How to improve the standing of vocational compared to general education.
A collaborative investigation of strategies and qualifications across Europe
Johanna Lasonen, Sabine Manning

Extract from:

Descy, Pascaline; Tessaring, Manfred (eds.).
Training in Europe

Reproduction is authorised provided the source is acknowledged.

Additional information on Cedefop’s research reports can be found on:
www.trainingvillage.gr/etv/research/index.asp

For your information:

- The background report to the second report on vocational training research in Europe contains original contributions from researchers on different themes. It is published in English only. However, contributions were written in languages other than English, and readers interested in these should contact Cedefop or the authors directly. A list of contents is on the next page.
- A synthesis report (about 450 pages) with additional research findings is being published in English, French, German and Spanish in the course of 2001.
  Bibliographical reference of the English version:
- In addition, an executive summary in all EU languages (about 50 pages) is available from Cedefop free of charge.

The background and synthesis reports are available from national EU sales offices or from Cedefop (www.trainingvillage.gr/etv/publication/form1.asp).

Prices in Luxembourg (excluding VAT): EUR 21 for the background report (3 volumes); EUR 19 for the synthesis report.
Price for the synthesis report and the background report in Luxembourg (excluding VAT) in a box: EUR 29.50.
Addresses of the national sales offices can be found at: http://eur-op.eu.int/general/en/s-ad.htm.

For further information contact:
Cedefop, PO Box 22427, GR-55102 Thessaloniki
Tel.: (30-31) 490 111
Fax: (30-31) 490 102
E-mail: info@cedefop.eu.int , Homepage: www.cedefop.eu.int ,
Interactive website: www.trainingvillage.gr
Contributions to the background report of the second research report

VOLUME 1

Part One: VET systems, coordination with the labour market and steering

Steering, networking, and profiles of professionals in vocational education and training (VET)
Lorenz Lassnigg

Financing vocational education and training
Andy Green, Ann Hodgson, Akiko Sakamoto, Ken Spours

How to improve the standing of vocational compared to general education. A collaborative investigation of strategies and qualifications across Europe
Johanna Lasonen, Sabine Manning

Certification and legibility of competence
Annie Bouder, Laurence Coutrot, Édith Kirsch, Jean-Louis Kirsch, Josiane Paddeu, Alain Savoyant, Emmanuel Sulzer

The changing institutional and political role of non-formal learning: European trends
Jens Bjørnåvold

The problems raised by the changing role of trainers in a European context
Mara Brugia, Anne de Blignières

Part Two: Lifelong learning and competences: challenges and reforms

Lifelong learning - How the paradigm has changed in the 1990s.
Martina Ní Cheallaigh

Training for new jobs: contents and pilot projects
Jeroen Onstenk

Vocational training and innovative practices in the environmental sector. A comparison of five EU Member States, with specimen cases
Roland Loos

Company-based learning in the context of new forms of learning and differentiated training paths
Peter Dehnbostel, Gisela Dybowski

VOLUME 2

Part Three: Training and employment in a company perspective

Globalisation, division of labour and training needs from a company view
Johan Dejonckheere, Geert Van Hootegem

Training, mobility and regulation of the wage relationship: specific and transversal forms
Saïd Hanchane (with the assistance of Philippe Méhaut)

The employment and training practices of SMEs. Examination of research in five EU Member States
Philippe Trouvé et al.

Human resource development in Europe - At the crossroads
Barry Nyhan

Reporting on human capital: objectives and trends
Sven-Åge Westphalen

Vocational training research on the basis of enterprise surveys: an international perspective
Lutz Bellmann

Part Four: Employment, economic performance and skill mismatch

The skills market: dynamics and regulation
Jordi Planas, Jean-François Giret, Guillem Sala, Jean Vincens

Economic performance of education and training: costs and benefits
Alan Barrett

Unemployment and skills from a dynamic perspective
Joost Bollens

Overqualification: reasons, measurement issues and typological affinity to unemployment
Felix Büchel

Forecasting skill requirements at national and company levels
Robert A. Wilson

VOLUME 3

Part Five: Individual performance, transition to active life and social exclusion

Training and individual performance: evidence from micro-econometric studies
Friedhelm Pfeiffer

The effect of national institutional differences on education/training to work transitions in Europe: a comparative research project (Catewe) under the TSER programme
Damian F. Hannan et al.

Education and labour market change: The dynamics of education to work transitions in Europe. A review of the TSER programme
Damian F. Hannan, Patrick Werquin

Selection, social exclusion and training offers for target groups
Jan Vranken, Mieke Frans

Training and employment perspectives for lower qualified people
Jitte Brandsma

Part Six: VET research activities outside the European Union

Research on vocational education and training at the crossroads of transition in central and eastern Europe
Olga Strietska-Illina

VET research in other European and non-European countries
Uwe Lauterbach et al.

Annex: VET related research on behalf of the European Commission

Research on vocational education and training in the current research framework of the European Commission
Lieve Van den Brande

Synopsis of selected VET-related projects undertaken in the framework of the Leonardo da Vinci I programme
Cedefop

Targeted socio-economic research (TSER): project synopses
Cedefop
How to improve the standing of vocational compared to general education
A collaborative investigation of strategies and qualifications across Europe

Johanna Lasonen, Sabine Manning

Abstract
This contribution is mainly based on research results provided by major partnership projects including ‘Post-16 Strategies / SPES-NET’ coordinated by the Institute for Educational Research, University of Jyväskylä, and INTEQUAL / DUOQUAL coordinated by the Research Forum WIFO, Berlin. The SPES-NET and DUOQUAL projects are still running and, therefore, final results are not available yet.

In analysing the standing of vocational vis-a-vis general education (the ‘standing’) in European countries, three levels are considered: course / curriculum, education system and labour market. On this basis, a model of criteria is applied which relates the ‘standing’ to the quality of VET. The three criteria are personal competence (including skills), educational mobility (for lifelong learning), and occupational mobility (in the labour market).

Four reform strategies have been identified in European upper secondary education systems for promoting parity of esteem between vocational and general education. These are vocational enhancement, mutual enrichment, links and unification. After extending the partnership, the categories of strategies have been reconsidered. The focus has shifted from four to one strategy, enhancement, which has been analysed more broadly than just as a single strategy. Each of the previous strategies and the extended partner countries’ reforms have been reviewed in the light of the new four substrategies identified by the SPES-NET partnership. The additional substrategies are:

a) promoting links with higher education;
b) enhancing links with employers;
c) raising the status and qualifications of VET teachers and trainers; and
d) improving the VET curriculum.

All the reforms respond to, or anticipate, trends in the labour market and in the organisation of work. All respond to a perceived need for qualitative changes in the knowledge and competences which young people bring to the labour market. Changes in the content of work, new technology, patterns of occupational mobility and the pace of change itself are seen to require increased adaptability, capacity to learn new skills in the future, personal and transferable skills.

An initiative taken in several countries is to provide the option for trainees or students of vocational programmes to acquire qualifications for university access alongside their vocational qualifications. These dual qualifications potentially live up to the criteria identified for high standing of VET: providing personal competence and facilitating mobility both in the education system and the labour market. They contribute to an upward trend of differentiation within vocational secondary education. The challenge for educational policy, therefore, is to ensure that schemes of dual qualification are part of a transparent and flexible system, being accessible from any point and linking up with other parts of education and training.

For general assessment of reform strategies aiming to improve the attractiveness of vocational education, high ‘standing’ should be interpreted according to the following characteristics: acquisition of key competences / combining vocational and general education; opportunity for access to academic and vocational higher education; qualification for entry to (highly) skilled employment. This set of characteristics represents an ideal-type model which is suitable for analysis and debate.
Table of contents

Acknowledgements .......................................................................................................................... 117

1. Criteria and measures to define and evaluate the standing of vocational compared to general education ........................................................................................................... 117

2. Reforms focusing on post-16 education strategies to promote parity of esteem between vocational and general education .................................................................................... 121
   2.1 Purpose of the study .................................................................................................................. 121
   2.2 Parity of esteem between vocational training and general education .................................. 122
   2.3 Institutional backgrounds for delivering secondary vocational education in Europe ........... 123
   2.4 Reform strategies to promote parity of esteem between general and vocational education ................................................................................................................................. 124
      2.4.1 Enhancement of vocational education ............................................................................... 125
      2.4.2 Mutual enrichment of vocational and general education ............................................... 130
      2.4.3 Links between vocational and general education .......................................................... 131
      2.4.4 Unification of vocational and general education ............................................................ 132
      2.4.5 Substrategies of enhancing vocational education .......................................................... 133
   2.5 Résumé ................................................................................................................................ 134

3. Implications of unifying post-compulsory education – the British case .................................. 135
   3.1 Addressing parity of esteem in strategies for unification ....................................................... 135
      3.1.1 The starting point of reforms ......................................................................................... 135
      3.1.2 The rhetoric and reality of parity of esteem .................................................................... 135
      3.1.3 The emphasis on core/key skills .................................................................................... 136
      3.1.4 The role of work-based learning .................................................................................... 136
      3.1.5 The concept of overarching certification ....................................................................... 137
      3.1.6 The flow of students into academic and vocational tracks ......................................... 137
   3.2 Tentative conclusions with regard to the issue of ‘standing’ ................................................... 138

4. Qualifications with a dual orientation towards employment and higher education .................. 138
   4.1 Characteristics of dual qualifications ..................................................................................... 139
      4.1.1 The aims of dual qualifications in the national context .................................................. 139
      4.1.2 The dimension of the schemes of dual qualification ....................................................... 140
      4.1.3 The place of dual qualifications within upper secondary education .............................. 140
      4.1.4 The type of certification awarded for dual qualifications .............................................. 141
      4.1.5 The part of dual qualifications in the process of training and employment .................. 141
      4.1.6 The target groups entering the schemes of dual qualification ...................................... 141
   4.2 Practical impact of dual qualifications .................................................................................... 143
      4.2.1 The scale of enrolment in the schemes .......................................................................... 143
      4.2.2 The degree of integration within the curriculum ............................................................ 144
      4.2.3 The success rate of students within the scheme and in further study ............................ 146
      4.2.4 The balance of dual orientation ..................................................................................... 147
      4.2.5 The patterns of dual progression .................................................................................... 147
   4.3 The potential of dual qualifications ....................................................................................... 149

5. Attitudes towards the esteem of vocational education – evidence from case studies ............... 150

6. Conclusions about trends and prospects for improving the standing of vocational compared to general education ................................................................. 152
   6.1 Issues of ‘standing’ in typical settings .................................................................................... 152
   6.2 Improvement of ‘standing’ ..................................................................................................... 155

Summary ........................................................................................................................................ 156
References .................................................................................................................................... 161
Bibliography ................................................................................................................................. 163
Abbreviations ............................................................................................................................... 166
Acknowledgements

This contribution is mainly based on the research results provided by four major partnership projects: Post-16 Strategies/SPES-NET coordinated by the Institute for Educational Research, University of Jyväskylä, and INTEQUAL/DUOQUAL coordinated by the Research Forum WIFO, Berlin. These projects have been carried out with the financial support of the European Commission within the framework of the Leonardo da Vinci programme. The SPES-NET and DUOQUAL projects are still running and, therefore, the final results are not available yet.

Furthermore, the contribution draws on the results of studies undertaken by individual partners involved in associated projects, in particular the UK-based project on unifying academic and vocational learning (ULP) and a parallel Leonardo project on improving the status and attractiveness of initial vocational education and training (PAVE).

The study has been prepared in close cooperation with the two partnerships involved in the multiplier-effect projects DUOQUAL and SPES-NET. The joint work of the authors has also benefited from research collaboration at the Institute for Educational Research, University of Jyväskylä, supported by a grant from the Academy of Finland. Pekka Kämäräinen (Cedefop) monitored the original projects Post-16 Strategies and INTEQUAL as part of a broader study.

Details of project references, supported by a bibliography, are attached to this contribution.

1. Criteria and measures to define and evaluate the standing of vocational compared to general education

The initial title proposed for this contribution read ‘attractiveness and parity of esteem between general education and practical training’. Why was it changed to the title ‘how to improve the standing of vocational compared to general education’? Two aspects of terminology gave rise to this alteration:

The terms ‘attractiveness’ and ‘esteem’ are related to behaviour or to attitudes held by individuals or groups. These are socio-psychological concepts which in this context, except for partial interventions, go beyond the scope of our investigation. It is more appropriate therefore to refer to the ‘standing’ of vocational education, which is an objective term related to educational levels and achievements, even if complex in its social and cultural context. We can analyse essential educational aspects of the ‘standing’, for instance the provision and role of vocational education as a basis and the response of the main beneficiaries of vocational education (young people; employers) as an effect.

The term ‘parity’ depicts an ideal as against the sober reality of ‘disparity’ between vocational and general education. ‘Parity of esteem’ is part of the political agenda of the European Union for vocational education and training (VET), while individual countries may have different terms (e.g. Gleichwertigkeit in Germany) or varying interest in this concept (e.g. popular in England, but of little relevance in France). Also, ‘parity of esteem’ may lend itself to political rather than analytical approaches. Altogether, ‘parity of esteem’ may be identified as a constituting rather than major concern of VET-related reforms.

The focus of analysis will be on how to assess and improve the standing of vocational compared to general education (the ‘standing’). At the same time, the individual studies underpinning this contribution will keep their original approach and terminology.

The tension between vocational and general education has been a major issue of educational debate (Moura Castro and Oliveira 1994), with several points of departure:

Under social-political pressures there have been efforts, since the period of educational expansion in the 1960s, to provide a high level of general as well as vocational education,
allowing for a postponement of decision taking for different pathways as far as possible, to ensure the best possible preparation for a highly technological and democratic society (Husén 1989).

In face of the scientific-technological challenge and changes in work organisation, a new understanding of qualification requirements has been gaining ground since the 1980s. Not only is there a growing need for including elements of general education into vocational courses and curricula; even more important are new concepts of key qualifications or transferable skills, action-oriented learning and work-related knowledge, which bring about qualitative changes in vocational education and pose new standards for general education (see also Onstenk et al. 1999).

In addition, the demand for highly skilled labour, enforced by the decreasing demographic trend, puts pressure for reform on education systems. Vocational education has to acquire higher quality and status to combat the traditional wake of academic education. Apart from this, challenges of providing for lifelong learning (Ni Cheallaigh 1999) can only be met by closely relating the efforts in both vocational and general education across all levels of the system.

Finally, education systems, being under pressure to become more efficient and transparent, look for ways of achieving equal status of vocational and general pathways and qualifications (Manning 1992). The standing of vocational compared to general education is still an unresolved problem throughout Europe. In nearly all countries participation in post-compulsory education and training has increased. There has been a process of academic drift, that is, young people have increasingly demanded the higher-status general or academic programmes which confer positional advantage. In most countries the demand for vocational programmes, especially those which do not lead to higher education, has declined in relative and sometimes in absolute terms. Expansion and academic drift have exposed or exacerbated existing weaknesses of post-compulsory education and training.

Society has become more ‘individualised’; students expect a wider choice of courses and want to be able to negotiate flexible pathways through education. Economic changes have created a demand both for higher levels of attainment and for new kinds of skills, especially generic and overarching competences, and for their wide distribution across the population. The increased risk of social and economic exclusion has created new problems in respect of low-achieving students who may be marginalised by the expansion of education itself.

These trends are mediated by the specific history and institutions of each country, so that the specific problems to which they give rise may vary across countries; but they reflect global trends, creating problems and challenges for post-compulsory education and training systems. According to an international study supported by the US Department of Education (Stern, Bailey and Merritt 1996) the major response of education systems to the ‘learning-intensive economy’ has been to create a closer connection between vocational and academic education.

‘Traditional forms of education do not provide the best preparation for this emerging economy. Vocational education has tended to become too focused on specific skills and occupations likely to change in the future. Traditional academic education by itself is also inadequate because it does not equip students to apply their abstract knowledge or to learn in the context of practical problem solving. In response to the perceived insufficiency of traditional education and training to prepare young people for more learning-intensive work, recent policies in many industrialised countries are converging on four principles:

a) new curricula should be created that integrate vocational and academic studies;

b) occupational and educational performance standards should be explicitly related to each other;

c) to prepare for learning-intensive work, initial education and training should include
How to improve the standing of vocational compared to general education

a certain amount of work-based learning for all students;

d) employers and educators, including both vocational and academic educators, must share both responsibility and power in new school-to-work systems.

