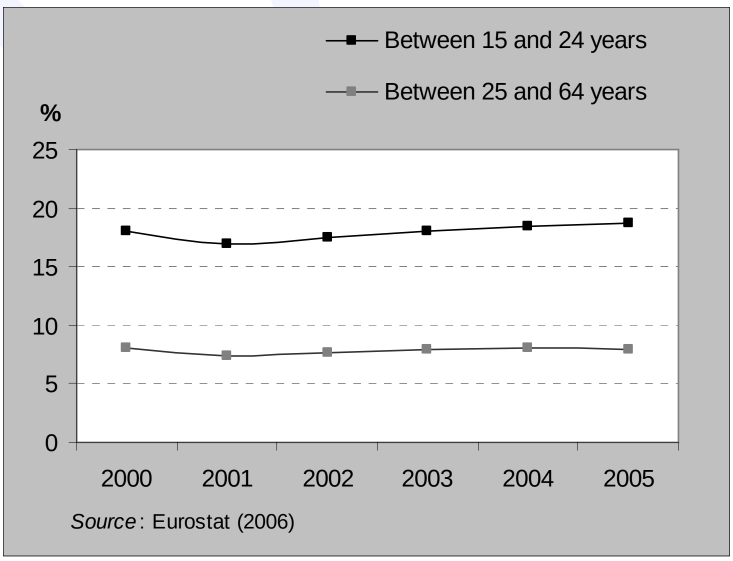
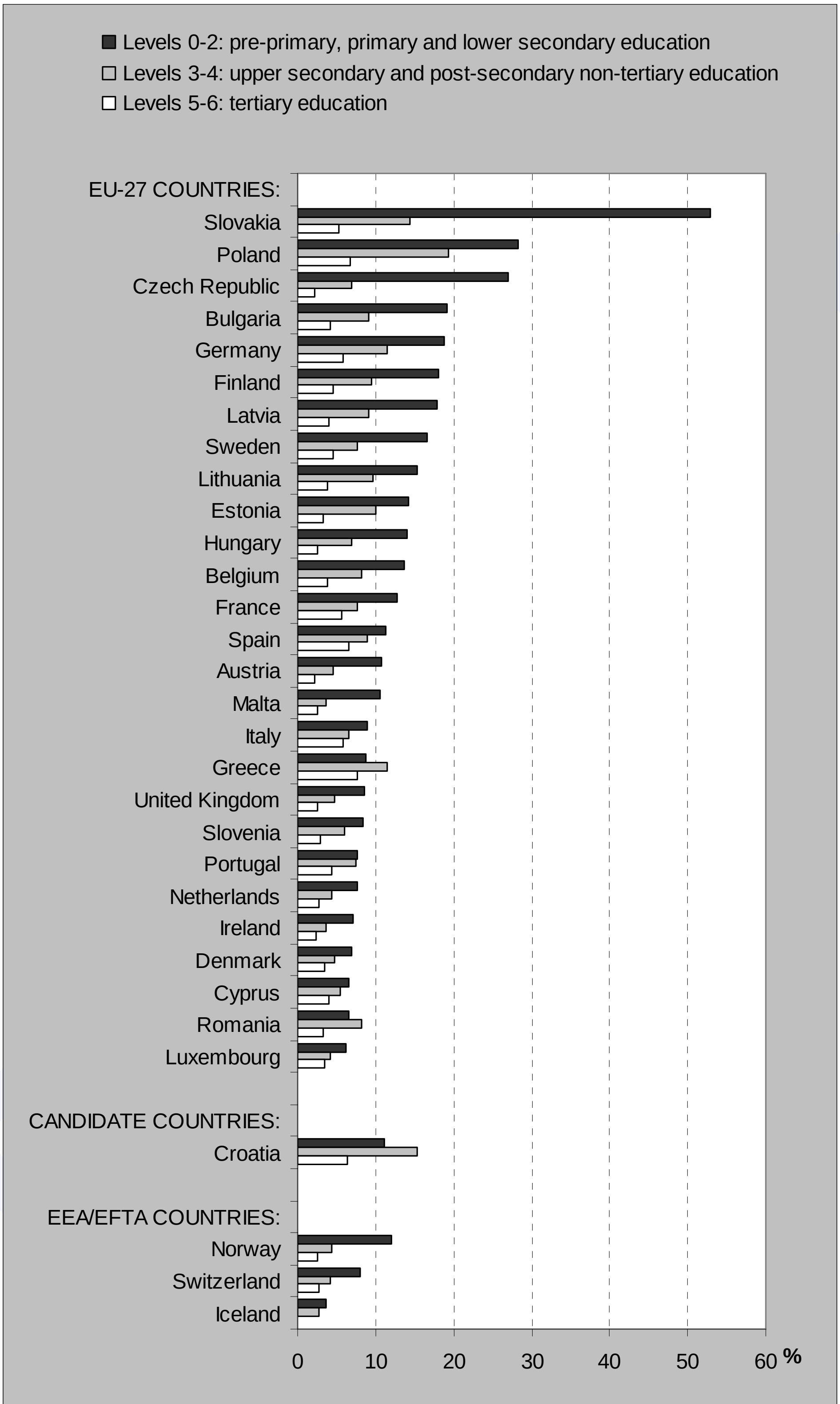


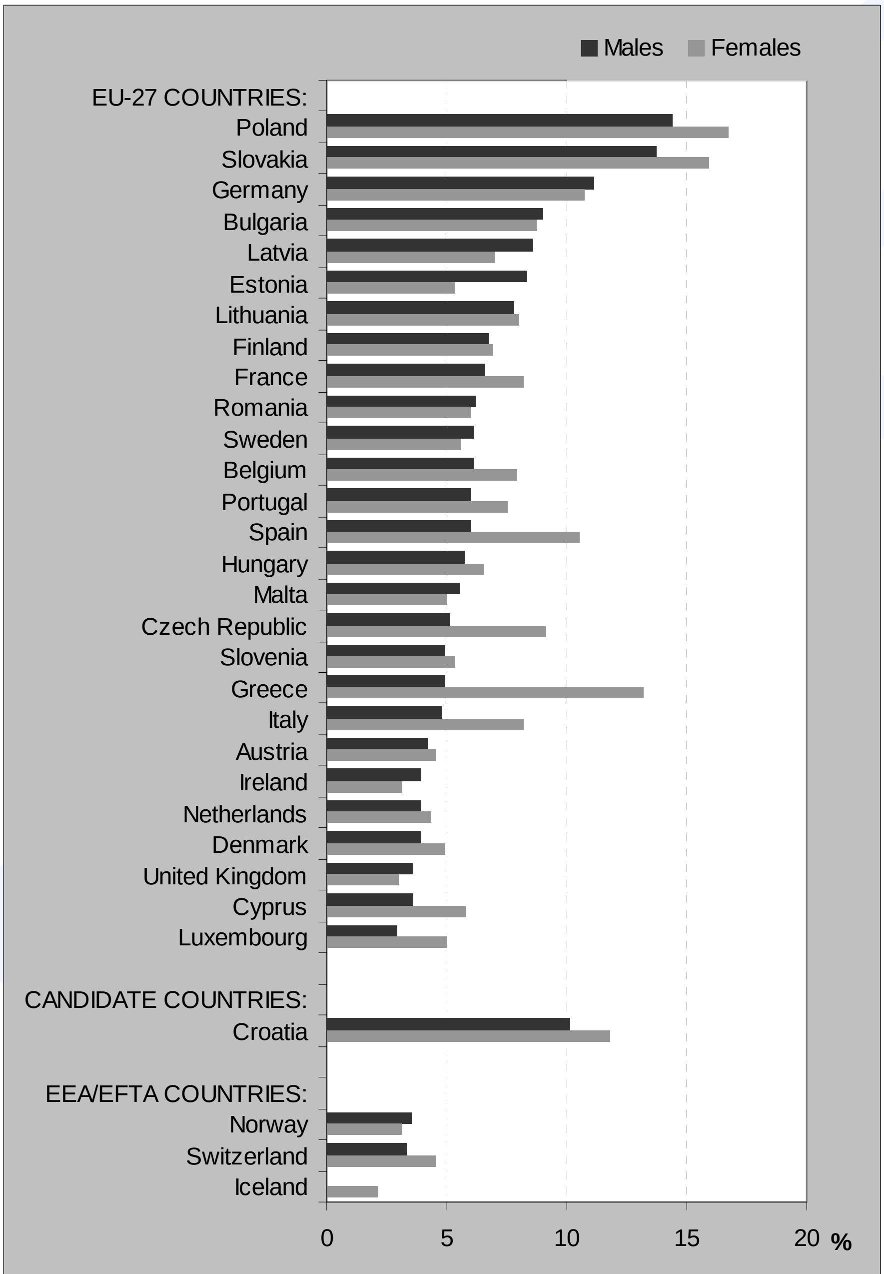
Figure 10: Unemployment rate by educational attainment in 2005



Source: Eurostat, 2006

Most of the EU-27 Member States follow the pattern that the higher the educational attainment, the lower the unemployment rate. Tertiary education seems to ensure entry to the labour market. The exceptions are Greece, Portugal, Romania and Croatia where upper secondary education provides slightly better qualifications for finding employment than tertiary education qualifications. Unemployment rates among females and males vary between the countries, which is shown in Figure 10.

Figure 11: Unemployment among adults (between 25 and 64 years) by gender and countries in 2005



Source: Eurostat, 2006

The highest unemployment rates among Europeans over 25 were in Poland (15.5%), Slovakia (14.7%), Germany (10.9%) and Croatia (10.9%) in 2005. The lowest unemployment among adults was found in Iceland (1.7%), Norway (3.3%), Switzerland (3.8%), the UK (3.3%), Ireland (3.5%), and Luxembourg (3.8%). Women's unemployment among 25-64 year olds was highest in Poland, Slovakia, Greece, Croatia, Germany, Spain, the Czech Republic, Bulgaria, Italy, France and Belgium. On average, it was higher than men's in EU-25 and in EEA counties. The greatest differences between females and males' employment are in Greece, Italy and Spain (Table A8 in the Annex). Women's unemployment rate was 13.2%, whereas it was 4.9% for men in Greece in 2005.

In 2005, the overall highest unemployment rates among young people were in Poland (38.6%), Croatia (32.8%), Slovakia (28.3%), Sweden (28%) and Finland (27%). The lowest unemployment rates were found in Denmark (7.9%), Ireland (8.2%), the Netherlands (8.6%), Iceland (8.7%) and Switzerland (8.8%). More many young women than men were found unemployed especially in Greece, Spain, Italy, Latvia, Portugal, Luxembourg, Slovenia, Denmark, Croatia and Malta (Table A7 in the Annex).

Unemployment among those who have emigrated from non-EU countries to Europe is much higher than among EU citizens in almost all countries (Table A9 in the Annex). Only Ireland and Slovenia are exceptions. Comparative data on the labour-market integration of immigrant youth are very scarce. Kalter and Kogan (2002) aimed at enhancing the understanding of ethnic inequalities making use of a new dataset made available by Eurostat, the EU labour force survey 2000 *ad hoc* module on school-to-work transitions. They used longitudinal information on labour-market entry. They found that non-EU youth are disadvantaged with respect to higher status employment in Belgium and Spain. While in Belgium it seems to be mainly due to lower educational qualifications and labour-market discrimination, in Spain in addition to labour-market discrimination a notable self-selection process seems to take place. They analysed in detail access to medium and lower status jobs, as well as the general transition patterns from school to work in both countries.

Wolbers (2002) investigated ([11]) the determinant of job mismatches in terms of education among school-leavers in Europe and the effects of having a job mismatch on their labour-market position. The results showed that some individual, job, and structural characteristics affect the likelihood of having a job mismatch. Furthermore, the incidence of job mismatch differs between European countries:

(a) school-leavers with a non matching job achieve less occupational status than those with a matching one;

(b) this negative effect of job mismatches is smaller in countries where the share of school-based, respectively apprenticeship-type vocational education is higher;

([11]) Data on this European research were drawn from the European labour force survey 2000 *ad-hoc*-module on transitions from school to work.

(c) in the countries where the share of upper secondary education students in school-based vocational education is high, the incidence of job mismatches among school-leavers is higher than in countries where this share is low (the UK and Germany were not included in the data);

(d) furthermore, the analysis reveals that school-leavers with a job mismatch use adjustment strategies to improve the fit. The adjustment strategies used were job searching and participation in (further) training. A surprising result of the analysis showed that having a job mismatch had a negative effect on participation in continuous vocational training. One can speculate about whether this is due to a less positive attitude against lifelong learning activities or to the overall educational attainment.

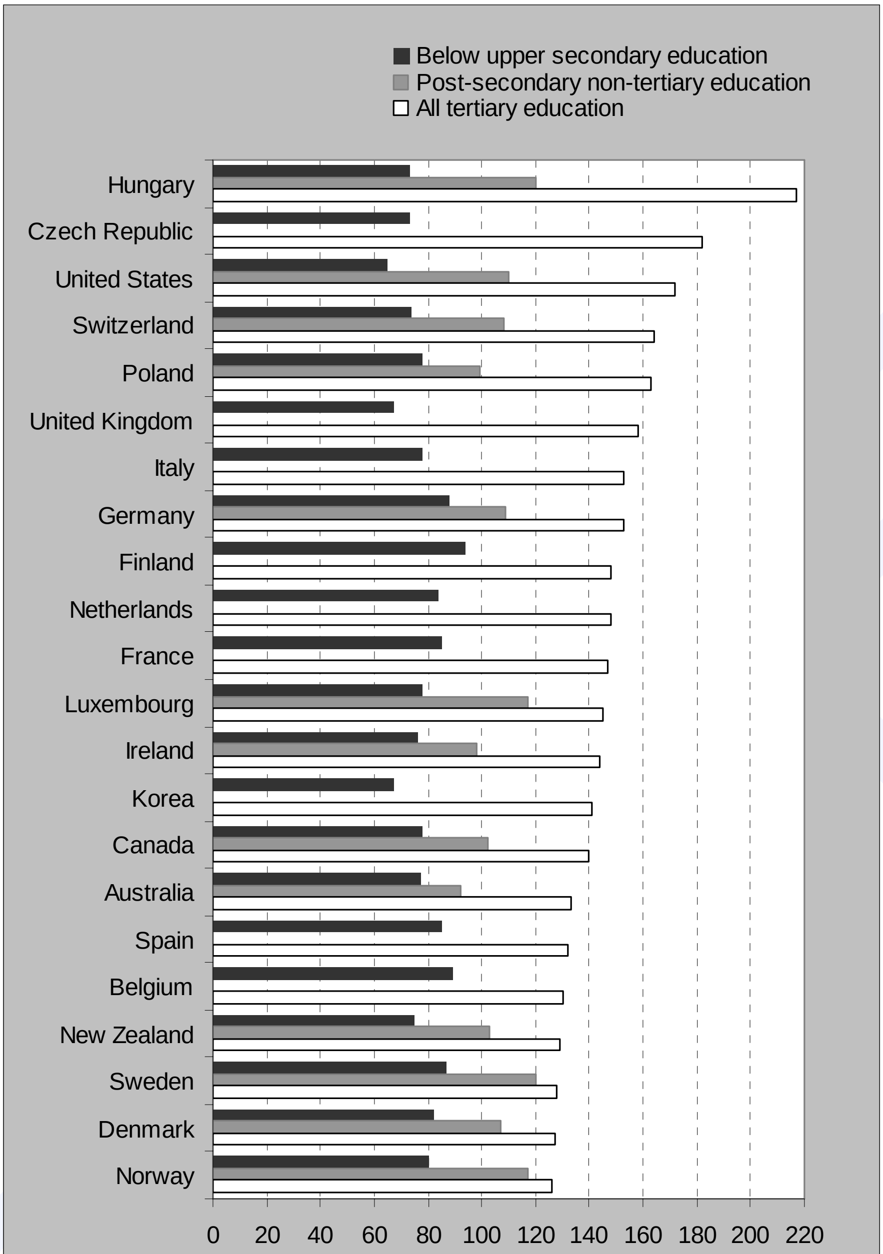
Certain individual, job and structural characteristics are related to job mismatch (Wolbers, 2002). Male school-leavers seem more often to have a job mismatch than their female counterparts. Older employees are more likely to be working in a non-matching job than younger workers. School-leavers with temporary and/or part-time contracts are more frequently employed in a job that does not match their education and training than those with job tenures. Those working in small firms and/or the private sector experienced job mismatch more often than those who were employed by large firms or/and the public sector. Periods of high unemployment have a tendency to increase job mismatch. The higher the education, or the more occupation-specific qualifications employees had, the fewer job mismatches they experienced.

Investing in education brings rewards both to the individual and to society. Individuals are willing to invest in education if there are adequate options available. Better education increases the probability of employment and secures higher income, although this connection varies between countries and education. Especially women without an upper secondary education have much poorer employment prospects than men who have completed such education. Employment is particularly unlikely among women with a low education, when compared to low-education men or high-educated women (OECD, 2006). This is especially true for Greece, Ireland, Spain and Turkey, where less than 40% of 25-64 years old women having no upper secondary education are employed, compared to the 70% among the corresponding group of men (OECD, 2005a).

3.4. Income returns on learning

There seems to be a strong positive relationship between educational attainment and relative earning (before taxes) for 25 to 64-year-olds. The higher the education persons have, the higher the wages they have, on the average. People with below upper secondary education have the lowest salary. This tendency is true in all countries (see also Table A10 in the Annex).

