

Initial vocational education and training (IVET) in Europe

Review

Abstract

This review is based on a comparative analysis of country reports written by ReferNet national consortia of 25 European countries on initial vocational education and training (IVET).

It provides an overview of the changes, trends and debates, and identifies the principal issues at stake. It summarises how they are being tackled by national IVET policies and provides some common orientations and policy objectives among countries.

As far as the IVET structure is concerned the reader is provided with comprehensive information and a more specific outline of lower, upper, and post secondary VET provision. The main conditions determining admittance to training, different initiatives undertaken by countries to promote participation, as well as different curricula development mechanisms and learning outcomes are also described.

Even though IVET varies to a large extent both by country and type or mode of provision, this comprehensive review provides important conclusions that summarise the main trends in IVET across Europe.

Foreword

Increasing participation in vocational education and training is one way to improve competitiveness hence it is in the focus of several European policies. Modern socioeconomic circumstances, such as globalisation, restructuring, innovation and transition to a knowledge-based economy require a better qualified labour force. Due to the ageing European population initial vocational education and training – as a supplier of new professionals – is of fundamental importance.

Modernisation of initial vocational education and training is one of the main topics of current discussions both at EU and Member State levels. To increase the attractiveness and prestige of vocational education and training we have to improve its quality and responsiveness to labour market needs. Knowledge of how different Member States deal with these challenges is important to assess experience and success.

Cedefop contributes in several ways, including preparation of detailed thematic analyses of initial vocational education and training systems (available from our European training village website) of all EU Member States. Besides, detailed comparative analysis of different initial training systems eases analytical work and provides summarised and simplified information on the common and different features. Finally, this review provides a comprehensive summary of the principal issues, main trends and conclusions.

This report aims to contribute to overall understanding of the main characteristics of initial vocational education and training in Europe, and detailed comparative analysis is available online in the European training village (www.trainingvillage.gr).

Aviana Bulgarelli
Director, Cedefop

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1. Introduction

For many of the European Union's young people it is academic study leading, potentially, to higher education that has become the preferred pathway through post-compulsory education. This has implications for initial vocational education and training (IVET) insofar as the vocational pathway has become, for many, a 'second best' option. Of course there are exceptions, notably in Germany and the Nordic countries where the vocational pathway continues to be regarded as a high status route into employment. Besides, across Europe, in recognition of the value vocational skills provide to national economies – and the European Union (EU) more generally – IVET has been subject to reform to improve its attractiveness to would-be participants.

Based on information provided by national ReferNet correspondents this report summarises the structure, content, and reform of IVET systems across 25 countries to provide a review of the similarities, contrasts, and trends at national level. The countries included are:

Belgium	Ireland	Cyprus	Austria	Finland
Czech Republic	Greece	Latvia	Poland	Sweden
Denmark	Spain	Lithuania	Portugal	United Kingdom
Germany	France	Hungary	Slovakia	Iceland
Estonia	Italy	Netherlands	Slovenia	Norway

The report commences with an outline of EU policy on IVET and then goes on to provide a comparison of vocational preparation at several levels:

- (a) lower secondary level;
- (b) upper secondary level;
- (c) apprenticeship;
- (d) post-secondary non-tertiary;
- (e) tertiary.

In addition, special training programmes, typically aimed at young people with difficulties gaining the basic skills to enter employment, are summarised.

Several cross-cutting themes are considered, notably reform of national systems, the extent to which IVET students continue to higher levels of study, and the relative ease with which students can transfer between courses (both within and outside the IVET system). While national systems across Europe show a degree of commonality, especially for the direction of reform – for instance, ensuring the relevance of IVET to current and future labour-market demand – there is also substantial variety about structure, content, and the pace of reform that reflects the differing origins of modern national IVET systems.

2. IVET, the Lisbon strategy and recent policy developments

2.1. The Lisbon strategy and the importance of IVET

Europe needs to increase its rate of skills production. This is the stark conclusion arising from the Lisbon strategy and subsequent policy statements by the European Commission. The Lisbon strategy stated that Europe has the following goal '[...] to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion' (Council of the EU, 2000). This is to be achieved by 2010.

Sustainable growth is seen as dependent upon investment in innovation, research, and development that is, in turn, dependent upon supply of highly skilled and educated people capable of developing innovative ideas, products, and services, where 'highly skilled and educated' tends to refer to graduates from higher education (Sapir et al., 2004). There is also a social cohesion dimension to the Lisbon strategy. If unemployment rates are to be lowered and employment rates raised, then there is a need to address education and skills at other levels too, especially among those who are vulnerable to structural change in the European economy. Also, because higher education is dependent upon supply from lower levels in the education system, its performance is reliant, at least in part, on improvements at primary and secondary education levels.

The role of IVET in meeting the goals initially set out in the Lisbon strategy can be seen in the targets laid down by the EU:

- (a) countries should reduce the share of early school-leavers (aged 18 to 24) to 10%;
- (b) a minimum of 85% of young people (aged 20-24) should have completed at least upper-secondary education;
- (c) at least 12.5% of adults (aged 25-64) should participate in lifelong learning.

Zooming in on 2010 (Cedefop, Lipinska et al., 2007) outlines the challenges the VET system needs to address. These include:

- (a) demographic change – given current population projections the number of young people in upper, post-secondary, and tertiary education will decrease by more than two million by 2030;
- (b) occupational change – this is biased towards higher skilled jobs;
- (c) tackling the relatively large, though declining, number of people with low skills;
- (d) meeting current skill shortages and averting future ones.

2.2. Recent policy developments

Education policy in the EU, relevant to the Lisbon strategy, has been shaped by three major policy statements:

- (a) the Copenhagen declaration, 2002 (European Commission, 2002);
- (b) the Maastricht communiqué, 2004 (European Commission, 2004);
- (c) the Helsinki communiqué, 2006 (European Commission, 2006a).

The Copenhagen declaration established the European dimension to vocational education and training (VET) including recognition of qualifications and competences. Maastricht built upon Copenhagen and established action plans at national level to increase investment in VET, increasing flexibility in VET systems so they are capable of meeting the needs of employers and assisting those most vulnerable to changes in the labour market. Helsinki confirmed the aims of Maastricht but also drew attention to the need for IVET to be a more attractive option for young people. More specifically, the Helsinki communiqué makes statements on:

- (a) the need to increase investment in human capital and skills;
- (b) recognition that VET is a major part of lifelong learning;
- (c) the need to deliver a skills base relevant to working life;
- (d) VET's contribution to competitiveness and social cohesion;
- (e) the role of European and national policies in improving VET;
- (f) the challenge of engaging young people in VET and working life.

The last point is of considerable importance given the relative attractiveness of IVET to young people across Europe. In Germany, for example, two thirds of young people enter the dual system, whereas in the UK the academic pathway is much more attractive with VET viewed as lower status ⁽¹⁾. The Helsinki communiqué states: 'European VET policies should promote high quality initial VET and create conditions to improve the skills of those in the labour force through continuing VET. Policies should engage all young people in vocational training and/or higher education, ensuring at the same time that they acquire skills and competences relevant to the labour market and to their future lives' (European Commission, 2006a, p. 3).

As well as making the case for increased investment in IVET, policy at European level has also sought to improve the structure and content of VET through:

- (a) bringing about greater transparency in VET systems;

⁽¹⁾ For example, the rates of return to vocational qualifications are lower than academic ones in the UK (Leitch Review of Skills, 2006).

- (b) developing a European qualifications framework based on competence-based outcomes from VET – and developing national qualification frameworks – to compare more easily qualifications across Europe;
- (c) convergence in validation of non-formal learning;
- (d) encouraging a common understanding of quality assurance in VET systems, especially where those systems are becoming less centralised at national level;
- (e) emphasising the importance of guidance to both young people in IVET and in lifelong learning.

Implementation of European standards and definitions has been variable although all countries are moving in a common direction (Cedefop, Lipinska et al., 2007), but IVET systems, while revealing commonalities in structure, content, and output also reveal substantial variations between one another, or between groups of countries sharing a common approach to IVET. Also, even within countries there can be distinct approaches at regional or local levels. The aim of European and national policies is to provide a common framework providing assurances about the quality of provision and outcomes, as well as providing the basis for comparability. The next section looks at how IVET systems have developed over the recent past before, in subsequent sections, looking at different levels of IVET.

3. Development of IVET

Based on ReferNet detailed analyses of IVET in 25 countries, this report provides a summary of main trends relating to IVET's:

- (a) reform;
- (b) definition;
- (c) structure;
- (d) participation;
- (e) content;
- (f) convergence to European standards.

3.1. Reform of IVET

IVET has a long tradition in many countries stretching back to medieval guilds but, in its current form, it can be more readily traced back to the needs of the industrial revolution. IVET is also a dynamic concept which has undergone multiple reforms as it adapts to current and anticipated needs of the labour market. In all countries the structure and content of IVET has been subject to major reform in recent years. Reform has been substantial in the former Eastern bloc countries where the IVET system has had to adapt to the development of market economies, but making IVET more responsive to current and future labour-market demand is a common trend across Europe. The reform debate is about making IVET more flexible so it is better able to meet the demand for skills.

3.2. Definition of IVET

The general definition of IVET is preparation of people with skills and/or competences to gain entry into a specific occupation/sector. At least this is the definition provided in most instances, but IVET is an evolving concept in all countries and, in many respects, this limited definition is becoming outdated. IVET is no longer considered only as a vocational pathway, but as an alternative pathway to the academic route that contains many elements of an academic education which can, ultimately, lead to a tertiary level, university education. This, at least, is an aspiration for IVET.

In countries where the dual system is well established (Germany) the vocational pathway has always combined practical experience in the workplace with academic study provided in the classroom. Arguably, transfer between vocational and academic pathways is less of an issue because of the strong academic component in IVET. Elsewhere, transfer between pathways and the opportunity to continue to the highest level of the education system is much more of a problem because of the relative difficulty of transferring from vocational to academic study (it is much easier in the opposite direction).