The first principle is the most fundamental from the perspective of US policy because it affects how the others are implemented. Work-based learning, performance standards, and school-business partnerships often occur in countries that maintain strict separation between occupational training and academic education. These practices, by themselves, will not achieve the integration of vocational and academic education now being recognised as desirable in most countries.' (Stern, Bailey et al. 1996).

A recent OECD study on the transition from initial education to working life (Durand-Drouhin 1999) has confirmed the significance of combining vocational and general education in providing flexible pathways for young people. As the comparative analysis shows, pathways preparing for both work and tertiary education, so-called ‘double-qualifying’ pathways, add to the attraction of vocational education.

The issue of ‘standing’ in Europe is addressed in different educational contexts, for instance the following: the gap perceived between general and vocational courses in Finland has lead to pilot schemes of integrating curricula within personal study programmes; the demand by young people for access to higher education in Germany puts pressure on the dual system to provide equivalent progression routes; the demand by industry for highly skilled labour in Portugal has pushed reforms which raise the standards of vocational education to allow for an equal status as against general education.

These few examples may illustrate the complexity and diversity implied in the standing of vocational compared to general education and in the ways of how to improve the ‘standing’. To carry out a comparative analysis of this issue across European countries, various aspects have to be considered:

a) the level of analysis: issues of the ‘standing’ may be related to
i) courses and curriculum, to
ii) the education system or to
iii) the labour market;

b) the criteria of the ‘standing’ which in this study are understood to correspond to major quality requirements of VET:

i) the development of personal competence (in a broad sense, including vocational skills),

ii) the chance of educational mobility and progression in lifelong learning, and

iii) the prospects of employment, occupational mobility and career;

c) the framework or context of the ‘standing’:

i) at curriculum level this may refer to the social value of vocational/practical training as against general/theoretical education;

ii) at system level the choice between education pathways (vocational, technical and general education at upper secondary level) and the selection for access to higher education may condition the ‘standing’;

iii) at the labour market the competition between all qualifications relevant for job entry (VET for skilled work; technical course; academic/professional studies) may be relevant for the ‘standing’.

These components of a comparative approach are summed up in Figure 1.

This comparative approach serves to carry out the present investigation within and across several individual projects, i.e. it provides a framework of secondary analysis based on heterogeneous evidence. The three criteria of personal competence, educational mobility and occupational mobility underpin the assumption, stated at the beginning, that the ‘standing’ corresponds to the quality of VET. It should be noted, however, that the UK-based studies included in this contribution (see project references in annex) treat this re-
relationship with caution. They argue that attempts to promote parity by reforming the contents of vocational education may have little impact unless they can change underlying assumptions about the status imparted by social and educational backgrounds of young people (Raffe, Fairgrieve and Martin 1999).

Particular emphasis will be put on measures taken to improve – or may have the indirect effect of improving – the quality of vocational education and/or its standing compared to general education. These range from major strategies in post-16 education to individual pilot projects of curricular innovation. To assess the impact of these measures on the ‘standing’, indicators may be selected which are related to the comparative framework. The indicators of ‘standing’ are broadly defined allowing for specification in the actual analysis. Partly, they may be applied in empirical investigation including quantitative questionnaires and statistical comparison (indicators at levels 2 and 3), and partly they may be used to interpret evidence from case studies (indicators at levels 1 and 3). The individual projects reviewed in this study relate to most of these measures and indicators, although with varying emphasis (Figure 2).

In the following sections of this study, problems of ‘standing’ and measures taken or expected to solve them will be analysed in different contexts. They will be addressed as issues of the ‘parity of esteem’ in the post-16 education strategies (Sections 2 and 3) and further considered in qualifications combining vocational and general education (Section 4). In conclusion (Section 5), evidence across these project-related results will be compiled to identify major approaches to improving the standing of vocational compared to general education.

It should be stressed that this study is designed as a secondary analysis referring to the original research carried out in a set of projects. While this approach benefits from rich input generated by large European partnerships, it also shares the limits of the projects involved. In particular, the range of countries or cases under investigation may depend on the composition of partnerships or availability of special studies rather than on systematic criteria. Indeed, the extra section on the British case is due to a special set of projects providing particular insight – any other country could have been just as significant. Furthermore, the findings available from the projects may not support all aspects of the model outlined above. Most noticeable in this respect is the focus on issues of competence/curriculum and educational mobility rather than on occupational mobility and the labour market. The latter aspect, in fact, has gained importance in the current phase

---

**Figure 1: The standing of vocational compared to general education: approach to comparative analysis**

<table>
<thead>
<tr>
<th>Level of analysis</th>
<th>Criterion of ‘standing’</th>
<th>Framework of ‘standing’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Course/curriculum</td>
<td>Development of personal competence, incl. occupational skills</td>
<td>Social value of vocational compared to general training</td>
</tr>
<tr>
<td>2) Education system</td>
<td>Chance of educational mobility and progression in lifelong learning</td>
<td>Choice between pathways; selection for university access</td>
</tr>
<tr>
<td>3) Labour market</td>
<td>Prospect of employment and occupational mobility</td>
<td>Competition between all qualifications at job entry</td>
</tr>
</tbody>
</table>

---

---
of the two multiplier-effect projects (SPES-NET and DUOQUAL). The results, however, are not yet available for the present secondary analysis.

2. Reforms focusing on post-16 education strategies to promote parity of esteem between vocational and general education

2.1 Purpose of the study

This section is based on the results of the Post-16 Strategies project (1996-97), which aimed at identifying European upper secondary education reform strategies for promoting parity of esteem between academic and vocational education, and its multiplier-effect project SPES-NET (1997-2000). The results of the former project demonstrated the policy lessons learned from eight countries through collaborative comparative analyses. The new partners of the multiplier-effect project are reflecting on and evaluating the reforms and educational strategies to improve parity of esteem articulated by the earlier project against their own national initial vocational education and training systems. The following chapter will discuss the origin of the issue of parity of esteem and introduce the reform movements of upper secondary vocational education.

Figure 2:
The standing of vocational compared to general education: measures and indicators

<table>
<thead>
<tr>
<th>Measure expected to improve ‘standing’</th>
<th>Indicator of ‘standing’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combining vocational and general education (integrative courses/curricula)</td>
<td>Integration of general and vocational subjects in the curriculum</td>
</tr>
<tr>
<td>Including key competences in the curricula: establishing new quality of VET as alternative to general education</td>
<td>Role of key competences in the curriculum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education system (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulations ensuring lateral mobility including acknowledgement of course results</td>
</tr>
<tr>
<td>Stipulation of equivalence of upper secondary certificates with regard to HE</td>
</tr>
<tr>
<td>Provision of qualifications with a dual orientation towards employment and higher education</td>
</tr>
<tr>
<td>Promoting connectivity, including linkages, within upper secondary education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labour market (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation between education institutions and enterprises/organisations facilitating transfer from vocational training to the labour market</td>
</tr>
<tr>
<td>Provision of qualifications with a dual orientation towards employment and higher education</td>
</tr>
</tbody>
</table>
education in 12 European countries. The fourfold typology of reform strategies revealed by the Post-16 Strategies project will be reassessed against the interim results of the SPES-NET project.

2.2 Parity of esteem between vocational training and general education

The origin of the issue of parity of esteem stems from the time when new tools turned Stone Age people into farmers and city-builders, writing and other symbol systems into priests, judges, scientists and artists. The development in human culture of inheritable, increasingly sophisticated and constantly regenerating skills achieved its full importance.

Philosophical analyses of the concept of skill as such started with Plato and Aristotle. Plato considers the problem of the cognitive content of skills: some practical skills entail counting, measuring and weighing (e.g. ship- and house building) while other skills involve working with rough-and-ready methods and a rule of thumb based on experience and drawing on professional skill that is, an intuitive skill gained through arduous practical training (e.g. medicine, agriculture, sailing, warfare). His reflections also lead Plato to distinguish between everyday skills (Gr. tekhne) and authentic knowledge (Gr. episteme), the preserve of philosophy.

Aristotle defined skill as ‘an appropriate rational ability to do something’. Thus tekhne is linked with making things (Gr. poiesis), not with action where the goal is part of the act itself (Gr. praxis). He established a distinction between the productive skills thus defined and theoretical and practical science. However, the word technique, based on the Greek tekhne, and its derivatives may also be used more broadly about any action requiring ‘skill’ or ‘mastery’ even when we are talking about Aristotelian praxis instead of productive work (e.g. sports, dance, the skills of a circus acrobat). In such cases skill is less the productive ability to bring about particular results (e.g. the ability to make iron) than the skilful performance of the given action itself (e.g. figure skating).

Among the poetic skills, antiquity already distinguished between material skills, considered more lowly (manual and bodily skills), and symbolic skills, linked with the use of language. As encapsulated by Terentius Varro (1st century BC), the core of general studies in the medieval educational system was to consist of the system of artes liberales, liberal arts: grammar, dialectic, rhetoric (trivium) and geometry, arithmetic, astronomy and music (quadrivium). As heirs to the medieval faculties of arts, today’s faculties of arts and sciences or faculties of liberal arts are still producing Masters of Arts.

The Latin equivalent to the Greek tekhne is ars (pl. artes), which became in English art and in Finnish artisti, artisaani and artifakti. Like ‘art’, the German Kunst and the Swedish konst mean both skill and art. In written Finnish, ‘skill’ (taito) and ‘knowledge’ (tieto) were originally, in the 16th century, nearly synonymous. Skill could refer to human mind, consciousness, soul, perception or knowledge.

The philosophy of skills involves a very broad range of problem areas, including among others the theory of action, the philosophy of technology, the philosophy of art, and the philosophy of sport and games. The concept of skill also features in such fields as logic and the philosophy of science (thinking skills), ethics (the skills of good life), politics (the skills of governance or of ‘the possible’), the philosophy of education (the teaching of skills) and the philosophy of love (the art of love) (Niiniluoto 1992).

General and vocational education, traditionally the former representing knowledge and the latter representing skill, form two separate tracks in most European educational systems. In most cases, choosing vocational education tracks has lead to disparity of esteem concerning amount of earnings, societal status and chances of further education compared to general education. However, European educational systems vary in status regarding vocational education compared to general/academic education. Table 1 shows the percentage of students at secondary education level enrolled in vocational and general education programmes in 1995/96. The
age of secondary education students varies from 14 to 19 years depending on the country.

Austria, Hungary, Germany and the Netherlands have strong vocational education programmes which attract a large proportion of youngsters. However, chances for flexible access to higher education vary between countries. Austria and the Netherlands have created several progression paths from vocational tracks to further studies, with Germany and Hungary following this line. Other countries such as Greece, Spain, England, Portugal and Estonia have less developed and weak vocational education systems which is reflected in enrolment numbers. The employers complain about mismatch between education and job requirements. At the individual level, insufficient training may lead to underemployment, unemployment or displacement.

### 2.3 Institutional backgrounds for delivering secondary vocational education in Europe

Eight countries (Austria, England, Finland, France, Germany, Norway, Scotland and Sweden) were included in the work of completing the Post-16 Strategies project. Sweden dropped out and five new countries (Belgium, Estonia, Greece, Hungary and Spain) joined the SPES-NET project. These 12 educational systems have different institutional compositions to deliver secondary-level vocational education. The length of secondary education and students’ ages vary among the countries. Table 2 shows secondary students’ typical age

#### Table 1: Proportion of students in vocational and in general programmes within secondary education in European countries in 1995/96 (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>Vocational programmes</th>
<th>General education programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td>Hungary</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td>Germany</td>
<td>72</td>
<td>28</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Belgium</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>Norway</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>Denmark</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>France</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Sweden</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Finland</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Greece</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>Spain</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Great Britain</td>
<td>31</td>
<td>69</td>
</tr>
<tr>
<td>Portugal</td>
<td>29</td>
<td>71</td>
</tr>
<tr>
<td>Estonia</td>
<td>26</td>
<td>74</td>
</tr>
</tbody>
</table>

Sources: European Commission, 2000; (Estonia/ Hungary:) European Training Foundation 1998.

#### Table 2: Students’ typical age and length of studies at secondary-level education in European countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Vocational programmes (age/length of studies)</th>
<th>General education programmes (age/length of studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>14-18 (4 yrs)</td>
<td>14/15-17/18/19 (1-4 yrs)</td>
</tr>
<tr>
<td>Belgium</td>
<td>14-18 (4 yrs)</td>
<td>14-18/19</td>
</tr>
<tr>
<td>Denmark</td>
<td>16-18/19 (2-3 yrs)</td>
<td>16-19 (3 yrs)</td>
</tr>
<tr>
<td>Finland</td>
<td>16-19 (3 yrs)</td>
<td>16-18/19 (2-3 yrs)</td>
</tr>
<tr>
<td>France</td>
<td>15-18 (3 yrs)</td>
<td>15-17/19 (2-4 yrs)</td>
</tr>
<tr>
<td>Germany</td>
<td>16-19 (3 yrs)</td>
<td>15/16-17/18/19 (1-3 yrs)</td>
</tr>
<tr>
<td>Great Britain</td>
<td>14-16/18 (2-4 yrs)</td>
<td>16-17/18 (1-2 yrs)</td>
</tr>
<tr>
<td>Greece</td>
<td>15-18 (3 yrs)</td>
<td>15-17/18 (2-3 yrs)</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>15/16-17/18 (2-4 yrs)</td>
<td>15/16-17/18/21 (2-6 yrs)</td>
</tr>
<tr>
<td>Norway</td>
<td>16-19 (3 yrs)</td>
<td>16-19 (3-4 yrs)</td>
</tr>
<tr>
<td>Portugal</td>
<td>15-18 (3 yrs)</td>
<td>15-18 (3 yrs)</td>
</tr>
<tr>
<td>Spain</td>
<td>16-18 (2 yrs)</td>
<td>16-18 (1-2 yrs)</td>
</tr>
<tr>
<td>Sweden</td>
<td>16-19 (3 yrs)</td>
<td>16-19 (3 yrs)</td>
</tr>
</tbody>
</table>

Sources: Eurydice 1997.
starting and finishing school and the length of studies in both vocational and general education programmes. Evidence shows that in most countries vocational programmes are comparable with general education programmes in terms of length. Youngsters are about 18 years old when entering the workforce or higher education.

2.4 Reform strategies to promote parity of esteem between general and vocational education

The Post-16 Strategies project identified four reform strategies in eight upper secondary education systems for promoting parity of esteem between vocational and general education. These were vocational enhancement, mutual enrichment, links and unification. The inclusion of more countries in the SPES-NET project has led to further differentiation within and between categories of reform. Below, the major strategies are briefly described, with the countries being grouped according to their primary reform characteristics (while also relating to features of other strategies).

- **Vocational enhancement.** The strategy of vocational enhancement emphasises the distinctive nature of vocational education on the basis of its characteristic content and links between employers and the providers of vocational education. Systems with either a high or a low status of vocational education are likely to generate different vocational enhancement strategies. In some countries, esteem for vocational education is linked with the high standard of the content and pedagogy offered in vocational education and training; the reforms promote access to higher education through vocational education and training (Austria, Denmark, Germany). Other countries attempt to enhance vocational education starting out from traditions of low status (Greece, Spain). A further group of countries is characterised by a transition process, with a vocational training system developed under a planned economy being reoriented towards a market economy (Estonia, Hungary). However, the Belgium, Greek, Estonian and Hungarian partners of the SPES-NET project do not categorise their upper secondary education system in any of the four strategies identified in the Post-16 Strategies project (Stenström and Lasonen 2000).

- **Mutual enrichment.** Vocational education institutions, enterprises and academic upper secondary schools cooperate with the aim of giving students a broader range of choices and offering them stimulating learning methods and environments. This strategy brings together the different types of schools by encouraging cooperation while simultaneously preserving their distinctive character. The strategy involves increasing student choice beyond the boundaries separating vocational and general upper secondary schools in the localities. The characteristic of the reform is to facilitate cooperation between vocational and general upper secondary schools (Finland). In addition to focusing on collaboration between different educational establishments, the reform has extended collaboration between schools and enterprises. The vocational education programmes have been reformed through enhancing occupa-
How to improve the standing of vocational compared to general education

- **Links.** Countries representing the linkage strategy have made vocational and general education more formally equal by linking both to a common qualification structure. Vocational and general education programmes and qualifications have been made formally more equal by linking them both to a common qualification structure. Vocational and general education is assumed to gain the same formal status through the measures of common certification frameworks and recognition. Educational systems which have traditionally fostered elitism by emphasising academic studies for the few, now have attempted to make vocational education more attractive (England, France).