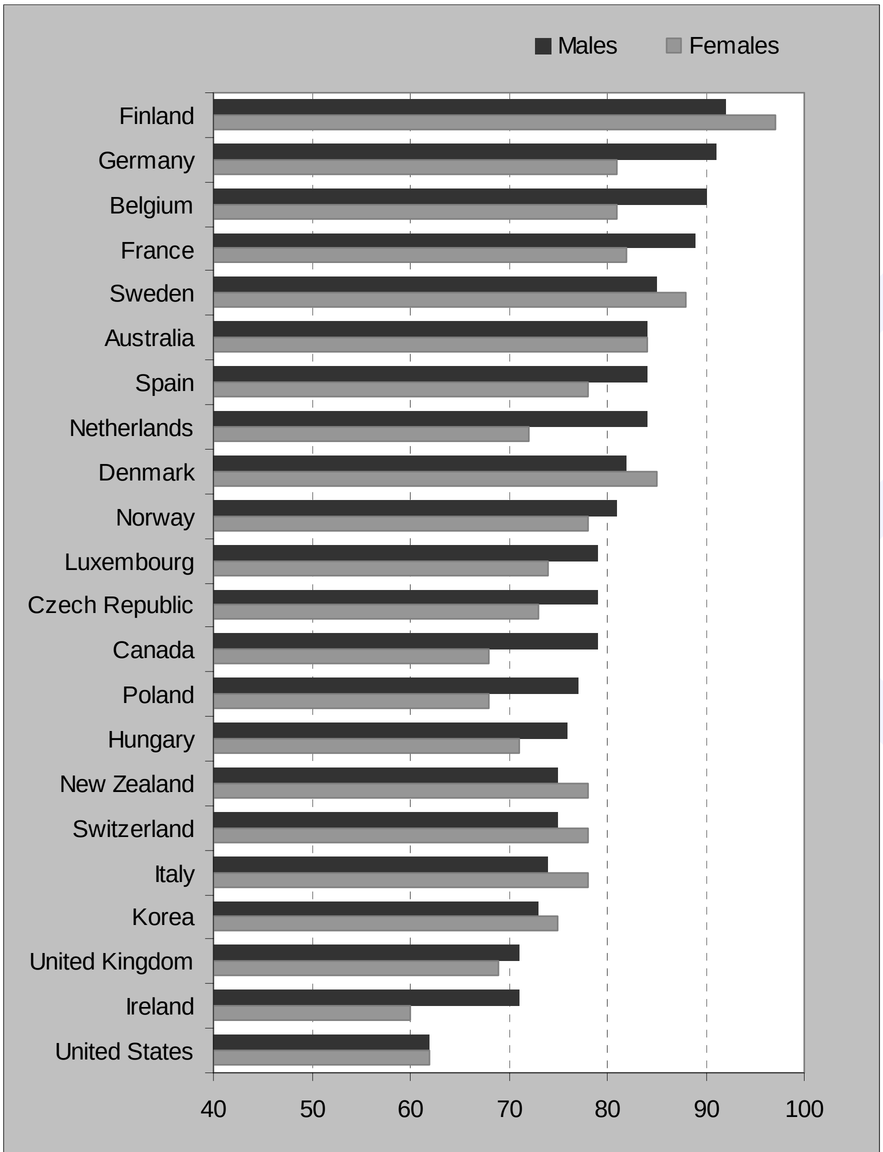
Figure 12: Relative earnings of the population with income from employment



Upper secondary and post-secondary non-tertiary education = 100
Source: OECD (2006)

In most of the countries men have more earning advantages from their educational attainment than women, especially visible for people with qualifications below upper secondary level. However, there are some exceptions. Females with below upper secondary education can count on better wages than males in Nordic EU countries (Denmark, Finland and Sweden) and Italy. Also Switzerland, Korea and New Zealand belong to this group. In Australia and the US females and males with this kind of education are equally enhanced.

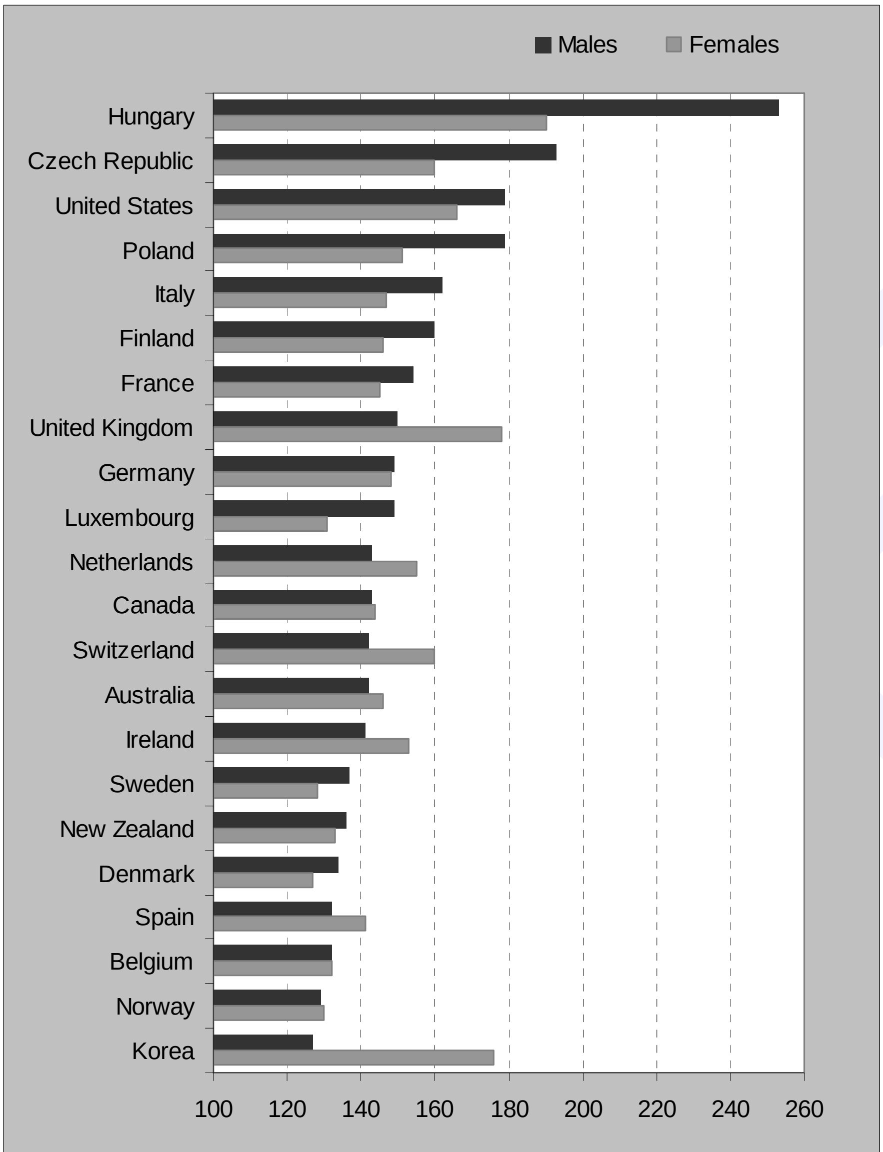
Figure 13: *Relative earnings of the populations with income from employment (educational attainment below upper secondary education)*



Upper secondary and post-secondary non-tertiary education = 100
Source: OECD (2006)

At the post-secondary level, women have higher salaries than men in Germany, Ireland, and Luxembourg, as well as in Switzerland and Canada. Financial rewards from tertiary (all tertiary education) benefit females more than males in some EU countries, Ireland, the Netherlands, Spain, the UK, as well as in Norway, Switzerland, Australia, Canada, and Korea.

Figure 14: *Relative earnings of the populations with income from employment (educational attainment of tertiary education*



Upper secondary and post-secondary non-tertiary education = 100
Source: OECD (2006)

In all countries and at all levels of educational attainment, females aged 30-44 earn less than males. However, the differences in relative earnings between men and women should be treated with caution. In most countries, earnings data include part-time work, which is more common among women (OECD, 2006, p. 124).

By considering all levels of education together, average annual earnings of female as a percentage of males in the 30 to 44 age group are highest in the countries where part-time work and part-year earnings are excluded: Hungary (87%), Luxembourg (84%) and Poland (81%). Women aged 55 to 64 get the biggest percentage of male earnings in Poland, Hungary, and Czech Republic. Women's salaries are in these countries, respectively, 87%, 86% and 82% of male earnings.

In some cases, 55 to 64-year-old women are better paid than men. This is observed among women graduates of tertiary-type A and advanced research programmes (131% of males earnings) and tertiary-type B education (105% of males earnings) in Luxembourg, among women with tertiary-type B education (107% of males earnings) and upper secondary and post-secondary non-tertiary education (104% of males earnings) in Hungary, and among Korean females with tertiary-type B education (107% of males earnings).

Despite these exceptions, on average, women still earn much less than men. For instance, in Finland where women's education attainment is higher than that of men, women's salary is hardly 80% of men's salary on average.

In salary comparison across different education levels, vocational upper secondary education seems to yield, for both genders, at least as high salaries as general upper secondary education (OECD, 2005a, p. 130). On the other hand, there is a marked difference when compared to tertiary vocational education and academic education (OECD, 2006, p. 123 and 135). The latter interpretation has to be handled with caution as access to vocational higher education (ISCED 5b) is very limited in the EU-27. In one out of 21 countries under study females profit more than their male counterparts from tertiary-type B education. This is observed in Norway.

Although it can be argued that the higher education a person has, the better paid job s/he will have, there are exceptions based on the occupation and the length of studies (Box 2). The higher a degree, the longer the years of studies are. Each year of studies is a loss of income in the short term. The future job has to pay well to cover the gap.

Box 2: A plumber earns more than a university graduate

In Finland a recent report Helsingin Sanomat (2006) compared average earnings and their development over a 35-year work career for 6 occupations: museum secretary, nurse, engineer, plumber, lawyer, and doctor. It turned out that a plumber reaches considerably higher earnings than many more highly educated professionals. The calculations were based on the Finnish salary statistics of trade unions and municipal employers. A plumber, who starts in the profession at the age of 20, has many years in a paid job while the others are still studying. Lawyers and doctors catch up the plumber in overall earnings after some 13 years of working. After 6 years of university studies a museum secretary will never reach the plumber's income level, on the contrary, due to lower annual income. Naturally, the salaries do also vary within occupational fields. For example, a lawyer working in the private sector may earn twice as much as a fellow lawyer working as a civil servant.

According to OECD statistics (OECD, 2005a), the biggest differences in salary comparisons across education levels occur between higher education and upper secondary or specialist vocational education. However, higher education does not pay off, at least financially, in all fields when compared to some vocational qualifications, as seen in Box 2. Furthermore, money is by no means the only reward education may bring. There are also other aspects to consider, such as self-fulfilment and work satisfaction. Many people may also end up working in a field other than what they originally studied. In any case, the effects of education on economy as a whole are hard to measure precisely. Based on available indicators we can still conclude that these effects are clearly connected to economic growth with relation to productivity and human capital.

3.5. Conclusions

Nearly all the European countries have achieved the goal of universal upper secondary education (ISCED 3). The mass of students challenges the education and training systems in terms of diversification of secondary and tertiary education. The learning environments of VET are different from those of traditional academic/liberal education. Teaching and learning approaches of VET draw on strategies of constructivist, and situated, work-based and expanding learning theories. Thus, VET can contribute to modernising teaching and learning methods and curricula.

VET seems to be quite attractive among young people in the most of European countries, especially among male students. In 2004, enrolment in VET programmes varied, depending on a country, from 9.2% to 79.2% of all upper secondary education students. In 20 countries out of 35 countries, more than 50% of the upper secondary education students enrolled in VET in 2004 (Table 8 in the Annex). In all country groups (EU-27, EEA/EFTA and in Japan), VET is more popular among male students compared to female students. Exceptions are the UK and Sweden. However, the countries account enrolment in VET in various ways. Among others, Finland considers vocational students those who enrol in vocational upper secondary programmes whereas the UK reckons up further education students there. The US and Ireland have only academically oriented programmes at the ISCED 3 level. Instead, they have pre-vocational programmes and vocational programmes at the ISCED 4 level (post-secondary non-tertiary programmes).

The policy goal of improving attractiveness of VET seems to be gained in EU-15 countries, whereas in the NMS-10 which joined the EU in 2004, attractiveness of VET decreased during the first years of the 21st century. The pattern of graduation is similar to the tendency of enrolment numbers.

Statistics show that the average salary rises and the risk of unemployment declines along with the education, both in Europe and abroad. VET is appreciated if this route is also seen to enable progress in educational and professional careers. With respect to professional socialisation and structural reproduction in society, family plays a central role in passing on values and attitudes. Some exceptions exist only in the Nordic countries (Finland and Sweden). Childhood conceptions of VET and certain types of professionals tend to be sustained in later life as well. Parents' educational and occupational background and their attitudes towards different options have significant influence when students are choosing between pathways after compulsory education.

4. Policy measures to increase the attractiveness of VET and continuing vocational training

4.1. Introduction

The purpose of this section is to present and discuss a panorama of selected policies and measures currently developed and implemented by EU Member States, the EEA countries and the candidate countries with the intention of increasing the attractiveness of VET. The data is drawn from the following reports drafted mainly by the relevant country ministries of education and employment, in response to requests for analysis and reporting undertaken for EU level. They are:

(a) the 2004 national contributions to the Maastricht Report drafted as responses to the questionnaire sent by the Qualifications and Curriculum Authority (QCA) to the Directors General for Vocational Training;

(b) implementing the 'Education and Training 2010' work programme national reports drafted in 2005 for the 2006 joint progress report;

(c) 2006 responses to the DGVT questionnaire sent out by Cedefop on progress made in the Copenhagen-Maastricht priority areas for VET.

The decision was taken to use this source of data because these reports are recent and were drafted for the purposes of reporting during the last three years. They state official positions in response to specific questions about recent policy developments in the VET systems. The drawback is inevitably that they tend to be descriptive rather than evaluative, but the richness of the data allows for a well-documented snapshot of the situation following the Lisbon mid-term.

The first section of this study examined past research on the attractiveness of VET and measures to improve parity of esteem drawing attention to some key points. Three criteria, personal competence, educational mobility and occupational mobility, are important factors in examining whether VET is perceived as an attractive choice in comparison with other educational pathways. Factors such as family background, policies in favour of equity, career guidance and quality have been shown to play a role. Past research has also indicated the role of vocational teachers and trainers both in their pedagogic role and as role models for their occupations. Other factors highlighted include progression opportunities and dual purpose qualifications giving access to higher education. It is therefore interesting to assess the extent to which current policy making takes account of such factors. The next section of the study analysed statistical data to assess any progress associated with earlier measures to make VET more attractive. The statistical analysis suggests that VET is quite attractive among young people in most European countries, especially among male students, but it appears to be appreciated if it is seen to enable progress into further and higher education and training, and in the chosen professional careers.

It is therefore interesting to map the range of policy measures currently being implemented by the countries, putting the emphasis on what is new and in the process of changing. The choice was made to present a broad panorama to obtain an overall perspective about how European countries are responding to the Lisbon challenge. The examples selected are illustrative of current policies designed to improve the attractiveness of VET and to improve its status and image both for the general public (young people and their families) as well as for employers. Given the different paces of reviewing and reforming VET systems as well as different contexts and histories of VET, countries which have been implementing certain specific types of measures for many years may not be mentioned given the focus on current policy developments. Therefore the fact that a country is not mentioned, for example concerning access to higher education or stakeholder involvement, does not suggest that they are not implementing the type of strategy presented. As a well-established practice it may not form an on-going preoccupation. A telling comment in the Maastricht Study was that 'co-operation among Member States across Europe is growing as Europe strives towards the Lisbon goal. Yet the indications are also that countries and sectors will continue to develop reforms that are most appropriate to their own traditions, circumstances, challenges and aims. This means that Member States will progress the Copenhagen actions according to rather varying sets of priorities.' (Leney et al., 2004a, p. 3) This observation is well illustrated in the different sets of concerns of the countries included in this study.

The countries included in this section are listed in the Table 2.

Table 2: The countries that responded to the DGVT questionnaire

EU Member States		**EEA**		**Candidate countries**	
Austria	AT	Iceland	IS	Croatia	HR
Belgium (Flanders)	BE-Fl	Liechtenstein	LI	Turkey	TR
Belgium (Wallonie)	BE-Wa	Norway	NO		
Bulgaria	BG	Ireland	IRL		
Cyprus	CY	Italy	IT		
Czech Republic	CZ	Lithuania	LT		
Germany	DE	Luxembourg	LU		
Denmark	DK	Latvia	LV		
Estonia	EE	Malta	MT		
Spain	ES	Netherlands	NL		
Finland	FI	Poland	PL		
France	FR	Portugal	PT		
Greece	GR	Romania	RO		
Hungary	HU	Sweden	SE		
		Slovak Republic	SK		

		Slovenia	SI		
		United Kingdom	UK		

To provide a point of anchorage with the Lisbon process, the country reporting is set against the framework of the Helsinki priorities. In most cases it is too early to assess the success of the policies. Following the presentation of the policies and measures, a matrix has been included in the conclusions attempting to summarise the types of needs that different policy measures are likely to fulfil for individuals and their families, as well as for employers and at systemic level as an indication of possible success factors.

The key issue is whether or not the policies developed actually improve the implementation and functioning of the VET systems and if they can also contribute to improving the parity of esteem between the technical/vocational routes and general education routes. In 1993, Woolf wrote that ‘governments find it nearly impossible to develop a coherence long-term policy – in large part because they are trying to achieve an umber of quite separate objectives. They are attempting to compress into a single national system programmes which imply very different sorts of education and training, to reconcile individual’s interests and ambitions with wider social concerns and to do so in a situation of inherent uncertainty about the future’ (Wolf, 1993). The situation has not changed much in the intervening years and makes the parity and attractiveness agenda both more complex and difficult. The metaphor of ‘building blocks’ has been used to describe the different function of a VET system:

(a) ‘to be able to define occupational sector priorities (on the best possible evidence available);

(b) to be able to identity the appropriate occupational sector competences and skills required (and to construct the institution and tools to do this);

(c) to be able to turn these into curricular profiles and programmes and measurable standards

(d) to deliver these at school level including the capacity to transfer from pilot to system level

(e) to help make the processes attractive to students and teacher (transferability, visibility and portability of qualifications for students and working conditions for teachers);

(f) to provide for timely and effective feedback through evaluation, monitoring, quality control and tracer studies of school-leavers’ (Parkes et al. cited in Viertel et al., 2004, p. 199).

It provides a useful indication of the different aspects that issues of attractiveness and parity need to consider in order to have a systemic effect.

But how does Europe situate itself in comparison with other competitor countries and in attitudes towards the development of VET? Studies suggest that the main competitors outside Europe have higher qualifications among their adult population than does, on average Europe as for example in the US and Japan and in addition Europe has a smaller percentage of higher education students in vocationally-oriented courses than these competitors (Leney et al., 2004a). The OECD tends to underline the importance for education systems to ensure that young people can obtain at least a full secondary school award before leaving initial education and training and also stresses the importance for the economy of investment in higher education. The World Bank emphasises the importance of investing in general education, even to the detriment of VET. The previous section dealt with the complex issues of the returns to education and training. According to the Maastricht Report, evidence suggests that investing in training both at the level of the higher achievers and of the most disadvantaged groups is worthwhile both from the economic and social points of view (Leney et al., 2004a). To a certain extent the emphasis placed by Europe on the specificity of VET and its particular contribution is somewhat exceptional in the supra-national landscape. In terms of the twin priorities of equity and efficiency underlined in the 2006 report on Education and Training 2010, VET can be seen as a significant contributing factor playing a specific role in increasing equity particularly at post-compulsory level as it still tends to enrol the lower achievers in the formal education systems.