3.3. Structure of IVET

In general IVET commences at upper secondary level, but there are many pathways through the education system (Figure 1). Until relatively recently, IVET was an upper secondary level phenomenon, but is increasingly being stretched to the third level and is also evident at lower secondary level. At lower secondary school, where IVET exists, it provides general vocational preparation alongside general, academic studies. Thus for some individuals the pathway commences at age 14, in the compulsory education system, and stretches potentially to age 25.

In general, a distinction is made between the following pathways:

- (a) academic;
- (b) vocational (school-based);
- (c) apprenticeship;
- (d) special programmes (principally aimed at those in danger of social exclusion).

The vocational route, as depicted in Figure 1, is based on exit from the compulsory school system leading to either vocational education in schools or the apprenticeship system. Countries such as Belgium, the Czech Republic, Denmark, Germany, Ireland, France, Hungary, Austria, Poland, Portugal, Slovenia and the UK provide special programmes other than vocational studies or apprenticeship aimed at young people at risk of dropping out of the IVET system and becoming either unemployed or inactive. In general these schemes are aimed at improving the employability skills of young people by providing them with the basic skills required to function in the labour market.

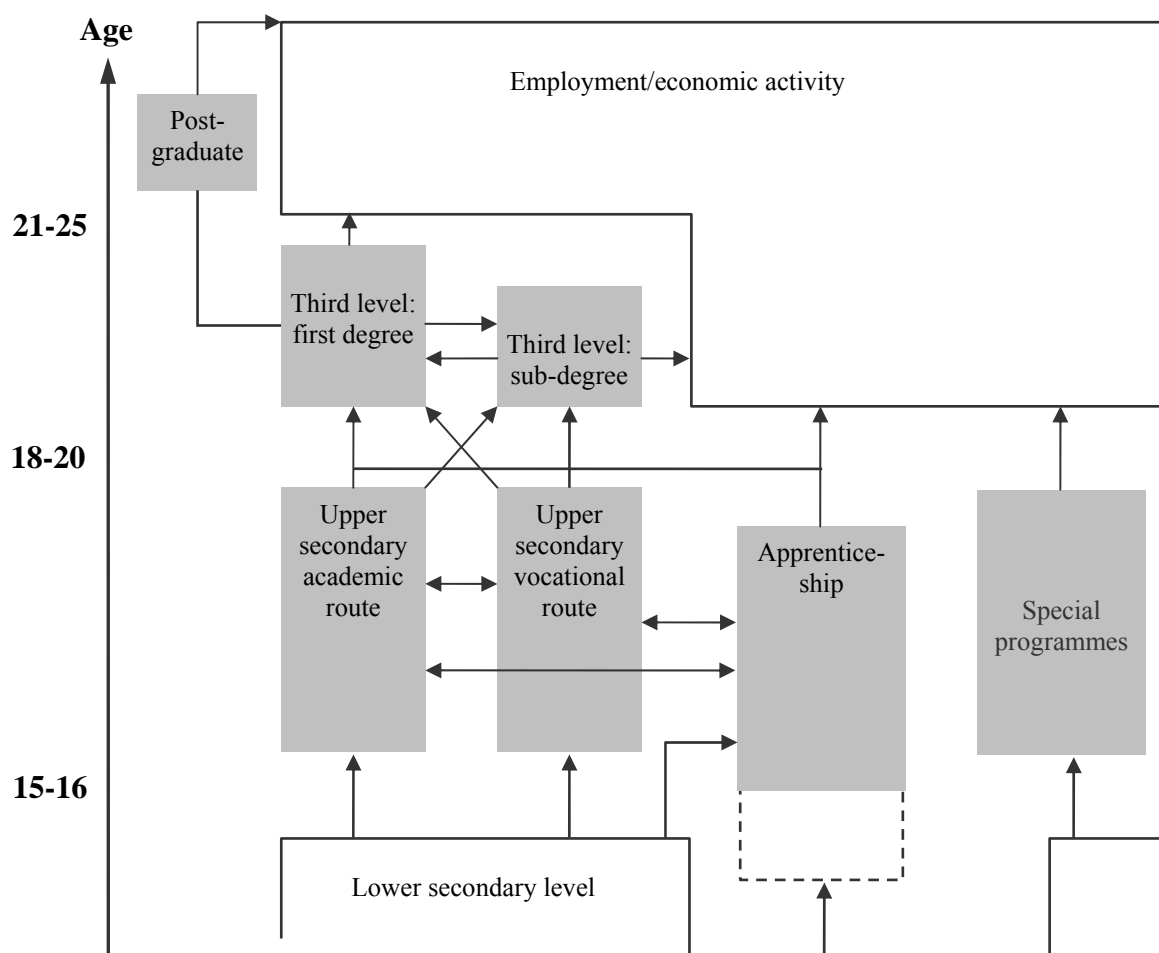
Following completion of the upper secondary equivalent cycle of vocational education depicted in Figure 1, there is the possibility of accessing post-secondary non-tertiary education or tertiary education. In practice, the definition between post-secondary, non-tertiary and tertiary is somewhat blurred (Cedefop, Lipinska et al., 2007).

While several factors can be identified that explain the development of IVET according to a common trajectory, in practice systems are starting from very different positions with respect to structure, curricula, qualification/accreditation, transfer, and progression. As discussed below, transfer and progression have become dominant themes in the evolution of IVET systems. Transfer relates to the capacity of systems to allow people to move between academic and vocational streams and between the various modes of vocational provision. Progression relates to the capacity of systems to allow people to attain higher levels of attainment regardless of whether they have chosen the academic or vocational stream. Hence the discussion is about the various possible routes through the education system.

3.4. Participation in IVET

Traditionally, IVET was designed to lead, in most cases, people exiting the education system at the end of upper-secondary level to enter the world of work. Policy-makers are now increasingly preoccupied with how the IVET pathway might lead to continuation of studies beyond this stage to post-secondary and tertiary levels. On the tertiary level, the European Commission has identified strengthening links between educational institutions and the world of work as a key challenge and advocates partnership at all levels, including universities (European Commission, 2006b). There is now a move to develop further tertiary level apprenticeships. In general, there remain concerns that the transition from the vocational route to tertiary level education is limited, especially to the general stream of university education leading to a Bachelor's degree. This is related to raising participation in IVET because limited opportunities for progression might discourage young people, from taking the vocational route.

Figure 1: IVET pathways: generic representation



Notes:

1. The diagram shows the structure of provision across Europe. It indicates the transitions and progressions which are theoretically possible within IVET systems even if, in practice, some transitions do not take place. For instance, the transition from apprenticeship to the academic route in upper secondary school tends not to occur even though national systems allow for such a move to take place. There are often significant barriers – such as the recognition and transferability of credits between pathways – that prevent movement between pathways taking place.
2. Vocational training at post-graduate tertiary level is available, but it is questionable whether this constitutes IVET or continuing vocational education and training. Hence it is not treated extensively in the reporting or the diagram above.

3.5. The content of IVET

The overall picture is one of the State, at either national or regional levels, establishing a framework within which curricula can be designed by educational institutions at upper-secondary level or in apprenticeship training. In general there is a tripartite system involving the State, educational institutions, and industry/professional bodies (regulating or advising a given profession). The extent of social partnership involved in the process is dependent upon the extent of social partnership in the economy more generally. So it is more developed in western European IVET systems than in eastern ones.

The process of assessment – based on examination, practical demonstrations, and/or assessment of project work is similarly organised. The State establishes the general framework within which educational institutions and industry/professional organisations set standards against which to gauge the performance of young people. Denmark, Ireland, France, Italy, the Netherlands and Finland are cited by Cedefop as having effective quality assurance mechanisms (Cedefop, Seyfried, 2007).

3.6. European standards

Allowing greater scope for transfer between vocational and academic streams, and providing the means for progression, requires comparability and transfer of qualifications between vocational and general, academic. The European qualifications framework and national qualifications frameworks will allow this to take place in the future. Among the 25 countries reviewed for this study, three have already adopted national qualifications frameworks (Ireland, France and the UK), and of the rest all, except Cyprus which remains sceptical, intend to introduce such a system in the near future.

4. Recent reforms and development of IVET

IVET systems have evolved from the industrial revolution across Europe. Several major events have shaped that evolution:

- (a) World War II;
- (b) the collapse of the former Soviet Union;
- (c) structural change in the European economy.

World War II created a strong demand for technical labour as a consequence of the demand for munitions, and later for reconstruction, that resulted in a reshaping of IVET systems.

The former Soviet bloc countries in eastern Europe were dependent upon a centrally planned system that determined the number of people to be trained. The Baltic States provide examples of this phenomenon. They have had to create IVET systems that can meet the demands of a market economy at the same time as major structural change has taken place in their economies with a decline in the demand for manual production skills to which the previous IVET systems were oriented. Lifelong learning has also risen in importance.

Across Europe all countries have had to adapt to conditions of a more open Europe and world market and the structural changes this has brought about. The main changes are:

- (a) making systems more responsive to the demands of the labour market (based on involving the social partners and improving the means to predict skill demand);
- (b) a more flexible IVET system that tends not to lock individuals into a narrow stream of vocational preparation;
- (c) increased emphasis on higher levels of skill development and the importance of post-secondary (non-tertiary) and tertiary IVET.

All systems are still undergoing reform as part of a process of continuous improvement based around:

- (a) improving links between vocational education and work (improving employability);
- (b) updating the qualification system and new means of accreditation;
- (c) raising levels of participation;
- (d) creating better links between the various pathways.

Aside from the distinction between the Soviet bloc countries and those of the older Member States there is also a difference between those countries that provide:

- (a) a relatively homogenous structure, with relatively few pathways through the system;
- (b) a relatively heterogeneous structure with multiple pathways.

