



Modernising vocational education and training

Fourth report on vocational education
and training research in Europe:
executive summary



Modernising vocational education and training

Fourth report on vocational education
and training research in Europe:
executive summary

A great deal of additional information on the European Union is available on the Internet.

It can be accessed through the Europa server (<http://europa.eu>).

Cataloguing data can be found at the end of this publication.

Luxembourg:
Publications Office of the European Union, 2009

ISBN 978-92-896-0594-6

© European Centre for the Development of Vocational Training,
2009
Reproduction is authorised provided the source is acknowledged.

*Designed by Fotone - Greece
Printed in the European Union*

The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training.

We provide information on and analyses of vocational education and training systems, policies, research and practice.

Cedefop was established in 1975 by Council Regulation (EEC) No 337/75.

Europe 123, 570 01 Thessaloniki (Pylea), GREECE
PO Box 22427, 551 02 Thessaloniki, GREECE
Tel. +30 2310490111, Fax +30 2310490020
E-mail: info@cedefop.europa.eu
www.cedefop.europa.eu

Aviana Bulgarelli, Director
Christian Lettmayr, Deputy Director
Peter Kreiml, Chair of the Governing Board

Foreword

In 2002, the Ministers for Vocational Education and Training (VET) of 31 European countries and the European Commission adopted the Copenhagen declaration. The declaration underlines the contribution of VET to achieving the Lisbon goals and sets priorities for VET systems reforms through enhanced cooperation. Every two years, the Member States' progress in modernising VET is reviewed and priorities for reform are refined.

The third review of the Copenhagen process has just been completed during the French Presidency and the Bordeaux communiqué has set new directions for future developments in VET. Cedefop is active in accompanying the policy process by reviewing national developments and progress in VET and preparing comparative analyses of policies.

Informing European VET policies, which is a priority for Cedefop, means also providing the evidence-base for policy-making. It is the task of research to investigate and explain the complex relationships between education and training and the socioeconomic system. Research aims at reducing complexity and improving the understanding of causes and effects to identify the means and strategies expected to be most effective and acceptable in solving a problem.

In its fourth report on VET research, Cedefop presents an in-depth analysis of the socioeconomic context that drives the modernisation of VET systems; the need to increase competitiveness despite demographic ageing, labour-market pressures and skill shortages, and the integration of the European social model and economic policies. It underlines the specific contribution of VET to fostering positive change. Trends in VET modernisation, such as how to increase the attractiveness of VET, the implementation of national and European qualifications frameworks, or the professionalisation of VET teachers and trainers are also analysed with a critical eye, from a research perspective.

I sincerely hope that this report will contribute to develop further a culture of evidence-based policy-making in VET.

Aviana Bulgarelli
Director of Cedefop

Acknowledgements

Pascaline Descy and Guy Tchiboza, Cedefop's project managers, have prepared the fourth report on vocational education and training research in Europe, *Modernising vocational education and training*.

The fourth research report is the result of a team effort and Cedefop would like to acknowledge the contributions of Pascaline Descy, Guy Tchiboza, Sandra Bohlinger, Manfred Tessaring and Jasper van Loo. They gathered and carried out secondary analysis of the material and drafted the various chapters of the report. Finally, thanks to Rauni Puurunen from Cedefop, for her technical support in preparing this publication.

This executive summary relies on the analyses presented in the 'synthesis report' and on the various contributions to the background report to the fourth research report.

Table of contents

Foreword	1
Acknowledgements	2
Table of contents	3
List of figures	4
Introduction	5
Part I: Challenges for vocational education and training modernisation	7
1. European competitiveness: the role of human capital	7
2. Labour-market pressures on VET	8
3. Demographic trends and implications for VET	11
4. The role of VET in the economic performance of firms	14
5. Promoting social Europe: the role of education and VET	15
Part II: Trends in vocational education and training modernisation	19
6. Improving the image and attractiveness of VET	19
7. Qualifications systems, qualifications frameworks and learning outcomes	22
8. Professionals developments in VET teaching and training	25
9. Issues and trends in information, advice and guidance	29
10. Conclusions	32
List of abbreviations	34
Country codes	35
Bibliography	36