4.2. The context

Over recent decades many countries in Europe have faced the challenges of improving the chances of young people and adults to access education and training and to enable them to obtain recognised qualifications (certificates and/or diplomas), including attesting to their (prior or current) learning outcomes. In brief, some of these developments have included:

(a) developing coherent progression routes and pathways which allow people to build on the qualifications they already have to move to the higher level;

(b) improving access to learning and to qualifications to enable individuals to undertake further learning to develop their knowledge, skills and competences; improve employability; have their acquired competences validated. Depending on the country, developing access has also focused on gender inequalities and on specific groups of the population which tended to face major obstacles and barriers to learning, obtaining recognised qualifications and entering (or seeking to return to) the labour market;

(c) developing flexibility to allow people (young people and adults) who have left the school system to access training and qualifications more easily. It is a question of entitling adults to learn in ways which take account of their work and life constraints;

(d) implementing measures to ensure transparency among the different types of diplomas and/or certificates which exist in any given country so that people can more easily access higher level or specialist qualifications. This may include aligning qualifications to a set of reference which allow individuals, employers, training providers, etc., to situate where specific qualifications fit in comparison to others;

(e) establishing criteria and procedures for ensuring the quality of the qualifications which may be issued by different ministries or bodies. Quality is essential for building trust in the system and contributes to improving the image of VET;

(f) improving the links between learning and the labour market to ensure the relevance of the qualifications provided.

Specific policies and measures implemented vary depending on the country and the focus of the issues prioritised also varies depending largely on socioeconomic factors. Transition to a market economy has also played an important role in determining priorities in the last 15 years for some of the NMS-10.

The conclusions to the Maastricht Conference on 15 December 2004, emphasised the achievements of VET systems in Europe, underlined the urgency for national authorities to put in place lifelong learning strategies by 2006 with the priorities and objectives outlined in the *Maastricht communiqué* as a key element. The communiqué underlined the importance of continuing the modernisation of VET systems to increase their attractiveness, to become increasingly demand-led, of high quality and relevant (EC, 2005a). Earlier in 2004, the *Joint Interim Report* (Council, 2004) had identified several levers and priorities for key areas and recommended that reforms and investment focus on the image and attractiveness of VET. The Maastricht agenda put a high priority on improving the image and attractiveness of the vocational route for employers and individuals to increase participation in VET giving as the challenge to 'maintain and improve the quality of IVET [initial VET], to make provision attractive to stakeholders and client groups and to provide flexible links between pathways and with general and higher education' (Leney et al., 2004a, p. 5).

Two years later, the priorities in the conclusions to the Helsinki conference reiterated most of the Maastricht priorities with a focus on improving the attractiveness of VET. They are in summary:

(a) more attention should be paid by participating countries to the image, status and attractiveness of VET. This calls for:

  (i) improved guidance;

  (ii) open VET systems;

  (iii) close links with working life;

  (iv) promoting the recognition of non-formal and informal learning;

  (v) measures to increase the interest and participation of men or women in those VET fields in which they remain under-represented;

  (vi) developing and highlighting excellence in skills;

(b) in improving the attractiveness and quality of VET, more emphasis should be placed on good governance of VET systems and providers in delivering the VET agenda through:

  (i) responsiveness to the needs of individuals and the labour market;

  (ii) highly qualified teachers and trainers;

(iii) national quality assurance;

(iv) improving public and private investment;

(v) increased transparency of VET systems;

(vi) stronger leadership of institutions;

(vii) active partnership between different decision-makers and stakeholders nationally, regionally and locally.

Emphasis has been placed in this chapter on selected priorities and, in particular, on those which aim to improve the attractiveness of VET through measures for guidance, flexibility, transparency, access to learning and qualifications, links with the world of work, partnership, quality and teacher education. Those noted in italics are not dealt with specifically. The following sections are organised as presented in Table 3.

Table 3: Section organisation

More attention should be paid by participating countries to the image, status and attractiveness of VET:	In improving the attractiveness and quality of VET, more emphasis should be placed on good governance of VET systems and providers in delivering the VET agenda:
Improved guidance and counselling	Highly qualified teachers and trainers
Open VET systems	National quality assurance
Close links with working life, including responsiveness to the needs of individuals and the labour market and active partnership between different decision-makers and stakeholders nationally, regionally and locally	Increased transparency of VET systems
Promoting the recognition of non-formal and informal learning	

4.3. Image status and attractiveness of VET

This section examines a first set of issues with a focus on the individual and his/her access into and their progression through systems.

4.3.1. Guidance and counselling

The various reports over the 2004 to 2006 period refer to improvements in guidance and counselling provision. In the 2005 reports several countries mentioned that improvement of their guidance and counselling systems was considered a significant contribution to improving the attractiveness of VET. This applied to the Belgium-Wa, Denmark, Cyprus, Czech Republic, France, Germany, Lithuania, Malta, Norway, Poland and the UK, though little further explanation was given. Three types of guidance and counselling are dealt with in the reports: transition to VET and/or upper secondary; the end of secondary or higher education and adult guidance. Examples are presented below.

The Norwegian Ministry of Education is introducing a framework on quality which includes counselling to improve pupils' transition to upper secondary education by providing them with the information they need on increased opportunities for specialisation and practical activities. They will be able to choose some subjects from upper secondary provision while still in lower secondary as it is felt that this can improve their transition. At the same time the new framework will stimulate the professional development of counsellors and establish regional partnerships for educational and vocational guidance which will become a task for the county authorities. The hope is that this new provision will increase the percentage of pupils who complete their VET within the generally stipulated time, improving attainments. The 2005 law on vocational training in Germany will extend cooperation among the *Länder* in vocational guidance and preparing students for choosing an occupation (in conjunction with the Federal Agency for Employment).

In Italy emphasis has been placed in recent years on guidance for students finishing upper secondary school or higher education called *tirocini formativi e di orientamento* which gives young people on-the-job experience and guidance.

The UK has been developing adult information, advice and guidance provision since the late 1990s through the learndirect national learning advice line which offers advice and information both on learning and career opportunities as well as on support services such as childcare. The services deals with a high number of calls (over 6 million since 1998) and a recent survey indicated that almost 80% of the respondents had either taken up training as an outcome of the information or intended to do so. In Ireland, following an OECD recommendation in 2003, guidance is being substantially developed. Measures include a national guidance forum which was established in June 2004 as a joint initiative of the Department of Education and Science and the Department of Enterprise, Trade and Employment to facilitate collaboration between guidance providers and to support lifelong guidance. It is composed of representatives of guidance policy-makers, practitioners, trainers, social partners, parents and consumers. New programmes within the school curriculum have significant guidance modules and an additional allocation of posts for guidance teachers has recently been announced by the Minister for Education and Science. Adult guidance is also being further developed through a number (over 35 at present) of guidance projects undertaken throughout the country and supported by the National Centre for Guidance in Education to assist adults to connect with learning opportunities and also those engaged in literacy programmes, community education and the vocational training opportunities scheme.

In France a national career guidance portal for both young people and adults was launched in 2006 and aims to provide useful information to all categories both for labour-market entry and throughout working life. It has been set up with the cooperation of partners from education, training, employment sector bodies and regional services.

Summary points

Observations about information, guidance and counselling have frequently tended to focus on the inadequacy of the information provided, the fact that it may not be up-to-date and fully informed by recent developments in employment and occupations. Another issue is that of ensuring that it is provided in a lifelong learning perspective. Thus the declared purpose of these measures is to improve the quality of the information provided to the users, and the support given to both young people and adults. The aim is that they will be equipped to better understand and assess their learning and career opportunities to make more informed choices about the pathways to take. The reports tend to be limited to descriptions of such measures with little indication of success factors except for quantitative ones which is hardly surprising given the time needed for this type of measure to be effective and for its effects to be gathered and interpreted.

4.3.2. Open VET and responsiveness to the needs of the individuals

Undertaking measures to make VET systems more open and responsive to individuals is not new and many pilot, innovative and mainstream experiences have been carried out for the last two decades. They tend to group around five main issues:

(a) improving the access to learning and to qualifications for all populations;

(b) developing flexible and individualised provision and pathways;

(c) facilitating transfers between the different parts of the secondary VET system;

(d) improving access to higher education;

(e) responsiveness through delivery of the curriculum.

The summary points are grouped at the end of the five subsections.

4.3.2.1. Improving the access to learning and to qualifications for all populations

Three types of approaches are presented here as illustrative examples: overall curricula approaches for the age-group; approaches specific to secondary VET; and approaches which focus on continuing vocational training.

The focus in the UK has been oriented to improve provision and the curriculum for the whole age-group (14-19 years old) in order to improve pathways both for academic education and for technical and vocational provision. The stated emphasis is on flexibility, tailoring the system to the needs of the individual, giving all young people a good grounding in key competences, reengaging the disaffected and providing challenging programmes for all. In Finland young people can mix academic and vocational options to suit their individual choices and work towards both academic and vocational qualification. This is also an approach to the whole age-group that does not separate students into 'silos' and gives them choice. It would be interesting to investigate further whether the good PISA results of Finland in fact are a reflection of the control that young people are given over the design of their own pathways and the extended choice and possibility of integrating both general education and vocational choices. In addition an interesting system has been established in Finland for finding out from students what they think about the labour-market training they receive. The OPAL system gathers student feedback which is then used by institutions in follow-up about the quality of provision. Further in-depth research into these questions would be highly interesting in order to investigate the role played by the factors of choice and control in making VET options more attractive to young people. In other words, is the integration of a higher degree of self-organisation a criteria for success in policies developing pathways?

The second example is focused specifically on VET. In Sweden one aspect of developing of a modern apprenticeship training system is through the introduction of an upper secondary education certificate for all the programmes offered. The modules that form the upper secondary curriculum will be broadened and more coherence introduced between the core subjects and specialised vocational subjects. In parallel this is linked to the development of advanced vocational education and training (AVET) which has become a regular part of the education system and includes close cooperation with the enterprises and course providers with one third of the training taking place in the workplace. While Sweden is introducing a modern system of apprenticeship at upper secondary school level as an alternative to school-based routes, since 2000, the German Dual system has integrated about 30 new occupations and modernised about 94 others. A further reform in Germany to increase attractiveness (and individualisation) of the Dual system comes through the legislation to promote mobility by allowing periods of vocational training courses to be completed abroad.

4.3.2.2. Developing flexible and individualised provision and pathways

Third, Poland provides an interesting example of a country that is putting their Strategy for the development of continuing education at the core of the VET modernisation strategy including the development of new occupations and national standards, modularisation, etc. with the aim of providing clearer career routes for holders of secondary VET awards.

For over 20 years this has been seen as a key element in making VET more attractive and improving the opportunities of the young people and adults who undertake VET courses. Considerations include giving more choice to individuals not just about the content of their course, so as to respond to their needs, but also developing more options of pathways. Flexibility of delivery has also been an on-going concern, especially for adults returning to learning and the need to make learning available in ways that suit their life and work style, in other words taking account of the importance of work-life balance considerations, especially for women (Gordon, 2004; Pont, 2004; Huggins and Harries, 2004).

Flexibility has become an important aspect in Slovenian policy for VET with the development of bridging courses and the offer of continuing education and training. The bridging courses last one year and allow students to move in both directions between general and technical upper secondary education. Students who have completed general upper secondary education can transfer to vocational courses and, vice versa, those who have obtained a professional qualification can transfer to general secondary to obtain the upper secondary matriculation diploma giving access to higher education. The aim is to increase the number of students from upper secondary technical courses who obtain the maturity exam and who go onto higher education. Permeability between education pathways is also at the centre of the German Vocational Training Act to open up access to the different sectors of vocational training and higher education in this case with the aim of attracting the higher achieving young people to VET.

Recent measures in Norway and Denmark have emphasised local autonomy and individual choice. In Norway they aim to establish a broader based and more flexible structure for organising VET routes in upper secondary education for individual pupils, schools, apprentices and training establishment or work places which is intended to be of benefit both to the individual learner and the labour market, reduce non-completion rate and improve the completion of upper secondary education including for VET courses. The declared aim is to give each pupil the basis necessary for lifelong learning to support their basic skills while fostering their cultural and moral development. The overall approach is to build on mutual trust and understanding and a high degree of local freedom in implementing priorities. In Denmark also all students are entitled to have an individual VET plan based on an assessment of prior learning and can include credit transfer where appropriate. Another approach to improving delivery and take-up is through flexibility which has been increased in Iceland with the introduction of credit-based awards which take account of work experience.

4.3.2.3. Facilitating transfers between the different parts of the secondary VET system

A further set of measures focuses on the need to develop pathways for young people and adults who have come through VET routes and to increase the possibilities of transfers, whether horizontal (between general education and technical and vocational education) or vertical (into higher education). There are two main approaches illustrated below.

First in Belgium-Fl and Germany, for example, measures seek to smooth the passage between general and vocational provision. In Germany links between vocational and general education are being strengthened by developing vocational modules. With the objective of improving the interface between general education and vocational training, qualification modules are being incorporated into vocational preparation targeted especially for young people experiencing difficulties at school. In Belgium-Fl there have been major updates of the curriculum designed to remove barriers between general secondary education and vocational provision. In a special pilot project, *Accent op talent*, support by the government, schools can innovate by removing barriers between general secondary education and VET. In Iceland also barriers hindering transfers between general education and initial VET have been removed and in the Netherlands the regulations which penalised students transferring from one course of study to another have been abolished to create scope for more flexible pathways from secondary vocational to higher professional education. In Portugal substantial updating of the curriculum has been undertaken allowing for an easier permeability between primary and secondary education and initial VET pathways, reinforcing the modular structure of programmes and in Estonia access to general education has been improved.

A second approach is by creating two or more pathways to upper secondary qualifications. Well-known examples are France and the Netherlands where there are school-based and apprentice routes to the same qualifications. In Romania and Spain different pathways have been created towards the upper secondary qualification. While in Slovenia two upper secondary diplomas have been established, one for general education and one for vocational. A new exam at the end of vocational secondary school in Croatia is being developed with the purpose of preparing students who wish to take the higher education entry exams.

An interesting initiative in Germany addresses both the permeability of the system in terms of the possibilities of transfers and access to higher education. The Innovation Circle for Vocational Education is a think tank consisting of high-ranking representatives from enterprises, science, trade associations, trade unions and the federal regions which will work, among other areas, on the modernisation of the system including new qualifications requirements, developing a training culture in innovative, growth and research-related industries. The Innovation Circle will also be called on to reflect on better permeability of the training system and pathways into higher education.

4.3.2.4. Improving access to higher education

Improving access to higher education for VET students has been an important aspect of increasing the attractiveness of VET for many years. In some countries progression from VET courses into higher education is well-established. Examples are Cyprus, the Czech Republic, France, Iceland, Ireland, the Netherlands and the UK. Some examples of new policies are described below.

A key policy in Denmark is to improve credit transfer nationally between initial VET and adult vocational training into short higher education while in the UK the Foundation Degrees address skills' needs at higher technician and associate professional levels as they are vocational higher education providing specialist knowledge and employability skills needed by employers. They are also a major progression route for young people who have followed an apprenticeship or other work based routes. The first graduates qualified in 2003 and the aim is to increase the number of young people obtaining a higher education award. In Finland the policy is also to continue improving the access to higher education for those who have taken a vocational route by increasing the number of award holders who leave school with both the matriculation exam and a vocational qualification.

Measures are being implemented in Austria to increase access to higher education, including after apprenticeship. In Liechtenstein a *Berufsmatura* has been established to raise the status of VET by creating an additional course that provides access to higher education. Giving equal status to the general and vocational tracks, as in Italy, is intended to open higher education to vocational award holders. In Spain open criteria for access to higher education have also been established and the new school leaving exam in Slovakia is intended to create better access to higher education for students who have followed vocational courses. Improving pathways is also of significant importance in Portugal where double certification can be either academic and professional or technical, including via apprenticeship. The objective is to involve over 650 000 young people in these courses by 2010 to make vocational courses more socially valued.

However, experience in France suggests that more than basic or legal entitlement is needed if vocational award holders are to be able to cope with the demands of higher education, follow the courses successfully and not find themselves in inequitable competition with students from general education. This type of reflection raises the issues of the advantages and disadvantages of binary higher education systems, differentiated routes and specific pathways (Dunkel et al., 2008). Hence the recent measure in France to give the holders of the vocational *baccalauréat* an entitlement for admission to higher technician courses, if they make an application to improve their chances of success in higher education and to direct them towards courses that provide direct and appropriate progression routes. The example of French students is given below to illustrate this situation.

Box 3:

Data on French students who obtained different types of *baccalauréats* shows that those who enter higher education with a vocational *baccalauréat* have less chance of obtaining a diploma than the students who have taken a general education or technological diploma. Just over two-thirds of the vocational *baccalauréat* holders continue their studies in higher education (as compares with almost 98% of the general *baccalauréat* holders. Out of those who do continue, only 10% leave with a diploma, mostly a higher technician award. For students who obtained their *baccalauréat* in 2002, after two years of studies, whereas 79% of the students with a general education *baccalauréat* enrolled in higher technician courses (*Brevet de technicien supérieur*) had obtained their diploma, only 48% of those with a vocational *baccalauréat* were in the same position. Most of those who did not obtain it stopped their studies. In the case of the other two year vocationally oriented diploma, the *Diplôme universitaire de technologie* (DUT), the students have all obtained either a general or a technological *baccalauréat* (M.E.N., 2006).

Another issue is the admission to higher education for people who do not have the standard requirements. The Netherlands have adopted a flexible admissions policy for students who have completed the third level of secondary vocational education but do not have standard requirements. In Austria recognition of non-formal and informal for admission to VET exams (demonstrating professional experience) has been introduced and the possibility of university entrance and the conferring of certain titles, for example engineer after engineering college and three years experience. Access to learning and qualifications is dealt with more in the next section.