For example, there is a world of difference between the French system and the numerous vocational qualifications/standards that can be achieved and that of, say, Finland, where there has been progress in consolidating the number of vocational qualifications/courses on offer. But there are still several common features to developing national IVET systems. Across countries, albeit to different degrees, policy-makers are contending with some common issues:

- (a) in many countries there has been an expansion in higher education, with the result that the academic route is favoured by students because it more readily results in entry to higher education;
- (b) in an effort to correct the bias this introduces in national education systems, policy has been directed at making it easier to transfer between academic and vocational routes (especially where the vocational route is viewed as being of lower status);
- (c) there are also implications for curricula and qualifications:
 - (i) curricula need to establish the bases to allow people to transfer between academic and vocational routes – competences obtained in one stream need to be transferable to the other;
 - (ii) the qualification structure needs to allow for comparability, such that, for example, certification of apprenticeship can be compared to awards in other vocational or academic streams;
 - (iii) curricula also need to provide for the future employability of the individual by anticipating skill needs over the medium to long term (hence the involvement of social partners and sectoral experts in designing curricula in some countries).
- (d) provision of greater autonomy to training providers to determine curricula so that content better meets demand;
- (e) policy is looking to make learning more flexible through several means, including individualisation of learning plans (Denmark), the shift to competence-based training (the Netherlands), and the move to modularisation (Austria) (Leney, 2004 a and b);
- (f) there have been efforts aimed at promoting the vocational pathway through:
 - (i) campaigns by the social partners demonstrating the economic benefits to the individual of acquiring vocational skills (UK);
 - (ii) provision of financial incentives to individuals and employers to engage in vocational training (Austria and France).

From the above it can be seen that the degree of change required to ensure IVET systems are responsive to the needs of the labour market – and to the individual – are not only substantial but also multidimensional. Several facets are being addressed simultaneously.

In exploring these themes further, discussion is based around developments aimed at fostering the transition to work with respect to:

- (a) secondary level education;
- (b) the apprenticeship system;
- (c) special programmes to assist young people;
- (d) post-secondary, non-tertiary education;
- (e) tertiary education.

Each of these is now considered in turn.

5. IVET at lower secondary level

For many individuals IVET is, typically, an upper secondary level experience, but in selected countries IVET is an option available at lower secondary level. At lower secondary level, countries can be classified according to whether they:

- (a) offer a distinct, separate course of study;
- (b) provide vocational education as part of a fully integrated general education;
- (c) provide no IVET.

Table 1: Classification of countries according to provision of IVET at lower secondary level

Distinct course of study available at lower secondary level	Vocational studies – other than work experience – included in general education	No IVET reported	
Spain	Belgium	Denmark	Slovenia
Latvia	Czech Republic	Estonia	Sweden
Lithuania	Germany	Ireland	Iceland
Hungary (art schools only)	Austria	Greece	Norway
Netherlands	United Kingdom	France	
Poland		Cyprus	
Portugal		Italy	
Slovakia		Finland	

Except for Belgium, the Czech Republic, the Netherlands, art classes provided in Hungary, and the *dance conservatoire* course of study in Slovakia, IVET offered at lower secondary level explicitly targets young people likely to be early school-leavers, and those who face difficulties in completing compulsory education (there are correspondingly links with special programmes discussed in Section 8). The objective is to help young people enter the labour market, albeit with lower level qualifications.

Some countries include a vocational dimension to general education at lower secondary level. The aim here is to offer prevocational training or guidance to assist pupils with making informed choices on future studies, rather than to provide qualifications to enter the labour market. For instance, in the UK pupils can choose vocational options alongside core national curriculum subjects.

6. IVET at upper secondary level

6.1. The structure of provision

As Figure 1 illustrates, IVET at upper secondary level has three distinct routes:

- (a) that provided in the school system or vocational schools;
- (b) apprenticeship/work-based learning;
- (c) special programmes.

This section considers the role of (a) above – a route that has been increasingly developed over recent years as a means of allowing young people to obtain a labour market relevant education but also one that will allow them potentially to progress to the tertiary level.

In Norway the above three forms of education are offered by the same institutions and have equal status, but this is not the case in most countries where general (academic) education is offered separately. Some countries distinguish between different forms of IVET vocational schools: Slovakia offers a study branch and a training branch, and Portugal provides both secondary education technological courses and vocational courses.

In general, there is increasing recognition of combining academic education with vocational training provided in IVET at upper secondary level. This is manifest in the apprenticeship-based systems in Nordic countries and Germany (Section 7). For example, in Norway upper secondary VET includes two years of apprenticeship training; in Finland work-based training accounts for at least one sixth of the course; and in Iceland IVET is mainly apprenticeship-based. In Germany two thirds of young people enter the ‘dual system’ which combines vocational training in enterprises with a rigorous general/theoretical education in vocational schools. In Germany there are also full-time vocational routes.

6.2. Access requirements and participation

The main access requirement is to have successfully completed lower secondary education by obtaining the relevant qualifications and have reached a certain age (typically 15/16 years). The right to access upper secondary IVET may be also granted up to a certain age: for example, in Sweden, young people aged over 20 must apply for adult education, and in the UK different funding streams are in place for those aged over 24.

Vocational schools are often free to apply their own selection criteria, particularly where demand for places exceeds supply, and entrance examinations are increasing in importance (in Spain and Hungary). In addition to a lack of sufficient study places, geographical limitations may also prevent students from accessing their chosen course. In Germany, access

is determined according to the purpose of the training and whether it leads to a vocational education leading to labour-market entry, or leads to entrance to higher education.

In all countries the aim is to retain young people in the education and training system at the end of the lower secondary cycle, hence there is also a degree of discretion in allowing people to continue in their studies regardless of their lower secondary level attainment. For example, providers may admit students based on their perceived capabilities.

Figure 2 provides an indication of participation levels across countries. It provides information for ISCED level 3 vocational education; the final stage of secondary education. Looking at the percentage of students engaged in ISCED 3 vocational education as a percentage of total participation in ISCED 3 reveals substantial variation between countries. Some of this is due to statistical anomalies, such as in the case of Ireland ⁽²⁾.

The general picture is of differing mixes between vocational and general education at this level. Several groupings are clear:

- (a) low levels of participation in vocational education (less than 30% participation in ISCED 3-voc): Estonia, Italy, Cyprus, Lithuania, Hungary and Portugal;
- (b) medium participation in vocational education (between 30 and 60% participation in ISCED 3-voc): Bulgaria, Denmark, Finland, France, Greece, Iceland, Latvia, Malta, Poland, Spain and Sweden;
- (c) relatively high participation (more than 60% participation in ISCED 3-voc): Belgium, the Czech Republic, Germany, Lithuania, Luxembourg, the Netherlands, Austria, Romania, Slovenia, Slovakia and the UK, as well as Norway and Switzerland.

There is a general trend across Europe for increased participation in higher education (European Commission et al., 2007). If IVET is unable to provide access to higher education – and in all countries the transition from IVET to higher education is less than straightforward – then young people may be discouraged from taking the vocational pathway. Accordingly, there have been several initiatives designed to promote participation in IVET:

- (a) campaigns by the social partners to indicate the importance of vocational training – especially apprenticeships;
- (b) financial incentives to employers and trainees;
- (c) efforts to create parity of esteem between academic and vocational pathways;
- (d) increased integration between academic and vocational education.

⁽²⁾ In Ireland all activities are coded to ISCED 3-general whereas, as ReferNet country studies indicate, there is a vocational stream.

6.3. Curricula and qualifications

Several organisations are involved in setting curricula:

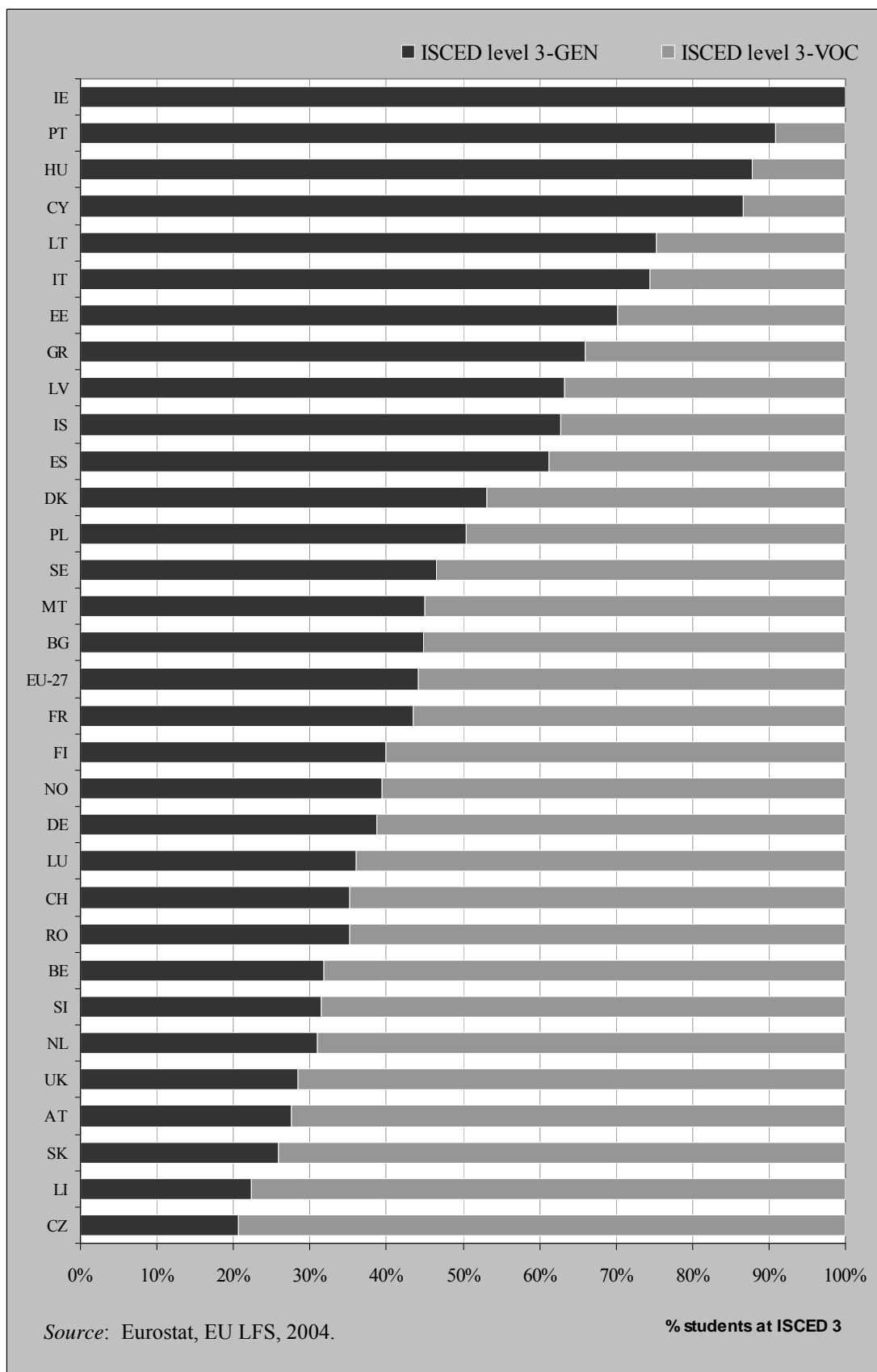
- (a) the State at a central level, usually under the aegis of the Ministry of Education;
- (b) the social partners through a range of committees;
- (c) in some countries (Italy, Norway, Spain) regional and municipal authorities also have a role in establishing complementary standards.