- **Unification.** Under the unification strategy, vocational and general education are merged into one another to create a single post-16 education system. It is believed that requiring all students to study certain common general subjects will provide them with equal opportunities to engage in further studies, a factor that determines the attractiveness of different qualifications. There are several types of unification strategy. The comparisons demonstrated different dimensions of unified strategy: uniformity of treatment and outcomes of students, of providing choice among a flexible range of opportunities and unifying educational administration (Scotland, Sweden).

When reviewing the strategies, it is important to distinguish between the overall goal of **vocational enhancement** shared by all of the strategies analysed and the specific strategy described as **vocational enhancement**. All four strategies including those promoting links or mutual enrichment or the abolition of academic/vocational divisions contribute to vocational enhancement in the broader sense. The original categories of the four reform strategies may be seen as means of enhancing vocational education programmes (see Figure 3). The additional substrategies are:

a) promoting links with higher education;  
b) enhancing links with employers;  
c) raising the status and qualifications of VET teachers and trainers; and  
d) improving the VET curriculum (see Table 3).

The impact of these substrategies is related to different national contexts of VET systems.

**2.4.1 Enhancement of vocational education**

**2.4.1.1 Enhancement of high-status vocational education**

**Austria**

In Austria, there are four main tracks through upper-secondary education: academic schools, higher vocational colleges, intermediate vocational colleges and the dual system. Students can start in vocational training programmes from the age of 14. They have to decide at this age whether they want academic or vocational education and which future occupations they will choose. In the dual system, vocational education and training for apprentices takes place in training companies (80% of the total training time) and in schools (20%).

Current reforms focus on vocational highers (Berufsmatura/Fachmatura), that enable apprentices to gain a certificate of general upper-secondary education at the same time as they complete their apprenticeship training or after they have finished it, and the establishment of polytechnics (Fachhochschulen). The curriculum is being broadened, updated, and extended to new occupational fields. New qualifications arrangements will give all vocational students, including those in the dual system, the opportunity to qualify for higher education. Fachhochschulen (vocational higher education institutions) were introduced in the early 1990s. These are gradu-
ally being expanded to provide a progression route for vocational students. The advantages of the dual system are the early integration of students into working life, the prevention of unemployment and exclusion among young people and the low cost of firm-specific initial training.

The reforms of the Austrian vocational education system in the 1990s have been nationwide. The aim has been both to make those completing apprenticeship training more eligible for higher education and to facilitate transition from vocational education to skilled work. Some 70% of Austrian young people acquire a vocational qualification, and some 15% of them complement it by also taking the matriculation examination (IBE 1999). In terms of enrolment rates, vocational education based on apprenticeship training is the most popular option, chosen by some 36% of the age cohort as their route to vocational qualification.

**Denmark**

Upper secondary education in Denmark can be divided into general upper secondary education (three years between ages 16 and 19) and vocational upper secondary education (up to four years between ages 16 and 20). Initial vocational training is provided in three main

Table 3: European upper secondary education reforms as concluded in the results of the Post-16 Strategies and SPES-NET projects

<table>
<thead>
<tr>
<th>Sub-strategies</th>
<th>Post-16 Strategies</th>
<th>Vocational enhancement</th>
<th>Mutual enrichment</th>
<th>Links</th>
<th>Unification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Links with higher education (HE)</strong></td>
<td>Reforming and expanding vocational HE</td>
<td></td>
<td>1. Improving access to existing HE</td>
<td>Creating a single system of post-compulsory education</td>
<td></td>
</tr>
<tr>
<td><strong>Links with employers</strong></td>
<td>Strengthening dual-system partnerships</td>
<td>Strengthening partnerships between providers of VET and employers</td>
<td></td>
<td>Strengthening links between employers and VET and general education teachers</td>
<td></td>
</tr>
<tr>
<td><strong>Status and qualifications of vocational teachers and trainers</strong></td>
<td>Equalising the status of vocational and general education teachers</td>
<td>Providing some common courses for VET and general education teachers</td>
<td></td>
<td>Common training and degrees for general education and vocational teachers</td>
<td></td>
</tr>
<tr>
<td><strong>Improving the VET curriculum</strong></td>
<td>Improving vocational education knowledge</td>
<td>More general education on vocational programmes</td>
<td></td>
<td>More integrated learning</td>
<td></td>
</tr>
</tbody>
</table>

Source: Young 2000.
forms following the completion of lower secondary education: basic vocational education and training, higher commercial courses and higher technical courses. This type of education attracts two thirds of a typical age group. Theoretical education is given at school, alternating with practical training in a firm.

The principal feature of Danish vocational education and training policy is that vocational education has the character of broad youth education, and youth training programmes should provide opportunities for continued training. The Danish vocational education system includes school-based and apprenticeship-based alternatives. In the beginning of the 1990s, the two parallel models for initial vocational education and training were merged into one basic model providing a unified curricular framework both for trainees with an apprenticeship and for students in vocational schools. In study programmes, a sixth of the total teaching time is devoted to optional subjects, about two thirds to practical training in firms. A major characteristic in Danish vocational education is the central role of social partners (employers and organised labour). The social partners are responsible for modernising training schemes and for delivering the practical work experience component of vocational programmes and exert considerable influence on their school-based components.

Recent government reports have indicated that, although the standard of the education system is of high quality in international comparisons, there are some malfunctions including the participation in VET programmes, the quality of student performance, the rate of students completing youth education and the efficiency of the VET system. In 1998, general agreement with the parliament and social partners was reached for setting up a new legislative framework of the future VET system in Denmark. The focus of the Reform 2000 is to create a more flexible, efficient and student-centred system of youth education, with educational provision leading to recognised qualifications, including ‘double’ qualifications, and special attention being paid to the needs of low-achievers to persuade them to stay in education.

**Germany**

General and vocational education are still clearly separated in the German education system, with young people choosing relatively early whether they will go on to vocational or university education. The German dual system, which combines apprenticeship training with education at vocational schools has come under double pressure facing an increasing demand by young people for upper general education (Gymnasium / Abitur) and a decreasing supply of apprenticeship placements by enterprises. These trends reveal functional weaknesses notwithstanding the high standards and qualification achievements of the dual system (Tessaring 1993). In response to these problems, efforts have been made to improve the attractiveness of vocational education and to achieve its equal status compared to general education. Pilot projects have been initiated to explore new ways of bridging the gap between vocational and general education, with a few German Länder introducing partial reforms in this direction.

One example taken up in Post-16 Strategies is the Schwarze Pumpe project in Brandenburg which focused on bottom-up, process-oriented reforms within the dual system. The project aimed at modernising the curriculum and pedagogy to take account of changes in society and the workplace and to integrate general and vocational education. The idea of intellectual emancipation in vocational instruction is included in integrative learning. It is vital to ask what is educational in vocational learning. Being qualified to enter higher education, being ‘qualified to study’, can be definable in terms of concrete competence. Employees must master both the vocational and academic components of their jobs and be able to shape work processes and technology. The Schwarze Pumpe project has sought to develop closer collaborative links between vocational schools and enterprises participating in the dual system, and to qualify young people for higher education as well as for employment as an outcome of vocational training. Oberstufenzentren (tertiary colleges or upper secondary education centres), that bring together all types of German upper sec-
ordinary education, were established throughout Brandenburg in 1991.

The Schwarze Pumpe project is of course but one example of numerous initiatives taken in Germany towards VET enhancement. Since the mid-1980s, reformed training occupations have aimed at vocational competence to plan, perform and control one's work. And in recent years, new training occupations were established for new jobs, to respond quickly to emerging needs of the labour market.

2.4.1.2 Enhancement of low-status vocational education

Greece

The majority of Greek upper secondary school graduates and their parents pursue a university degree. Vocational/technical education is not thought to satisfy aspirations. VET is considered to serve those who fail in the school system. As a result there are more university graduates than the labour market demands. The rate of unemployment is steadily increasing, and a phenomenon of multi-employment is frequent. A large number of university graduates have other jobs than those they were educated for (Patiniotis and Spiliopoulou 1999).

Traditionally the Greek education system has not offered alternatives to follow vocational pathways. As a result, most professions are learnt on the job. The 1997 education law introduced the comprehensive lykeion that will abolish and replace all previous types of lykeia. It offers three fields of specialisation: theoretical subjects (humanities, social sciences and languages), positive sciences (mathematics and natural sciences) and technological sciences. Chances of optional subjects for students were increased and a programme for students with special needs was created. The new Act on Secondary-Level Technical and Vocational Education, introduced in 1998, allows to develop the complete system of technical and vocational education (TVE) within the framework of Greek secondary education. Students who have completed nine-year compulsory education can choose either the comprehensive form of general education (the comprehensive lykeion) leading to academic studies, or the reformed and flexible form of TVE (technical and vocational institutes) which qualifies them for entry into working life.

The new institutional context is aimed at developing knowledge, critical ability and various skills to access flexibly to working life, and at providing a horizontal link to the comprehensive lykeion to offer continuous opportunities for growth of vocational and general knowledge and understanding. Acquisition of vocational skills through and at work is also emphasised. However, the conditions for implementing workplace-based learning still have to be provided.

Spain

The main foci of Spanish reforms over the last decade have been

a) to ensure that coherent compulsory education is available to all up to the age of 16;

b) to rationalise and upgrade the system of post-compulsory vocational education and training into one system with a number of progression routes for those studying vocational courses who wish to continue into higher education as well as for those seeking employment;

c) to diversify the baccalaureate so that some routes within the baccalaureate system can lead to employment as well as to higher education.

The rationalisation of the previously diverse and fragmented VET provision in Spain is being attempted through establishing a single system of vocational qualifications with several pathways. However, the old divisions between formal (or regulated) and non-formal (non-regulated) vocational education remain. The Spanish reforms can be seen, therefore, as a clear example of a vocational enhancement strategy or trying to ‘improve the vocational track from within’. Parallel with these reforms of the system of vocational education, there are moves to diversify provision of general education so that students completing
baccalaureates can either progress to university or become qualified or semi-qualified workers at 18. The Spanish reforms appear to give emphasis to the employment prospects of academic (baccalaureate) students. Thus, those completing a baccalaureate who do not gain access to (or do not wish to proceed to) university can move to the higher-level formative cycle and go into employment as technicians. It is also possible for students who complete the intermediate formative cycle within the system of vocational education to join the baccalaureate route at 16+. The renewed emphasis on education/business partnerships, the importance of students gaining work experience while still at school and the government’s efforts to extend the involvement in education of employers and trade unions could all bring the general and vocational education systems closer together.

2.4.1.3 Enhancement of vocational education in transition

Estonia and Hungary

Until the 1980s, in Estonia and Hungary the nature and forms of vocational education and training were determined by both ministries and big State-owned companies. They defined curricula and implemented vocational education programmes. Vocational schools were often part of the training system of these big companies, used to recruit and train their own workforce. Therefore, vocational education and training was characterised by a very high degree of specialisation and precisely defined vocational profiles for occupations within the big companies and the bureaucracy. This meant on the one hand that there was a long list of different vocations in the different countries. On the other hand there was a lack of well-defined job descriptions because the demand for vocational qualifications was politically controlled. Mobility and flexibility of workers were excluded both from vocational education and from economic policy.

After the political changes around 1990, one of the primary goals of educational policy was preventing the vocational education and training systems from collapsing. Apart from short-term crisis management, legal, financial and organisational conditions had to be created for ensuring the efficient operation of a market economy through provision of qualified labour. After the change of 1989/90, three different strategies for reforming vocational education and training systems could be observed:

a) reactivating traditional occupations (mostly skilled trades) from the pre-communist era, with the main attention focused on practical skills;

b) retaining some aspects of communist-era vocational education systems, that is, the possibility of entering post-secondary education with vocational qualifications;

c) while adopting a school-based model, vocational training has been integrated into it by different methods of practical training, such as simulation or authentic work experience in companies.

Estonia and Hungary were confronted with similar problems. The development of what are known as key qualifications (such as teamwork skills, creativity or responsibility) takes time. As a consequence, at least during the first years after the change, foreign investors brought their own management staff to these countries. There are still many problems concerning the infrastructure of vocational education and training, especially in Estonia.

The systematic change in vocational education and training has led to growing higher education enrolment. The reasons are, in general, better labour market opportunities for well-educated people (i.e. higher wages, lower unemployment rates, especially for young people with a tertiary degree) and also the fact that young people often enter higher education because of being otherwise unemployed. Unemployment is a big problem among young people without higher education, older people with low or obsolete vocational qualifications, handicapped people and ethnic minorities.

The recent difficulties encountered by vocational education and training systems are similar within Estonia and Hungary, and EU
member countries to varying extents. Vocational education and training has to be adapted to labour market needs, especially to new qualification requirements and new occupations. At the same time, practically-oriented curricula have to be introduced in addition to providing a general education. This is accompanied by a development of new learning methods and the improvement of teacher education. The modernisation of educational institutions is a basic requirement of the ‘new’ infrastructure of vocational education and training. The adaptation to labour market needs will also concern the mechanisms of evaluation and certification used in vocational education to increase flexibility and encourage self-employment.

2.4.2 Mutual enrichment of vocational and general education

The aim of the reforms of vocational education undertaken in the 1990s in the Nordic countries, to which Finland and Norway belong, has been to increase equality among citizens by guaranteeing everyone a study place, raising the esteem of vocational education and increasing flexibility and student choice, seen as a way to enhance student motivation. All these countries have integrated vocational education into their educational system. The main purpose has been to modernise secondary education. A further purpose of the reforms has been to give vocational students academic competencies (and to some degree also to give academic students vocational competencies) and thus improve their chances of progressing in their studies and of launching successful working careers. The reforms have also been meant to be a response to the changing demands of working life and society.

Finland

Over 90% of those leaving nine-year comprehensive school continue their studies at general upper secondary school or at a vocational institution. The network of general and vocational upper secondary schools covers the entire country. In Finland, vocational education is mainly school-based, even if it has been decided to increase the proportion of apprenticeship training to 10% of the age cohort by the year 2001. Apprenticeship training has increased among adults but not among under-20-year-olds to the extent as expected. Therefore, another measure intended to improve the connections between school-based education and working life is a stipulation that all secondary-level vocational education should include a minimum of half a year’s practical training at the workplace.

Upper secondary education in Finland is divided in two pathways: three-year general upper secondary education (catering for 16-19 year-olds, leading to the matriculation examination) and two- to three-year vocational education. By the year 2001, all vocational education will comprise three-year programmes and include a minimum of half a year’s practical training at the workplace.

Mutual enrichment refers to combining studies at both the general upper secondary school and the vocational school in a single examination and also to taking the matriculation examination alongside a vocational qualification, even if this is not very common because of the great demands it sets on the student. In 1992, experimental reforms were started in 16 local networks of schools. Each network comprises both types of schools and collaborates in joint scheduling and the cooperative provision of programmes. Students are encouraged to select a proportion of their programmes from other schools in the network, thus bridging the academic/vocational divide.

In Finland the extended student choice introduced into the curricula increases vocational students’ opportunities to gain access to higher education and to include more theoretical subjects in their study programmes while allowing academic students to study vocational subjects together with their primarily academic studies, thus adding practical skills to their study programmes. Vocational and academic programmes are acknowledged as equivalent and students are credited for parallel or earlier studies in other upper secondary education institutions.

Finland is also increasing its provision of apprenticeship training based on an apprenticeship contract between a student and an em-
ployer. Apprentices receive their practical training at the workplace and their theoretical education in a vocational school during course periods (on average 25% of the teaching time). The length of apprenticeship training is two to four years. Apprentices are paid a regular trainee's wage. In the new law, apprenticeship training will be linked with vocational schools. After completing their training apprentices will take a vocational examination and a skills test.

Higher vocational education was introduced in 1992, when AMK institutions, a Finnish equivalent to the polytechnic, were established. They are based on the matriculation examination or three years of vocational education and offer programmes lasting three and a half years. AMK institutions represent the non-university sector of higher education and differ from universities in being more practically oriented and training experts for the new labour market. About 35-45% of the age group will receive polytechnic education and about 20% university education. This is because the changes that have taken place in Finnish business life have meant that the demand on the labour market concentrates much more on high-tech professions.

Norway

The Norwegian Reform 94 brought general and vocational upper-secondary schools together in new combined (or comprehensive) schools increasing the general education component of vocational courses. It rationalised first-year courses, and remedied the shortage of places on second- and third-year courses. It made the pathways through the system more flexible, by broadening the second-year options available to students completing a given first-year course, and likewise in the third year. It introduced a ‘2+’ model for vocational courses, which allowed students after two years of school-based study to choose between a further year of training or two years of training combined with productive work. It developed new pathways from vocational education to higher education.