4.3.2.5. *Responsiveness through delivery of the curriculum*

There have been many curriculum reforms in most countries over a the last two decades which cannot be dealt with in detail here. Selected examples presented below focus on recent reform. They cover issues of re-structuring study programmes for VET, as in Norway, to increase the range of subjects, the general education inputs or choices for students. Or, as in Cyprus, the reforms of technical and VET curricula also include increased use of ICTs. In the Czech Republic, more general education subjects are being integrated into the programmes for technical education to improve the attractiveness to students.

Modularisation is still on the agenda despite the fact that limited investigation has been undertaken on its real contributions and effectiveness for the systems, for individuals and in terms of resourcing. Thus the delivery of the curriculum is being radically altered in Hungary with the introduction in 2006 of modularisation of the VET provision which is intended to increase flexibly and to enable updating of the system to be carried out more easily, rapidly and drawing on fewer resources. It will be interesting in 10 years time to assess whether or not these aims of effectiveness and efficiency have been fruitful. In Belgium-Fl, the *Dienst voor Beroepsopleiding* (DBA) in cooperation with its partners, has been developing a modular system for secondary schools, which is being piloted and will be evaluated in summer 2007. The overall aim is to increase coherency between vocational training, the labour market and lifelong learning. One specific objective is to reduce the number of unqualified school leavers from vocational training by improving the general transparency of the courses and giving students more flexibility.

Reforms in assessment take different forms depending on the countries. In Bulgaria the focus is on the creation of externally moderated exams which is also a preoccupation in the Western Balkan where such courses have tended to be assessed within schools and a final certificate issued which gave students few possibilities to continue in education and training;

Taking a different approach, in Estonia an interesting initiative, the e-VET consortium, brings together VET schools and higher education institutions to support cooperation and to develop innovative and interactive tools to improve the delivery of VET and teacher training. The hope is that it will also improve the standing of the VET schools through their links with higher education.

4.3.2.6. *Summary points*

The measures presented above target both progression and labour-market entry while they also recognise the specificity of VET's contribution to the education and training of young people broadening the scope of choice at all levels.

Developing better structured pathways for students taking VET courses in secondary education and providing them with more and better opportunities for transfers and progression, have been among the key approaches to making VET more attractive over the last 20 years. A crucial aim was to ensure that no courses lead to dead-ends but all fit into possible pathways that can be followed in initial or continuing provision. Permeability between education pathways has been on agendas for several years. Barriers to progression have been reduced and access to different types of training made more open, for example taking away age limits for apprenticeship. In those countries in which pathways into higher education have existed for many years, they have contributed to increasing the percentage of the age group who obtain a full secondary school certificate and of those who obtain a higher education award, as long as the routes offered correspond to the students' requirements and capacities. The data review suggests that earlier reforms and measures have indeed contributed to increasing the number of young people completing secondary education through different types of routes and by extension have contributed to increasing the entry to higher education of award holders with a technical or vocational diploma.

Next to these more technical measures, there are an interesting series of questions concerning the specific contribution of individualising provision and making it more flexible whether for mainstream students in initial VET or for adults and specific groups of the population. Are the technical measures sufficient alone in increasing the attractiveness of VET or are they substantially reinforced by approaches that increase choice about content, mix of vocational and general courses and that increase the flexibility of delivery. In other words is the self-organisation element a crucial contributing factor and a vital element of added-value in making VET more attractive? This is an area which could usefully benefit from further qualitative research.

4.3.3. Close links with working life for both initial and continuing VET

Linking VET with the labour-market requirements of the knowledge economy for a highly skilled workforce is one of the key areas on which the *Joint Interim Report* recommended that reforms and investment be focused. Both the Maastricht and Helsinki communiqués further emphasised the importance of increasing the relevance and quality of VET through the involvement of all key partners, nationally, regionally and locally, and the need for paying greater attention to the early identification of skills needs (EC, 2005a). Countries report on a range of approaches implemented for the purposes of improving the links between VET provision and the labour market, including reforms to the education and training structure, developing relationships with enterprises and reviewing the occupational, competence and/or education standards. Funding measures are also included. In most countries this process of review and adaptation has been on-going for many years.

The main aspects highlighted in the different reports focus on:

(a) regionalisation/decentralisation;

(b) sector approaches;

(c) labour-market considerations;

(d) institutional development;

(e) standards development.

Some examples follow.

4.3.3.1. Regionalisation/decentralisation

This includes reforming and improving the structure of VET and strengthening links with the labour market, the social partners and other stakeholders. As part of reforming the Vocational Training Act in Germany, platforms will be established regionally which will bring together all the relevant stakeholders (regional authorities, Chambers, social partners, teachers and vocational schools) to improve the planning and coordination of the provision of training places and therefore the regional training markets. A current challenge for Slovenia is to develop social partnership at regional level and partnerships at local levels of schools and companies to ensure that companies are fully involved in delivering placements for training. In Italy the post-secondary higher technical education and training (IFTS) is developed in collaboration between the education and the training systems with guidelines formulated nationally but the curricula planned locally jointly by a partnership of schools, universities, regions and the vocational agencies with the aim of meeting the needs of the local labour market.

Increasing institutional autonomy is frequently linked to decentralisation and therefore has implications for regional and local labour markets and the Maastricht Study noted that decentralisation is a major trend in the governance of initial VET institutions (Leney et al., 2004a). In the Netherlands planning of courses will no longer be organised nationally, but regionally allowing vocational education institutions to decide in cooperation with regional industry what courses the region needs. Hungary is establishing integrated vocational training centres regionally bringing together existing provision to rationalise the offer and hep institutions better meet the needs of the local labour market.

4.3.3.2. Sector involvement

Several countries have well-established mechanisms for involving social partners in the creation and updating of diplomas and certificates and/or the development of curricula, while others have recently set them up. In France, for example, where these committees have existed for several decades, there has been very substantial work to renew and update the technical and vocational qualifications and the new awards put emphasis on multi-skilling, adaptability and autonomy. Special sector commissions in Sweden, (the Vocational Education Commission) have been developing cooperation between education and working life since 2004 bringing together representatives of business, trade unions, trade organisations, training providers, and government agencies.

Among the NMS-10 there are several examples of strengthening links by creating sector bodies and commissions. Examples are Romania where a tripartite agreement has been signed to establish permanent Sectoral Committees responsible for validating and steering the qualification processes; Estonia where the involvement of the social partners is being increased at all levels and Lithuania where industry lead bodies have been set up. Latvia has also set up 14 tripartite industry lead bodies jointly approved by the Ministry of Education and Science and the Ministry of Social Services and Labour. 21 tripartite sector committees have been functioning since 2002 in Hungary.

Developing new curricula in cooperation between schools and employers is another direction piloted for example in Estonia where employers are being involved in school management through the school boards and also in the assessment of the final exams.

Involvement of the Chambers is another type of approach undertaken in Liechtenstein where two working groups have been put in place. One is led by the Chamber of Trades and aims to improve the attractiveness of apprenticeships in industry and the other is under the Chamber of Commerce and aims to promote attractive training places in industry.

4.3.3.3. Taking better account of labour-market requirements

Establishing mechanisms for obtaining better information and understanding about future labour-market needs has been addressed recently in Ireland where a group was set up on future skills needs to provide a central national resource on skills and labour-market supply for the enterprise sector. The aim is to be able to provide advice on projected requirements and the steps required to meet the identified needs. This task is carried out in Italy by the inter-professional funds for forecasting and anticipating training and vocational needs which is jointly undertaken by the Ministry of Labour and the regions.

Another approach to taking account of the needs of the labour-market concerns the validation of non-formal and informal learning but this is dealt with in a specific subsection below.

4.3.3.4. Institutional development

Setting up or developing specific types of education institutions in response to a labour-market need such as the technical/vocational post-secondary institutions in Croatia and Cyprus and building a network of VET institutions, which will work closely with labour market in Hungary and Latvia.

4.3.3.5. Standards development

Ensuring labour-market relevance through the training regulations and standards development is a frequently taken route. Slovenia is developing occupational standards for all sectors based on job profiles through work undertaken by sectoral committees. In Germany there is a permanent process of evaluating and developing training regulations which involves all relevant stakeholders. It is intended to maintain a certain dynamic and to ensure that there are always a good supply of places in modernised training occupations.

In some cases measures are implemented to increase attractiveness through the direct links with enterprises. Examples of measures implemented include:

(a) training programmes developed in partnership with enterprises. In Denmark there is a focus on individual training programmes developed in partnership with enterprises. However, within that framework, since 2003-04 there has been some shift from focusing on individual training programmes towards focusing on employment and labour-market skills and so programmes are grouped by competence descriptions related to employment. The aim is to increase the number of students completing VET programmes. In Belgium-Fl covenants between industry and education have been signed for cooperation between VET schools and enterprises with a focus on implementing new fields of study and making schools more responsive to the labour-market needs. In return workplace training is provided for students, financial support given to schools and in-service training to teachers. Finland has incorporated on-the-job periods in upper secondary VET qualifications so that students now spend a minimum of 20 weeks in firms with the aim of improving the transition from school to work in the coming years. Sweden recently introduced post-secondary VET, the advanced vocational education, which is based on close cooperation with business and one third of the training takes place in enterprises;

(b) dealing with emerging labour-market needs is an area addressed in Malta through the provision of tailor-made courses by the further and technical education provider, the College of Arts, Sciences and Technology;

(c) apprenticeship is receiving a lot of attention. In Germany there is a need to increase the number of apprentice places – 45 000 have been created outside the private sectors supported by the Federal and *Länder* authorities. In 2004 a National Pact for vocational training and young skilled workers was signed. Italy and Portugal are also providing support for apprenticeship and alternance between school and work; and in Norway tripartite cooperation in VET, organised in the Councils appointed by sectors, have as an objective to increase the number of apprentice places and local partnerships agreements;

(d) Belgium-Fl is creating opportunities for VET schools to develop stimulating partnerships with enterprises through the *Accent op talent* programme. The Flemish government has created this space for innovation where each local project can potentially become a success story for the school. The focus is on training in the workplace, competence development in schools and enterprises, promoting technology in schools and above all direct and extended cooperation between schools and enterprises;

(e) increasing support to employers in up-skilling their workforce through national employer training programme is a focus in the UK. This means improving partnerships between employers and providers through Sector Skills Councils and Skill Academies and developing the apprenticeship programme.

The intended outcomes for all of these measures are to improve and ease the transition from school to work for the young people while training a more appropriately skilled workforce for employers and sectors. Developments have taken place at the level of developing local and regional partnerships to involve enterprises and stakeholders in VET. In addition it is to be noted that considerable development is taking place, particularly in the NMS-10, of mechanisms and procedures to develop, update and cancel qualifications.

4.3.3.6. Summary points

With strong encouragement from the EU, decentralisation and regionalisation are playing an increasingly important role in the NMS-10 reforms and tend to be implemented with increased institutional autonomy. One argument is to raise the relevance and credibility of VET by ensuring that local needs and requirements can be fully taken into consideration in designing and implementing provision. The implication is that this will in turn raise the attractiveness of VET. However, this type of approach raises issues including for the financing of VET provision especially in poorer countries and it is an area in which further research would be welcome to investigate further the relationship between responding to the needs of the local labour market and increasing the attractiveness of VET.

Other approaches will also need careful follow up in years to come, for example the place and effectiveness of work place training, especially in economies in which due to the closure of many enterprises in transition economies, finding sufficient training places may pose a real challenge. There may be a need to balance the attractiveness of workplace training against the reality of the economic terrain. Detailed and specific statistical data monitoring across countries would be useful to provide the basis for an assessment of such measures.

4.3.4. Promoting the recognition of non-formal and informal learning

'In general change has become a core concept in today's working life. Lifetime employment becomes an exception, the majority of employees will, voluntarily or not, change job and career several times in their work lifespan. Labour-market change, reflecting evolutions in technologies, market, and organisation requires that skills and competences can be transferred and be "reprocessed" within a new working environment. Employees who leave or lose their job must be able to transfer knowledge and experience to a new enterprise, sector or even a new country.' (Colardyn and Bjornavold, 2004). This is the logic behind the moves to establish better recognition of non-formal and informal learning and experience. Substantial work has been carried out at European level in recent years taking stock of how countries are setting up mechanisms to recognise non-formal and informal learning and in establishing some common principles. The focus in this section is uniquely on the attractiveness of VET.

The recognition and accreditation of prior learning and experience is seen a major way of opening access to learning for adults and to qualifications. It is probably the only aspect of systems focusing on and promoting systematically the recognition of learning outcomes in so far, as the portfolios and other forms of documentation presented for recognition and accreditation are drafted around what has been acquired by the individual. The implications for education and training systems are substantial and potentially far-reaching in terms of the contributions of formal and non-formal/informal learning and for individuals to be able to construct pathways in a lifelong learning perspective. Examples are given below.

In the Nordic countries different types of measures are being implemented to improve access to learning and qualifications for adults. In Norway, a system of competence-based training for adults has been introduced and will provide the basis for establishing recognition of prior learning. Adults with more than five years of work experience who wish to obtain a trade certificate can obtain formal recognition of their experience acquired. Action has been taken in Denmark to develop schemes for documenting prior skills in cooperation with the social partners and other stakeholders from general adult education and non-profit associations as part of developing a system of recognition of prior learning. In Sweden the Swedish agency for flexible learning has been established to improve access for adults.

Another example of a systemic approach to recognition of prior learning is France where a national system, *validation des acquis de l'expérience*, was established by legislation in 2002 and is being developed for all sectors and recognised awards. In Portugal a national system for the recognition and formal validation of prior learning, which has been acquired non-formally or informally through life and work experience, has been set up. It is implemented by a group of experts and stakeholders (tertiary education institutions, experts, trade unions, employers and the relevant ministries). The process is carried out by the Centres for Recognising, Validating and Certifying Competences. By 2004 there were nearly 60 of them operating. In Belgium-Fl, 21 competence centres deal with the accreditation of prior learning as well as other training and guidance activities. Competence certificates are being introduced for six occupations (bus and car drivers, extra-curricula school assistants, call centre operators, decorators and gantry crane operators) for individuals who have substantial professional experience but not the certificates to attest it. Candidates are being offered the possibility to demonstrate their skills at an interview and through practical tests. The certificates are recognised by the Flanders government and drawn up by the Economic and Social Council of Flanders. The ERA project in Spain has designed a methodology to assess, recognise and accredit skills acquired through work experience and through non-formal and informal learning based on the National Catalogue of Occupational Qualifications. Italy has introduced a competence portfolio, the *Libretto formative del cittadino* while Germany is running a pilot project, *Profilpass*, funded by the European Social Fund, for developing guided documentation of informal and non-formal learning.

Three examples from NMS-10 are Hungary, the Czech Republic and Slovenia. In the first a system of accreditation, assessment and validation of formal, non-formal and informal learning is under preparation with the support of the European Social Fund. From the autumn 2006, new training modules are being piloted in several VET institutions introducing a competence-based approach which is intended to provide more flexibility for adults. In the Czech Republic alternative pathways to qualifications are being set up through new legislation on continuing education which is being piloted for adults without qualifications. Slovenia is establishing procedures for the validation of non-formal and informal knowledge, skills and competence for the labour market through the formal education system.

Summary points

The main issue is: does it work and does it bring real advantages to individuals? Does it contribute to making VET more attractive by opening up progression routes and pathways?

For the moment this type of recognition remains largely experimental both in countries in which it is part of a national and systemic approach established by legislation and in the cases where it is being experimented locally or is used by institutions for entry and progression. There subsists a need to change attitudes in the world of learning, especially in higher education. This could prove to be a hindrance to increasing the practice of full accreditation for a qualification, as opposed to giving candidates entry to education and training courses.

A major issue has been in establishing procedures which ensure credibility and reliability whole remaining accessible in terms of the time needed and the input for individuals. Thus in France, the observation of the time needed for individuals to complete their dossiers has had an adverse effect on the number of candidates who follow the procedure completely. Taking the case of validation for higher education, the recently published figures of the Ministry of Education show that while the number of diplomas obtained through the procedure increased in 2005, to 3 830 the number of validations for individuals to enter a course of study has been decreasing since 2003 which clearly raises cause for concern (M.E.N., 2007). In response to these difficulties, in 2006 measures to simplify procedures for candidates were introduced. They include a simpler form which will be the same for all 14 ministries that have developed procedures for validating experience. An additional form of support will come through the recently established advice centres (*Points-Relais-Conseils*) which will be supplemented by a call service.

4.4. Good governance of VET systems and providers in delivering the VET agenda

A second set of issues and measures are examined in this section which looks at policies implemented that respond to the Helsinki priorities linked to the need to improve the governance of the systems and providers. One country, Cyprus has reported that it is making use of the structural funds to be able to undertake a study of the attractiveness and appropriateness of their VET provision which suggests a high priority.

Relatively little information is available through reporting on Lisbon about governance matters. To obtain a better vision of how governance is being adapted to providing the VET agenda, more specific studies would be useful to provide data on for example:

(a) institutional re-organisation and restructuring;

(b) changes in ministerial supervision of schools, apprentice training centres and colleges in line with decentralisation;

(c) the changing institutional and provision landscape;

(d) changes in approaches to institutional management and leadership;

Among the policies focusing on structures, there are examples of countries where there has been re-organisation of the schools and/or colleges providing initial VET. In Hungary Regional Integrated Vocational Training Centres are being developed to concentrate resources and to strengthen capacity regionally, as well as to strengthen links with the local labour market. In Malta a similar process of integration has taken place as the different VET providers have been merged into one institution, the Malta College of Arts, Sciences and Technology. Latvia is also establishing a network of institutions and Croatia envisages grouping institutions with similar objectives of efficiency and effectiveness. In all of these cases the policies aim to consolidate and make the best use of the existing resources to improve the provision of VET for the learners. This preoccupation with giving institutions the means to deliver effectively is also central to policies in Belgium-Fl where vocational schools with a large intake from low socioeconomic backgrounds receive extra resources to compensate for disadvantage.

This section examines teacher training, quality and transparency as part of good governance of VET systems.