Different countries' Ministries of Education or an equivalent body usually provide the legislative background for preparing the curricula for IVET. In some cases, the Ministry of Education takes a more operational role and defines the subjects, assessment procedures and other details of courses. This is the case in Denmark and Italy, for instance.

In most cases, however, curricula are approved by the State but developed by several agencies, including education and training providers (in Estonia, Lithuania, the Netherlands, Finland) or other bodies such as vocational councils in Iceland, and the National Council for Curriculum and Assessment in Ireland. Here the general structure is one of the State setting an overall framework, within which licensed trade or professional bodies, which include the social partners, set curricula.

In general, the influence of the social partners is determined by the overall strength of social partnership in the labour market. Hence there are northern European countries – Denmark, Germany and the Netherlands where the role of the social partners is relatively strong in shaping the content of IVET – and those where social partnership is much less well established, such as the UK. For example, the emphasis in the UK is on listening to the employer's voice. Social partnership tends to be mentioned in relation to the operation of IVET systems, typically for ensuring that IVET is responsive to the labour market, but there are substantial qualitative differences, as indicated above, in the actual role and influence of the social partners.

Figure 2: Participation in general and vocational education at ISCED 3 (as a % of total participation in ISCED 3)



There has been a trend in increasing the autonomy of schools and regional and municipal authorities in preparing the curricula. In Austria, schools may decide on the amount of time dedicated to different subjects and in Germany schools have a degree of autonomy for the curricula established by the State. In Spain autonomous regions establish curricula guidelines for each qualification; and in Sweden plans describing how schools are to be run are defined by each municipality.

In the school-based system several features are clear:

- (a) development of a multilevel qualification system;
- (b) a strong general component;
- (c) strong emphasis on theoretical and practical learning;
- (d) consolidation of courses/qualifications (making vocational education broader);
- (e) recognition of acquired prior learning (especially where transfer takes place);
- (f) individualisation of learning;
- (g) forward looking perspectives.

Curricula have been developed to allow progression to take place. In some cases this is dependent upon the vocation to which a course is directed, because some occupations are considered to require higher levels of learning. It is also dependent upon the competence of individuals – their capacity to take advantage of higher levels of learning. The existence of a progressive system of qualifications can also aid entry to post-secondary and tertiary education.

Vocational courses tend to possess a strong general component, providing individuals with key skills (numeracy, literacy, and competence in a foreign language), and civic skills (to make people responsible citizens). The balance between general and vocational skills is often specified in a given number of hours to be devoted to each activity.

Within the vocational aspects of courses, depending upon the level at which they are being delivered, there is a need to acquire a theoretical understanding of the vocational skills being taught, as well as being able to show practical competence.

In some countries (Spain, Finland, the UK) there is also a possibility that experience and qualifications gained elsewhere in the system can count towards completion of the current course. This can either be through a credit-based system or some other test of competence. Again, this is by no means a common feature but it is being increasingly deployed in some countries.

Consolidation of courses has had an impact on the number of institutions that provide training and learning, with mergers of schools/colleges taking place in many countries, leading to the reduction in education/training providers. Often this goes hand-in-hand with giving greater autonomy to individual institutions on how they deliver courses, even if the core curriculum is

established by national bodies. There is some evidence that the individualisation of learning is also taking place where institutions have a degree of autonomy to deliver courses in a manner most appropriate to their student population.

Despite several developments outlined above, in many countries most programmes are delivered with a narrow occupational/professional focus. The issue is the extent to which these programmes provide individuals with skills that will aid their employability.

Where there is a narrow occupational focus, it is a moot point whether emphasis on general education (key and civic skills) is sufficient to provide individuals with skills allowing them to vary their career pathways once in the labour market compared to systems providing a more broad-based approach. This is not simply a country based difference; it can also vary by subject.

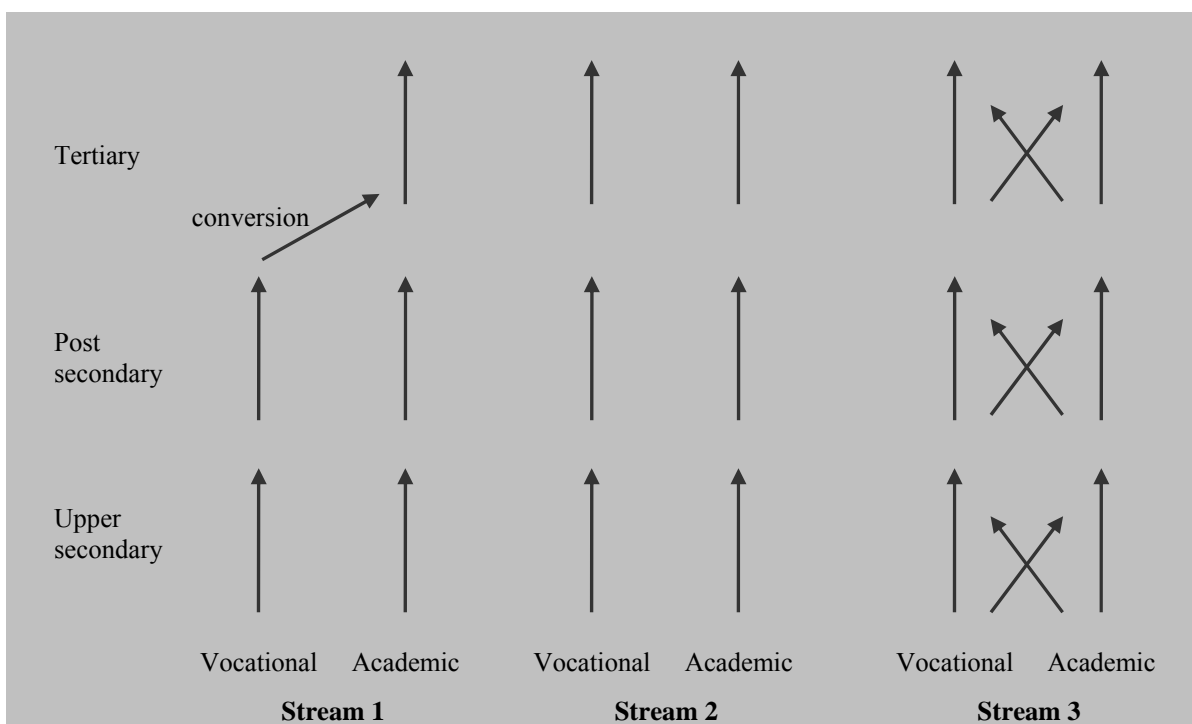
6.4. Outcomes and progression

The importance of transfer and continuing in education stems from two interrelated factors. First, the danger of young people at age 16/17 making decisions which are, in a sense, irreversible, whereas simplifying transfer would enable them to switch between pathways. Second, the increased importance attached to higher level education – given the relatively high rates of return attached to this form of education in many countries – and the drive to increase participation at this level.

Figure 3 shows current pathways through IVET: Streams 1 and 2 are current systems and Stream 3 is the integrated flexible model many countries are striving to develop:

- (a) in Stream 1 third level education is homogeneous and tends not to distinguish between vocational and academic education insofar as courses are provided in institutions providing both types of course and set a common standard for entry (typically based on academic qualification). For those studying for vocational qualifications at upper-secondary level there may need to be some form of conversion course required to gain entry to third level education;
- (b) in Stream 2 the vocational and academic pathways lead to participation in distinct institutions at the third level. In this respect vocational and academic pathways are distinct at all levels of the educational system making transfer between systems difficult either for the individual or for any institution faced with a request for transfer. Often where individuals attempt to transfer they are faced with starting again and so losing time;
- (c) Stream 3 shows what many countries are trying to achieve – a system that allows people to transfer readily between systems as need be. For many countries they are only just beginning to develop the means of transfer through developing curricula and accreditation procedures.

Figure 3: Progression and transfer between academic and vocational pathways



Country examples

- Stream 1:** this tends to be norm across most countries. The vocational stream is seen as distinct and if individuals are to move from the vocational stream to access higher education then they need to pass an examination or gain credits that will allow the transition to take place. Accordingly, the transition from vocational to academic streams is limited for example as in Germany and Denmark.
- Stream 2:** in those countries where there is an established vocational tertiary sector, such as in France where apprenticeship is available to ISCED level 5, or in the UK where there are distinct vocational qualifications at sub-bachelor level, or in Austria where there are distinct vocational colleges at the tertiary level.
- Stream 3:** this is the aspiration – a system allowing people to move between streams to meet their individual needs with suffering the penalty, where possible, of needing to recommence studies when making a switch. It is not clear that any country has achieved this status but the emphasis in policy is to move closer a system that makes less rigid the distinction between IVET and general/academic education.