Upper secondary education, which follows nine-year comprehensive school, is organised as a single type of school, the upper secondary school. In this sense the school systems of Norway and Sweden are alike and differ from those of Denmark and Finland, where there are separate schools for general upper secondary education and vocational education, even if it is possible to select studies from both kinds of school.

In Norway, upper secondary school lasts three years and is divided into 10 study fields consisting of a general studies programme and nine vocational programmes. About 45% of 16-year-olds enrol in the general studies programme. All study fields have the same basic structure: a foundation course (one to two years), advanced courses (one to two years) and shorter courses. The two-year foundation course combines general and vocational subjects and enables students to choose either an academic or a vocational track after the foundation course has been completed. The apprenticeship training system is based on close cooperation between school and working life and on a combination of school-based training and practical apprenticeship. It is also possible to attend an apprenticeship school one day a week and receive workplace training four days a week.

In higher education there are two main sectors: the university and the college sectors. Non-university institutions of higher education offer programmes lasting one to four years. Longer courses and graduate programmes of up to six years have also been introduced in some of the institutions. Most programmes are oriented towards specific professions such as pre-school teaching and compulsory school teaching, engineering, social work, administration, automatic data processing, health professions, etc.

2.4.3 Links between vocational and general education

England and Wales

As a background for reforms, political and economic factors since the 1980s have included increasing unemployment and the collapse of the youth labour market. Academic and vocational education is in a dual crisis.
The academic route or A levels caters for a minority, includes premature specialisation and creates negative attitudes towards vocational alternatives. Vocational education has attracted a minority of the cohort, mostly at lower qualification levels, and has poor completion rates. A bias towards lower-achieving students means that the vocational route is invariably seen as an option of secondary choice. By the mid-1990s, vocational education in England and Wales consisted of two tracks: broad vocational courses (increasingly GNVQs) and occupationally-focused courses (NVQs). The vocational curriculum is split between three traditions: a weak technical tradition, a pre-vocational tradition (GNVQs) and a narrow competence-based and occupationally-focused approach to work-based learning (NVQs). The ‘Dearing review of 16-19 qualifications’ proposed reforms to clarify the purposes, reduce the overlap and enhance the distinctiveness of each of the three ‘pathways’ (academic, applied and vocational). Its declared aim was to improve the parity of esteem between academic and vocational qualifications at upper secondary level.

The Dearing review proposed a number of measures to link or bridge the pathways, including common nomenclature, levels and quality assurance procedures for the three pathways, overarching diplomas, a restructuring of courses into smaller units or groups of units to promote mixing and transfer between pathways, the promotion of key (core) skills across all three pathways, and the merger of the main bodies regulating the different pathways.

The changes introduced in the ensuing reform, especially measures intended to move GNVQs and A levels closer together, helped consolidate vocational qualifications and establish vocationally-oriented components of learning and achievement. Thereby, progress was made in the direction of attaining parity of esteem, with more students combining vocational and academic study programmes (Hillier and Oates 1998). The Labour government elected in 1997 has expressed broad support for the Dearing recommendations, while preparing to consult on the specific next steps.

France

In 1985, France introduced the Baccalauréat professionnel (Bac Pro), a vocational Bac alongside the existing general and technological Bacs, with substantial common content. In 1993, there were 35 different Bac Pros. They are designed primarily for students who embarked on lower-level (CAP/BEP) vocational courses at 15, and thus extends the progression opportunities in vocational education. It also confers entitlement to higher education, although a majority of its graduates enter the labour market. The Bac Pro programmes are the least favourable among students compared to the two other Bacs. In 1995, the Bacs were reformed to promote flexibility, cater for the greater diversity of students and reduce the hierarchy among them. The programmes leading to Bac Pro are based on the cross-fertilisation of experiences from school-based and work-based vocational education and training. French pedagogic research (raison graphique) involves a comparative approach whose aim is to capture the various learning and teaching styles for languages to be found in upper secondary vocational schools. Identifying the cognitive processes forming a vocational level of understanding leads to an improved esteem of vocational education and training. This concept of promoting parity of esteem is similar to the German approach.

In the English and Welsh case, the main aim is to raise the quality of post-compulsory participation and qualification outcomes by strengthening vocational education and vocational progression paths to higher education and creating broader links between academic and vocational learning. This has also been the case in France, but the strategy applied there is clearer and more advanced, involving 80% of young people attaining the baccalaureate level, but only partly through the vocational route.

2.4.4 Unification of vocational and general education

Scotland

There are three types of post-16 courses and diplomas available in Scotland. Two kinds of
courses qualify young people for university studies, Highers and Certificates of Sixth Year Studies (CSYS). Both are single-subject courses. Highers are available in S5 and S6 or further education colleges. CSYS are available in S6 for students who have a Higher in a subject and need further preparation for university study. General vocational courses, available in school or in further education colleges, lead either to National Certificate (NC) or General Scottish Vocational Qualifications (GSVQs). NC modules are a national framework of some 2000 outcome-based modules, while each GSVQ covers a broad occupational area and has a substantial general education component. School students have tended to ‘pick and mix’ NC modules in combination with academic courses. Full-time further education students usually follow ready-made programmes of modules.

In 1999, a ‘unified curriculum and assessment system’ will replace nearly all provisions for adults and young people beyond 16 years, except for higher education and work-based training. It will incorporate general (academic) and vocational courses in a single framework of 40-hour units, usually grouped into 160-hour courses, available at five levels. The system is designed to have flexible entry and exit points. Most students will have a relatively free choice of courses, although they may choose to take combinations of subjects which lead to specified group awards. Common principles of curriculum design, assessment and certification will apply throughout the system. Failure to incorporate work-based provision is possibly one of the main limitations of the Higher still reform. The unified system will remain based on full-time delivery in schools and colleges, with very little scope for alternance or for input from the workplace.

**Sweden**

In Sweden, where an earlier reform had established integrated upper-secondary schools, reforms in 1994 replaced the previous structure of general and vocational programmes of varying length, with a system based on 16 national three-year programmes. Two programmes (natural and social sciences) focus on university entry; the other 14 are more vocationally oriented but also give access, at least in principle, to higher education. For these programmes at least 15% of study time is provided in the workplace. There is substantial common content, and all programmes include the same eight core courses or modules; the system is intended to facilitate transfer between programmes or from an ‘individual’ (self-chosen) programme to a national one. All young people up to 20 years have an entitlement to education within the system. The reform has also decentralised education and increased the autonomy of localities and institutions.

Over 95% of compulsory school leavers continue their studies at upper secondary level. Most upper secondary studies take place in schools under municipal responsibility. Studies in agriculture, forestry, horticulture and certain caring occupations are delivered in schools run by county administrative boards.

Sweden also has apprenticeship training programmes, which combine vocational training organised by employers with education at upper secondary school.

### 2.4.5 Substrategies for enhancing vocational education

Considering the current trend towards a closer relationship between education and employment policies and given that the four previous hypothetical strategies did not include all countries, four substrategies were identified by the partnership of the SPES-NET project (Stenström and Lasonen 2000). These are aimed at improving upper secondary vocational education:

a) promoting links with higher education (e.g. expansion and creation of a new vocational higher education or a single system of post-compulsory education);

b) enhancing links with employers (e.g. strengthening dual system partnerships or partnerships between providers of VET and employers, or strengthening links between employers and VET and general education teachers);
c) raising the status and qualifications of VET teachers and trainers (e.g. establishing parity of status and providing some common courses or common training and degrees for VET and general education teachers);

d) improving the VET curriculum (e.g. improving vocational education knowledge or integrating vocational and general learning).

Furthermore, four common trends were found:

a) more standardisation of qualifications for students and teachers;

b) a greater emphasis on work-based learning and the educational potential of workplaces,

c) efforts to increase employer involvement in all aspects of VET provision, and

d) more choices for students and more autonomy for local authorities and individual institutions.

2.5 Résumé

Each country's reform programme might include elements of different strategies, and the emphasis of a country's policy could change over time. The four strategies represent a continuum between strategies based on the distinctiveness of academic and vocational education and those based on their full integration, with links and mutual enrichment as intermediate strategies between the two poles. Each of the partner countries have key system issues which the reforms are seeking to resolve.

Those systems that want to move in a more unified direction and at the same time have high degrees of student choice may also be encouraging academic drift or reflecting more basic social divisions between academic and vocational orientations because of the way in which prevailing values and cultures impinge upon student choices. This could be countered by very strong and supportive messages coming from the labour market concerning the acquisition of certain types of vocational qualifications.

However, in the absence of this or of divisions of opinion amongst employers, the answer may be more prescription and rules of combination provided by qualification authorities, both to protect the integrity of the vocational route and to encourage students to be more radical in the ways in which they combine studies.

All of the reforms respond to, or anticipate, trends in the labour market and in the organisation of work. All respond to a perceived need for qualitative changes in the knowledge and competences which young people bring to the labour market. Changes in the content of work, new technology, patterns of occupational mobility and the pace of change itself are seen to require increased adaptability, capacity to learn new skills in the future, personal and transferable skills, and so on.

Most of the reforms seek to enhance links between VET and the labour market, and to make VET more responsive to labour-market needs. This is pursued through networking with local enterprises, through the formal representation of industry in the machinery for designing curricula and qualifications, and in some systems by allowing greater responsiveness to local needs. In most countries, therefore, we can identify an attempt to increase the influence of the labour market within the reforms.

However, this is not the same as a labour-market influence on the reforms themselves. In most of the countries studied the main impetus to reform appears to be, not pressure from the labour market, but internal pressures arising from the need to rationalise the education system itself. This is most obvious in Austria and Germany. The reforms in Norway, Scotland and Sweden aim to simplify their systems and make them more coherent through unifying or comprehensive reforms. The reforms in England, Finland and France pursue rationalisation through links of various kinds rather than unification. We assume that VET systems' responses to labour-mar-
ket changes depend on whether and how these changes coincide with problems internal to VET itself.

3. Implications of unifying post-compulsory education – the British case

A comparative study on unifying post-compulsory education in England, Wales and Scotland (Unified Learning Project – ULP, see project references) throws further light on the issue of parity of esteem. The focus of this project is on attempts in these countries to reduce divisions between academic and vocational tracks and to develop a more coherent system. In addition, a critical assessment of the ’parity of esteem’ debate in England (Hillier and Oates 1998) illuminates the rhetoric and reality of this concept. A further comparative study on flows and pathways in post-compulsory education and training (home internationals project, see project references) provides empirical evidence on the destination of students of academic and vocational tracks in England, Scotland and Wales against the background of educational attainment and social class.

Due to the specific objectives and approaches in these two projects, the question of how to improve the standing of vocational education compared to general education is only included by implication. The issue of parity of esteem is related to the relative social status of entrants to vocational and academic tracks rather than to the quality of educational provision. The following review of the projects therefore intends to filter the outcome from the point of view of 'standing'. First, the relevant evidence of the project results is set out according to selected aspects (summarising text from the quoted project reports and additional sources); second, tentative conclusions are drawn from the evidence with regard to the issue of 'standing'.

3.1 Addressing parity of esteem in strategies for unification

In the above-mentioned analyses of developments in post-compulsory education in Britain, the issue of parity of esteem is addressed in the following context: the starting point of reforms, the rhetoric and reality of parity of esteem, the emphasis on core/key skills, the role of work-based learning, the concept of overarching certification, and the flow of students into academic and vocational tracks.

3.1.1 The starting point of reforms

The policy agendas which have driven recent changes towards unifying post-compulsory education in England, Wales and Scotland, focus on the need to promote employability and to combat social exclusion. The unification strategies are related to the dimensions of government and regulation, and of certification; the reforms are qualifications-led. This distinguishes Britain from other European countries where post-16 strategies put more emphasis on the dimensions of content and process and on institutional reform.

The comparative analysis (ULP) sets out major challenges for unification strategies in Britain, including the need to respond to the wider range of aspirations of students in a high participation system; the demand for higher levels of attainment and new kinds of skills and knowledge; the pressure for greater coherence, transparency and responsiveness; the need for greater social inclusiveness and the need for parity of esteem of academic and vocational learning.

3.1.2 The rhetoric and reality of parity of esteem

As argued by Hillier and Oates (1998), parity of esteem in the mid-1990s became a rallying cry and overriding policy objective, while little attention was paid to its aims and meaning. The uncritical pursuit of parity of esteem might have undesirable consequences, in particular, an introduction of ‘sameness’ in currently diverse qualifications, leading to a qualifications system failing to meet the needs of diverse learner groups. That GNVQs must achieve parity of esteem with A levels has been repeated as a priority by policy-makers and practitioners, with little attention being paid to why parity of esteem is desirable, what it involves and how it can be measured.
A key point is that parity of esteem issues reflect deeper social patterns of distribution of value and opportunity. Poor parity of esteem is not solely a reflection in ideology of deeper inequalities, it sustains and propagates these differences through mechanisms such as career advisers and teachers recommending certain qualifications for lower ability groups and others for higher ability groups; candidates attaching lower status to certain qualifications and thus being attracted more to other qualifications; selectors placing a premium on certain qualifications; and certain qualifications being treated preferentially in funding and approval listings. This gives the issue of parity of esteem the janus-headed quality of being both an effect and a cause—a reflection of past and current inequalities and the support of mechanisms which cause these inequalities to persist in areas such as earnings potential. As Robinson (1997) revealed in a study on earnings and qualifications, there is no parity of esteem between academic and vocational qualifications in the labour market. The notional equivalences established by qualification structures contrast with the disparity in levels of earning: academic qualifications tend to offer access to more highly paid occupations, and often pay a higher wage within some of those occupations, than their formally equivalent vocational counterparts. This experience again influences the decisions taken by young people in their choice of pathways.

Practical measures are essential for improving the parity of esteem, for instance changes for advanced GNVQs to allow programmes combining vocational and academic qualifications to be delivered in schools and colleges. The success of GNVQs post-16 (with participation moving from an initial 10 000 in 1993 to 240 000 in 1996) has contributed to underpinning the role of vocational provision alongside academic provision. The sustained success of GNVQ candidates in applications for HE has consolidated the currency of vocational qualifications. In addition, the proposal to implement across the whole education and training system key skills—developed principally in vocational qualifications—further established the importance of vocationally-orientated components of learning and achievement. Recently GNVQs and A levels have been moving closer together (in terms of unit structure, assessment and grading), thereby encouraging more students to combine vocational and academic qualifications in their study programmes.

### 3.1.3 The emphasis on core/key skills

The national policies in England, Wales and Scotland place great importance on the development of core/key skills. In this respect, the reforms respond to both external demands, especially from industry, and to internal problems of the education and training systems. Core/key skills may play a unifying role for general and vocational learning in several respects: they may comprise a component of the curriculum of all learners; their purposes may relate both to employment and to higher education; and they may prefigure the more process-oriented concepts of learning which could characterise a unified curriculum of the future.

The unifying effect which core/key skills may have, however, is dependent on the education context. In the Scottish approach, core skills are incorporated into the design of units or courses wherever the subject-matter and assessment arrangements make this appropriate, i.e. they are developed as part of an integrated curriculum. In England on the other hand, except for the design of GNVQs, key skills add a common element to programmes with different content, pedagogy and assessment approaches, i.e. they are additional rather than integrated in the curriculum.

### 3.1.4 The role of work-based learning

In all three systems unifying strategies have centred on school/college-based provision, while work-based provision such as apprenticeships and youth training programmes have not been incorporated. Several reasons for the marginal role of work-based learning are identified: the dominance given by young people to the full-time route; the institutional complexity and fragmented nature of work-based training; the competence-based approach of national/Scottish vocational quali-
How to improve the standing of vocational compared to general education

ifications which sets them apart from qualifications in the full-time system.

Indeed, both in England and Scotland there is a widespread view that work-based provision needs to be kept distinct if it is to retain its character and function. In this way it would safeguard the delivery of occupational competence, maintain industry ownership and avoid domination by educational interest. The introduction of modern apprenticeships and national traineeships is intended to ‘regenerate’ work-based training. The maintenance of a distinct work-based route is perceived as more effective in ensuring the supply of high quality skills matched to the needs of employers than full-time provision. In England in particular, government unwillingness to promote any general education component as part of work-based qualifications has contributed to the marginalisation of the work-based route.