4.4.1. VET teacher and trainer training

The *Maastricht communiqué* emphasised the continuing competence development of teachers and trainers in VET reflecting their specific learning needs and changing role as a consequence of the development of VET. This priority is further developed in the *Progress towards the Lisbon objectives in education and training* report (EC, 2005b), which develops three main messages for improving the quality of teachers and trainers (in both general education and VET). The first concerns the need for motivating teachers of whom a large proportion in Europe are over the age of 50, to undertake continuing professional development. The second underlines the variation in the pupil-teacher ratios and the third concerns the need for high recruitment from 2005 to 2015 to replace teachers who will retire. According to the Maastricht report a key problem for vocational teachers and trainers is their lack of recognition. Though essential to supporting skill development of the workforce, they do not generally enjoy high status. Added to this, VET teachers are an aging profession and may attract comparatively low salaries. The report also drew attention to the increasing diversity of the range of profiles needed, given the diversification of training in the workplace (EC, 2005a).

Though mandatory requirements have been introduced in many European countries for continuing training for VET teachers, the challenge remains to develop recruitment and training policies which can attract individuals from different backgrounds. Providing high quality initial and continuing teacher training remain fundamental challenges for the development of a lifelong learning strategy and to increase the attractiveness of VET.

The reports consulted express the same concerns and describe changes in the curriculum for teacher training for VET, establishing closer links with professionals, developing new standards and broadening the curriculum. Promoting the responsibility of teachers as mentors is also reported as the need to develop their roles in learning programmes centred on the individual.

Other measures which reinforce the VET sectors include:

(a) new standards for teacher training and training modules;

(b) developing a broader curriculum to include ICTs;

(c) reinforcing higher education for teachers.

Continuing professional development for VET teachers is not dealt with in many of the national reports consulted even though a major challenge for increasing the attractiveness of VET both initial and continuing will be to increase the access to education, training and re-training for both VET teachers and trainers. Though measures are being implemented by public authorities as far as VET teachers are concerned, the training and retraining of trainers does not appear to be well developed.

When considering issues of prestige, attention can also be paid to vocational teachers and their own appreciation for their teaching work and how it could be affected. For example in Finland, vocational teacher education attracts persons who have strong vocational expertise and self-esteem. Each academic year there are much more applicants than can be admitted to vocational teacher training colleges.

Summary points

Reforms to VET teacher training are emphasising standards, recruitment and higher education. However other aspects are likely to increase in importance and will play an essential role in raising and then maintaining the attractiveness of VET. How well teacher training currently integrates the consequences for the learning environment of moving towards individualised learning plans, individual choice, modularisation, local autonomy, workplace learning, not to mention the immense potential of and transformations brought by e-learning and b-learning ([12]) remains unclear. These factors, along with broader questions about the futures of learning and which address issues to do with locus of learning, inter-generational transfer of information, the 'digital divide' between young people seen as 'digital natives' and adults seen as 'digital immigrants' will also become crucial in the coming years (Carneiro et al., 2007).

([12]) This definition has been adapted from EduTechWiki. Blended learning refers to courses that are taught both in the classroom (face-to-face) and at distance (online) and using a mix of different pedagogic approaches. Thus the term tends to describe a solution that combines several different delivery methods (collaboration software, Web-based courses, knowledge management practices, etc.) and that mixes face-to-face classrooms, live e-learning, and self-paced learning.

4.4.2. Quality assurance

For the 2005 Joint Report, countries were asked to comment on how they are implementing the quality tools developed nationally under the Copenhagen process.

In some countries, such as Finland, the Netherlands and Spain, the common quality assurance framework is already being implemented. The common principles are an integral part of provider's quality assurance in Ireland where, since 2005, it has been prerequisite for accreditation for Further Education and Training Awards Council awards. In Belgium-Fl the inspectorate has integrated them into the regular school audit tools and in Austria the Quality in School programme is being developed in line with the joint quality assurance framework for VET. The overall orientation is to encourage and support VET schools and colleges to review, monitor and develop their quality of provision. The approach is based on mainstreaming quality assurance pilot projects and the outcomes in terms of quality management procedures will be benchmarked regionally and nationally.

EU funding is being used in Romania (Phare) and in Lithuania (Structural funds) to develop quality assurance. In the former country, quality assurance mechanisms based on the European Guide for training providers and self-assessment are being experimented in pilot initial VET schools.

Quality assurance includes establishing accreditation procedures either for training centres as in Bulgaria where they are in the process of being licensed or through the accreditation of all higher professional programmes as in the Czech Republic.

In Turkey the Institute for National Vocational Qualifications will be responsible for establishing a common quality assurance framework and the basis of a system of validation of non-formal learning but it is not yet functioning. As part of improving quality, a database to follow the destinations of VET graduates is also being created.

In Belgium-Fl within the VIZO/Syntra system for training future and established entrepreneurs, a total quality assessment system is being implemented to obtain an overview of the quality status of the training system and to serve as a basis for improvements. In Spain a national quality assurance network is under development with the aim of coordinating all the Autonomous Communities in VET to establish common principles for initial VET.

Summary points

Approaches to quality involve both developing the quality criteria and the processes for the overall system, and also fostering a culture of self-evaluation in institutions. In terms of increasing the attractiveness of VET, the purpose is to raise the credibility of provision for all the stakeholders whether the young people and their families or enterprises.

Though quality is undeniably a contributing factor to the attractiveness of VET provision, it is difficult to assess its exact contribution. European studies linking quality assurance measures and developments in institutional self-evaluation to institutional development, VET enrolments and awards would be useful and interesting to fill this gap.

4.4.3. Increased transparency of VET systems

Over the last 10 to 15 years, in European countries, there has been a rise in interest in national qualification frameworks (NQF). The reasons are certainly complex although at least partly linked to current EU policy on education and training. The stated reasons for developing a framework tend to include the following points:

(a) improving the coherence of a particular national qualification system;

(b) connecting the parts and making the whole more transparent to the users;

(c) providing a framework within which individual's learning can be recognised and validated (for the purposes of study, training, employment mobility, etc.).

It is common for countries to have developed over a long period quite complex qualification systems with several different types of certificates and diplomas issued by different ministries and/or other bodies. There may well be a lack of transparency among these awards which has consequences for both individuals and enterprises and which exacerbates already quite difficult issues about improving the coherence of the education and training system, connecting the different subsectors, ensuring quality and improving access for individuals. Clearly there is no single way to deal with these issues.

There are several broad approaches to designing NQFs (and their equivalents), all of which produce 'maps' of one type or another. The approaches originally emanating from the English-speaking world have tended to favour frameworks, whereas the French approach (also used in Spain and Portugal) uses the register or catalogue type approach. What they have in common is:

(a) seeking better transparency among the different components in the system;

(b) aiming to build more trust among the different actors in the system;

(c) improving the opportunities for individuals;

(d) providing a strategic and overarching framework for reforms of qualifications including moving from a supply-led to more demand-led approach.

Where they differ is the extent to which the map is designed to be dynamic and interactive or fulfils a more descriptive function. At one end of the scale, inserting different types of provision and the existing formal qualifications of a particular system into a framework allows the user to visualise the spaces occupied by the different types of provision. At the other end of the scale the framework could allow for quite sophisticated credit transfer and be based on the recognition of learning outcomes. Thus, some aim to make the system more readable; others specifically allow the users to build pathways through different types of education and training provision while a few are developing a credit-based approach (Bouder et al. in this volume). They are intended to respond to a range of different types of needs, such as:

(a) individuals: in terms of recognising learning. This may be in a fairly limited and formal manner examining diplomas or certificates, or it may be much broader and include non-formal and informal learning. The declared intentions tend to be to improve employability, access to formal qualifications, mobility, etc.;

(b) employers: to better understand what the different types of provision and awards offer in terms of competences, knowledge and skills and so as a contribution to human resource management;

(c) transparency among the different component parts of one national system or sectors at European/international levels, among national systems.

NQFs cover either the whole system (e.g. Scotland, Ireland) or a subsector of the system (e.g. VET or higher education) and can also focus on individual sectors. All tend to be structured around some form of reference, and they contain procedures for quality assurance and processes as well as mechanisms for recognising learning acquired (including non-formal and informal as well as recognition of prior experience and learning). The reasons for starting a development process and the processes then undertaken vary considerably from country to country. They may respond to any or a combination of the following:

(a) economic pressures – high unemployment, low skilled adults, long-term unemployment, issues of improving employability, etc.;

(b) increasing the involvement of different groups of stakeholders;

(c) part of reform process – Estonia, Hungary – links to Copenhagen/Lisbon;

(d) part of a reform process outside the EU but influenced by EU developments, for example the Western Balkans.

Specific approaches vary from country to country, building on the certificates and diplomas which already exist. One aspect of the process of developing and then managing an NQF that is common to all countries is bringing together all the key stakeholders to ensure that the framework reflects their needs and preoccupations. A characteristic they all have in common is seeking to provide a more coherent map of the different types of certificates and diplomas and the different ways in which learning may be recognised. This entails clarifying how the certificates and diplomas relate to each other in terms of levels, the possibilities for progression, for labour-market integration, etc. Therefore, common components tend to be reference, quality assurance principles, and methods for recognising learning gained in different contexts, programmes and ways. As part of the process of understanding the implications on the different European systems, Cedefop has commissioned a study in 2007 examining the roles and use of learning outcomes in VET ([13]).

([13]) This study is led by QCA (UK) and will be available in 2008.

These are some of the challenges around the development of strategies for national qualification frameworks and national registers of vocational qualifications. In establishing a more free flowing system that encourages and supports the development and recognition of competences and allows individuals to build their competences in different ways over a long period, one clear intention is to improve the parity of standing between the different routes to qualifications. Though there is in fact quite substantial activity in this field in several countries, partly linked to the development of the European qualification framework, little concrete information was in fact reported in the country reports for the 2006 Joint Report. Many developments are too recent for there to be evidence available to assess how well the objectives are being achieved. In a few countries NQFs or Catalogues are already functioning, in others they are under development but maybe at very different stages. Finally some countries are still examining the feasibly and desirability of establishing an NQF.

Two countries, Ireland and Scotland, are working with fully-fledged qualification frameworks, though in both cases they consider they are about half way in the process of full development. France has created a national catalogue of vocational qualifications which shows equivalences between national qualifications of different types and in some cases with European ones. In Spain the national qualification and vocational training system has been under development nationally and regionally since the mid 1990s. It was formally established through legislation in 2002 and includes a national catalogue of occupational qualifications as well as recognition, assessment and accreditation procedures. There has been substantial social partner participation in the development of the catalogue and the different aspects of the provision. In Portugal a similar catalogue is being launched. In the NMS-10 examples include Estonia where a set of levels and a first framework were developed for VET outside of the school system under the Chamber of Commerce. The education system is now taking forward work on an NQF. In the Czech Republic the focus is on the introduction of a national qualifications system to provide better links between initial VET and continuing vocational training. Transparency is being increased in Hungary through the establishment of a National Qualifications Register with a set standardised input and output criteria for the inscription of qualifications. The process of reflection on an NQF is in its early stages in Austria and has been stimulated by discussion on the European qualifications framework. The Ministry of Education, Science and Culture is coordinating discussion on possible ways of tackling a project to develop an NQF in Austria and initial research has been undertaken and consultation carried out.

Summary points

The question remains about the extent to which these frameworks and catalogues will really be used by the main stakeholders, i.e. students, working people and employers and the purposes they will serve. On the whole it is too early to evaluate the effects of developing qualification frameworks and national catalogues on the VET systems in particular and on education and employment in general. As Young points out in his paper for the ILO in 2005, 'the broadening support for NQFs across the world is based on relatively little evidence from the experience of countries that have already introduced NQFs that they can achieve the goals claimed from them.’ (Young, 2005). In an environment in which there is quite a lot of pressure on systems to move rapidly to outcomes-based approaches as part of improving the attractiveness of VET, Young explores tensions inherent in NQFs drawing attention to two particular issues of quality assurance for qualifications. First he raises the issue of whether outcomes can be independent of syllabus (inputs) and he draws attention to the continuing importance of strong institutions to ensure the quality of a qualification. An interesting comment from the Slovenian authorities in response to the European qualification framework consultations reinforces these points as they say: with respect to our central European tradition we expect that both general knowledge and a major emphasis on a high-quality teaching process will remain a legitimate and valued part of the educational outcomes.

However, what can be observed is that in all cases where a framework or a catalogue has been developed, the process has fostered partnership among all the key actors bringing together the social partners, the education sector, government, etc.

4.5. Issues arising

This section summarises the issues arising from the above presentation and discussion of recent policies and measures implemented to reduce the gaps between general education routes (and higher education) and the technical and vocational routes. Earlier research tended to emphasise the importance for parity of esteem of the personal competence, education mobility and occupational mobility developed through VET routes. It also draws attention to the importance of measures to promote equity, improve career guidance and establish adequate quality assurance. Some of these factors are well illustrated in this section and examples have included approaches to:

(a) developing coherent progression routes and pathways;

(b) improving access to learning and to qualifications;

(c) developing flexibility;

(d) ensuring transparency among the different types of diplomas and/or certificates which exist in any given country:

    (i) establishing criteria and procedures for ensuring the quality of the qualifications;

    (ii) improving the links between learning and the labour market to ensure the relevance of the qualifications provided.

While it is highly probably that all the VET systems taken into consideration for this study would recognise all or some of their national objectives in these issues, the existence of clearly defined and identifiable success factors are not evident in reporting to the Commission. Some of the policies and measures were implemented a few years ago in some of the countries. One of the advantages of working at European level should lie in the possibility of increased exchange of experiences and outcomes and so lead to better peer learning among countries about new policies and strategic choices (Grootings and Nielsen, 2008). The data review in Section 3 sought to assess progress in terms of enrolments and completions but from a more qualitative and policy analysis point of view, certain measures may continue to be recommended without very thorough analyses of effectiveness. One example is modularisation which is now being introduced in some NMS-10 even though its usefulness and effectiveness has not been very well demonstrated elsewhere. It would therefore be interesting to look back at these experiences, with a view to highlighting the implementation issues for the countries which are now going down the same road, a few years later.

The examination of policies and measures show many interesting developments responding to problems clearly identified such as the need for progression routes, flexibility, etc. From this point of view it would appear that real progress is being made in terms of the provision on offer and the relations with enterprises and the economic sectors. Thus progress concerns:

(a) regional and local partnerships which engage the stakeholders (except for the principal stakeholders, i.e. the students, who tend not to be included as key actors);

(b) mechanisms and procedures for recognising non-formal and informal learning and experience;

(c) pathways and progression routes with increased flexibility and possibilities for individualisation of pathways;

(d) measures and processes to promote labour-market relevance.

However, about the building blocks which constitute a VET system (Viertel et al., 2004) to what extent are these measures supported through systemic and institutional governance and quality measures? Recent reports suggest that quality assurance and information and guidance are two areas which are undergoing substantial improvement. However, relatively little information is available on issues of governance of VET. This appears to be an area on which more European level research would be most useful to obtain a clearer vision of how governance is being adapted to responding to the Lisbon/Maastricht/Helsinki VET agenda. Finally concerning teacher training, and in the context of increasing reflection on the use of learning outcomes in VET, there may be cause to investigate the extent to which teachers are being adequately prepared to deliver the evolving VET agenda.

5. Conclusions and implications

5.1. Policies and measures of promoting attractiveness of VET in the Member States

The attractiveness of VET for individuals is essentially based on employment and income opportunities, but also on the competence and professional skill that precedes and then enables these benefits. Companies appreciate VET when it provides them with a skilled workforce matching their needs. The value of VET for society is much the same as for education in general; it contributes to the positive image and competitive edge of the country on the global market, serves as ‘storage’ of human capital for the reserve of labour, increases potential tax revenues in the long term, and underpins social stability. In different countries the respective factors pertaining to the history, societal development, and occupational structures, as well as the major education policy orientations have a substantial influence on the status and value of VET (cf. the high prestige of apprenticeship-based VET in Austria, the Czech Republic, Germany and Switzerland). According to the *Helsinki communiqué* (2006, p. 2):

Young people in VET should acquire skills and competences relevant to labour-market requirements, for employability and for lifelong learning. This calls for policies to reduce drop-out rates from VET and to better facilitate school-to-work transition, for example by combining education and training with work through apprenticeships and work-based learning. The skills, competences and mobility of the labour force should be promoted by encouraging the recognition of prior learning gained through training and work experience. Training opportunities should be provided for those in working life.

In this policy statement, the important function of VET is emphasised for individuals, the labour market, the economy and societal cohesion. Some of the approaches to making VET more attractive make reference to improved mobility (both vertical and horizontal), practice-based learning and recognition of prior learning. Improving the attractiveness of VET is an aim which can only be approached by continuously enhancing and adapting it to meet new requirements. The following table seeks to provide a synthesis of the needs that particular policies and measures are designed to satisfy for individuals, employers and at systemic level, from the point of views of the image, status and attractiveness of VET.

Table 4: Summary of the needs that the policies and measures are designed to fulfil for individuals, employers and systems

Types of policies and measures	Individuals /families	Employers	Systemic level
Improved guidance and counselling	• capacity to make better informed choices through having more, more recent and better presented information and guidance; • information in a lifelong learning perspective demonstrating further steps and not just next steps.	Opportunities for employment are more clearly and correctly represented	• provides opportunities for cooperation between services for young people and adults. • should provide better matches between information and real opportunities
Open VET	• provides young people and adults with more and clearer opportunities to access learning and qualifications; • there is flexibility of access and delivery as well as permeability across the different parts of the system; • more options mixing general education and VET; • young people taking VET routes gain access to higher	• more flexible and responsive VET systems should provide support for human resource development in enterprises; • young people with an education and training better corresponding to the needs of knowledge society.	• provision better tailored to individual needs with no dead ends, structured pathways, a redesigned curriculum and mechanisms supporting local partnership and decision-making. • fewer low qualified young people achieving better levels and sustainability of labour-market entry.

	education; • adults without traditional entry requirements gain access to higher education.		
Close links with working life, including responsiveness to the needs of individuals and the labour market and active partnership between different decision-makers and stakeholders nationally, regionally and locally.	• young people are trained for qualifications adapted to labour-market needs; • better transition from education to work.	Local and sectoral partnerships	Local partnerships based on institutional autonomy and degrees of decentralisation
Promoting the recognition of non-formal and informal learning	More flexible access to learning qualifications	Supports enterprise investment in human resource development	Better reflection on the skills of the working population.
Highly qualified teachers and trainers	Quality of provision	Better trained applicants	Quality of VET teacher training
National quality assurance	Lifelong learning competence	Competences for occupational mobility	National qualification system
Increased transparency of VET systems	• portability of qualifications; • mechanism for recognising learning acquired in different manners.	Better understanding of the content of different types of qualifications	European qualification framework

In summary, for the individual beneficiaries and users of the VET systems, it is important that they are provided with adequate and adapted information and guidance so that they can understand the offer and the range of possibilities open to them. A flexible offer, especially for adult learners, which allows them to build their individual pathway and see the progression possible also appears to be crucial. For employers and enterprises it is important that VET contributes to a better preparation of young people, not just in terms of hard skills but also the soft skills, and that it provides support for their human resource development planning. At the same time they contribute to maintaining an up-to-date understanding of their sector and occupations through active participation in the development of standards. At systemic level providing a better adapted and appreciated service to citizens and enterprises and increased transparency about provision and qualifications contributes to the attractiveness of VET. Good working relations with the key actors in the VET system, locally and nationally, can also contribute to a smoother transition from education to employment for young people.