Several identifiable factors have aided transfer but institutional impediments remain in place in some countries. Helping factors include:

- (d) a strong core curriculum of general education in vocational courses;
- (e) in some countries – Norway, Sweden – all students (vocational and academic) are expected to remain in the same school over the first years of their upper secondary education, or at least share several subjects;
- (f) in several countries – Poland – a system of credits has been introduced allowing transfer – for instance, a given number of credits in course x will count towards the completion of course y to which the individual has switched, under the aegis for instance of national qualifications framework. In theory, a given number of credits can count towards qualification criteria for entry to higher level courses (Finland, the UK);
- (g) this is sometimes linked to a qualification structure and has been designed to allow comparability across qualifications (the 10-level structure in Ireland: level 1 foundation to level 10 doctoral);
- (h) use of modular courses allowing people to move readily across courses.

But there are also strong forces of inertia:

- (a) few people move between apprenticeships and more academic streams;
- (b) there is a belief in many countries that it is easier to move from the academic to the vocational stream rather than the other way round;
- (c) where vocational education is provided in separate institutions this can sometimes be a barrier to transfer (it is easier to move within than between institutions);
- (d) where responsibility for education and the IVET system is divided between various bodies (national, regional, and municipal).

7. Apprenticeship

7.1. The structure of provision

Apprenticeship training refers to a structured plan of learning divided between the workplace and training centre/school. The classic apprenticeship model is one where individuals receive practical training at the workplace and general/theoretical education at a training school or centre, with a core curriculum prescribed by the social partners and sectoral/professional bodies, but which may be elaborated at local level. In several European countries – especially the northern ones – apprenticeship was the dominant form of IVET during most of the 20th century, but there are now a wider range of options available to young people, such that many national systems have set about reforming the apprenticeship system to make it more attractive to young people and relevant to the labour market, both now and in the future.

As will be discussed below apprenticeship still provides in many instances a specialised vocational preparation giving access to an occupation. There are questions about the extent to which transferable skills are provided and the extent to which apprenticeship training allows for progression within the context of IVET (or transfer to other streams of IVET). There has also been some revision of the age of entry and exit – with the latter being extended in some cases to beyond 25 years in an effort to increase take up (Italy).

Countries can be classified according to where there is:

- (a) no or, no typical apprenticeship system (the Czech Republic, Lithuania, Slovakia);
- (b) small-scale activities affecting a small part of the potential population (Estonia, Greece, Cyprus, Latvia, Sweden, the UK);
- (c) large-scale activity (the remaining countries). In Denmark it is the only recognised form of IVET and in Germany it accounts for two thirds of all post-compulsory education.

In Hungary, apprenticeship is not classified as a separate pathway but simply as a means of delivering practical training at several educational levels.

7.2. Access requirements

Entry into apprenticeship is usually based on successful completion of lower secondary level education, but in some instances (Poland, Spain ⁽³⁾) it is also a form of training aimed at those who did not complete lower secondary school, have difficulty accessing other forms of training or entering the labour market. In these cases there is an overlap with special programmes assisting groups of young people vulnerable to social exclusion.

⁽³⁾ In Spain this is ‘school workshop’ mode rather than the ‘training contract’ mode.

In all apprenticeship systems emphasis is on time being spent with the employer and time spent at vocational schools, where apprentices are given both general education and a theoretical understanding of their vocation. In general, the balance between on-the-job training at the workplace and that spent in training schools is set up by regulation. Normally, apprentices are employees of an enterprise – but in most cases only until training is completed. A contract exists between the employer and apprentice, with the employer abiding by various regulations regarding the hiring of apprentices, and with the institution delivering apprenticeship (the education institution). Where collective agreements are in place these are central to determining the number of apprentices, their contractual position, and wage levels.

Apprenticeship training commences at the start of upper secondary level and lasts for two to four years. In general, it is a form of training open to people aged 16-25, with the expectation it will be completed by age 21-25 (depending on the country). There is, however, considerable variation by both country and vocational area, with some apprenticeships only taking between one and two years to complete.

7.3. Promoting participation

Apprenticeships are now showing signs of growth – for example in Hungary numbers have tripled between 2000 and 2005, and in the UK the number of apprentices has increased after a period of decline.

Governments have sought to increase the number of apprentices because it is recognised as providing output for which there is demand in the labour market. Participation is promoted in two ways:

- (a) campaigns by the social partners to emphasise the benefits to the individual – and the employer – from completing an apprenticeship;
- (b) providing incentives – many of which are long-standing – to cover some of the employers costs of apprenticeships (such as apprentices' wages while training).

There have also been attempts to make the curricula more attractive to students, such as emphasis upon foreign language training in Austria. These provide a broad-based, general education to increase an individual apprentice's employability. As mentioned above there have also been moves to increase the upper age at which people are eligible for apprenticeships thus increasing the stock of people from which apprentices can be recruited.

7.4. Curricula

Curricula are set up to meet industry/occupation standards by national or regional regulatory bodies. In general, the State plays a role in providing a framework within which expert groups representing a trade or industry (that usually includes the social partners) establish the curriculum for their respective apprenticeships.

There is, in most examples of apprenticeship training, emphasis on general education, and vocational education, both theoretically and practically oriented. In countries such as Denmark and Germany, there is usually a core curriculum around which an individualised training programme is designed to ensure that apprentices' and employers' needs are fulfilled. The UK is an exception in that general education is not an important element of the apprenticeship programme except where it is required to meet a vocational need (mathematics in engineering apprenticeships).

Despite emphasis on general education in most systems there is generally little opportunity to progress beyond the apprenticeship system (or even transfer into other streams of IVET). Exceptions are France, Italy and Hungary. Italy has recently introduced a graduate level apprenticeship system and the French system allows for apprenticeship training to ISCED 5, even if most of it is delivered at ISCED 2. Implicit in these systems is the idea of progression. In Hungary, apprenticeship is available at several levels as a means of acquiring practical experience. In countries such as Germany and Iceland there is also a possibility of gaining a master level qualification (at ISCED 4). Similarly, in Denmark there is a two-stage apprenticeship, with the first level leading to a skilled worker certificate and the second level leading to master level recognition.

Reform of apprenticeships is often subject to the agreement of several parties at national, regional, municipal and sectoral levels.

7.5. Outcomes

The goal of apprenticeships is to provide vocational training taking place at schools or educational institutions and at the workplace or more practical setting to prepare students for employment. In most countries offering the apprenticeship pathway, completion of an apprenticeship results in the award of a certificate or formal qualification. In some countries, such as the Netherlands and Portugal, this qualification may enable students to enter further education or training programmes while in others, such as Latvia, this is not the case. In Poland and Sweden, to grant access to further learning, an apprenticeship programme must be supplemented by additional theoretical learning or courses.

The apprenticeship route, however, is viewed mainly as a route directly into the labour market and in most countries with this pathway, successful completion of the programme permits apprentices to gain employment in specific professions and to be considered a qualified worker in this profession. Progression often belongs to lifelong learning rather than being a structured element of the apprenticeship programme.

8. Special programmes

8.1. The nature of provision

Special programmes refer to the measures in place to assist young people who struggle to find a training place and/or at risk of being unemployed. They are primarily concerned with providing young people with the basic skills that will assist them find work or secure a place on a training programme in the formal IVET system.

Evidence reveals there are considerable labour market penalties for individuals with low educational attainment, evidenced in higher probabilities of being unemployed (and recurrently unemployed) and lower income levels over the lifecycle (OECD, 2006). Increasingly emphasis is on encouraging participation in education, especially to the third level, but there is recognition within this policy that for many even a basic standard of educational attainment will be difficult, hence the design of special programmes to assist these people.

Many countries provide special programmes to assist with the transition from school to work of young people otherwise at risk of social exclusion – often those who have failed to achieve a satisfactory attainment in lower secondary school ⁽⁴⁾. It forms part of an overall mosaic of active labour-market policy and often overlaps with programmes aimed at assisting adults. Several types of activity can be identified:

- (a) programmes specifically designed to help young people, usually assisting them with the development of basic key skills (numeracy and literacy);
- (b) programmes aimed at specific groups of individuals in the labour market (travellers in Ireland and Roma in Slovakia) without reference to age.

Table 2 shows the countries that have special programmes.

⁽⁴⁾ As noted above there is some overlap with apprenticeship systems in this regard.

Table 2: *Provision of programmes to assist the educationally disadvantaged*

	No provision		Provision		Provision
Estonia	X	Belgium	√	Netherlands	√
Greece	X	Czech Republic	√	Austria	√
Spain	X	Denmark	√	Poland	√
Italy	X	Germany	√	Portugal	√
Cyprus	X	Ireland	√	Slovenia	√
Iceland	X	France	√	Slovakia	√
Norway	X	Latvia	√	Finland	√
		Lithuania	√	Sweden	√
		Hungary	√	United Kingdom	√

Where groups are difficult to reach, or it is difficult to sustain people in learning, several features are clear such as allowing people to reenter programmes as they wish, and provision of courses in settings in which people are comfortable, such as providing learning in their own communities. Other programmes, however, are more distinct, providing a fixed programme over several years leading to a certificate upon completion.

Some countries have raised the school leaving age to 17-18 with the result that participation in special programmes can be mandatory if individuals have not obtained entry to other courses or programmes (Italy). Generally, participation is voluntary, although there are often strong incentives provided indirectly by the social security system to encourage people to participate – especially where allowances are paid to the individual to participate in these programmes.

The Czech Republic and Slovenia are exceptions to the above in that special programmes also provide for people to continue their vocational preparation – in Slovenia the courses are available to those who have completed their vocational training but would like to start their own businesses, and in the Czech Republic special language courses are defined for people who have completed upper secondary level ⁽⁵⁾.