The study (ULP) arrives at the hypothesis that the problems of incorporating work-based provision are more severe for a unified system strategy than for a links strategy, since a unified approach has more stringent requirements for common design features. The analysis of the flow of students (home internationals project) suggests that work-based provision may be more critical for inclusion, by attracting people at risk, while full-time vocational education, having a closer interface with academic education, may be more critical for parity.

Another argument (ULP) put forward in the Scottish context is that vocational qualifications have not yet developed a strong enough position to be able to preserve, within a unified system, the principles that they represent. They should be built up before they are included in a more unified system. In conclusion the question is raised whether strong work-based qualifications and a strong work-based route can be developed in Britain.

3.1.5 The concept of overarching certification

There are proposals for overarching certificates in England and group awards in Scotland. According to the Dearing review, the overarching certificates should be awarded for equivalent levels and quantities of attainment in either academic or vocational qualifications and be subject to additional criteria such as the achievement of key skills. The function of an overarching certificate would be to build on existing plans for smaller qualification blocks and provide a framework for curriculum breadth and coherence. The Scottish group awards are different in that they bring together units and courses from a single unified system. The group award criteria, therefore, can be more stringent with regard to assessment and curriculum design.

The study (ULP) concludes that both overarching certificates and group awards are potential instruments for unifying academic and vocational learning and for promoting parity of esteem, provided these additional layers of certification acquire sufficient currency and status as against their constituent parts.

3.1.6 The flow of students into academic and vocational tracks

The unifying strategies are put in another perspective by an empirical analysis of flows and pathways in post-compulsory education and training in Britain (home internationals project). These investigations on the flow of students into academic and vocational tracks in England, Scotland and Wales have drawn attention to a significant correlation with educational attainment and social class background. The patterns of entry to the academic track (high attainers and middle class) and to the work-based track (middle/low attainers and working class) are similar in the three systems. Participation in the full-time ‘further education’ (broad vocational) track, however, is marked by significant differences: while in England these youngsters are mostly middle-attainers (Wales: low attainers) and from the middle class, in Scotland the participants are predominantly low-attainers and from the working class.

These differences are partly related to the provision of full-time further education in the systems concerned. The Scottish track is not only low in educational status but also considerably smaller (compared to the academic
track) than the one in England. Also, the standards of courses are different. While one in three English students in full-time further education in the early 1990s took academic courses, which would be more likely to attract higher attaining and middle-class students, hardly any Scottish student in the corresponding track did so.

The results of this investigation not only inform the debate on parity of esteem; they also throw light on difficulties encountered in implementing unification strategies, particularly in the Scottish context. It becomes evident that despite formal educational similarities between academic and broad vocational tracks, they are very different in terms of their relation to educational and social differentiation. The academic sector in Scotland proved to be more exclusive, in terms of educational status (prior attainment) and social class of entrants, than the one in the other UK countries – which means that the most unified system was the furthest from achieving parity of esteem.

3.2 Tentative conclusions with regard to the issue of ‘standing’

Following from the aspects set out above, some tentative conclusions can be drawn on the issue of ‘standing’.

Although parity of esteem between vocational and general education has been voiced as an aim in the strategies concerned, the ensuing reforms have only brought about tentative progress in this respect. This is because the underlying problems of disparity and low standing are deeply rooted in education and training traditions, societal interests and aspirations of young people, and can therefore only be solved by targeted policies. The drive towards a unifying system observed in Britain may provide a framework for possible improvement in ‘standing’. The preoccupation with government and regulations and the guiding role of qualifications in this system, however, appears to contribute little to this effect.

Potential progress in ‘standing’ is closely related to a rise in the quality of educational provision at course/curriculum level, e.g. the achievement of GNVQ and the potential impact of core/key skills. At the same time, there is a need for qualitative advance in vocational education to underpin the unification strategy. Qualitative improvements of vocational education, in particular work-based training, are required as preconditions e.g. for attracting higher-achieving students, for including work-based qualifications in a unified system and for achieving the desired effect of overarching certification.

A higher standing of vocational, particularly work-based, education will depend, above all, on qualitative advances in the contents and pedagogy. Attempts, however, to promote work-based qualifications in isolation, e.g. by excluding general education components, may be counter-productive.

The principal way to improve ‘standing’ in the British context is implied by the following conclusion put forward in the project (ULP): there is a need to go beyond unification as a rejection of academic/vocational division and to explore new possibilities for relating academic and vocational learning.

4. Qualifications with a dual orientation towards employment and higher education

An initiative taken in several countries is to provide the option for trainees or students of vocational programmes to acquire qualifications for university access alongside their vocational qualifications. This provision is based on varying degrees of combination or integration of general and vocational education, and of work-based and education-based learning. The resulting qualification opens up alternative routes into professional work and advanced studies (see Figure 4).

Starting out from partnership work in the projects INTEQUAL and DUOQUAL, the characteristics of qualifications with a dual orientation towards employment and higher education (dual qualifications) and their practical impact are investigated in the sections below.
It should be emphasised that the selection of these schemes is related to the composition of the partnership and the involvement of partners in specific pilot or reform initiatives. Obviously this approach is bound to neglect other schemes operating within individual countries and Europe, so that conclusions have to be drawn with care. References to the broader contexts are in fact included in the national case studies (see references). On the other hand, the approach adopted has provided valuable ‘insider’ knowledge for the partnership project and strong feedback from the project to the partners’ environments.

4.1 Characteristics of dual qualifications

The schemes of dual qualification considered in this study differ considerably with regard to their function, scope and structure. While this poses problems in comparative analysis, it also shows the great variety of initiatives and solutions adopted in the countries concerned. Dual qualifications may be described according to the following characteristics:

a) aims in the national context;
b) dimension;
c) place within upper secondary education;
d) type of certification awarded;
e) role in the process of training and employment;
f) target groups.

4.1.1 The aims of dual qualifications in the national context

The development of dual qualifications is related to specific educational aspirations in the countries concerned:

a) in the Czech Republic, vocational programmes offering a dual qualification enjoy a strong tradition and have recently seen considerable extension throughout upper secondary education;
b) the national reforms in Norway, Portugal and Sweden were initiated to reorganise the education system, particularly at upper secondary level, in such a way that it could meet the demands for lifelong learning and provide qualifications for employment as well as for access to higher education;
c) the ongoing reform in England has aimed at creating a coherent national qualifications framework with three different pathways: general, vocational and a middle one with dual orientation (GNVQ);
d) in France, starting out from the need for higher qualification standards, the intention was to bring the majority of young people up to baccalauréat level and, by creating the Bac Pro, also to meet the demand
4.1.2 The dimension of the schemes of dual qualification

All schemes investigated are part of the upper secondary level of education. Three groups may be distinguished:

a) schemes which extend over an integral part of the whole educational sector, such as the study branches in the Czech Republic, the vocational courses in Portugal and the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;

b) schemes which refer to individual courses or qualifications, e.g. the baccalauréat technologique (France) and the technological lyceum (Greece) – both being outside this investigation; a few of the full-time schemes (MBO/ BOL4 and GNVQ) are accessible via modular structures which extend over the rest of vocational education (the Netherlands) or over the whole of secondary education (England);

c) schemes which represent pilot projects within the established systems of vocational education and training, including the experimental reform in Finland and individual projects in Germany (Bavaria/ Brandenburg).

Most of the schemes considered in this study are still in their initial stage (Austria, England, Norway, Portugal, Sweden) or in a pilot phase (Germany, Finland), with one no longer operating (Greece); only three are already established (Czech Republic, France, the Netherlands).

4.1.3 The place of dual qualifications within upper secondary education

The schemes analysed in this study are selected from a broader range of dual qualifications existing in the countries concerned. Dual qualifications can be found in or across all strands of upper secondary education including full-time general, full-time vocational and dual/part-time vocational education.

In all countries, dual qualifications are available within full-time vocational education, i.e. as school-based schemes (Figure 5). This strand of upper secondary education may be regarded as the most fruitful basis of dual qualifications. The schemes involved vary, however, in the extent to which they are related to other strands. Several patterns can be identified:

a) some schemes are confined to the full-time vocational strand only, e.g. the baccalauréat technologique (France) and the technological lyceum (Greece) – both being outside this investigation; a few of the full-time schemes (MBO/ BOL4 and GNVQ) are accessible via modular structures which extend over the rest of vocational education (the Netherlands) or over the whole of secondary education (England);

b) other schemes are vocational programmes or streams which link up with full-time general education as part of comprehensive systems (Norway, Sweden); some schemes involve apprenticeships as preceeding stages (Czech Republic; France: Bac Pro) or as optional part of the stream (Norway).

In some countries, schemes of dual qualification have been specifically designed to integrate educational strands. General and vocational full-time education have been integrated in two schemes: in the Integrated Multivalent Lyceum (Greece) and in the individual study programmes (Finland). Full-time vocational education and apprenticeship training have been integrated within a course (project in Bavaria, Germany).
In three countries dual qualifications are provided within the strand of apprenticeship or part-time education: either as a general entitlement (Portugal) or as specific schemes: the Berufsmatura and the WIFI academy (Austria) and a pilot project (Brandenburg, Germany).

4.1.4 The type of certification awarded for dual qualifications

Certification for dual qualifications is dependent on the legal framework of the national education system (see also Kirsch et al. 1999) and on the role of academic versus vocational credentials in the society concerned. The type of certificate, therefore, gives little indication in transnational comparison of the characteristics or status of the individual dual qualification. Nevertheless, among the schemes investigated a certain pattern emerges:

a) the most common form is a combination of matriculation and vocational certification – as an expression of a ‘double qualification’ (Austria, Germany, Greece, Finland, Norway, Portugal); in one case the vocational certificate may be complemented by adding a transfer certificate for higher education (the Netherlands);

b) three schemes (Czech Republic, France, Sweden) lead to matriculation only, with one being qualified as vocational (Bac Pro);

c) only one scheme has a specific certificate (GNVQ: England).

4.1.5 The part of dual qualifications in the process of training and employment

Most schemes of dual qualification have emerged from vocational education and training, thus being part of the process of acquiring vocational qualification for skilled employment in the countries concerned.

While most schemes start immediately after compulsory education, some operate on the basis of a preceding apprenticeship or course of initial training (Czech Republic in part; France) or build on experience of skilled employment (Austria).

Within the schemes, training in full-time, apprenticeship or part-time arrangements may be applied. The majority of schemes are based on full-time education which is extended by offering practical assignments (England, Finland, France, the Netherlands, Portugal and Sweden). The German pilot projects are part of a dual system linking a full programme of training at an enterprise with theoretical vocational instruction at school. The Norwegian scheme includes the options of a full-time course (three years) or a combination of a full-time period and an apprenticeship (two+two years). In the Czech Republic, dual qualifications can be obtained in full-time or part-time courses. An exception is the Austrian scheme, which operates as a part-time course alongside employment.

There is a significant distinction in the relevance for employment between:

a) schemes providing basic vocational education as entry-level qualifications which have to be supplemented by continuing vocational training or on-the-job training (England, Finland, Norway: three years, Sweden);

b) schemes representing full qualifications for skilled labour at craft, technician or middle-management levels (Austria, Czech Republic, Greece, France, the Netherlands, Norway: two+two years, Portugal).

4.1.6 The target groups entering the schemes of dual qualification

All the investigated schemes except for two (Austria, France) are part of the initial vocational training provided at upper secondary level for 16 to 19 year olds. Several of these schemes (Czech Republic, England, Norway, Portugal, Sweden) are open to adult students as well. The Czech and French schemes also offer the option of advanced education and training for students who have already completed initial vocational courses or certain stages of them. In Austria, the scheme is exclusively geared to adults who are already qualified and employed.

While some schemes are accessible for the corresponding target group without precon-
Figure 5: The place of schemes within upper secondary education

<table>
<thead>
<tr>
<th>Country</th>
<th>General education: full-time (school-based)</th>
<th>Vocational education: full-time (school-based)</th>
<th>Vocational education: dual or part-time (work-based)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>General lyceum</td>
<td>IML</td>
<td>Voc. school</td>
</tr>
<tr>
<td>Finland</td>
<td>Gen. Upper sec. school</td>
<td>Exp. reform</td>
<td>Voc. school</td>
</tr>
<tr>
<td>England</td>
<td>GCE ‘A’ level</td>
<td>GNVQ: advanced level</td>
<td>NVQ</td>
</tr>
<tr>
<td>The Hetherlands</td>
<td>VWO/HAVO</td>
<td>MBO/BOL4</td>
<td>Apprenticeship</td>
</tr>
<tr>
<td>Sweden</td>
<td>Preparatory study programmes</td>
<td>Vocational programmes</td>
<td>Apprenticeship</td>
</tr>
<tr>
<td>Portugal</td>
<td>General courses</td>
<td>Vocational courses</td>
<td>Apprenticeship</td>
</tr>
<tr>
<td>Norway</td>
<td>General streams</td>
<td>Vocational streams</td>
<td>(incl. apprenticeship)</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Gymnasium</td>
<td>Study branches (also part-time)</td>
<td>(incl. apprenticeship)</td>
</tr>
<tr>
<td>France</td>
<td>General streams</td>
<td>BTn</td>
<td>Bac pro (incl. apprent.)</td>
</tr>
<tr>
<td>Germany</td>
<td>Abitur/Gymnasium</td>
<td>Tech. courses</td>
<td>Pilot project</td>
</tr>
<tr>
<td>Austria</td>
<td>Matura/AHS</td>
<td>BHS</td>
<td>Berufsmatura</td>
</tr>
</tbody>
</table>

Abbreviations: see list in annex.

dictions (Austria, Greece, Finland, Norway, Portugal, Sweden), others are restricted in access by requiring specific entry qualifications (England, France, the Netherlands), by setting entry examinations (Czech Republic) or by applying selection criteria (Germany). These distinctions are partly due to general characteristics of the national systems concerned. However, they may also reflect differences in the function and status of the individual schemes. For instance, certain schemes offer dual qualifications as a general option, leaving it to the individual students to make the most of it (Finland, Norway, Portugal, Sweden); other schemes offer dual qualifications as part of distinct and demanding vocational courses (Czech Republic, the Netherlands), and a few schemes are particularly designed to attract high-achievers (Germany, France).

4.2 Practical impact of dual qualifications

In order to assess the practical impact of the schemes of dual qualification, the following indicators are applied:

a) the scale of enrolment in the schemes;

b) the degree of integration within the curriculum;

c) the success rate of students within the scheme and in further study;

d) the balance of dual orientation;

e) the patterns of dual progression.

4.2.1 The scale of enrolment in the schemes

Since the schemes of dual qualification differ in their educational aims, in the length of time they have been in existence and in the target groups they address, the scale of enrolment is bound to vary considerably. In terms of proportion of the relevant age group, participation in the schemes ranges from low level (less than 1%: Austria, Germany) via medium level (5-20%: Greece, England, Finland, France, Portugal) to high level (up to 45%: Czech Republic, the Netherlands, Norway, Sweden). It should be noted, though, that some of these percentages refer to a ‘gross’ proportion of all entitled entrants, while only a smaller part of these either reach the corresponding level of the course (the Netherlands) or choose to acquire a dual qualification (Finland, Sweden).

The trends in enrolment point upwards in most schemes (Czech Republic, Greece, England, Finland, the Netherlands, Norway, Portugal). The stable trend observed in some cases may either be connected with a given framework of the scheme (Czech Republic, Germany, Austria) or caused by a saturation of demand (France, Sweden). None of the schemes shows a downward trend in participation.

The predominant upward trend in enrolment correlates, in seven schemes, with significant proportions of the age group involved. This can be interpreted as an indication of both the attractiveness and the relevance of dual qualifications in the majority of the countries concerned.

The schemes selected for this study only partially represent the entire opportunities of acquiring dual qualifications at upper secondary level in the given countries (see also Figure 5 above). To get a more comprehensive picture, data from other sources are included which indicate the entitlement of VET students for access to higher education. In Figure 6, a distinction is made between two choices open for these students: progression to vocational studies or to both academic and vocational studies. It should be stressed that these data only refer to the opportunity in principle and not to the actual flow of students.

As the figure shows, opportunities for taking up further studies after completing vocational education are open to a majority of students (except in France). Access in several countries, however, is restricted (almost or totally) to further vocational studies (Germany, Greece, Finland, the Netherlands). A dual option in the full sense, granting access to both academic and vocational studies, is only avail-
able in five countries (Czech Republic, Norway, Austria, Portugal, Sweden). Finland will join this group after the present reform. It is worth noting that the ‘fully’ dual option can be found with both comprehensive systems (Nordic) and track systems including several courses/qualifications (Czech Republic, Austria, Portugal).