5.2. European and non-European enrolment patterns in VET

In most of the EU-15 and EEA/EFTA countries, VET is an attractive and respectable choice of education among young people, especially among male students. In these countries, enrolment in VET programmes ranged from 25.5% to 79.2% of all upper secondary education students. In 20 countries out of 35 countries, more than 50% of the upper secondary education students were enrolled in VET in 2004. In all the country groups considered in the statistical analysis (EU-27, EEA/EFTA and in Japan), VET is, however, more popular among male students than among female students. The exceptions are the UK and Sweden where females chose VET more frequently than males. Ireland and the US, where there are only academically-oriented programmes at ISCED 3, have pre-vocational and vocational programmes at ISCED 4 (post-secondary non-tertiary programmes).

The main statistics concern upper secondary education (ISCED 3) enrolment, turning point in young people’s life as they enter into a more independent phase and make important decisions about their future. Table 5 characterises the country groups based on enrolment proportions and some of the prerequisites of attractiveness such as options available, access, progression, quality assurance and career guidance.

Table 5: Summary of the measures of attractiveness in VET in ISCED 3

Enrolment in VET (ISCED 3)	Countries	Options available to students
55-80%	Austria, Belgium, Bulgaria, Croatia, Czech Republic, Germany, Finland, France, FYROM, Liechtenstein, Luxembourg, Malta, the Netherlands, Norway, Romania, Slovakia, Slovenia, Switzerland, the UK	Both vocational and general Double qualifications in some countries
45-54%	Denmark, Poland, Sweden	Both vocational and academic
10-44%	Cyprus, Estonia, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Portugal, Spain	Mostly general, some vocational
0-9%	Ireland, the US	General/liberal

Vocational and general education and training programmes and courses offer different learning environments and experiences. Learning environments which include options meet the needs of a diverse student population and of their different learning styles better than one kind of programme, whether general or vocational. Due to the cooperation between different educational institutions at the local level, some countries (e.g. Austria and Finland) have made it possible for students to study both general and vocational courses, either for interest and variety or to obtain two diplomas. Most countries offer either general or vocational programmes to their students.

Access refers to the chances and rights of all citizens' to study in upper secondary, tertiary and continuing education and training programmes, that is access to lifelong learning opportunities for all. Access refers a person's right to study VET programmes at the upper-secondary-education and higher education level.

Progression indicates the chances to continue from VET to higher education at any point of the life span. Further education opportunities can be academic or occupational higher education. The organisation of higher education programmes varies in Europe. In certain countries, such as Austria, Finland and Germany, there are parallel vocational and academic higher education tracks. In these countries progression chances may be better for vocational students graduating from vocational upper secondary education than in the countries with only academic higher education degrees.

5.3. Attractiveness of VET and parity of esteem between vocational and general education

Direct access from initial vocational education to higher education has improved in many European countries, helping to promote parity of esteem between vocational and academic education. Some countries are trying to improve access for those on vocational courses through a unified system of higher education (such as Sweden and the UK). While, some others are seeking to diversify their system of higher education (or to expand an already diversified system) by developing vocational higher education for graduates of initial vocational education (e.g. Austria, Germany, Finland). In Finland the upgraded polytechnics ([14]) are also designed to attract those graduating from general upper secondary schools. This can be seen as another way of promoting the parity of esteem of vocational and general upper secondary education. In Europe, four different systemic patterns of organising higher vocational education can be identified (Lasonen, 2003):

(a) gradual integration has led to a unification pattern and to a single higher education system (e.g. the UK);

(b) the coexistence of university and non-university sectors with different status refers to a diversifying pattern (e.g. Germany);

(c) upgrading existing tertiary VET for separate but equal non-university sector indicates two parallel higher education systems, vocational and academic higher education (e.g. Finland);

(d) establishing a new vocational non-university sector again represents a diversifying pattern in Austria. The Austrian model of vocational higher education differs from the two previous ones in the sense that it was created from more initial stage than the others. The Austrian higher vocational colleges share a common feature with Germany and Finland: local communities' economics have inspirited the development of colleges.

In their study, Dunkel and le Mouillour (2006) explored the phenomenon of the vocational drift in higher education. The Bologna process emphasises occupational relevance and employability as two of the quality aspects of higher education programmes. Academic programmes are being redesigned to better meet the demands of the labour market. In the long term it seems that vocational and academic higher education programmes may be coming closer (or even in some cases) unified in their purposes and structures. Behind these changes, the role of funding systems in providing the necessary support to the different routes to higher education qualifications is an essential aspect of attractiveness.

([14]) Although the Finnish polytechnic system does not have a particular international model, it resembles the German *Fachhochschule* and the Dutch HBO [*middlebar beroepsondewijs*], now BOL4 [*beropleidende leerweg*] system.

5.4. An agenda for change to promote the attractiveness of VET

An increasing number of occupations for which students train through the VET system, are seen as high-skilled or expert work. Distinctions between different occupations, and between the related responsibilities, are no longer permanent or clearly defined but call for continuous professional adaptation and development. This increases the pressures on VET systems to be responsive to many different agendas at the same time. The structures of society and work communities have become less hierarchical, although higher education is still likely to lead to a higher rank and to better-paid employment. Cultural origin, family background and gender still bear significant influence on employment, and society is still reproducing itself to the extent that even unemployment is 'passed down' from one generation to another. Female-dominated fields and occupations still lack the higher appreciation that would show in higher status and/or better pay. Some occupational fields or groups that used to be central up to a few decades ago have since faced severe reduction, such as in agriculture, whereas information technology and related industries continue growing. It could be assumed that fields of education that only take a small number of students and are hard to enter would have high status, but this does not always seem to be the case, however, at least not in terms of salary, for example, in art fields.

It can be seen from the data available that the European education and training policy goal of improving the attractiveness of VET, based on the needs of the economy and towards better employability for citizens, is making progress in the EU-15, based on the enrolment averages, though numbers remain quite steady from one year to another. However, the attractiveness of VET appears to have decreased in the NMS-10 since 2000, especially among females. The challenges are certainly educational and economic as summarised in the points below:

(a) the aim of current measures to improve guidance is to equip young people and adults to better understand and assess their learning and career opportunities in order to make more informed choices on the pathways to take. It will take considerable time before it is possible to really assess how effective recent measures prove to be and monitoring data at European level would be useful;

(b) developing better structured pathways for students taking VET courses in secondary education and providing them with more and better opportunities for transfers and progression, have been among the key approaches to making VET more attractive over the last 20 years. Countries have increasingly sought to reduce or eliminate barriers to progression. Access to higher education for VET students has contributed to increase the percentage of the age group which obtain full secondary qualifications and of those who obtain a higher education award;

(c) there are issues concerning the specific contribution of individualising provision and making it more flexible whether for mainstream students in initial VET or for adults and specific groups of the population. This study has asked the question whether the technical measures are in themselves sufficient to increase the attractiveness of VET or whether they need to be reinforced by approaches that increase students' choice about content and the possibility of mixing vocational and general courses. In other words, to what extent is the possibility of self-organisation a factor that needs to be taken into account and an element of added-value in making VET more attractive?

(d) with strong encouragement from EU policy, decentralisation and regionalisation are playing an increasingly important role in most Member States. In the case of VET, one argument is that local needs and requirements can be fully taken into consideration in designing and implementing provision. The implication is that this will in turn raise the attractiveness of VET. However this type of approach raises issues for the financing of VET provision and is an area in which the monitoring of effects and difficulties would be welcome;

(e) the recognition of prior learning and experience, of non-formal and informal learning is increasingly high on national agendas. For the moment this type of recognition remains largely experimental, both in countries in which it is part of a national and systemic approach established by legislation and in the cases where it is being experimented locally or is used by institutions for entry and progression. There subsists a need to change attitudes in the world of learning, especially in higher education. This could prove to be a hindrance to increasing the practice of full accreditation for a qualification, as opposed to giving candidates entry to education and training courses. There is a need to reach a balance between establishing procedures which ensure credibility and reliability while remaining accessible in terms of the time needed and the input for individuals;

(f) reforms to VET teacher training are emphasising standards, recruitment and higher education. However other aspects are likely to increase in importance and will play an essential role in raising and then maintaining the attractiveness of VET. In this respect it is essential to investigate and understand the extent to which the current training of VET teachers is integrating the consequences for the learning environment of moving towards individualised learning plans, individual choice, modularisation, local autonomy, workplace learning, not to mention the immense potential of and transformations brought by ICTs, e-learning and b-learning. These factors, along with broader questions about the futures of learning which address issues to do with locus of learning, inter-generational transfer of information, the ‘digital divide’ between young people seen as ‘digital natives’ and adults seen as ‘digital immigrants’ will also become crucial in the coming years (Carneiro at al., 2007);

(g) though quality is undeniably a contributing factor to the attractiveness of VET provision, it is difficult to assess its exact contribution. With a view to filling this gap, it would be very useful to envisage European studies investigating links between quality assurance measures (including institutional self-evaluation) to institutional development, VET enrolments and the numbers and types of awards obtained.

5.5. Implications for future research

Vocational education is a generic term which contains particular features as related to the different fields of VET (business and economics education, technical education, agricultural education, health and social care, etc.). It is the part of education which takes a scientific look at prerequisites and conditions, aims, possibilities of gaining a qualification and competences for humane, gainful employment and for living life in society, taking on one's full societal and ecological responsibility. Vocational education research should explore the conditions, processes, procedures and consequences of gaining professional qualifications, as well as personal and social attitudes which seem to be significant for fulfilling of work processes and developing occupational profiles. Research on VET, that is to say the formal and informal qualifying for work, still tends to have a marginal status and provision in higher education and research (except perhaps in Germany, to some extent).

The human and social capital gained at home supports and contributes to later achievement at school and also directs future choices so that students who master theoretical content and, therefore, do better at school tend to opt for academic studies and higher education programmes. In some cases VET may be more valued by parents who themselves have received this type of education. Naturally, student counselling at school plays an essential role with respect to the kind of picture they build up of their own possibilities and potential and how they see the position of different occupations both now and in the future. Longitudinal research is needed to analyse motivation and aspirations linked to the construction of human and social capital in different families.

The authors of this study think that further in-depth research on the following areas would be beneficial to monitoring improvements in the attractiveness of VET. The first group of proposals concerns the learning environment:

(a) the extent to which teacher training currently integrates the consequences for the VET learning environment of moving towards more individualised and personalised learning, local autonomy, workplace learning and the full range of changes to the learning environment introduced through technology enhanced learning;

(b) it is assumed that the quality of teaching and learning make VET more attractive. However, the assumption requires more research concerning VET pedagogy and the need and role of skills and competence;

(c) the role played by choice for students in making VET options more attractive to young people. To what extent does choice and being able to take control over one's pathway contribute to the attractiveness of different routes for young people?

(d) vocational teacher pre- and in-service training as well as VET teachers' work and expertise has not researched enough.

Going beyond the design of the learning environment and the curriculum, two further areas are recommended for research:

(a) the effects of decentralisation on funding;

(b) the governance of VET systems. Relatively little information is available through reporting on Lisbon about this aspect but it is one of the key Helsinki recommendations. Therefore, to obtain a clearer vision of how governance is being adapted to delivering the prioritised VET agenda, more specific studies would be useful to provide data on:

  (i) institutional re-organisation and restructuring;

  (ii) changes in ministerial supervision of schools, apprentice training centres and colleges in line with decentralisation;

  (iii) the changing institutional and provision landscape;

  (iv) changes in approaches to institutional management and leadership.

Improving the attractiveness of VET and promoting esteem is likely to remains on the agenda of education systems in the coming future. Despite the multitude of policies and measures developed and implemented in recent decades there is still work to be done. The most crucial measures appear to be those that strengthen the possibilities of pathways, progression, flexibility and relevance as well as access and quality. Part of ensuring relevance comes through learning in the workplace whether through formal apprenticeship or well-structured work placements. Many countries are still challenged to increase the delivery of quality VET programmes. Europe is in a unique position among its partners and competitors in being able to harness a broad range of VET cultures, histories and experiences to jointly develop and implement research and policy development strategies in this field among others through structured exchanges and peer learning. If these opportunities are fully grasped they should provide a firm basis for rising to the challenges of the coming period with high quality VET teaching and learning experiences for young people and adults. Finally, research is also needed in the following areas:

(a) mobility within and between different ISCED categories (ISCED 2, ISCED 3, ISCED 4 and ISCED 5 and 5B);

(b) indication to attractiveness of different VET options.

There are a wide variety of education and training options in each ISCED category. And the countries offer various mixtures of school-based, company-based and combined VET learning in different levels. Today it is difficult to get detailed statistics of students' progression from one level to another and on enrolment in higher studies or jobs accessed and progressed from one type of training to another type.

Annex

Table 6: General education students at ISCED 3 – trends in enrolment in 2000-04 (%), ranked by percentage of general education students in 2004

	2000			2001			2002			2003			2004		
	Total	Males	Females	**Total**	Males	Females	**Total**	Males	Females	**Total**	Males	Females	**Total**	Males	Females
EU-27															
Ireland	**100**	100	100	**100**	100	100	**100**	100	100	**100**	100	100	**100**	100	100
Portugal	**93**	91.9	94	**71.7**	67.3	75.7	**71.2**	67.1	75.1	**91.2**	89.8	92.5	**90.9**	89.6	92
Hungary	**89.7**	86.7	92.8	**88.5**	85.6	91.4	**87.2**	84.6	89.8	**87.2**	84.4	90.1	**87.9**	85.2	90.6
Cyprus	**85.8**	75.8	95.6	**85.7**	76	95.3	**86.2**	77.2	95.3	**86.3**	77.6	95.2	**86.6**	78.1	95.3
Lithuania	**60.4**	52.1	68.6	**67.7**	60.9	74.3	**71.8**	66	77.5	**73.9**	68.3	79.5	**75.3**	70	80.6
Italy	**75.4**	74.2	76.8	**74.1**	72.2	76.1	**73.2**	71.2	75.3	**74**	72.3	75.8	**74.5**	72.8	76.3
Estonia	**67.5**	56.6	77.7	**68.2**	57	78.9	**68.5**	57.3	79.3	**70.7**	59.9	80.8	**70.1**	59.2	80.5
Greece	**67.9**	62.7	72.8	**64.8**	59.9	69.7	**60**	54.4	65.8	**64**	58.4	69.8	**66**	59.9	72.5
Latvia	**61.4**	52.1	70.2	**61.7**	53	70	**60.9**	52.7	69.1	**62.2**	54.6	69.9	**63.2**	55.4	71.2
Spain	**66.5**	65.4	67.5	**64.4**	62.5	66.1	**62**	59.6	64.1	**62.8**	59.3	66	**61.3**	57.8	64.5
Denmark	**45.3**	40	50.4	**45.7**	39.9	51.2	**47**	41.1	52.7	**46.7**	41	52.2	**53.2**	45.3	60.1
Poland	**35.7**	26.2	45.8	**37.9**	28.6	47.9	**39.1**	30.1	48.9	**45.7**	36.6	55.8	**50.5**	41.8	60.1
Sweden	**51.2**	50.7	51.6	**48.3**	47.6	48.8	**50.4**	49.4	51.1	**47.1**	43.9	49.7	**46.6**	49.5	44.3
Malta	**75.2**	68.9	80.8	**73.7**	67.9	80	**67.2**	56	79.4	**76.3**	67.5	86.4	**45**	32.2	63.3
Bulgaria	**44.3**	31.1	57.8	**44.2**	31.9	56.7	**44.5**	33.1	56.2	**45**	33.8	56.5	**44.8**	33.9	56.3
France	**42.6**	37	48.5	**43.3**	37.5	49.1	**43.7**	37.9	49.7	**43.6**	37.9	49.3	**43.5**	38	49.1
Finland	**44.7**	39.8	49	**43.3**	39.1	46.9	**42.8**	38.6	46.5	**41.2**	37.1	44.8	**39.9**	36.2	43.2
Germany	**36.8**	31.4	42.8	**36.7**	31.2	42.7	**37**	31.6	42.9	**37.8**	32.2	44.1	**38.8**	33.1	45.1
Luxembourg	**36.5**	34	39	**36.2**	33.4	38.8	**36**	32.9	38.9	**35.3**	31.7	38.9	**36.1**	32.5	39.5
Romania	**37.5**	29.2	45.8	**36.1**	27.9	44.4	**36**	28	43.9	**35.6**	27.8	43.4	**35.2**	27.5	42.9
Belgium	**33.2**	31.3	35.1	**30.8**	29.2	32.4	**30.3**	28.6	31.9	**29.7**	27.8	31.5	**31.8**	29.6	33.9
Slovenia	**27.7**	22.6	32.8	**27.7**	23	32.4	**29.7**	24.2	35.2	**30.6**	24.6	36.8	**31.4**	25.3	37.8
Netherlands	**31.7**	28.7	34.9	**29.9**	27.3	32.6	**30.8**	28.2	33.5	**30.9**	28.9	32.9	**30.9**	29.1	32.8
United Kingdom	**32.7**	35.6	30.3	**33.1**	36.4	30.4	**27.9**	31.9	24.8	**30.8**	35.3	27.2	**28.5**	32.3	25.5

Austria	**28.9**	24.5	33.9	**28.2**	24.2	32.8	**27.7**	23.6	32.5	**28.2**	23.9	33.1	**27.6**	24.1	31.7
Slovakia	**21.4**	18.3	24.3	**22.4**	18.9	25.8	**23.6**	19.7	27.6	**24.6**	20.2	29.1	**25.9**	21.1	30.7
Czech Republic	**19.8**	15.6	24	**20.1**	15.7	24.4	**19.8**	15.1	24.4	**20.7**	15.7	25.6	**20.7**	15.9	25.6
Candidates countries															
Albania	**85.9**	80.8	91.2	**85.2**	79.6	90.9	-	-	-	**84.9**	85.2	84.6	**83.1**	78.8	88
Turkey	**51**	54.1	60	**60.3**	63.4	68.2	**60.6**	64.9	69.6	**62**	65.4	71	**62.7**	58.6	69.3
FYROM	**35.3**	29.1	42.2	**37**	30.9	43.7	**38.1**	32	44.7	**38.6**	32.7	45	**39.5**	33.9	45.6
Croatia	-	-	-	-	-	-	-	-	-	**25.8**	19.5	32.1	**25.7**	19.2	32.1
EEA/EFTA countries															
Iceland	**67.7**	57.5	77.5	**64.8**	55	74.2	**63**	54.2	71.3	**66**	56.3	74.9	**62.8**	55.9	69.2
Norway	**42.7**	36.7	48.7	**42.4**	36.7	48.3	**42**	36.4	47.8	**40.8**	35.4	46.3	**39.5**	34.2	44.7
Switzerland	-	-	-	-	-	-	**35.4**	29.4	42.7	**35**	29	42.4	**35.2**	28.8	42.9
Liechtenstein	-	-	-	-	-	-	-	-	-	**26**	19.5	35.9	**22.3**	15.8	32.2
Non-European countries															
United States	**100**	100	100	**100**	100	100	**100**	100	100	**100**	100	100	**100**	100	100
Japan	**74.7**	72.6	76.8	**74.9**	72.8	77	**75.1**	73	77.2	**75.3**	73.1	77.6	**76.2**	73.8	78.7

Source: Eurostat online database.