8.2. Access requirements

There are few restrictions on entry to other youth programmes. Access is determined, in large part, by ineligibility to enrol in other IVET programmes (Table 3). There are few entry requirements, as Table 3 below shows, other than age restrictions (usually people have to be

⁽⁵⁾ It is a moot point whether courses in Slovenia and the Czech Republic should be classified as post-secondary/non-tertiary education.

aged 25 or under); and in Denmark, Austria, Poland and Portugal to have completed compulsory education.

There is also an allocation process to consider. In several countries there is a placement process whereby young people are assigned to courses. For example, in Austria, the public employment service assigns young people to appropriate courses, in Lithuania young people may be referred by the Children Rights Protection Agency or Juvenile Affairs Inspection, and in Poland by social services, the police, or school careers advisors.

Overall, access to other youth programmes is determined by failure either to secure a place in another IVET programme at upper-secondary or apprenticeship level, or to secure sustainable employment.

Table 3: Access requirements to other youth programmes

Access requirements	
Belgium	The target group is young people who have ceased participating in training measures and/or are out of work.
Czech Republic	Access determined by language schools.
Denmark	Completion of compulsory education.
Germany	Young people lacking the preparedness to enter the labour market.
Ireland	15-18 year olds with less than five Grade D passes in the Junior Certificate.
France	Those aged under 26 without qualifications and the unemployed. Specific access requirements depend upon particular courses.
Latvia	No specific access requirement
Lithuania	12-16 year olds who have failed in lower secondary education and 16-18 year olds looking to improve their skills.
Hungary	No specific entry requirements.
Netherlands	No specific access requirement.
Austria	At least two years of compulsory schooling and failure to acquire and apprenticeship.
Portugal	Aged over 15 and have completed compulsory education.
Slovenia	Successful completion of vocational education.
Finland	No specific access requirement.
Sweden	Based on ineligibility to participate in other IVET programmes.
UK	Young people lacking the preparedness to enter the labour market.

Source: Cedefop ReferNet.

8.3. Curricula

Common to all countries providing other youth programmes is delivery of basic skills allowing individuals to participate in the labour market. This reflects the emphasis on providing these skills to individuals to avoid unemployment. Other features worthy of note are:

- (a) assistance to young people with particular problems such as substance abuse (in Finland);
- (b) courses tend not to be examined but often lead to a certificate based on attendance;
- (c) in Austria and Ireland provision is designed to ease progression; in Sweden to access the apprenticeship scheme and in Ireland to a progression stage in the Youthreach programme;
- (d) courses share a common structure in the first year of apprenticeship training in Austria and Poland;
- (e) in Denmark programmes have a modular aspect so that completion of one training module can be accredited to other training programmes;
- (f) there is an orientation to the particular needs of the individual in Denmark and Sweden;
- (g) a practical orientation with workplace-based training emphasised in Poland;
- (h) an alternative stream to secondary education in Lithuania.

Despite the variations in provision listed above the emphasis across countries is on providing the basic literacy, numeracy, and work readiness skills to allow people to function in the labour market.

8.4. Outcomes

Learning outcomes in all countries are described with reference to provision of qualifications and or certificates, except in Ireland where learning outcomes are defined with reference to the transition to employment, education, or training. It is possible to classify countries as follows:

- (a) courses leading to a qualification through examination, as in Latvia, Lithuania, Poland, and Portugal. Where individuals fail to acquire the qualification there tends to be an award of a certificate based on attendance. Gaining a qualification provides access to other IVET programmes at secondary level or apprenticeship;
- (b) countries relying more on certification rather than examination as in Denmark, Austria, Finland and Sweden. In Denmark and Sweden the outcome sought from the programmes is a possibility to access other IVET programmes.

Aside from some comments on the impact of different programmes, evaluation data are not provided about the extent to which other youth programmes are effective in reconnecting disadvantaged young people's access the labour market.

9. Post-secondary, non-tertiary IVET

9.1. Structure of provision

IVET at this level is placed between upper secondary and tertiary levels of education. As post-secondary education it is classified as ISCED 4: ‘programmes that straddle the boundary between upper-secondary and post-secondary education from an international point of view, even though they might clearly be considered as upper-secondary or post-secondary programmes in a national context’ (Unesco, 1997, p. 31).

France, Norway, Slovenia, Spain, and the UK have no post-secondary, non-tertiary IVET. It is also clear that IVET, at this level, is sometimes aimed at vocational activities principally delivered through tertiary education elsewhere (in Austria). In Ireland and Cyprus there is also an element of active labour-market policy attached to IVET at this level. In both countries there is an element of provision concerned with equipping unemployed people to access the labour market.

Apart from the exceptions listed above, post-secondary education, in general, allows individual students to obtain a greater level of specialisation in their chosen vocational/professional fields. This tends to equate with the master level with respect to apprenticeship training and provides the skills/competences to allow people to work independently. In nearly all countries providing post-secondary IVET, students are able to pursue their studies across a range of disciplines/subjects, though it occasionally has a sectoral focus (in Austria emphasis is on healthcare, and in Lithuania it is towards business and administration).

The general impression is that IVET constitutes at this level a small part of the overall IVET system with low participation compared to participation in upper secondary courses. That said in the Czech Republic, Germany, Hungary and Iceland continuing vocational preparation beyond ISCED 3 is a well established pathway, even if is a relatively small-scale activity compared to other levels of vocational preparation.

In the EU, ISCED 4 accounts for just over 1% of all enrolments at all ISCED levels ⁽⁶⁾.

9.2. Access requirements

The general requirement for access is successful completion of upper secondary level education, but there is a degree of flexibility:

- (a) experience will give access to some courses/institutions (Ireland);

⁽⁶⁾ Eurostat records around 112 million in EU-27 studying towards an ISCED level qualification, of which nearly 1.5 million were studying at ISCED level 4 – 1.24%.

- (b) being employed or in need of additional skills to gain access to employment will grant entry in countries such as Denmark, Italy and Sweden;
- (c) where people do not have the skills/qualifications/experience required, training is available to assist with entry to IVET at this level (in Portugal).

Demand often outstrips supply so candidates need to demonstrate not only that they are able to satisfy entry requirements but have the capability to benefit from the training provision on offer.

9.3. Curricula

Institutions providing IVET at this level tend to have a degree of autonomy for the content and delivery of training. Several points can be made:

- (a) courses, on average, tend to last for one to two years;
- (b) attendance is usually full-time, but part-time provision is available in those countries where being employed is a prerequisite for entry (in Denmark and Sweden);
- (c) when developed by institutions courses are generally subject to approval by national authorities. Where the course is designed to provide access to a trade or profession employers are also involved (either nationally or locally) in their design;
- (d) courses provide a mix of theoretical and practical training and, sometimes, work-based training.

Provision and curricula are heterogeneous as they are determined in large part by the specific needs of the vocation/profession in which greater specialisation is being sought.

9.4. Learning outcomes

Learning outcomes are as follows:

- (a) a certificate providing proof of course completion, and often examination and assessment leading to a qualification with the generic title ‘advanced vocational qualification’;
- (b) providing access to the labour market at an appropriate level to the qualification;
- (c) fostering career progression for those in work (in Denmark);
- (d) meeting specific skill shortages in an economy (in Ireland);
- (e) where course provision is concerned with continuation of studies in a selected trade at upper secondary level – as in Iceland where it is a continuation of the apprenticeship route – direct access is provided to a profession or trade;
- (f) where courses are not so closely linked to a profession or trade – as in Denmark and Estonia – the certificate or qualification obtained does not grant direct access to a regulated profession or trade.

10. Tertiary level IVET

10.1. Structure of provision

At tertiary level it is usual to differentiate between academic and vocational streams, though in practice there is a degree of overlap between them. The ISCED classifies 5A programmes as tertiary ones ‘that are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skills requirements’. More vocationally oriented courses are classified as 5B and ‘are typically shorter than those in 5A and focus on occupationally specific skills geared for entry into the labour market, although some theoretical foundations may be covered in the respective programme’ (Unesco, 1997, p. 35).

The evidence – summarised in Table 4 – shows that the concept of vocational, tertiary level education, as a distinct entity, is much more advanced in some countries than others. There may also be definitional problems with some countries much more willing to concede that some elements of third level education are vocational than others. Also, several university courses leading to bachelor level awards are often vocational (engineering, medicine, etc.) but it is likely that these are classified as academic (ISCED 5A) rather than vocational courses (ISCED 5B).

Within IVET there is also potential for overlap with continuing vocational education and training where entry is granted to people who decide to further their studies after a period of work. As will be seen below, access to training at this level is sometimes through work experience.

Across countries there are two distinct types of provision identified in Table 4:

- (a) countries with distinct institutional arrangements for delivery of tertiary IVET;
- (b) countries with vocationally oriented courses provided at tertiary level but subsumed within the general, academic stream (5A).

Table 4: Types of provision of tertiary IVET

Distinct institutional arrangements	No distinct arrangements
Belgium	Greece
Czech Republic	Cyprus
Denmark	Hungary
Germany	Poland
Estonia	Portugal
Ireland	Slovakia
Spain	United Kingdom
France	Iceland
Italy	
Latvia	
Lithuania	
Austria	
Netherlands	
Slovenia	
Finland	
Sweden	
Norway	

Participation in ISCED 5B is relatively small compared to total participation at ISCED 5 except for Belgium, Croatia, Cyprus, Estonia, Greece and Slovenia. Figure 4 shows these data for each country.

Where distinct institutional arrangements are provided education tends to take place at institutions other than universities, such as polytechnics, university colleges, etc., leading to a distinct qualification. Where no distinct arrangements are in place, education tends to refer to more vocationally oriented subjects provided in the general, academic tertiary stream, but which tend otherwise to have the same characteristics as general, academic courses.

In Italy, vocational tertiary education is defined with reference to post-graduate studies and, in this respect, is exceptional.