List of figures

1	Work organisation and employer-provided training – EU-27, 2005	9
2	Learning effects on social cohesion	17
3	Teachers and academic staff in upper secondary education (ISCED 3), by age, 2005	27

Introduction

Modernising vocational education and training (VET) is the overarching theme of Cedefop's fourth report on VET research. It aims to provide and discuss the evidence-base for the process of enhanced cooperation in VET, which sets priorities for reforming VET to contribute to the Lisbon process (European Commission, 2002). The report relies on various contributions by researchers (Cedefop, 2008a, 2009a and b). We have pooled together these contributions and complemented them with additional research to document, discuss and analyse the socioeconomic context and the process of reforming VET, based on latest research evidence.

VET policies have to consider the complex relationships and interdependencies between education and training and the socioeconomic system. It is the task of VET research to investigate and explain these relationships and their effects. Sound research focuses on reducing complexity and improving the understanding of causes and effects, to identify the means and strategies expected to be most effective and acceptable in exploring and solving a problem. In that sense, VET research is meant to serve and inform policy- and decision-making.

Research and policy-making, however, often appear disconnected. 'Evidence-based policy-making' is a fashionable term but tends to be rhetorical, as policy-makers and researchers tend to follow their own agenda and preoccupations. Cedefop's fourth research report *Modernising vocational education and training* attempts to address this issue by bringing together research to discuss policy priorities for VET. This report is timely as common VET policy priorities are agreed between European Union (EU) Ministers for Education in the Copenhagen process. These priorities have just been revised and during the French Presidency, new directions have been agreed on in the Bordeaux communiqué (European Commission, 2008). The Copenhagen process was the backdrop to selecting the issues discussed in the report.

The report gives the reader an overview of external pressures for modernising VET such as the need to increase competitiveness, population ageing, labour-market pressures and the objective of improving social cohesion while reducing social exclusion. Trends in VET modernisation are also addressed in depth. These include increasing the attractiveness

of VET, use of qualifications frameworks and the shift to learning outcomes, changes affecting VET teacher and trainer roles as well as practices and policies in information, advice and guidance.

Aim of Cedefop reporting series on VET research

The present publication is the fourth issue in the series of reports on VET research published by Cedefop since 1998 ^(a). The aim of the reporting series is to provide overviews of current socioeconomic research in fields related and relevant to VET and skill development in Europe, its results and implications for policy and future research. Research reports are, therefore, a tool for evidence-based policy-making. The reports also identify gaps in current theoretical and empirical work and suggest how future research can address these.

^(a) Cedefop (1998); Cedefop, Tessaring (1999); Cedefop, Descy and Tessaring, 2001; 2005.

PART I

Challenges for vocational education and training modernisation

1. European competitiveness: the role of human capital

Competitiveness is a lever to achieve economic, social and environmental goals and ensure a good quality of life for citizens. Competitiveness is dependent upon several factors and it increasingly appears to rely on a country's knowledge base, i.e. its human and social capital as well as its capacity for reform and innovation. In this context, the concept of knowledge-based competitiveness refers to the generation of – and investments in – skills and knowledge, participation in learning activities and the resources allocated to science, technology and R&D.

European countries perform well in terms of knowledge-based competitiveness compared to other countries. However, this does not apply to all EU Member States or to the EU as a whole. The fact that almost one third of the population in Europe is low skilled (ISCED 0-2) hampers economic and social performance. Still, several Member States are found among the highest skilled economies in the world, on a par with other highly skilled economies outside Europe. The EU takes on a medium rank in terms of total public and private expenditure on education although, again, some Member States are among the most advanced countries. Several Member States score well on science, technology and R&D indicators but, on average, the EU lags behind the best performing economies. Innovation performance is a domain where Europe performs better than Australia and Canada but is behind the US and Japan.

Economic performance, as measured by economic growth and labour productivity, is on a par with the US and other well-performing non-European countries. The same applies to employment growth. Employment growth in 2006-07 was rather weak in the EU on average but this was also the case in several non-EU countries such as the US, Japan and Korea. In terms of employment rates and of unemployment, the EU lags behind its competitors.