Table 7: Vocational education students at ISCED 3 – trends in enrolment in 2000-04 (%), ranked by percentage of vocational education students in 2004

	2000			**2001**			**2002**			**2003**			**2004**		
	Total	Males	Females	**Total**	Males	Females	**Total**	Males	Females	**Total**	Males	Females	**Total**	Males	Females
EU-27															
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	**7**	8.1	6	**28.3**	32.7	24.3	**28.8**	32.9	24.9	**8.8**	10.2	7.5	**9.1**	10.4	8
Hungary	**10.3**	13.3	7.2	**11.5**	14.4	8.6	**12.8**	15.4	10.2	**12.8**	15.6	9.9	**12.1**	14.8	9.4
Cyprus	**14.2**	24.2	4.4	**14.3**	24	4.7	**13.8**	22.8	4.7	**13.7**	22.4	4.8	**13.4**	21.9	4.7
Lithuania	**39.6**	47.9	31.4	**32.3**	39.1	25.7	**28.2**	34	22.5	**26.1**	31.7	20.5	**24.7**	30	19.4
Italy	**24.6**	25.8	23.2	**25.9**	27.8	23.9	**26.8**	28.8	24.7	**26**	27.7	24.2	**25.5**	27.2	23.7
Estonia	**32.5**	43.4	22.3	**31.8**	43	21.1	**31.5**	42.7	20.7	**29.3**	40.1	19.2	**29.9**	40.8	19.5
Greece	**32.1**	37.3	27.2	**35.2**	40.1	30.3	**40**	45.6	34.2	**36**	41.6	30.2	**34**	40.1	27.5
Latvia	**38.6**	47.9	29.8	**38.3**	47	30	**39.1**	47.3	30.9	**37.8**	45.4	30.1	**36.8**	44.6	28.8

Spain	**33.5**	34.6	32.5	**35.6**	37.5	33.9	**38**	40.4	35.9	**37.2**	40.7	34	**38.7**	42.2	35.5
Denmark	**54.7**	60	49.6	**54.3**	60.1	48.8	**53**	58.9	47.3	**53.3**	59	47.8	**46.8**	54.7	39.9
Poland	**64.3**	73.8	54.2	**62.1**	71.4	52.1	**60.9**	69.9	51.1	**54.3**	63.4	44.2	**49.5**	58.2	39.9
Sweden	**48.8**	49.3	48.4	**51.7**	52.4	51.2	**49.6**	50.6	48.9	**52.9**	56.1	50.3	**53.4**	50.5	55.7
Malta	**24.8**	31.1	19.2	**26.3**	32.1	20	**32.8**	44	20.6	**23.7**	32.5	13.6	**55**	67.8	36.7
Bulgaria	**55.7**	68.9	42.2	**55.8**	68.1	43.3	**55.5**	66.9	43.8	**55**	66.2	43.5	**55.2**	66.1	43.7
France	**57.4**	63	51.5	**56.7**	62.5	50.9	**56.3**	62.1	50.3	**56.4**	62.1	50.7	**56.5**	62	50.9
Finland	**55.3**	60.2	51	**56.7**	60.9	53.1	**57.2**	61.4	53.5	**58.8**	62.9	55.2	**60.1**	63.8	56.8
Germany	**63.2**	68.6	57.2	**63.3**	68.8	57.3	**63**	68.4	57.1	**62.2**	67.8	55.9	**61.2**	66.9	54.9
Luxembourg	**63.5**	66	61	**63.8**	66.6	61.2	**64**	67.1	61.1	**64.7**	68.3	61.1	**63.9**	67.5	60.5
Romania	**62.5**	70.8	54.2	**63.9**	72.1	55.6	**64**	72	56.1	**64.4**	72.2	56.6	**64.8**	72.5	57.1
Belgium	**66.8**	68.7	64.9	**69.2**	70.8	67.6	**69.7**	71.4	68.1	**70.3**	72.2	68.5	**68.2**	70.4	66.1
Slovenia	**72.3**	77.4	67.2	**72.3**	77	67.6	**70.3**	75.8	64.8	**69.4**	75.4	63.2	**68.6**	74.7	62.2
Netherlands	**68.3**	71.3	65.1	**70.1**	72.7	67.4	**69.2**	71.8	66.5	**69.1**	71.1	67.1	**69.1**	70.9	67.2
United Kingdom	**67.3**	64.4	69.7	**66.9**	63.6	69.6	**72.1**	68.1	75.2	**69.2**	64.7	72.8	**71.5**	67.7	74.5
Austria	**71.1**	75.5	66.1	**71.8**	75.8	67.2	**72.3**	76.4	67.5	**71.8**	76.1	66.9	**72.4**	75.9	68.3
Slovakia	**78.6**	81.7	75.7	**77.6**	81.1	74.2	**76.4**	80.3	72.4	**75.4**	79.8	70.9	**74.1**	78.9	69.3
Czech Republic	**80.2**	84.4	76	**79.9**	84.3	75.6	**80.2**	84.9	75.6	**79.3**	84.3	74.4	**79.3**	84.1	74.4
Candidates countries															
Albania	**14.1**	19.2	8.8	**14.8**	20.4	9.1	-	-	-	**15.1**	14.8	15.4	**16.9**	21.2	12
Turkey	**49**	-	-	**39.7**	-	-	**39.4**	-	-	**38**	34.6	29	**37.3**	41.4	30.7
FYROM	**64.7**	70.9	57.8	**63**	69.1	56.3	**61.9**	68	55.3	**61.4**	67.3	55	**60.5**	66.1	54.4
Croatia	-	-	-	-	-	-	-	-	-	**74.2**	80.5	67.9	**74.3**	80.8	67.9
EEA/EFTA countries															
Iceland	**32.3**	42.5	22.5	**35.2**	45	25.8	**37**	45.8	28.7	**34**	43.7	25.1	**37.2**	44.1	30.8
Norway	**57.3**	63.3	51.3	**57.6**	63.3	51.7	**58**	63.6	52.2	**59.2**	64.6	53.7	**60.5**	65.8	55.3
Switzerland	-	-	-	-	-	-	**64.6**	70.6	57.3	**65**	71	57.6	**64.8**	71.2	57.1
Liechtenstein	-	-	-	-	-	-	-	-	-	**74**	80.5	64.1	**77.7**	84.2	67.8
Non-European countries															
United States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	**25.3**	27.4	23.2	**25.1**	27.2	23	**24.9**	27	22.8	**24.7**	26.9	22.4	**23.8**	26.2	21.3

Source: Eurostat online database.

Table 8: Graduates in ISCED 4 – trends in 2000-04 (N)

	ISCED_4 (total)					ISCED_4 (general)					ISCED_4 (vocational)				
	2000	**2001**	**2002**	**2003**	**2004**	**2000**	**2001**	**2002**	**2003**	**2004**	**2000**	**2001**	**2002**	**2003**	**2004**
Austria	0	22 483	0	23 363	-	0	0	0	-	-	0	22 483	0	23 363	-
Belgium	22 586	21 122	21 456	20 573	23 242	110	102	84	58	47	22 476	21 020	21 372	20 515	23 195
Cyprus	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
Czech Rep.	15 080	13 008	22 175	38 788	41 411	0	-	-	12 703	13 074	15 080	13 008	22 175	26 085	28 337
Denmark	196	526	-	643	592	194	526	-	643	592	2	-	-	-	-
Estonia	2 901	4 501	4 629	4 360	3 775	-	-	-	-	-	2 901	4 501	4 629	4 360	3 775
Finland	1 660	2 313	3 003	2 919	-	-	-	-	-	-	1 660	2 313	3 003	2 919	-
France	9 783	9 904	-	9 338	-	5295	5 295	-	4 850	-	4 488	4 488	-	4 488	-
Germany	134 495	138 041	132 567	138 338	151 692	19 032	20 145	19 951	22 277	27 586	115 463	117 896	112 616	116 061	124 106
Greece	23 102	-	-	-	14 011	-	-	-	-	-	23 102	-	-	-	-
Hungary	49 206	52 177	46 220	35 270	36 149	9 367	11 379	12 258	4 858	-	39 839	40 798	33 962	30 412	36 149
Ireland	19 855	21 819	13 645	12 561	17 205	0	0	0	-	-	19 855	21 819	13 645	12 561	17 205
Italy	23 545	27 828	32 914	0	37 193	-	-	-	0	-	23 545	27 828	32 914	0	37 193
Latvia	2 906	3 463	3 401	3 175	2 779	633	614	454	379	-	2 327	2 849	2 947	2 796	2 779
Lithuania	2 470	2 766	3 111	3 355	3 344	-	-	-	-	-	2 470	2 766	3 111	3 355	3 344
Luxembourg	157	168	215	199	188	-	0	-	-	-	157	168	215	199	188
Malta	-	-	0	0	-	-	-	0	0	-	-	-	0	0	-
Netherlands	1 834	1 983	2 518	2 278	2 300	-	-	-	-	-	1 834	1 983	2 518	2 278	2 300
Poland	80 717	73 403	70 314	80 542	87 143	0	-	-	-	-	80 717	73 403	70 314	80 542	87 143
Portugal	-	-	0	423	681	-	-	0	-	-	-	-	0	423	-
Slovakia	2 117	2 760	4 213	3 317	2 540	-	0	-	-	-	2 117	2 760	4 213	3 317	2 540
Slovenia	138	149	711	1 027	1 298	42	106	232	404	640	96	43	479	623	658
Spain	53 283	30 597	19 160	-	-	0	0	0	-	-	53 283	30 597	19 160	-	-
Sweeden	549	-	362	385	591	-	-	-	-	-	549	396	362	385	591
The UK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	4 721	2 647	1 963	2 574	1 623	-	-	-	-	-	4 721	2 647	1 963	2 574	1 623
Romania	39 166	33 469	28 456	25 337	22 636	-	-	-	-	-	39 166	33 469	28 456	25 337	22 636
Croatia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-
FYROM	136	521	226	261	489	-	-	-	-	-	136	521	226	261	489

Iceland	254	191	235	299	305	0	0	0	-	-	254	191	235	299	305
Lichtenstein	-	-	-	-	28	-	-	-	-	28	-	-	-	-	-
Norway	6 475	4 442	3 636	3 063	2 777	2 728	1 526	1 295	850	602	3747	2 916	2 341	2 211	2 175
Switzerland	-	-	19 275	18 246	13 713	-	-	2 841	3 288	3 845	-	-	16 434	14 958	9 868
United States	260 401	288 301	-	-	-	-	-	-	-	-	260 401	288 301	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	757 733	758 582	434 405	430 634	467 705	37 401	39 693	37 115	50 310	46 414	720 386	719 164	397 290	380 322	406 599

Source: Eurostat online database.

Table 9: Structure of enrolment in tertiary programmes with academic orientation (ISCED 5A) in 2004. % - Total (N) = 100%

	ef14	ef2	ef3	ef4	ef5	ef6	ef7	ef8	unk	Total (N)
EU-25	**10.0**	**13.1**	**34.9**	**11.2**	**14.3**	**1.9**	**9.8**	**3.1**	**1.5**	**12 838 541**
EU-15	**9.0**	**14.6**	**33.3**	**12.6**	**14.4**	**1.8**	**11.4**	**2.2**	**0.6**	**9 700 356**
NMS-10	**13.2**	**8.4**	**39.9**	**7.0**	**14.3**	**2.4**	**4.8**	**5.7**	**4.2**	**3 138 185**
EU-27										
Austria	9.5	13.7	40.1	12.8	11.8	1.5	8.9	1.6	0.1	197 627
Belgium	18.0	7.4	32.2	5.4	12.1	2.3	21.0	1.6	0.0	185 273
Bulgaria	8.5	9.0	42.0	5.2	21.7	2.4	4.8	6.2	0.2	207 340
Cyprus	27.6	21.0	27.3	22.3	1.8	0.0	0.0	0.0	0.0	3 908
Czech Republic	16.8	9.7	28.1	8.9	21.3	3.7	6.8	3.9	0.8	262 530
Denmark	12.0	18.2	23.5	8.3	9.6	1.1	26.4	0.9	0.0	184 227
Estonia	9.6	14.7	37.8	11.1	12.5	3.7	5.6	4.9	0.0	39 605
Finland	5.2	14.5	22.2	11.4	26.8	2.3	13.0	4.6	0.0	278 522
France	-	-	-	-	-	-	-	-	-	-
Germany	7.3	19.1	29.4	17.2	15.4	1.3	8.6	1.7	0.0	1 981 373
Greece	10.3	17.6	36.3	22.3	8.3	3.0	1.5	0.8	0.0	374 591
Hungary	13.7	7.8	42.3	5.4	13.0	3.4	8.0	6.5	0.0	394 021
Ireland	6.8	21.0	22.6	13.7	9.8	1.2	12.7	1.5	10.6	120 782
Italy	6.6	14.2	38.4	7.5	16.2	2.3	12.1	2.5	0.3	1 926 956
Latvia	14.6	7.4	53.0	7.3	9.0	1.7	3.7	3.4	0.0	111 040
Lithuania	15.8	8.6	36.2	7.5	19.5	2.1	8.3	2.1	0.0	127 914
Luxembourg	-	-	-	-	-	-	-	-	-	-
Malta	14.5	12.9	40.5	6.7	10.4	0.1	15.0	0.0	0.0	6 707
Netherlands	14.9	7.7	40.9	7.7	8.3	1.7	15.8	2.7	0.3	536 342
Poland	12.0	8.3	41.5	6.7	13.4	2.1	3.2	6.2	6.6	1 989 889
Portugal	10.2	8.2	31.8	7.4	21.9	2.1	13.0	5.3	0.0	372 521
Romania	1.1	11.8	46.8	4.8	20.7	2.9	5.8	3.0	3.1	621 501
Slovakia	17.2	5.5	28.3	9.0	17.5	3.4	12.0	7.1	-	150 037
Slovenia	16.8	14.6	37.4	6.9	14.2	2.9	5.4	1.9	0.0	52 534
Spain	9.4	9.9	35.2	12.7	17.3	2.7	8.6	4.1	0.0	1 507 520
Sweden	16.4	13.6	27.3	8.8	16.2	0.6	15.8	1.2	0.0	389 390
United Kingdom	8.5	17.4	32.0	15.9	8.9	0.8	13.3	0.7	2.6	1 645 232
Candidate countries										
Albania	17.0	13.3	41.1	4.3	8.2	7.7	6.8	1.7	-	51 903
Croatia	1.0	14.3	38.1	8.7	18.1	4.3	7.6	7.8	0.0	81 949
FYROM	13.9	12.6	32.6	9.0	15.5	4.3	7.5	4.6	0.0	43 720
Turkey	19.0	6.0	46.7	8.2	9.3	2.7	6.5	1.6	0.0	1 385 094
EEA/EFTA countries										
Iceland	18.4	15.4	35.6	8.5	7.0	0.6	12.7	1.8	0.0	13 960
Liechtenstein	0.0	8.3	63.7	0.0	28.0	0.0	0.0	0.0	-	532
Norway	15.1	11.2	32.3	10.1	6.3	0.8	19.1	3.3	1.7	205 142
Switzerland	10.3	15.1	38.8	10.5	12.8	1.1	9.8	1.1	0.6	140 984
Non-European countries										
Japan	6.1	17.9	37.0	3.6	17.1	2.6	5.9	1.9	7.8	2 976 974
United States	-	-	-	-	-	-	-	-	100.0	12 950 801

NB: unk unknown or not specified
ef8 services
ef7 health and welfare
ef6 agriculture and veterinary
ef5 engineering, manufacturing and construction

	ef4 science, mathematics and computing
	ef3 social sciences, business and law
	ef2 humanities and arts
	ef14 teacher training and education science
	NMS10 (CZ, EE, CY, LV, LT, HU, MT, PL, SI, SK)
Source:	Eurostat online database.