In several countries – such as Greece, Iceland, Norway – there is no distinction between vocational (ISCED 5B) and academic (ISCED 5A) higher education. In several countries specialised institutions – such as *Fachhochschulen* in Austria, polytechnics in Finland and institutes of technology in Ireland – provide applied tertiary education. In others it is delivered by the public or private university system.

10.2. Access requirements

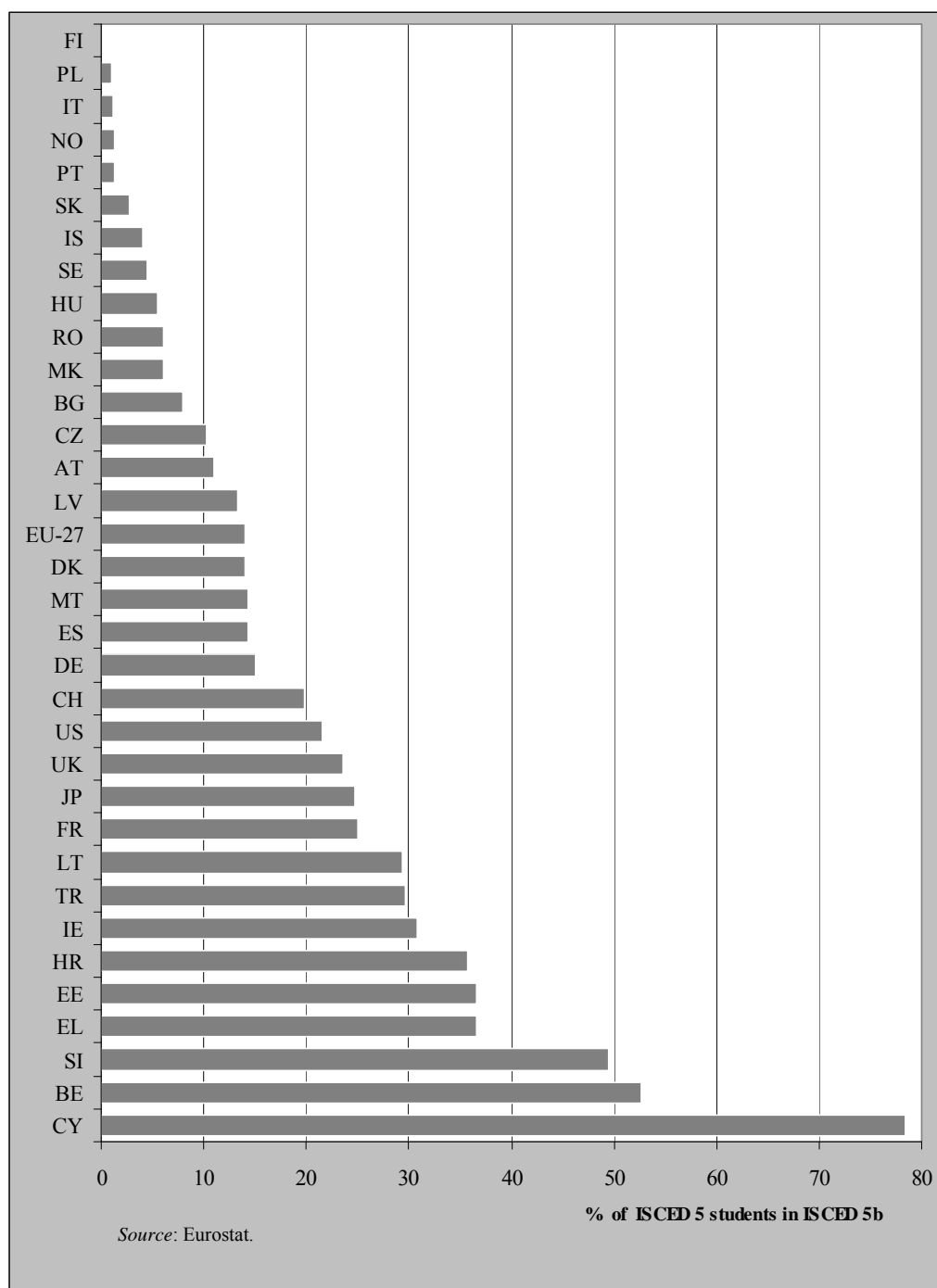
Access to vocational tertiary education depends on successful completion of upper secondary level education (possession of the relevant qualification) typically at a high level (better than average performance). But there is an opportunity to obtain access through:

- (a) an entry examination (in the Netherlands if the individual does not have the formal qualifications necessary for entry);
- (b) relevant experience (especially for older entrants, in Ireland and Finland).

While countries require, in general, successful completion of upper secondary level education for entry to tertiary level education, for vocational courses – other than those related to high demand courses where a high academic education is required for entry, there tends to be a degree of discretion available to course providers. This varies by course type and level rather than by country. Hence emphasis is placed on experience and the option of taking an entry examination.

Competition for entry to some courses is strong. In general, demand is greater for entry to the general academic stream (5A) than to the vocational stream (5B).

Figure 4: Percentage of all ISCED 5 students enrolled in ISCED 5b (2005)



10.3. Curricula

The characteristics of institutions providing vocational tertiary level education are the following:

- (a) autonomy in setting up their curricula within certain limits fixed by Ministries of Education or related agencies;

- (b) curricula set up by institutions must meet the standards fixed by Ministries of Education or related agencies;
- (c) assessment of students is carried out by the institutions but their standards are also subject to external assessment by national agencies with responsibility for tertiary education.

The type of course varies substantially across the EU:

- (a) full-time courses taking two to four years to complete, leading to the award of a diploma level qualification (in Denmark where long duration course are available in business schools, or the UK where sub-bachelor level awards are available);
- (b) shorter courses offered in some countries – one to two years – aimed at developing further the skills of those already employed or meeting skill shortages (in Ireland where conversion courses are available for people to turn their existing qualifications into those where there are skill shortages).

There is some evidence of modular courses being introduced in the vocational domain. In Finland, for example, partial awards are available where students have studied several elements of the overall programme. Courses are based on acquisition of practical and theoretical knowledge, but the importance of work experience is not evident in many instances.

The newer Member States of the EU are moving towards implementing the European credit transfer system.

Developing vocational tertiary level education is new in countries such as Latvia, Lithuania and Austria. It has arisen with increased recognition that people require higher level skills to develop their careers in some occupations or industrial sectors. Hence vocational education is often aimed at specific industries – such as tourism, engineering and construction – allowing people to acquire higher level skills through a vocational pathway just short of achieving a bachelor level award. Where vocational education is recognised at the third level it tends to lead to the award of a subdegree, diploma level qualification assessed by either examination, continuous assessment, or both.

Approaches to teaching and assessment also vary. In some countries it is necessary to undertake practical work experience (30% of activity in Estonia) with qualification dependent on continuous assessment and/or examination.

At this level, IVET can be part of a conversion process allowing students, who up to this stage have taken the vocational pathway, to enter the university system. In this way tertiary level vocational education can be seen part of a process giving students the possibility of progression to the highest level of their national education system (the award of first and higher degrees by universities).

10.4. Outcomes

The main outcome is the qualification achieved through assessment and examination. Where there are separate institutional arrangements for delivery of education it leads to a qualification (usually referred to as a diploma) that is distinct from the bachelor's award provided in the first stage of the general academic stream (5A). In theory, obtaining a vocational qualification gives access to universities to study towards a bachelor level award or a post-graduate qualification, but in practice the main outcome is entry to the labour market.

11. Typology of IVET

Much of the discussion has been about the reform of national IVET systems such that they are more adaptable to current and future labour market needs. Two of the driving forces in the reform have been:

- (a) transfer – allowing people to move between modes of post-lower secondary level education (academic, school-based vocational education, and apprenticeship) without penalty;
- (b) progression – allowing young people to progress to the highest levels of educational attainment through the IVET route.

In combination these concepts give an indication of how integrated IVET provides a linked form of education, and how well integrated it is with the academic stream of study. Based on these two dimensions Table 5 provides a classification of IVET systems and Table 6 ascribes country models.

Table 5: Typology of integration of IVET – criteria

Integration	Level			
	Lower secondary level	Upper secondary level: vocational training	Apprenticeship	Tertiary
Yes	IVET provided as part of a fully integrated general education	Extent of shared curricula, ability to transfer to other streams	Emphasis upon a strong general education, ability to transfer to other programmes	Tertiary education part of the general university system; ease of progression to bachelor level
No	Distinct IVET system available	Distinct courses with little chance to transfer and/or progression	Distinct programme of study; transfer unlikely; limited scope for progression	Tertiary delivered by separate institutions; progression to bachelor level uncertain

Table 6: Typology of integration of IVET – countries ^(a)

Integration	Level		
	Lower secondary level	Upper secondary level: vocational training	Apprenticeship ^(b)
Yes	Belgium	Belgium	Germany
	Czech Republic	Czech Republic	Greece
	Estonia	Germany	France
	Spain	Estonia	Italy
	Italy	France	Hungary
	Austria	Cyprus	Netherlands
		Hungary	Poland
		Austria	Norway
		Poland	
		Slovenia	
		Sweden	
		Norway	
		Iceland	
No	Latvia	Denmark	Belgium
	Lithuania	Ireland	Estonia
	Netherlands	Greece	Ireland
	Poland	Spain	Spain
	Portugal	Italy	Cyprus
	Slovakia	Latvia	Latvia
		Lithuania	Austria
		Netherlands	Portugal
		Portugal	Slovenia
		United Kingdom	Finland
			United Kingdom
			Iceland