### 4.2.2 The degree of integration within the curriculum

A key question raised in this study is the extent to which vocational and general education are integrated. This includes the issue of competence acquired in these schemes. The following comparative analysis stems from two dimensions assumed to be relevant for qualifications with dual orientation:

a) the relationship of dual qualifications to skilled work; and

b) the relationship within the schemes between general and vocational subjects.

In conclusion, the schemes are compared in relation to both dimensions.

**Relation of dual qualifications to skilled work**

Since dual qualifications are situated in various contexts of education and training they differ in their relation to the requirements of work. To determine the extent and character of their work orientation, two indicators are applied:

a) the part played in the schemes by practical training, characterised by the organisational form (assignment, traineeship and employment) and by duration within the course; and

b) the degree of vocational specialisation within the schemes, measured by the number of primary and secondary divisions (areas, programmes, branches, etc.).

Analysis according to the two indicators produces different groups of schemes whose work orientation ranges from a low via a medium to a high degree. The characteristics of work orientation among the three groups of schemes are summed up below:
How to improve the standing of vocational compared to general education

a) low: training in broad areas; no compulsory practical assignment (Greece, England);

b) medium: training in differentiated vocational areas; practical assignments (Finland, France, Norway: three years, Sweden);

c) high: basic vocational training and full specialisation; extensive practical assignments or traineeship (Czech Republic, Germany, the Netherlands, Norway: two+two years); or broad continuing training related to skilled occupations (Austria).

Relation between general and vocational subjects within the schemes

Attempts made in all schemes to link vocational and general/academic components of the curriculum are relevant not only for advanced studies, but also for high-level skilled work. The curricula of the schemes provide for a variety of combinations involving vocational and general subjects. In the comparative analysis, four approaches have been identified, extending from an additive to an integrative focus:

a) provision of separate general or theoretical subjects within the major curriculum and also as optional units; this additive approach is found in all schemes, mostly as a dominant feature (Czech Republic, Greece, France, Austria, the Netherlands, Norway, Portugal, Sweden);

b) vocational application of general/theoretical subjects or a combination of theoretical and vocational subjects; this approach expresses itself in various initiatives across all schemes, often playing a prominent role (Czech Republic, Germany, Greece, England, Austria);

c) education and training related to transferable skills, overcoming the division of general and vocational abilities; this approach cannot be traced in all schemes, it tends to be an underlying principle (Czech Republic, Germany, England) rather than being applied in practical terms (Finland, Norway, Austria);

d) action-orientated education and training based on work-related parts of the curriculum (projects); all schemes include variants of this approach, with particular relevance being attributed to a project-related curriculum in the German case.

Within each approach, a considerable similarity (groups (a), (d)) or variety (groups (b), (c)) of practice can be observed across all schemes. This evidence suggests that the forms of combining general and vocational subjects are fairly independent of or easily adaptable to different categories of schemes. The relative weight of the different approaches, however, differs between schemes. This is an indication of the degree to which general and vocational subjects are integrated. According to this criterion, the schemes range from a low degree of integration (France, the Netherlands, Portugal, Sweden) via a medium degree (Czech Republic, Greece, England, Finland, Norway, Portugal) to a high degree (Germany, Austria).

Curricular structure of dual qualifications

Analysis of schemes according to dimensions of work orientation and integration of subjects has led to different groupings in each case. In a concluding step, both dimensions are combined in a matrix with the schemes arranged accordingly (Figure 7). Three clusters of schemes may be distinguished:

a) the majority of schemes combine medium work orientation with either low integration (the Netherlands, Portugal, Sweden) or medium integration of subjects (Greece, Finland, Norway: three years). Two more cases are included in this cluster which are characterised by either low work orientation and medium subject integration (England) or high work orientation and low subject integration (the Netherlands);

b) the rest of the schemes form a cluster combining medium and high degrees of both work orientation and integration of subjects (Czech Republic, Germany, Norway, Austria: two+two years). The German pilot projects, in particular, display the potential of work-based education and train-
ing in combination with a highly integrated curriculum;

c) there are no cases of both low work orientation and low integration of subjects. If recent developments of and plans for the schemes are considered, little change may be expected with regard to work orientation, but further advance is likely with regard to the integration of subjects (e.g. initiatives in NL, and gradual steps following the reforms in Norway, Portugal, Sweden). This trend may result in boosting the group of schemes which combine a medium degree of integration with various degrees of work orientation (the central column in the matrix).

4.2.3 The success rate of students within the scheme and in further study

In preparation for access to higher education, students in schemes of dual qualification compete with those in tracks of general education. Their comparative performance at the point of graduation is therefore significant. On the one hand, Bac Pro students achieve a rate of success by the end of their course which characterises French baccalauréat holders in general, and graduates from German pilot projects reach a particularly high performance rate; on the other hand, the poor completion rate in GNVQ courses is a cause of concern in England, and the performance of students in the Finnish experimental reform is also below that of students in general education.

At the point of entry to higher education, the success of graduates with dual qualification may be equal to those with general education (Czech Republic, Greece) or less (Portugal). As to progression within higher education, the two cases for which evidence is available (France, the Netherlands) require a closer look: while the success rate of Bac Pro holders hardly exceeds half of them, but matches the general rate in advanced technical studies, the success rate of MBO holders after two years of study reaches three quarters which is slightly below the average in higher vocational institutes.

A tentative conclusion supported by the case studies is that students in various schemes face difficulties in progression to higher education. Steps considered to raise the chances of success (e.g. in England, the Netherlands) include partnerships or compact arrangements between the institutions which offer a
dual qualification and those providing higher education. Also, the possibility for individuals to enter enriched or enhanced programmes within the schemes can greatly affect their subsequent prospects of success in higher education.

### 4.2.4 The balance of dual orientation

While all schemes allow for a dual orientation, they differ in the relative weight attributed to either employment or higher education. Several of them put the emphasis on employment as the prior aim and also function like this in practice (Austria: 37% 1997, France: 12% 1992, the Netherlands: 27% 1996, Portugal). This emphasis is likely to apply to the vocational streams or programmes (Norway, Sweden) as well, despite their original claim of a balanced orientation. Another group of schemes (Czech Republic, Greece, England, Finland) offers and also achieves a fairly equal weight of the two progression routes (about 50% 1995 for both Greece and England and 46% 1996 for Czech Republic). Only one scheme (Germany) is geared primarily towards higher education (95% 1998), but in terms of a vocational career.

The flow of graduates into higher education, if followed over a longer period, shows various trends (downward, stable, upward). These are related to more general changes, for instance in the demand of young people for upper secondary and higher education, in the provision of study places and in alternative chances on the labour market. The evidence of trends does not imply any significant shift in the balance of dual orientation. If the latest percentage figures are considered it is evident that the dual orientation functions in practical terms. The overall balance of the schemes is summed up in Figure 8.

### 4.2.5 The patterns of dual progression

How does dual orientation towards higher education and employment function in real terms? To start with, evidence on the targets of the qualifications and the options open for graduates is analysed. In conclusion, typical patterns of dual progression are identified.

#### 4.2.5.1 The orientation of dual qualifications towards employment

As the analysis of the curricula of dual qualifications has shown, the degree of work orientation varies significantly between schemes. This diversity affects the level and type of occupation envisaged for graduates, ranging from unspecified employment via skilled work to middle-level management. At
the same time, depending on the national context, the congruence between qualifications and occupations and the modalities of the transfer from education to work vary greatly. While in some countries, the relationship between the qualification obtained in the scheme and the type of occupation it prepares for is clearly defined (Czech Republic, Germany, France, the Netherlands, Austria), in other countries the occupational orientation of the schemes is less specific (Greece, England, Finland, Norway, Sweden).

The pattern of occupations related to dual qualifications includes a category of special significance: so-called 'highly skilled work' which is situated between ordinary skill level and technician level. The schemes forming this group (Czech Republic: SVS, Germany, France) have two features in common: they have a clearly defined occupational profile and they address high achievers among the trainees.

Some evidence is available on the position of graduates with dual qualifications on the labour market: chances for graduates to enter the labour market is indicated, in general terms, by the employment rate. This appears to be high for dually qualified graduates compared to the employment rate of other young job seekers, even if the evidence available does not allow to make detailed comparisons (Greece, Germany, Finland, France, the Netherlands). No opposite cases of a low employment rate are known from this study. It may be assumed, therefore, that dual qualifications provide good chances for their graduates compared to other job seekers on the labour market.

Another question is whether the jobs obtained by dually qualified graduates match the occupational levels envisaged in the schemes concerned. While three cases indicate a close relationship between the occupational target of the scheme and the actual job obtained (Greece, Austria, Portugal), one case implies a lower entry level (France) which however may be followed by occupational progression. Altogether, the evidence available suggests a positive relationship between the envisaged and the achieved occupational levels.

It may be concluded from the evidence available that dual qualifications enhance prospects for gaining skilled employment as against ordinary qualifications at upper secondary level.

4.2.5.2 The orientation of dual qualifications towards higher education

Orientation towards higher education implies a precondition and/or an entitlement to have access to studies which may extend from higher vocational to academic courses. In those countries where there is a clear distinction between tracks of vocational and academic institutions at upper secondary and tertiary levels (Germany, Greece, the Netherlands, Austria), the schemes specifically qualify for access to the technical sector of higher education, partly granting additional entitlement for access to academic studies (Austria). In other countries which have developed a more integrated structure of secondary and higher education (England, Finland, Norway, Sweden) and in France, the schemes serve as a general entitlement for access to higher education. However, as the case studies show, the special requirements insisted upon by individual faculties reduce the options in actual terms. In most cases, therefore, access is in practice confined to technical courses or studies in the domain-related areas.

4.2.5.3 Patterns of dual progression

If the typical career prospects of dual qualifications set out above are compiled for each scheme (with evidence available for nine of them), two major patterns of dual progression emerge (Figure 9):

a) most of the schemes offer a choice between access to studies in the technical sector or entry into highly skilled employment/middle-level management (Czech Republic, Germany, France, the Netherlands, Austria, Portugal);

b) a smaller group of schemes provide opportunities of either progression to studies in related subjects (with no established technical sector available) or unspecified em-
How to improve the standing of vocational compared to general education

Employment (England, Norway: three years, Sweden).

The first of the two patterns is likely to open up more structured professional careers, also in terms of close relations and potential combinations between technical studies and highly skilled/managerial work. The second pattern functions under conditions of a more flexible relationship between higher education and labour market in the countries concerned.

The patterns above suggest that there is a significant relationship between the two options of progression. Particularly in pattern I, by preparing both for (highly) skilled work and work-related studies, dual qualifications provide a basis for professional careers in a lifelong learning process.

4.3 The potential of dual qualifications

Altogether, dual qualifications potentially live up to the criteria identified for high standing of VET (see Figure 1 in Section 1): providing personal competence and facilitating mobility both in the education system and the labour market. Figure 10 summarises the characteristics of dual qualification according to this model.

For assessing the relevance of dual qualifications in vocational education provision and in facilitating transition to the labour market, the conclusions drawn in two external studies are significant:

a) within the whole spectrum of transition from education and training (at secondary level) to work ‘double’ qualifications are likely to mark the highest degree of opportunity (Hannan 1999);

b) the introduction of demanding ‘double qualifying’ pathways is intended to raise participation in VET. The success of these pathways, however, seems to some extent related to their selectivity in favour of the most successful students (Durand-Drouhin 1999).

The results of both of these studies and of the INTEQUAL/DUOQUAL project confirm that
dual qualifications improve the chances of young people entering educational and occupational careers, thereby contributing to an upward trend of differentiation within secondary vocational education. In a context of wide-ranging problems of transition from education to work, with a large section of young people being at risk, dually qualifying pathways are in effect selective, leaving those perceived as 'low-achievers' behind. The challenge for educational policy, therefore, is to ensure that schemes of dual qualification are part of transparent and flexible systems, being accessible from any point and linking up to other parts of education and training.

5. Attitudes towards the esteem of vocational education – evidence from case studies

The esteem of vocational education and ways of improving its attractiveness have been analysed in another parallel project (PAVE), involving case studies on England and Wales, Finland, Greece, Ireland and the Netherlands. The following section summarises the major approach and relevant results, based on the project report (Trant et al. 1999).

The investigation focuses on the tension between vocational and liberal (rather than general) education, also tracing the evolution of these concepts, and sets out to explore ways of reconciling the two. Three hypotheses have led the project research:

a) 'vocational education in general has low prestige because it is perceived to lack the qualities traditionally associated with liberal education;

b) liberal education at its best has a vocational dimension and vocational education at its best has a liberal dimension; hence it makes good sense to integrate the two;

c) examples of such integration already exist but they need to be examined critically and articulated more clearly.'

The major message in conclusion is that liberal and vocational education should be regarded as two complementary aspects of the same task: the fashioning of the human person. An educational challenge of the coming century will be to create a new synthesis of the liberal and vocational ideals and to rediscover their underlying complementarity.

The methodology applied in the study comprises three dimensions:

a) the philosophical one which attempts to analyse possibilities of integrating the liberal and vocational traditions;

b) the historical/hermeneutical one which facilitates the evaluation of documentary evidence;
c) the ethnographic one which examines examples of good practice through selected case studies.

Other than the previously reviewed projects, PAVE did not undertake a comparative analysis of different education systems, but sought to study a number of individual cases in their national contexts. These case studies include:

- the GNVQ experience in England and Wales;
- double qualifications through cooperation between academic and vocational upper secondary schools in Finland;
- improving the status and attractiveness of vocational education in Greece;
- the leaving certificate applied: a prevocational programme in Ireland;
- the liberal dimension in secondary vocational education in the Netherlands.

A special approach applied in the case studies are interviews and questionnaires carried out in individual schools involving students, teachers, and also partly administrative staff, parents and professionals. The evidence produced on this basis offers special insight into the issue of parity of esteem: the studies reveal the perception of individuals, their attitudes towards vocational education and ways of influencing these attitudes.

Parity of esteem is considered in a social context, starting out from the observation that vocational education is in most cases regarded as having lower status than liberal education. The reason for this is sought in the values, attitudes and beliefs that people hold. These values may refer to the courses which students follow, the schools they attend, the types of learning, the forms of knowledge and the ways in which these are assessed.

On a closer look, the world of education turns out to be concerned with diverse patterns of values. While the value system of society has its impact on schools, education itself is saturated with values. Moreover, education is not only a mirror of values, it also transmits and communicates values and may shape these values in its own right (see also Walsh 1993). These considerations provide the background against which the evidence of the case studies related to the issue of parity of esteem, is assessed in the study.

A conflict may occur between new values realised in the learning environment and the prevalent value system, e.g. students could benefit educationally from a learning environment created in a vocational course, but in the end face barriers of prejudice associated with the qualification obtained. This situation raises the question of whether and how the prevalent system could be challenged.

The values involved in the traditional vocational subjects can make a substantial contribution to the social and personal fulfilment of human beings. Their liberating potential therefore can be just as important as that of the traditional ‘liberating’ subjects. This potential however has been both undervalued and underdeveloped. Many academics share this underestimation, while vocational educators may fail to demonstrate the values of vocational subjects for human development.

In view of the generally low status of vocational education, the question is how to remedy the situation. Individual schools facing this challenge often experience an uphill struggle, with several approaches being adopted to improve the image of vocational education:

a) two English schools have attempted to reassure parents that the new vocational course concerned is as good as the traditional academic one (GNVQ as compared with the more familiar A levels);

b) an Irish school has initiated a publicity campaign in the local area to make employers and parents aware that the new vocational course is more work-related than the traditional one (the leaving certificate applied compared to the leaving certificate). Despite these efforts, the public perception of vocational courses proved difficult to correct.
In both cases, media coverage particularly in the tabloid press had an adverse effect on the attitudes of students and parents.

An important factor in determining the status of new vocational courses is the drop-out problem, as experienced in the Finnish, Greek and Irish cases. Among the reasons encountered for the drop out of students in the Finnish experiment (individual programmes of double qualification) was the extra work load which the students had to bear and also inadequate selection, with students underestimating the demands of the study.

Problems of communication, too, appear to affect the status of vocational education. In the Finnish case, this problem turned out to be related to the culture gap between the academic and vocational traditions. Information provided for prospective students in double qualification programmes, for instance, did not cover everyday routines in the academic schools. Academic teachers providing the information took these routines for granted, not realising that these were unknown in vocational schools. Experience from the English case study confirmed that clear information and first-hand experience were vital for generating positive attitudes towards vocational education among students.