Table 10: Structure of enrolment in tertiary programmes with occupational orientation (ISCED 5B) in 2004. % - Total (N) = 100%

	ef14	ef2	ef3	ef4	ef5	ef6	ef7	ef8	unk	Total (N)
EU-25	**7.8**	**9.4**	**22.9**	**7.2**	**13.8**	**2.5**	**25.0**	**5.9**	**5.5**	**1 917 526**
EU-15	**7.1**	**10.3**	**20.4**	**7.6**	**14.0**	**2.5**	**26.8**	**5.1**	**6.2**	**1 675 090**
NMS-10	**13.2**	**2.9**	**40.7**	**4.0**	**12.8**	**2.0**	**12.8**	**11.0**	**0.6**	**242 436**
EU-27										
Austria	49.1	3.3	2.9	2.8	18.3	0.0	19.5	4.0	0.0	25 370
Belgium	11.0	13.1	34.2	12.2	10.8	1.8	15.2	1.8	0.0	193 823
Bulgaria	4.8	1.2	34.6	0.0	26.3	2.5	19.3	11.3	0.0	16 294
Cyprus	5.9	4.7	44.2	10.0	4.6	0.1	5.3	22.6	2.7	16 739
Czech Republic	1.4	6.0	29.9	5.3	8.5	3.0	34.1	8.9	2.7	33 046
Denmark	0.0	4.1	55.0	12.8	13.6	3.5	1.8	9.3	0.0	27 810
Estonia	9.2	5.3	40.0	7.0	11.0	0.2	14.7	12.6	0.0	24 401
Finland	11.3	25.8	19.5	0.0	37.1	0.0	1.9	4.4	0.0	159
France	-	-	-	-	-	-	-	-	-	-
Germany	7.1	1.1	17.5	1.7	16.0	1.7	48.8	5.7	0.3	349 084
Greece	0.0	2.3	28.7	3.7	28.0	12.1	17.4	7.9	0.0	203 509
Hungary	0.0	0.2	55.2	5.1	11.8	0.4	3.5	23.7	0.0	20 321
Ireland	0.6	11.1	17.2	7.8	13.0	1.6	5.4	7.9	35.4	63 194
Italy	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21 933
Latvia	3.7	4.7	63.7	3.5	13.8	1.3	1.2	8.2	0.0	15 191
Lithuania	7.0	3.1	46.7	2.3	19.4	3.3	12.3	5.8	0.0	52 119
Luxembourg	-	-	-	-	-	-	-	-	-	-
Malta	15.3	1.7	43.0	1.7	0.1	1.8	34.3	2.1	0.0	1 143
Netherlands	-	-	-	-	-	-	-	-	-	-
Poland	100.0	-	-	-	-	-	-	-	-	22 355
Portugal	0.0	10.8	26.8	9.6	17.0	2.6	25.5	7.7	0.0	5 097
Romania	23.3	0.7	20.9	5.0	29.7	4.7	8.4	4.9	2.4	46 172
Slovakia	4.1	8.6	8.1	1.3	2.0	1.3	64.3	10.3	-	5 259
Slovenia	2.7	0.1	49.1	3.3	19.4	3.1	8.2	14.0	0.0	51 862
Spain	4.8	10.8	23.0	15.3	22.3	0.6	10.8	12.5	0.0	255 488
Sweden	0.1	12.2	25.7	15.3	23.0	3.5	7.6	12.7	0.0	16 792
United Kingdom	9.2	15.2	12.5	7.6	4.3	0.8	34.1	0.6	15.7	512 831
Candidate countries										
Albania	-	-	-	-	-	-	100.0	-	-	706
Croatia	13.4	0.9	33.8	2.7	15.1	2.3	7.6	24.1	0.0	43 832
FYROM	0.0	0.0	1.4	0.0	54.4	0.0	38.2	6.0	0.0	2 917
Turkey	0.0	6.6	44.4	5.0	26.4	4.2	5.5	7.9	0.0	562 677
EEA/EFTA countries										
Iceland	31.9	7.9	36.3	23.3	0.0	0.0	0.0	0.6	0.0	699
Liechtenstein	-	-	-	-	-	-	-	-	-	0
Norway	2.3	2.8	64.8	8.0	5.7	0.0	7.9	8.4	0.0	4 347
Switzerland	9.8	2.6	42.6	8.6	17.6	1.3	6.1	11.5	0.0	39 113
Non-European countries										

Japan	9.8	11.9	6.5	0.0	15.7	0.5	26.6	22.1	6.9	983 241
United States	-	-	-	-	-	-	-	-	100.0	3 574 028

NB: unk unknown or not specified
ef8 services
ef7 health and welfare
ef6 agriculture and veterinary
ef5 engineering, manufacturing and construction
ef4 science, mathematics and computing
ef3 social sciences, business and law
ef2 humanities and arts
ef14 teacher training and education science
NMS10 (CZ, EE, CY, LV, LT, HU, MT, PL, SI, SK)

Source: Eurostat online database.

Table 11: Unemployment rates between 15 and 24 years old by gender – trends in 2000-05, ranked by unemployment rate in 2005

	2000			2001			2002			2003			2004			2005		
	total	**M**	**F**	**total**	**M**	**F**	**total**	**M**	**F**	**total**	**M**	**F**	**total**	**M**	**F**	**total**	**M**	**F**
EU-25	**18.1**	**17.2**	**19.1**	**17**	**16.4**	**17.7**	**17.5**	**17.2**	**17.8**	**18.1**	**18.1**	**18.1**	**18.5**	**18.4**	**18.7**	**18.7**	**18.7**	**18.6**
EU-15	**16.1**	**15.1**	**17.2**	**14.1**	**13.4**	**14.9**	**14.7**	**14.4**	**15.1**	**15.5**	**15.6**	**15.4**	**16.2**	**16**	**16.4**	**16.7**	**16.7**	**16.6**
EEA	**16**	**15**	**17.1**	**14**	**13.3**	**14.9**	**14.7**	**14.3**	**15**	**15.5**	**15.6**	**15.4**	**16.1**	**16**	**16.3**	**16.6**	**16.6**	**16.6**
EU-27																		
Poland	35.7	34.3	37.2	39.2	38	40.6	41.6	41	42.4	41.4	40.3	42.8	40.1	38.9	41.5	38.6	37.9	39.5
Slovakia	36.9	40	33.3	38.9	42.6	34.5	37.7	38.8	36.3	32.9	34.8	30.7	32.8	34.8	30.4	28.3	29.7	26.4
Sweden	9.5	10.8	8.1	11.7	12.7	10.6	12.9	13.4	12.4	14.3	15.5	13.1	18.5	19.8	17.2	28	28.1	27.8
Finland	28.4	27.5	29.2	26.6	25.7	27.5	28.2	28.6	27.8	27.8	27.8	27.9	27.5	27.9	27.2	27	27.9	26.1
Greece	29.2	21.9	38	28	20.9	36.3	26.1	19	34.7	25.7	18	35.2	26.5	18.8	35.6	25.3	17.5	34.7
Italy	31.5	28.4	35.3	27.8	24.8	31.6	27.1	23.7	31.5	26.8	23.7	30.9	24.6	21.2	29	22.9	20.9	25.7
Bulgaria	33.3	36.1	29.6	39.3	42.8	35.4	35.6	39	31.5	27.1	29.4	24.1	24.5	25	23.8	22.6	24.2	20.6
Spain	25.3	19.6	32.1	20.7	16.4	26.3	21.6	16.9	27.9	22.3	19.1	26.4	22.4	19.3	26.4	20.4	17.4	24.1
Belgium	15.2	12.9	18.2	15.3	14.3	16.6	15.7	16	15.2	19	20.1	17.5	17.5	15.8	19.5	19.9	20.6	19.1
France	-	-	-	-	-	-	-	-	-	18.4	16.9	20.2	19.5	17.9	21.6	19.6	18.4	21.2
Estonia	23.5	24.6	21.8	24.5	17.4	34	17.3	14.2	22	24.2	20.5	30.4	23.5	23.4	23.7	19.5	21.8	16.7
Hungary	12.3	13.7	10.4	10.7	11.6	9.5	11.4	12.3	10.2	12.9	13.5	12.1	14.4	14.6	14.2	19.2	20.2	17.9
Latvia	21.3	21	21.7	22.9	24	21.4	25.6	25.1	26.2	17.5	13.8	23	19.3	14.9	25.8	19	16.3	22.3
Romania	17.8	19.3	15.9	17.6	18.1	17.1	22.2	22.4	22	19.5	19.2	20	22.3	25.1	18.7	18.8	20.2	16.9
Czech Republic	17	17.4	16.4	16.3	16.4	16.2	15.4	15.7	15	16.8	16.2	17.5	19.9	21.4	17.9	17.9	17.6	18.3
Malta	11.8	13.1	10.4	17.6	20.3	14.5	15.3	16.5	14	17.4	15.6	19.4	18.3	18.8	17.7	17.5	16.6	18.5
Lithuania	28.6	29.5	27.3	31.6	36.6	24.6	20.4	19.6	21.6	26.9	22.2	32.8	21.2	23.6	17.1	16.5	16	17.2
Germany	8.5	9.5	7.4	7.8	9	6.4	9.3	11.1	7.2	11	13.7	8.1	13	15.4	10.2	15.5	17.1	13.7
Portugal	8.2	5.4	11.7	8.9	6.5	12	10.4	9.1	12.1	13.4	10.6	16.7	14	12.5	15.9	15.3	13.6	17.6
Luxembourg	6.4	5.7	7.3	6.3	7.1	-	7	5.3	9	10.9	9.7	12.2	16.9	12.1	22.5	13.7	11.7	16.2
Slovenia	16.4	14.8	18.5	15.7	15	16.6	14.8	13.5	16.7	15.3	13.1	18.4	14	11.2	17.7	12.9	11	15.5
Cyprus	10.2	6.7	13.3	8.2	6	10.2	7.7	8	7.6	8.9	9	8.8	8.7	7.9	9.5	12.7	11.8	13.7
United Kingdom	12	13.4	10.4	10.3	11.8	8.7	10.9	12.8	8.8	11.4	13.1	9.5	10.8	11.8	9.7	11.7	13.2	9.9
Austria	4.3	3.6	5.1	5.2	5.9	4.4	5.5	5.8	5.1	6.1	6.1	6.1	8.6	8	9.2	10.9	10.9	10.8
Netherlands	5.3	4.7	5.9	4.4	4.2	4.5	4.6	4.3	4.8	6.6	6.7	6.5	8	7.9	8.1	8.6	8.4	8.7
Ireland	6.5	6.2	6.9	6.2	6.5	5.8	7.8	8.8	6.6	8.1	9	7.1	8.3	8.9	7.5	8.2	9.1	7.9

Denmark	6.7	6.5	7	8.3	7.3	9.3	7.1	8.8	5.2	9.8	10.6	9	7.8	8.5	7.1	7.9	6.1	9.8
Candidate countries																		
Croatia	-	-	-	-	-	-	36.3	34.3	38.9	35.8	33.8	38.5	32.8	29.5	37.3	32.8	30.5	36.1
EEA/EFTA countries																		
Norway	11.1	10.8	11.4	12.2	12.3	12	13	13.8	12.3	11.9	12.4	11.3	12.8	14	11.7	13.3	13.6	12.9
Switzerland	5	5.8	4.1	5.6	5.8	5.5	5.6	7.1	3.9	8.4	8.2	8.7	7.7	8.1	7.3	8.8	8.5	9.1
Iceland	4.4	-	-	5.1	-	-	6.4	9.5	-	12.5	12.7	12.2	12.1	16.2	-	8.7	9.4	7.9

NB: M = Males, F = Females

Table 12: Unemployment rates between 25 and 64 years old by gender – trends in 2000-05; ranked by unemployment rates in 2005

	2000			2001			2002			2003			2004			2005		
	total	M	F	total	M	F	total	M	F	total	M	F	total	M	F	total	M	F
EU-25	**18.1**	**17.2**	**19.1**	**16.4**	**17**	**17.7**	**17.5**	**17.2**	**17.8**	**18.1**	**7.2**	**8.8**	**8.1**	**7.4**	**9**	**7.9**	**7.2**	**8.7**
EU-15	**16.1**	**15.1**	**17.2**	**13.4**	**14.1**	**14.9**	**14.7**	**14.4**	**15.1**	**15.5**	**6.5**	**8**	**7.3**	**6.7**	**8.2**	**7.2**	**6.6**	**7.9**
EEA	**16**	**15**	**17.1**	**13.3**	**14**	**14.9**	**14.7**	**14.3**	**15**	**15.5**	**6.4**	**8**	**7.3**	**6.6**	**8.1**	**7.1**	**6.5**	**7.9**
EU-27																		
Poland	13,8	12	15,9	15,4	13,9	17,1	16,9	16,2	17,8	16,4	15,8	17,1	16,4	15,8	17	15,5	14,4	16,7
Slovakia	15,7	15,7	15,8	15,9	16	15,7	15,4	15,2	15,7	14,6	14,1	15,1	16,5	15,1	18	14,7	13,7	15,9
Sweden	5,1	5,5	4,7	3,8	4,1	3,5	4	4,4	3,6	4,5	5	3,9	5,2	5,6	4,8	5,9	6,1	5,6
Finland	8,1	7,4	8,8	7,5	7,2	7,7	7,4	7,7	7,1	7,6	8,3	6,8	7,6	7,4	7,7	6,8	6,7	6,9
Greece	8,9	5,8	13,9	8,4	5,4	13	8,1	5,2	12,7	7,7	4,9	11,9	8,6	5,2	13,5	8,3	4,9	13,2
Italy	8,4	6,2	12	7,7	5,8	10,7	7,4	5,5	10,5	7,1	5,4	9,9	6,3	5	8,2	6,2	4,8	8,2
Bulgaria	14,4	14,4	14,5	17,7	18,4	16,9	16,3	16,6	15,9	12,6	12,8	12,3	10,9	11,2	10,6	8,8	9	8,7
Spain	12	8,1	18,2	8,8	6,1	13,1	9,7	6,6	14,5	9,8	6,7	14,3	9,6	6,8	13,7	7,9	6	10,5
Belgium	5,7	4,5	7,2	5,2	4,8	5,9	6	5,2	7	6,5	6,1	7,1	6,3	5,8	7	6,9	6,1	7,9
France	-	-	-	-	-	-	-	-	-	7,3	6,4	8,4	7,5	6,7	8,4	7,4	6,6	8,2
Estonia	12,1	13,5	10,6	11,1	11,2	11	8,8	9,9	7,7	9,3	9,9	8,8	8,6	9,9	7,5	6,8	8,3	5,3
Hungary	5,7	6,1	5,1	5	5,6	4,3	4,9	5,3	4,5	5,1	5,3	4,7	5,1	5	5,1	6,1	5,7	6,5
Latvia	13,6	14,4	12,7	12,1	13,4	10,7	11,8	13,6	9,9	9,8	10,1	9,4	8,8	8,6	9	7,8	8,6	7
Romania	6,1	6,4	5,8	5,7	6,1	5,2	6,7	7,1	6,3	5,7	6,2	5,2	6,1	7,1	4,8	6,1	6,2	6
Czech Republic	7,6	5,9	9,7	6,9	5,5	8,7	6	4,6	7,8	6,6	4,8	8,8	7,1	5,6	8,9	6,9	5,1	9,1

Malta	4,7	4,9	4,4	3,8	3,6	4,3	4,5	4,2	5,4	4,7	4,5	5,2	4,4	4,6	3,8	5,3	5,5	5
Lithuania	14,7	16,9	12,5	15,5	17,7	13,4	12,4	12,7	12,2	11,5	11,6	11,4	10,5	9,8	11,3	7,9	7,8	8
Germany	7,9	7,5	8,4	7,9	7,7	8	8,5	8,5	8,4	9,7	9,9	9,5	10,6	10,9	10,2	10,9	11,1	10,7
Portugal	3,4	2,9	4	3,3	2,5	4,2	3,9	3,3	4,7	5,6	4,8	6,4	5,8	5,1	6,6	6,7	6	7,5
Luxembourg	2	1,5	2,7	1,4	1,1	1,8	2,2	1,6	3,1	3,1	2,5	4	4,2	3,1	5,8	3,8	2,9	5
Slovenia	5,9	5,9	5,9	4,6	4,3	5	5	4,7	5,3	5,6	5,3	6	5,2	5,1	5,2	5,1	4,9	5,3
Cyprus	4,4	3	6,4	3,5	2,3	5,1	2,9	2,2	3,7	3,7	3,4	4	3,9	3,1	4,9	4,6	3,6	5,8
United Kingdom	4,5	4,9	3,9	3,7	4,1	3,3	4	4,4	3,6	3,7	4,2	3,1	3,5	3,8	3,2	3,3	3,6	3
Austria	3	2,6	3,5	3,1	2,8	3,6	3,3	3,4	3,2	3,8	3,6	4	4,3	3,8	4,8	4,3	4,2	4,5
Netherlands	2,2	1,7	2,9	1,7	1,4	2,1	2,2	1,9	2,5	3	2,8	3,2	4	3,8	4,3	4,1	3,9	4,3
Ireland	3,9	4,1	3,6	3,2	3,3	3	3,5	3,8	3,1	3,8	4,1	3,3	3,8	4,4	3,1	3,5	3,9	3,1
Denmark	4,1	3,6	4,6	3,5	3,1	4,1	3,9	3,6	4,2	4,8	4,3	5,3	4,9	4,6	5,2	4,4	3,9	4,9
Candidate countries																		
Croatia	-	-	-	-	-	-	12,3	10,3	14,8	11,3	9,8	13,2	11,6	10,3	13,1	10,9	10,1	11,8
EEA/EFTA countries																		
Norway	2,2	2,4	1,9	2,3	2,5	2,1	2,6	2,5	2,7	3	3,3	2,7	2,9	3,2	2,6	3,3	3,5	3,1
Switzerland	2,3	1,8	3	2	1,1	3,1	2,5	2,2	3	3,5	3,2	3,8	3,8	3,4	4,4	3,8	3,3	4,5
Iceland	1,3	-	2,2	1,2	-	1,8	2,3	2,2	2,5	2,2	2,2	2,3	2,4	2,9	1,8	1,7	-	2,1

NB: M = Males, F = Females

Table 13: Unemployment among those who have emigrated from non-EU countries and among EU citizens by EU-25 countries in 2004 (%)

Country	Non-EU citizens	EU citizens
Belgium	33	7
Check Republic	8	7
Denmark	13.5	4.5
Germany	23	10.5
Estonia	15	6
Greece	8	9.5
Spain	12	9
France	25	8
Ireland	7.5	4
Cyprus	4	5
Latvia	7.5	9
Lithuania	8	8
Luxembourg	12.5	4
Hungary	4.5	6.5
Malta	6.5	7.5
Netherlands	18	4
Austria	14	4.5
Poland	5	18
Portugal	13	7
Slovenia	6	5.5
Slovakia	6	16
Finland	28	9
Sweden	25.5	8
United Kingdom	9	4
EU-25	17	8.5

Source: Eurostat online database.

List of abbreviations

EEA	European economic area
EFTA	European free trade association
EU-15	European Union of 15 Member States
NMS-10	10 New Member States
NQF	National qualification frameworks
VET	Vocational education and training

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