This signals a higher degree of non-utilisation of the working age population and of the labour force.

It can be concluded that, although some Member States are among the most competitive knowledge-based economies in the world, there is a great heterogeneity in the EU which reduces its competitiveness overall. Also, many questions remain open and require additional research. What makes some countries more competitive than others in terms of education, training and skills? What are the links between investments in VET and economic and employment performance? These questions call for both cross-country comparative studies as well as detailed analyses into the particular situation of individual countries. Both types of study should aim to assess the political, social and economic environment and examine the links between education, training and skills on the one hand, and economic, employment and social performance on the other.

2. Labour-market pressures on VET

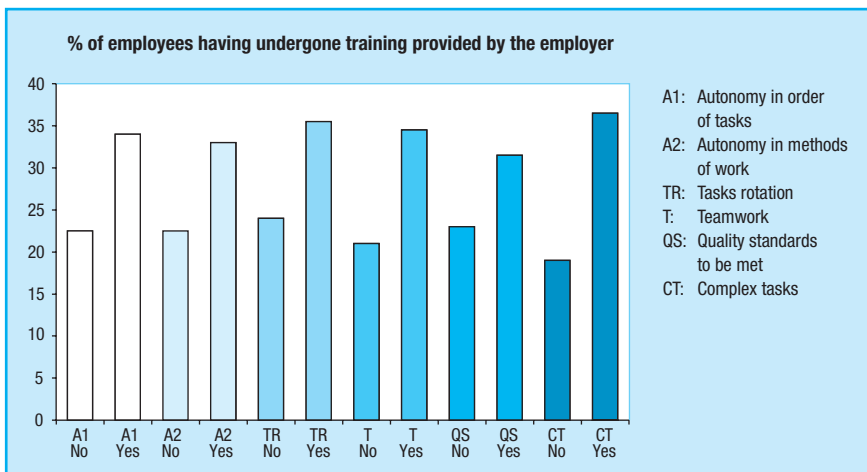
In what ways do current labour-market developments demand VET modernisation? Four dominating labour-market trends can be distinguished: the deteriorating position of youth, the partial implementation of the flexicurity concept, increasing skills shortages and limited intra-EU geographical mobility.

Although the labour-market position of young people has improved in recent decades, with increasing earnings and falling unemployment, their overexposure to unemployment remains a matter of serious concern as the gap in unemployment rates between youth and adults has widened. At the same time, a significant proportion of young people are neither in employment, nor in education or training: in 2006 in the EU, disengaged youth represented 18.6 % of those aged 20-24. In addition, for those young people in employment, job quality is an important concern. Youth temporary employment and part-time jobs have increased in the EU and are often involuntary. On top of addressing youth unemployment, VET faces new challenges in contributing to job quality and career security through reinforced support to involuntary temporary and part-time workers. Preventing youth from getting trapped for years in the situation of being neither employed nor in education or training also requires adequate responses from education and training offers and policies.

Flexicurity aims at promoting the use of flexible forms of work organisation and labour relations, while ensuring good prospects for employee employment

and career development. An examination of several indicators shows that while flexibility indeed increased, this is not the case for security. Over the past two decades EU labour markets have gained flexibility by increasing use of fixed-term contracts, changing working time arrangements and patterns, adapting the organisation of work – including the provision of training to help workers adapt to flexible work organisation (Figure 1) – and limiting employment protection legislation. Such increased labour-market flexibility has, however, not been accompanied by increased job and income security (as shown by a reduction in unemployment benefit replacement rates; Eurofound, 2008). Declining public expenditure on active labour-market policies may also be interpreted as a decreasing involvement of public authorities in promoting job and employment security. For flexicurity to become a reality, and given the progress already made on the flexibility side, the focus should now be on promoting job and employment security. Education in general, and VET in particular, have a role to play not only in supporting people in adapting to flexible working process, in acquiring competences such as multi-tasking, autonomy, decision-making and self-responsibility,

Figure 1. **Work organisation and employer-provided training – EU-27, 2005**



How to read the graph: for example, the first two bars mean that the percentage of employees involved in employer-provided training ranges from around 23 % for firms with traditional and Tayloristic work systems (firms denoted 'no') to around 35 % for firms with flexible work organisation (firms denoted 'yes').