In summing up the evidence of the case studies the authors see a certain chance for schools themselves being able to influence the esteem of vocational education and in some ways being ahead of national consciousness.

A major conclusion drawn from the analysis of parity of esteem is that vocational education should not only prepare technicians and skilled workers but also enable young people to enhance their own human development. In particular, the aspiration to proceed to further and higher education is encountered across the case studies. It is seen as the critical factor in deciding the status of a particular vocational course. At the same time, the failure of both academic and vocational education to cater adequately for underachievers exposes these youngsters to perpetual low status.

It is worth noting that the PAVE project with its focus on values and attitudes, arrives at virtually the same conclusion as the previous projects adopting a systemic approach. In essence the study provides further dimensions of the quality of vocational education, as a major basis of esteem, and confirms the key role of the dual option for skilled work and higher education in improving the esteem.

6. Conclusions about trends and prospects for improving the standing of vocational compared to general education

To summarise issues of the standing of vocational compared to general education across the various projects and the countries involved, the comparative approach outlined at the beginning (Section 1) is taken up again. First, the issues of ‘standing’ are considered in typical settings, second, criteria are applied to assess the ‘standing’.

6.1 Issues of ‘standing’ in typical settings

Starting out from the three levels of analysis – course/curriculum, education system and labour market (Figure 1) – a tentative typology of national settings is applied which cuts across these three levels. This typology picks up on investigations of education and work in an institutional context (Müller and Shavit 1998) and on studies into the transition from education to work (Durand-Drouhin 1999; Hannan 1999) which capture the relation between the education system and the labour market. The following three types of national settings for relating education and work, particularly for the 16 to 19 age group, are suggested (Figure 11):

It should be noted that the allocation of countries to these types follows a normative approach, being based on systemic characteristics rather than empirical findings. Evidence for the loose type can in fact only be found outside the European context of investigation. Furthermore, the reforms which several countries are undergoing imply processes of
How to improve the standing of vocational compared to general education

change which cannot be considered in this structure. Nevertheless, by grouping the countries according to these settings, basic relations between education systems and labour markets can be identified which help interpret national differences in the standing of vocational compared to general education. The problems related to ‘standing’ and the measures expected to solve them are summarised below according to the three types of setting.

**Type I: close relationship**

Based on established standards of apprenticeship training and full-time technical courses, countries seek to enhance the quality and status of vocational education by measures such as:

a) promoting key qualifications (Austria, Germany);

b) providing flexible links between school- and work-related provision at various levels and institutions (Denmark, Netherlands);

c) offering dual qualifications (access to higher education) for high achievers from vocational tracks, e.g. Berufsmatura (Austria), pilot projects (Germany).

In cases of socioeconomic transition, where training systems used to be fully developed in a planned economy being highly specialised according to occupational structures, and now having to adapt to new demands of a market economy (Czech Republic, Hungary), the reform measures are geared to:

a) overcoming extensive specialisation;

b) developing key qualifications;

c) retaining traditional pattern of work-based qualification.

The standing of vocational education in the first type of setting (established group) is underpinned by regulations which make vocational qualifications a precondition for entry to skilled employment. This provides a certain advantage over secondary general education and partly even stimulates mobility

---

<table>
<thead>
<tr>
<th>Type</th>
<th>Setting</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>I = close</td>
<td>Close relationship between education system and labour market, including a tracked system of education and a qualification structure which has direct relevance for occupational entry</td>
<td>Austria, Czech Republic, Denmark, Germany, Netherlands, Hungary</td>
</tr>
<tr>
<td>II = loose</td>
<td>Loose relationship between education system and labour market, with a flexible match between qualifications and occupations or jobs, allowing for predominant school-based, broad vocational education and subsequent on-the-job training</td>
<td>Australia, Canada, Japan, USA(*)</td>
</tr>
<tr>
<td>III = varied</td>
<td>Varied relationship between education system and labour market, with close matching confined to apprenticeship or specialised VET and loose matching related to predominant full-time education; calling for coherent education and qualification frameworks across all sections</td>
<td>England, Estonia, Finland, France, Greece, Norway, Portugal, Scotland, Spain, Sweden</td>
</tr>
</tbody>
</table>

(*) Countries included according to external study (Durand-Drouhin 1999).
from general to vocational tracks at upper secondary level (the Netherlands). The challenge, however, lies in the superior career prospects of graduates with both vocational and general certificates at upper secondary level and of higher education graduates.

**Type II: loose relationship**

Both the occupational specificity and stratification of secondary education are at a low level, matching open labour markets characterised by large service sectors. Countries with this setting often provide comprehensive school patterns, with programmes of broad vocational education included, while entry to employment is facilitated by on-the-job training. Generic concepts of employability, with an emphasis on key competences, dominate. At the same time, there are efforts in such countries to involve employers in education and training, through development of school-enterprise partnerships and practical assignments (Durand-Drouhin 1999; Mueller and Shavit 1998).

Despite far reaching attempts to raise the standards and occupational relevance of vocational education in these countries, ‘standing’ in terms of demand for places and prospects of employment remains problematical. A major reason for this can be found in the characteristics of this setting: since there is no distinct relationship between vocational qualifications and occupational requirements (specific skills being acquired in the workplace), the qualification obtained at school is considered by employers as indirect information on the applicant (general abilities, etc.) rather than as evidence of defined knowledge and skills. (This contrasts with the ‘close’ relationship in type I, where a standard qualification or vocational certificate is regarded by the employer as a direct indication of the competence and skills acquired.) In this respect, graduates from vocational programmes or strands tend to be at a disadvantage over those from general programmes in cases where they both compete for the same jobs.

**Type III: varied relationship**

Attempts are made in this setting to overcome problems of transition from education to work arising from a diversity of institutions, courses and certificates in vocational education and to establish coherent structures across upper secondary education. This is done, for instance, by integrating general and vocational programmes in comprehensive schools (Norway, Sweden), by promoting horizontal flexibility between vocational and educational pathways, especially within individual study programmes (Finland), and by providing at certificate and programme levels a framework of formal recognition of vocational education (England, Estonia, France, Portugal, Spain, Scotland). Output-related qualification structures are developed particularly for modular systems (England, Scotland). In some cases the framework includes provision for equivalence between vocational and general education, e.g. equal entitlement for access to higher education (Portugal) or overarching certification (England).

These attempts of promoting coherence only partly include the curricular level. Examples are the creation of the (former) integrated multivalent lyceum (Greece) and the implementation of general pedagogical concepts of new professional competences (Portugal).

The relationship between the education system and the labour market within this setting varies, among other factors, according to the role and involvement of enterprises, particularly in work-based training. The following situations may be identified:

a) in a few countries (e.g. France) relations between the diverse education system and the labour market are facilitated by a large-scale commitment of enterprises in providing work-based training, partly as assignments or traineeships for students and partly as firm-specific training for new employees;

b) moves towards building up the work-based part of vocational education have been made especially in the Nordic countries, e.g.:

i. by forging cooperation between schools and enterprises for providing practical assignments (Sweden),
ii. by introducing an extra year of work-based training in VET programmes (Finland), or

iii. by linking school-based and apprenticeship training, with a pattern of two years full-time education and two years apprenticeship (Norway).

However, problems in finding placements and qualified trainers in enterprises partly pose drawbacks to these reforms;

c) most countries (England, Estonia, Greece, Portugal, Scotland, Spain) face problems related to a low profile and insufficient provision of work-based training, with inferior standards of apprenticeships and lack of opportunities of gaining practical experience within school-based programmes. Their specific conditions, actions and achievements in tackling these problems, however, vary considerably owing to the diversity of education systems and labour markets particularly in these types of setting.

6.2 Improvement of ‘standing’

For assessing the standing of vocational compared to general education and its prospect of improvement resulting from various measures, the initial framework of three criteria is applied (Section 1, Figure 1). In more specific terms, high ‘standing’ should be interpreted according to the following characteristics which relate to dual qualifications:

a) acquisition of key competences/ integration of vocational and general education;

b) opportunity for access to academic and vocational higher education;

c) qualification for entry to (highly) skilled employment.

This set of characteristics represents an ideal-type model which should be regarded as an aim or direction of development, linking up with all sections of vocational education and with general education (Figure 12).

The ‘standing’ of vocational education in a given system may be assessed as ‘high’ (or equal to general education) given the following conditions:

☑ if high ‘standing’ is achieved according to all three criteria (or characteristics).
In the German dual system, for instance, only two criteria are fully met: young people typically acquire a high level of competence and gain entry to skilled employment, but they have limited access to higher education (apart from schemes in individual Länder);

- if high ‘standing’ extends over a major part of upper secondary education.

The French scheme of Bac Pro for example proves to be limited in this respect: although corresponding to all criteria of high standing, it involves only a moderate percentage of young people while the major part of vocational education remains at the bottom of the educational hierarchy;

- if high ‘standing’ relates to public esteem.

The Swedish vocational programmes for instance meet the three criteria, but do not seem to gain in public esteem, presumably because the traditional role of vocational education as second choice for low-achievers has not changed and the qualitative improvements in the curricula are largely shared by the general programmes as well.

 Altogether, improvement of the standing of vocational compared to general education is a permanent aim which can only be approached by continuing enhancement and adaptation to new requirements.

For enriching and deepening existing knowledge on ‘standing’, further insight is required into the basic assumptions guiding definitions of the core contents of academic/general and vocational educational goals, in particular the following aspects:

- how changing concepts of knowledge accumulation and management may affect assessments of the ability of different forms of education to create preconditions for tertiary-level studies and qualifications;
- how modern curricula and/or teaching and learning environments may shift the balance between
  - absorbing fundamental knowledge structures,
  - acquiring knowledge with a view to applying it in practice and
  - linking the acquired knowledge bases to new knowledge and new contexts of application;
- how the ability to coordinate, systemically and socially, organisation-specific operational situations, (an essential aspect of modern occupational skills) may also become a model in academic/general education;
- how developing the structures and curricula of vocational education may serve as a dynamic response to the challenge of shifting occupational structures and the gradual obsolescence of practical occupational knowledge.

This contribution may stimulate further projects to consider these aspects and relate them to the current debate about vocational pedagogy and educational policy.

**Summary**

This contribution is mainly based on research results provided by four major partnership projects: Post-16 Strategies/SPES-NET coordinated by the Institute for Educational Research, University of Jyväskylä, and INTEQUAL/DUOQUAL coordinated by the research forum WIFO, Berlin. These projects have been carried out with the financial support of the European Commission within the framework of the Leonardo da Vinci programme. The SPES-NET and DUOQUAL projects are still running and, therefore, final results are not available yet. Further, the contribution draws on the results of studies undertaken by individual partners involved in associated projects, in particular the UK-based project on unifying academic and vocational learning (ULP) and a parallel Leonardo project on improving the status and attractiveness of initial vocational education and training (PAVE).

In analysing the standing of vocational compared to general education (the ‘standing’) in
European countries, three levels are considered: course/curriculum, education system and labour market. On this basis, a model of criteria is applied which relates ‘standing’ to the quality of VET. The three criteria are personal competence (including skills), educational mobility (for lifelong learning), and occupational mobility (at the labour market). This comparative approach serves to carry out the present investigation within and across several individual projects, providing a framework of secondary analysis.

**Reforms focusing on post-16 education strategies to promote parity of esteem between vocational and general education**

The Post-16 Strategies project identified four reform strategies in eight upper secondary education systems for promoting parity of esteem between vocational and general education. These were vocational enhancement, mutual enrichment, links and unification. The inclusion of more countries in the SPES-NET project led to further differentiation within and between categories of reform. The original strategies were complemented with substrategies focusing on lifelong learning including the issue of access; partnerships between providers of VET and employers; teachers’ and trainers’ qualifications; and the knowledge base of VET.

Each country’s reform programme might include elements of different strategies, and the emphasis of a country’s policy could change over time. The four strategies represent a continuum between strategies based on the distinctiveness of academic and vocational education and those based on their full integration, with links and mutual enrichment as intermediate strategies between the two poles. Each of the partner countries have key system issues which the reforms are seeking to resolve.

Those systems that want to move in a more unified direction and at the same time have high degrees of student choice may also be encouraging academic drift or reflecting more basic social divisions between academic and vocational orientations because of the way in which prevailing values and cultures impinge upon student choices. This could be countered by very strong and supportive messages coming from the labour market concerning the acquisition of certain types of vocational qualifications.

However, in the absence of this or of divisions of opinion amongst employers, the answer may be more prescription and rules of combination provided by qualifications authorities, both to protect the integrity of the vocational route and to encourage students to be more radical in the ways in which they combine studies.

All the reforms respond to, or anticipate, trends in the labour market and in the organisation of work. All respond to a perceived need for qualitative changes in the knowledge and competences which young people bring to the labour market. Changes in the content of work, in new technology, in patterns of occupational mobility and in the pace of change itself are seen to require increased adaptability, the capacity to learn new skills in the future, personal and transferable skills, and so on.

Most of the reforms seek to enhance links between VET and the labour market, and to make VET more responsive to labour-market needs. This is pursued through networking with local enterprises, through the formal representation of industry in the machinery for designing curricula and qualifications, and in some systems by allowing greater responsiveness to local needs. In most countries, therefore, we can identify an attempt to increase the influence of the labour market within the reforms.

However this is not the same as a labour-market influence on the reforms themselves. In most of the countries studied the main impetus to reform appears to be, not pressure from the labour market, but internal pressures arising from the need to rationalise the education system itself. This is most obvious in Austria and Germany. The reforms in Norway, Scotland and Sweden aim to simplify their systems and make them more coherent through unifying or comprehensive reforms.
The reforms in England, Finland and France pursue rationalisation through links of various kinds rather than unification. We assume that VET systems’ responses to labour-market changes depend on whether and how these changes coincide with problems internal to VET itself.

**Implications of unifying post-compulsory education – the British case**

The focus of this analysis is on attempts in these countries to reduce divisions between academic and vocational tracks and to develop a more coherent system. In addition, a related study on flows and pathways in post-compulsory education and training provides empirical evidence on the destination of students of academic and vocational tracks in England, Scotland and Wales against the background of educational attainment and social class.

The drive towards a unifying system observed in Britain may provide a framework for possible improvement in ‘standing’. The preoccupation with government and regulations and the guiding role of qualifications in this system, however, appears to contribute little to this effect. Potential progress in ‘standing’ is closely related to a rise in the quality of educational provision at course/curriculum level, e.g. the achievement of GNVQ and the potential impact of core/key skills. At the same time, there is a need for qualitative advance in vocational education to underpin the unification strategy. Qualitative improvements of vocational education, in particular work-based training, are required as preconditions, e.g. for attracting higher-achieving students, for including work-based qualifications in a unified system and for achieving the desired effect of overarching certification.

**Qualifications with a dual orientation towards employment and higher education**

An initiative taken in several countries is to provide the option for trainees or students to acquire qualifications combining vocational and general education to provide a dual orientation towards employment and higher education. In the projects INTEQUAL/DUOQUAL the characteristics and practical impact of these dual qualifications have been investigated across Europe.

In analysing the curricula of dual qualifications, two clusters may be distinguished: the majority of schemes combine medium work orientation with low or medium integration of subjects; the rest of the schemes combine medium and high degrees of both work orientation and integration of subjects. Looking at recent developments, little change may be expected with regard to work orientation, but further advance is likely with regard to the integration of subjects. This trend may result in boosting the group of schemes which combine a medium degree of integration with various degrees of work orientation.

If the typical career prospects of dual qualifications are compiled, two major patterns of dual progression emerge: most of the schemes offer a choice between access to studies in the technical sector or entry into highly skilled employment/ middle-level management; a smaller group of schemes provide opportunities of either progression to studies in related subjects (with no established technical sector available) or unspecified employment. These patterns suggest that there is a significant relationship between the two options of progression. By preparing both for (highly) skilled work and work-related studies, dual qualifications provide a basis for professional careers in a lifelong learning process.

Altogether, dual qualifications potentially live up to the criteria identified for high standing of VET: providing personal competence and facilitating mobility both in the education system and the labour market. Dual qualifications improve the chances of young people for entering educational and occupational careers, thereby contributing to an upward trend of differentiation within secondary vocational education. In a context of wide-ranging problems of transition from education to work, with a large section of young people being at risk, dually qualifying pathways are in effect selective, leaving those perceived as ‘low-achievers’ behind. The challenge for educational policy, therefore, is to ensure that
schemes of dual qualification are part of transparent and flexible systems, being accessible from any point and linking up to other parts of education and training.