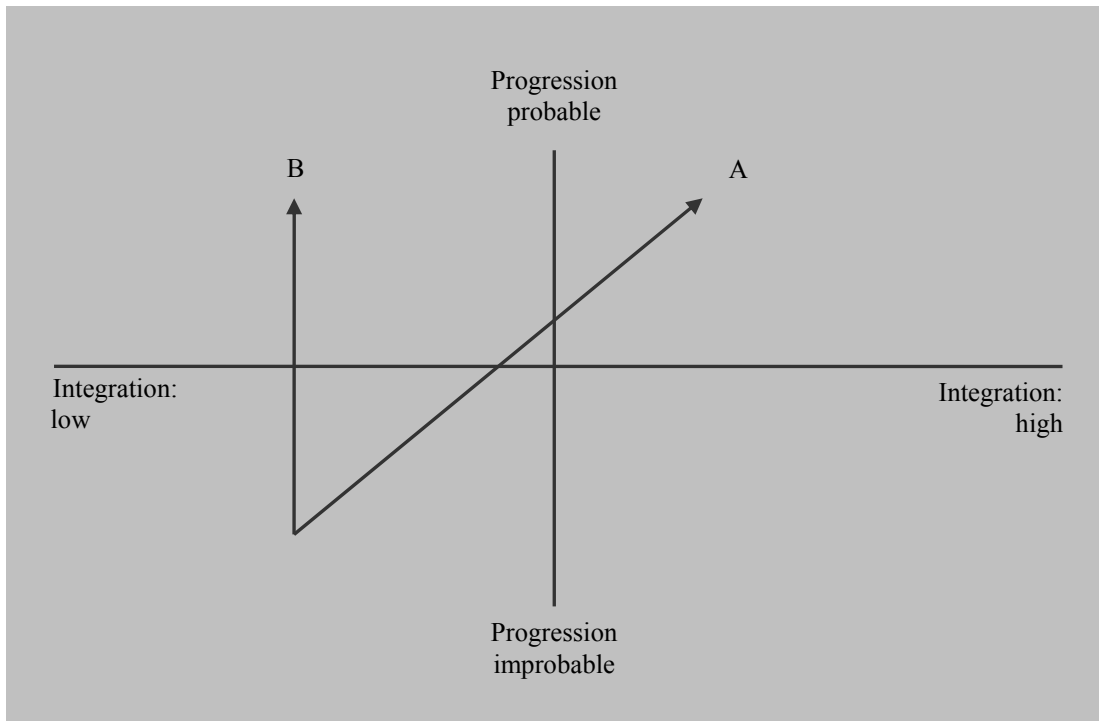
^(a) Due to different definitions used to classify IVET at the tertiary level it has not been possible to assign countries.

^(b) Whereas some countries stated that their apprenticeship programmes were integrated to their upper secondary level IVET, Lithuania, Slovakia and Sweden, stated that they do not offer apprenticeship programmes.

Figure 5 shows the two generic pathways adopted by countries for developing their IVET systems. The first, Pathway A, is based on integrating the IVET system into the general education system. It is possible to transfer readily between vocational and academic streams without being penalised by having to start again when transferring, thus ensuring that transfer does not hinder progression. The second, Pathway B, is based on allowing progression, and the possibility of transfer, but is grounded in a distinct IVET system (distinct curricula, separate institutions). At the end of Pathway B, if the individual achieves tertiary education it

will be a vocational one, whereas in Pathway A there is every possibility that it might be either academic or vocational.

Figure 5: Pathways in IVET and the general education system



Countries differ according to whether they have chosen Pathway A or B, and the distance to travel to reach point A or B. There are also differences by type of IVET with apprenticeship/ alternance categorised according to Pathway B in nearly every country. In many respects the newer Member States, especially those of the former Soviet Republic (the Baltic States), are starting with a blank sheet of paper as they have dispensed with their former models. In the older Member States the process of reform can be complicated because existing pathways are firmly established. That said, new Member States have the longest distance to travel.

12. Conclusion

IVET in each country faces the challenge of adapting to changing demands – both current and future – in the labour market. These challenges are essentially those of increased international competition and the degree of structural change to which this gives rise in national economies, combined with a need to help those socially excluded. The former has been most manifest in apprenticeship training where it has historically focused on traditional areas of industrial activity. The general challenge for IVET systems is to provide young people with skills and competences to access and maintain their position in the labour market and to progress within it, thereby sustaining their employability.

While most IVET systems have undergone a period of reform it is a moot point whether or not they have achieved the goal of delivering sustainable employability for their participants. One approach to this problem is to increase the breadth of knowledge provided to individuals: emphasis is on a broad-based general and vocational education. There is evidence of this taking place, especially in the non-apprenticeship vocational stream (Figure 1), but similarly there is evidence of many vocational streams being narrow in focus. There has to be a question mark over the extent to which this will serve people well over their working lives. Hence the importance of lifelong learning in building upon the foundations put down by national IVET systems.

Market competition brings about a common set of challenges to national IVET systems, and to some extent there is evidence of mimetic behaviour as systems learn from one another in responding to these challenges. While the challenge is the same, the commonality of responses should not be overemphasised. The structure, regulation, and orientation of national systems are sufficiently different that the outcomes of change at country level can be different. There is, for instance, a world of difference between the dual system in Germany and the vocational system in the UK.

From this brief review of national systems several groupings can be identified:

- (a) northern European countries with a long tradition of collective bargaining, where the social partners have set up a regulatory system for determining the content of IVET;
- (b) eastern European systems that have had simultaneously to adapt their IVET systems to meeting the needs of a market economy and adapt to increased competition in what were once closed markets;
- (c) largely market driven economies with little tradition of social partnership (the UK and, until relatively recently, Ireland) but where the employer's voice is strong.

In summary, it is possible to make the following conclusions on IVET in Europe:

- (a) there is a vast array of different courses and ways of providing and managing them but at macro level a common pattern emerges (as described in the main body of this report and summarised below);

- (b) the general rationale for IVET is common across countries – preparation for employment;
- (c) often IVET still has a relatively low status compared to academic education. Some countries have managed largely to avoid this distinction by integrating academic and vocational streams, but in the Netherlands, for example, they are explicitly not looking towards integrating IVET and academic strands;
- (d) Germany stands out given the high levels of participation in IVET via the dual system;
- (e) efforts are being made to improve the status of IVET through several activities designed to promote its value and importance;
- (f) IVET is often a safety net for those who have not met a sufficient level of educational attainment in the compulsory education system and are potentially at risk of social exclusion;
- (g) accordingly special measures to encourage IVET are often focused on disadvantaged groups, to try to reengage them in education and training;
- (h) in some cases IVET can be a stepping stone to higher education; this is still not universal but there is a general trend towards this opportunity for progression;
- (i) the social partners are generally closely involved in course design and delivery – but less so in countries with a more Anglo-Saxon approach to the labour market – and employers play a significant role in virtually every case to ensure that labour supply meets demand;
- (j) local delivery is common and there is evidence of the devolution of IVET where individual schools and training centres have a degree of autonomy over the delivery of learning;
- (k) there is some evidence of the individualisation of learning, where the core curriculum is guaranteed but there is scope to tailor training to individual needs and aspirations;
- (l) most, but not all, provision is publicly financed;
- (m) the mix between work experience and formal training, and between theory and practical aspects, in the various courses are fairly similar across countries. There is emphasis on general education – numeracy, literacy, foreign languages, etc. – in providing young people with a broad-based education in the IVET system.

These are generic trends although they are not necessarily fully represented in every country. IVET varies both by country and type or mode of provision, but the above points summarise the main trends in IVET across Europe.

13. Country codes

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

HR	Croatia
MK	former Yugoslav Republic of Macedonia
IS	Iceland
JP	Japan
NO	Norway
CH	Switzerland
TR	Turkey
US	United States of America

14. Bibliography

Cedefop; Lipinska, P. et al. *Zooming in on 2010: reassessing vocational education and training*. Luxembourg: Publications Office, 2007. (Cedefop Reference series). Available from Internet:

http://www.trainingvillage.gr/etv/Upload/Information_resources/Bookshop/474/4060_en.pdf [cited 11.9.2008].

Cedefop; Seyfried, E. *Indicators of quality in VET: to enhance European cooperation*. Luxembourg: Publications Office, 2007b (Cedefop Panorama series; 134). Available from Internet:

http://www.trainingvillage.gr/etv/Upload/Information_resources/Bookshop/469/5167_en.pdf [cited 11.9.2008].

Council of the EU. *Presidency conclusion: Lisbon European council 23 and 24 March 2000*. Brussels: General Secretariat of the Council of the European Union, 2000.

European Commission, *Declaration of the European Ministers of Vocational Education and Training and the European Commission convened in Copenhagen on 29 and 30 November 2002, on enhanced cooperation in vocational education and training*. Brussels: European Commission, 2002.

European Commission. *Maastricht communiqué on the future priorities of enhanced European co-operation in vocational education and training: a review of the Copenhagen declaration of 30 November 2002*. Brussels: European Commission, 2004.

European Commission. *The Helsinki communiqué on enhanced European cooperation in vocational education and training: communiqué of the European Ministers of Vocational Education and Training, the European social partners and the European Commission convened in Helsinki on 5 December 2006 to review the priorities and strategies of the Copenhagen process*. Brussels: European Commission, 2006a.

European Commission. *Communication from the Commission to the Council and the European Parliament: delivering on the modernisation agenda for universities: education, research and innovation*. Luxembourg: Publications Office, 2006b (COM (2006), 208 Final).

European Commission; Eurydice; Eurostat. *Key data on higher education in Europe. 2007 Edition*. Luxembourg: Publications Office, 2007.

Leitch Review of Skill. *Prosperity for all in a global economy: world class skills: final report*. London: the Stationary Office, 2006.

Leney, T. *Achieving the Lisbon goal: the contribution of VET: executive summary*. London: QCA, 2004a.

Leney, T. *Achieving the Lisbon goal: the contribution of VET*. Final report. Brussels: European Commission, 2004b.

Sapir, A. et al. *An agenda for a growing Europe*. Oxford: Oxford University Press, 2004.

OECD. *Education at a glance 2006*. Paris: OECD, 2006.

Unesco. *International standard classification of education: ISCED 1997*. Paris: Unesco, 1997.