Source: European Commission, 2007, p. 155.

but also in promoting employment security by preparing workers to deal confidently and securely with repeated professional transitions.

Skills shortages, as demonstrated by recruitment difficulties ⁽¹⁾, have increased overall since 2005, with a stabilisation in 2007-08. For some occupational profiles persistent shortages are visible in most or, at least, several countries: information and communication technology (ICT) specialists, and, to a lesser extent, business administrators, educationalists, health care professionals, hotel and catering personnel, skilled workers in construction, and workers, technicians and supervisors in electric/electronic industry. In addition to quantitative skills shortages, qualitative shortages are also emerging. These result from the increased importance attached by employers to soft-skills such as team working, interpersonal communication, initiative, creativity, entrepreneurship, leadership and management, presentation skills and ability to learn. Skills shortages can lead firms to change their skill demands and choose production technologies that require relatively low degrees of skill intensity (deskilling), which may result in low wages, sub-optimal work organisation, and low productivity as well as impacting negatively on production and trade patterns (Cedefop, Strietska-Illina, 2008). Awareness of – and responsiveness to – skills shortages is critical for education, VET and labour-market policies, not only to increase the number of people possessing the professional profiles in demand but also to provide the adequate combination of specific occupational and soft skills.

Some 50 years after the creation of the European Community – and despite the fact that it is a fundamental principle of the Union, with significant policy emphasis – internal geographical mobility across Member States remains low. In fact, the percentage of EU nationals living abroad in another Member State remains marginal at less than 2 % of those of working age in 2005 (Cedefop, Ward, 2008). In parallel, the annual inflow of third country migrants has been increasing since the 1990s; many of them are low-skilled (43.4 %; *ibid.*). Immigrant populations lacking skills are a prime reason for their disadvantaged position on the labour market and in society and hamper social inclusion. To foster intra-EU mobility, a range of policies, some with a particular VET focus, have been put in place but they need to be further developed. Training actions and VET are also a key part of the policy toolbox to ensure immigration is an asset and a success (see also Chapter 5).

⁽¹⁾ Job vacancy rates increased by 40 % on average between 2005 and 2008.

3. Demographic trends and implications for VET

It is well-known that Europe's population is aging. The population aged 65+ will have increased substantially by 2030, while the young age population is diminishing. This will have a negative impact on the number of people in the labour force, in employment and also on old-age dependency ratio. In 2010, there will be 26 persons aged 65+ for 100 of working age; in 2030, there will be 40. The age structure of employment will change too: there will be a substantial increase in so-called ageing workers and older people working beyond retirement age, and a decrease in the number of labour-market entrants. These demographic changes bear consequences for both initial and continuing VET (IVET and CVET).

The reduction in the young age cohort will cause the total number of IVET students and graduates to decline. This diminution is estimated at minus 17.6 % at ISCED 3 and minus 12 % at ISCED 5 by 2030 (Cedefop, 2008b). This has a negative impact on the demand for teachers and trainers in IVET, with a decline of about 15 % in ISCED 3. Such a decline not only has implications for IVET schools, institutions, policies and systems, but also for labour markets. As a consequence of the reduction in the number of IVET participants, for the EU as a whole and for 11 Member States individually, potential labour-market shortages are projected both for 2020 and 2030. Pronounced labour-market shortages could occur in Poland, Romania, Slovakia and Sweden. However, one should underline that participation in IVET is not only influenced by changes in the size of the young age cohorts; it is also affected by their preferences and those of their parents, by policies that aim at promoting or modernising different learning pathways, by participation rates and duration of compulsory education, national curricula, migration trends and the integration of people with special needs in mainstream education. The relative attractiveness of IVET pathways, therefore, has a key role to play in counterbalancing demographic effects on the number of IVET students and potential labour-market shortages (see Chapter 6 on VET attractiveness).