Attitudes towards the esteem of vocational education – evidence from case studies

The esteem of vocational education and ways of improving its attractiveness have been analysed in another parallel project (PAVE), involving case studies on England and Wales, Finland, Greece, Ireland and the Netherlands. The investigation focuses on the tension between vocational and liberal (rather than general) education, also tracing the evolution of these concepts, and sets out to explore ways of reconciling the two. The project’s major message is that liberal and vocational education should be regarded as two complementary aspects of the same task: the fashioning of the human person.

Parity of esteem is considered in a social context, starting out from the observation that vocational education is in most cases regarded as having lower status than that of liberal education. The reason for this is sought in the values, attitudes and beliefs that people hold. These values may refer to the courses which students follow, the schools they attend, the types of learning, the forms of knowledge and the ways in which these are assessed. The values involved in the traditional vocational subjects can make a substantial contribution to the social and personal fulfilment of human beings. Their liberating potential therefore can be just as important as that of the traditional ‘liberating’ subjects. Schools themselves may be able to influence the esteem of vocational education and in some ways be ahead of the prevalent value system.

A major conclusion is that vocational education should not only prepare technicians and skilled workers but also enable young people to enhance their own human development. In particular, the aspiration to proceed to further and higher education is seen as the critical factor in deciding the status of a particular vocational course.

Issues of ‘standing’ in typical settings

Starting out from the initial levels of analysis – course/curriculum, education system and labour market – a typology of national settings is applied which cuts across these three levels. The following three types of national settings for relating education and work are distinguished:

a) Type I: close relationship between education system and labour market, including a tracked system of education and a qualification structure which has direct relevance for occupational entry (Austria, the Czech Republic, Denmark, Germany, Hungary, the Netherlands).

Based on established standards of apprenticeship and full-time technical courses, these countries seek to enhance the quality and status of vocational education. The standing of vocational education is underpinned by regulations which make vocational qualifications a precondition for entry to skilled employment. This provides a certain advantage over secondary general education and partly even stimulates mobility from general to vocational tracks at upper secondary level (the Netherlands). The challenge, however, lies in the superior career prospects of graduates with both vocational and general certificates at upper secondary level and of higher education graduates.

b) Type II: Loose relationship between education system and labour market, allowing for predominant school-based, broad vocational education and subsequent on-the-job training (Australia, Canada, Japan, USA).

Both the occupational specificity and the stratification of secondary education are at a low level, matching open labour markets characterised by large service sectors. Countries with this setting often provide comprehensive school patterns, with programmes of broad vocational education included, while entry to employment is facilitated by on-the-job training. Generic concepts of employability, with an emphasis on key competences, are dominating.
At the same time, there are efforts in such countries to involve employers in education and training, through development of school-enterprise partnerships and practical assignments.

c) Type III: Varied relationship between education system and labour market, calling for coherent education and qualification frameworks (England, Estonia, Finland, France, Greece, Norway, Portugal, Scotland, Spain, Sweden).

Attempts are made in this setting to overcome problems of transition from education to work arising from a diversity of institutions, courses and certificates in vocational education and to establish coherent structures across upper secondary education. A major problem addressed by several of these countries is the insufficient provision of work-based training, with inferior standards of apprenticeships and lack of opportunities of gaining practical experience within school-based programmes. An essential condition for solving this problem lies in promoting the cooperation with enterprises.

**Improvement of ‘standing’**

For assessing the standing of vocational compared to general education and its prospect of improvement resulting from various measures, the initial model of three criteria is applied. In more specific terms, high ‘standing’ should be interpreted according to the following characteristics (which essentially relate to dual qualifications):

a) acquisition of key competences/combining vocational and general education;

b) opportunity for access to academic and vocational higher education;

c) qualification for entry to (highly) skilled employment.

This set of characteristics represents an ideal-type model based on high-quality vocational education and linking up with general education. The ‘standing’ of vocational education in a given system may be assessed as ‘high’ (or equal to general education) given the following conditions:

a) if high ‘standing’ is achieved according to all three criteria (or characteristics);

b) if high ‘standing’ extends over a major part of upper secondary education;

c) if high ‘standing’ relates to public esteem.

Altogether, improvement of the standing of vocational compared to general education is a permanent aim which can only be approached by continuing enhancement and adaptation to new requirements.
References

Project references

Post-16 Strategies/SPES-NET;
INTEQUAL/DUOQUAL;
ULP/home internationals project;
PAVE.


Title: Finding new strategies for post-16 education by networking vocational and academic/general education and working life to improve the parity of esteem for initial vocational training.

Coordinator: Johanna Lasonen, Institute for Educational Research, University of Jyväskylä.

Partnership: A – Institute for Industrial Sciences (IWI) and Institute for Vocational and Adult Education Research (IBE); D – Institute for Technology and Education (ITB); F – International Centre of Pedagogical Studies (CIEP) and National Institute for Pedagogical Research (INRP); FIN – Institute for Educational Research (IER); N – Agder College; S – National Agency for Education; England and Scotland, UK – Post-16 Education Centre, Centre for Educational Sociology (CES) and Scottish Qualification Authority (SQA).

Reports on the major project results: Lasonen 1996; Lasonen and Young 1998.


Title: Sharpening the post-16 education strategies by horizontal and vertical networking.

Coordinator: Marja-Leena Stenström, Institute for Educational Research, University of Jyväskylä.

Partners:

1. Institute for Industrial Sciences, Vienna University of Economics, Austria (A)
2. BIEF, Multidisciplinary Research Bureau, Louvain-la-Neuve, Belgium (B)
3. Danish Institute for Educational Training of Vocational Teachers, Denmark (DK)
4. Post-16 Education Centre, University of London, England (UK)
5. National Examination and Qualification Centre, Tallinn, Estonia (EE)
6. National Board of Education, Helsinki, Finland, (FIN)
7. National Institute for Pedagogical Research, Paris, France (F)
8. Institute for Technology and Education, University of Bremen, Germany (D)
9. Institute for Work and Technology, University of Flensburg, Germany (D)
10. Laboratory of Sociology and Vocational Education, University of Patras, Greece
11. Technical University of Budapest, Hungary (HU)
12. Agder College, Kristiansand, Norway (N)
13. Faculty of Education, University of Valencia, Spain (E)
14. Clydebank College, Glasgow, Scotland (UK)
15. Scottish Qualification Authority, Glasgow, Scotland (UK)


Title: The acquisition of integrated qualifications for professional work and study – an assessment of innovative approaches in seven European countries.

Coordinator: Sabine Manning, Research Forum Education and Society (WIFO), Berlin.


**DUOQUAL / Leonardo da Vinci multiplier-effect project (1997-2000) based on INTEQUAL.**

Title: Qualifications with a dual orientation towards employment and higher education – applying a pattern of comparative investigation across European countries.

Coordinator: Sabine Manning, Research Forum Education and Society (WIFO), Berlin.


Partners (I=INTEQUAL; D=DUOQUAL):

1. Berufsbildungs Institut Arbeit und Technik (BIAT), Universität Flensburg, Germany (D);
2. Centre d'Etudes et de Recherches sur les Qualifications (CEREQ), Marseille, France (I);
3. Coop erativa Marcella, Lurago Marinone, Italy (D);
4. Department of Educational Research, Roskilde University, Roskilde, Denmark (D);
5. Faculdade de Ciências e Tecnologia – Ciências da Educação, Universidade Nova de Lisboa, Monte de Caparica, Portugal (D);
6. HIKAkershus College, Bygdoy, Norway (I/D);
7. Institut für Bildungsforschung der Wirtschaft (ibw), Wien, Austria (I/D);
8. Institut Technik und Bildung (ITB), Universität Bremen, Germany (I/D);
9. Institute for Educational Research (IER), University of Jyväskylä, Finland (D);
10. Institute for Employment Research (IER), University of Warwick, England (I/D);
11. National Institute for Pedagogical Research (INRP), Paris, France (D);
12. Pedagogical Institute (P.I.), Ministry of Education, Athens, Greece (D);
13. Research Institute of Technical and Vocational Education (VÚO_), Prague, Czech Republic (D);
14. SCO Kohnstamm Instituut, Universiteit van Amsterdam, The Netherlands (I/D);
15. Staatsinstitut für Schulpädagogik und Bildungsforschung (ISB), München, Germany (I/D);
16. Stockholm Institute of Education, Stockholm, Sweden (I/D);

**ULP (Unified Learning Project) / ESRC UK programme the learning society (1996-98).**

Title: Unifying academic and vocational learning – Scottish and English/Welsh approaches.

Partners: Cathy Howieson and David Raffe, CSE, University of Edinburgh; Ken Spours and Michael Young, Post-16 Education Centre, Institute of Education, University of London.

Reports on the major project results: Raffe, Howieson et al. 1998a/b; Spours, Young et al. 1998.

**Home internationals project / ESRC (1998 in progress).**
Contents: Differences in the education and training systems of the four ‘home countries’ systems of the UK, focusing on the 14-19 stages.

Partners: David Raffe, Chris Martin, Linda Croxford and Karen Brannen, CSE, University of Edinburgh.

Reports on the major project results: Raffe, Fairgrieve et al. 1999; Raffe and Martin 1998; Raffe, Brannen et al. 1998.

PAVE / Leonardo da Vinci survey and analysis project (1997-99)

Title: Analysis of national policies with regard to improving the status and attractiveness of initial vocational education and training.

Partners: Anton Trant (coordinator), Jackie Branson, Diarmaid O’Donnabhain, Christos Frangos, Finbar Geaney, Denis Lawton, Raimo Mäkinen, Trudy Moerkamp, Eva Voncken, Päivi Vuorinen, Paddy Walsh.

Report on the major project results: Trant et al., 1999.

Bibliography


Brown A., 1996. Attempting to create a ‘middle pathway’ between vocational and academic routes: a critical review of the introduction and implementation of General National Vocational Qualifications (GNVQs) in England. Surrey: University of Surrey


Hannan D., 1999. Transitions from education/training to work (Paper in preparation for Cedefop Research Report 2)

Hillier J., Oates T., 1998. Parity of esteem – a surface effect or a deep cause of divisions? (working draft)


Stern D., Bailey Th. et al., 1996. School-to-work policy. Insights from recent international developments. Berkeley: Graduate School of Education, University of California at Berkeley


## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>advanced level (GCE programmes)</td>
</tr>
<tr>
<td>AHS</td>
<td>Allgemeinbildende Höhere Schule</td>
</tr>
<tr>
<td>AS</td>
<td>advanced supplementary level (GCE programmes)</td>
</tr>
<tr>
<td>Bac Pro</td>
<td>baccalauréat professionnel</td>
</tr>
<tr>
<td>BEP</td>
<td>brevet d'études professionnelles</td>
</tr>
<tr>
<td>BHS</td>
<td>Berufsbildende Höhere Schule</td>
</tr>
<tr>
<td>BMBF</td>
<td>Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie</td>
</tr>
<tr>
<td>BMS</td>
<td>Berufsbildende Mittlere Schule</td>
</tr>
<tr>
<td>BOL4</td>
<td>Vocational training pathway at level 4 (from 1997)</td>
</tr>
<tr>
<td>BTEC</td>
<td>Business and Technical Education Council</td>
</tr>
<tr>
<td>BTn</td>
<td>baccalauréat technologique</td>
</tr>
<tr>
<td>BTS</td>
<td>brevet de technicien supérieur</td>
</tr>
<tr>
<td>CAP</td>
<td>certificat d'aptitude professionelle</td>
</tr>
<tr>
<td>CBS</td>
<td>National Bureau of Statistics</td>
</tr>
<tr>
<td>Cedefop</td>
<td>European Centre for the Development of Vocational Training</td>
</tr>
<tr>
<td>CEREQ</td>
<td>Centre d'études et de recherches sur les qualifications</td>
</tr>
<tr>
<td>CSYS</td>
<td>Certificates of Sixth Year Studies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES</td>
<td>Centre for Educational Sociology</td>
</tr>
<tr>
<td>DUT</td>
<td>Diplome Universitaire de Technologie</td>
</tr>
<tr>
<td>EA</td>
<td>economic/administrative mbo courses</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EUROPROF</td>
<td>(acronym of Leonardo project)</td>
</tr>
<tr>
<td>FEDA</td>
<td>Further Education Development Agency</td>
</tr>
<tr>
<td>FRG</td>
<td>Federal Republic of Germany</td>
</tr>
<tr>
<td>G</td>
<td>Germany</td>
</tr>
<tr>
<td>GCE ('A' level)</td>
<td>General Certificate of Education (advanced level)</td>
</tr>
<tr>
<td>GCSE (A*-C)</td>
<td>General Certificate of Secondary Education (grades A* to C)</td>
</tr>
<tr>
<td>GNVQ</td>
<td>General National Vocational Qualification</td>
</tr>
<tr>
<td>GSVQ</td>
<td>General Scottish Vocational Qualification</td>
</tr>
<tr>
<td>HAVO</td>
<td>senior general secondary education</td>
</tr>
<tr>
<td>HBO</td>
<td>higher vocational education</td>
</tr>
<tr>
<td>HE</td>
<td>higher education</td>
</tr>
<tr>
<td>HIAK</td>
<td>Høgskolen I Akershus</td>
</tr>
<tr>
<td>ibw</td>
<td>Institut für Bildungsforschung der Wirtschaft</td>
</tr>
<tr>
<td>IHK</td>
<td>Industrie- und Handelskammer</td>
</tr>
<tr>
<td>ILWT</td>
<td>integrated learning and working tasks</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>IML</td>
<td>Integrated Multivalent Lyceum</td>
</tr>
<tr>
<td>INTEQUAL</td>
<td>‘integrated qualifications’... (acronym of Leonardo project)</td>
</tr>
<tr>
<td>ISB</td>
<td>Staatsinstitut für Schulpädagogik und Bildungsforschung</td>
</tr>
<tr>
<td>ITB</td>
<td>Institut Technik und Bildung</td>
</tr>
<tr>
<td>IUT</td>
<td>institut universitaire de technologie</td>
</tr>
<tr>
<td>KMK</td>
<td>Kultusministerkonferenz</td>
</tr>
<tr>
<td>Leonardo</td>
<td>(acronym of EU programme)</td>
</tr>
<tr>
<td>LO</td>
<td>Norwegian Federation of Trade Unions</td>
</tr>
<tr>
<td>MAVO</td>
<td>junior general secondary education</td>
</tr>
<tr>
<td>MBO</td>
<td>senior secondary vocational full-time education</td>
</tr>
<tr>
<td>NC</td>
<td>National Certificate</td>
</tr>
<tr>
<td>NCU</td>
<td>National Coordinating Unit</td>
</tr>
<tr>
<td>NCVQ</td>
<td>National Council for Vocational Qualifications</td>
</tr>
<tr>
<td>NHO</td>
<td>Confederation of Norwegian Business and Industry</td>
</tr>
<tr>
<td>NVQ</td>
<td>National Vocational Qualification</td>
</tr>
<tr>
<td>ÖGY</td>
<td>trial programme</td>
</tr>
<tr>
<td>PETRA</td>
<td>(acronym of EU programme)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Research Centre for Education and the Labour Market</td>
</tr>
<tr>
<td>RUBS</td>
<td>school leavers survey</td>
</tr>
<tr>
<td>S</td>
<td>Social services and welfare MBO courses</td>
</tr>
<tr>
<td>SCO-KI</td>
<td>SCO-Kohnstamm Institute</td>
</tr>
<tr>
<td>SEAC</td>
<td>School Examinations and Assessment Council</td>
</tr>
<tr>
<td>STS</td>
<td>sections de techniciens superieurs</td>
</tr>
<tr>
<td>T</td>
<td>Technical MBO courses</td>
</tr>
<tr>
<td>UCAS</td>
<td>Universities and Colleges Admission Service</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>VBO</td>
<td>pre-vocational education</td>
</tr>
<tr>
<td>VET</td>
<td>vocational education and training</td>
</tr>
<tr>
<td>VWO / WO</td>
<td>pre-university education / university education</td>
</tr>
<tr>
<td>WIFI</td>
<td>Wirtschaftsförderinstitut</td>
</tr>
<tr>
<td>WIFO</td>
<td>Wissenschaftsforum Bildung und Gesellschaft e.V.</td>
</tr>
</tbody>
</table>