In all Member States, there are concerns about the socioeconomic consequences of the early labour market retirement policies applied since the 1980s. Pension reforms and occupational health are now key policy elements in industrialised countries in keeping workers active at least until statutory retirement age. Although there is growing recognition that these policy measures do not suffice to extend workers' contribution to working life, active ageing remains a largely unknown concept (Ilmarinen, 2006, p. 51). CVET is a key element of active ageing policies. It supports

sustainable labour-market participation and enables longer working lives (OECD, 2006a, pp. 74-75). However, the available evidence shows that CVET is not yet part of the toolbox to promote active ageing. Most current discussions on lifelong learning for adults focus on employability until mid-age, not old-age; and current lifelong learning practices and policies are not in line with the reality of substantial population ageing. There is a clear negative relationship between participation in continuing vocational training (CVT) and age, also attested by the results of the latest European survey of continuing training in enterprises (Eurostat, 2008). There is also no apparent relationship between how much a country is affected by demographic ageing and participation in CVT. Those southern Member States most affected by ageing are less active in CVT and vice versa; northern Member States are less affected by ageing but they tend to provide more CVT.

Financial incentives and social security regulations are only one determinant amongst many in stimulating ageing worker labour-market participation. Providing promising employment opportunities and optimal working and learning conditions are also crucial. Policies to limit labour-market exit should, therefore, have a dual focus: remove barriers preventing older people from successfully engaging in working longer and provide better and more appropriate employment opportunities for ageing workers; and promote ageing workers' employability, focusing on the long-term and opportunities to acquire/update skills and competences. Policies should adopt a resource-based, rather than a deficit-based, approach to older workers, to underline, recognise and value the strengths of ageing workers' experience, rather than emphasise physiological decline and other limitations (as is often the result of occupation health policies) (Cedefop, Tikkanen, 2009).

One of the reasons for the low employment rate of older workers is negative stereotypes of the relationship between age and performance. Such stereotypes are, however, not supported by empirical research, which shows no relationship other than age-impaired activities that require either rapid information-processing and/or strenuous physical activity. Otherwise, age has either no effect, or can be outweighed by compensating strategies or experience. Some activities, in which performance benefits from experience, are age-enhanced. The fear that population ageing will lead to less innovation, slower adoption of new technologies and less long-term investment in education and R&D is also not supported by empirical evidence. Research evidence is thus quite clear: there is little to support the myth of the costly

and unproductive worker. However, in the context of rapidly changing labour markets, working organisation and technologies, and longer working life, CVET remains a profitable and key investment, also in the case of older workers, to combat skills obsolescence, maintain skills currency, and enhance innovation capacity and productivity (see also Chapter 4 on enterprises' economic performance here below).

CVET itself should be adapted to the needs and abilities of older workers, particularly in terms of learning methods. Here, further research insights are necessary on the relationship between ageing, working and learning and the role of specific andragogical learning methods, to make CVET more responsive to older workers' needs. At the workplace, CVET, including its more informal forms, should be part of organisational policies that encourage learning and performance for employees of all ages, promote inter-generational learning, and increase the awareness of skills possessed by more experienced employees that could be lost with their departure. Age-awareness campaigns could support managerial staff to combat negative stereotypes and promote positive age-management. Finally, job satisfaction is an enabler of a longer working life and, therefore, employers must take account of the overall pattern of older workers' wishes, expectations and experiences towards work. Flexible working arrangements, such as part-time, flexible working hours and self-employment, are also part of successful strategies to support longer working lives.

The pattern of ageing, its impact on employment and the consequences for VET are far from uniform across countries and, therefore, need country-specific policy responses. Nevertheless, to deal effectively with demographic change over the coming decade, VET will need to meet three main challenges. First, IVET provision and policy should be adapted to the reality of lower future participation. In addition, the nature of the skills IVET deliver should be adapted to the combination of longer working life and dynamic change in competence requirements. Next to specific and vocational training skills, general competences that support lifelong learning should be provided. Second, CVET should be approached in a life-cycle perspective, to prevent skills obsolescence. Age-aware CVET requires that both training content and delivery methods are adapted to the learning preferences of older people. In addition, the cumulative barriers between participation in labour market and training and learning should be addressed. The third challenge lies in the interdependencies between IVET and CVET systems, institutions, and practices. The shift to the knowledge economy means a shift of attention from the former to the latter. Teachers

and trainers should, in consequence, be able to share their expertise and deliver VET in multiple contexts. Expanding the professional expertise of teachers and trainers is, therefore, another implication of demographic ageing (see also Chapter 8 on the professionalisation of VET teachers and trainers).

4. The role of VET in the economic performance of firms

Training is critical to the economic performance of businesses. This is the conclusion of most studies investigating the benefits of employer-provided training for innovation capacity, growth and productivity. Training acts as a booster of staff knowledge and skills, which is a factor of innovation in processes and products ⁽²⁾. It improves enterprises' survival and growth perspectives ⁽³⁾. Finally, training enables workers and managers to adopt better production and management techniques, enhancing productivity ⁽⁴⁾. In terms of impact, raising the proportion of employees training by one percentage point would increase productivity by about 0.8 %. The positive effect of training is, however, not uniform but depends on training type and content, trainee characteristics and the way training practices and policies are embedded in corporate strategy.

Despite these positive outcomes, about 40 % of the EU's enterprises do not train their personnel at all (Eurostat, continuing vocational training surveys [CVTS] 1, 2 and 3). The main reasons given for not providing training are the fact that people with the skills needed are recruited, the lack of time and the cost of training. The size and the age of the enterprise also matter: small firms train less, so do younger firms. Start-up firms are focused on survival. This probably applies to small firms too.

A possible policy implication of these research findings is that when market incentives to provide training are insufficient (market failure), public intervention could be an efficient way to stimulate firms' training investment. Such funding could be complementary or States could aim to stimulate enterprise-provided

⁽²⁾ Blundell et al. (1999); Ng and Li (2003); Brunello and Gamberotto (2007).

⁽³⁾ Collier et al., 2005; Fraser et al., 2002.

⁽⁴⁾ Black and Lynch, 2001; Dearden et al., 2000, 2006; Lee, 2004; Zwick, 2005, 2006; Almeida and Carneiro, 2006; Liu and Batt, 2007.

training through information on the economic benefits and positive impacts of training. Small firms could also be supported by consultancy, implementation and management support for training provision.

In terms of further research, studies that investigate the benefits of employer-provided training should develop theoretical frameworks to obtain a complete view of the returns to training for firms, including how additional productivity is shared, effects on profitability, on the wage distribution and on market competition. The specific advantages that employers can gain from training, especially those of a non-economic nature, are still under-researched. Social benefits could be improved stress management, motivation, commitment to and satisfaction with work, absenteeism and turn-over reduction, and better safety and health in the workplace.

5. Promoting social Europe: the role of education and VET

The specific role of VET in promoting and sustaining social inclusion and cohesion is not yet firmly established. However, its institutional role vis-à-vis increasing or reducing social inheritance effects, its orientation towards broader forms of inclusion than employment alone, its contribution to transmitting civic values and in mitigating skill inequalities, seem to be part of the mechanisms by which concomitant models of economic growth and social cohesion, i.e. the Lisbon goal, may be reached with a specific contribution from VET.

VET has an important role in increasing and sustaining labour-market participation but this can be considered as a narrow form of social inclusion. In the fight against exclusion, according too much primacy to jobs is a reductionist approach which does not sufficiently consider the multidimensional nature of the phenomenon. As exclusion tends to affect the economic, social and cultural capital of people simultaneously, it is arguable whether models of VET premised on employment alone can properly address social exclusion. Vocational socialisation, by developing a sense of belonging to a community of practice, and the transmission of civic values through VET, extend its contribution beyond mere labour-market inclusion. Further, VET programmes, when targeted on the basis of participant characteristics such as labour-market status, race, family type or disability carry deadweight effects as not all members of these groups are necessarily excluded if one looks

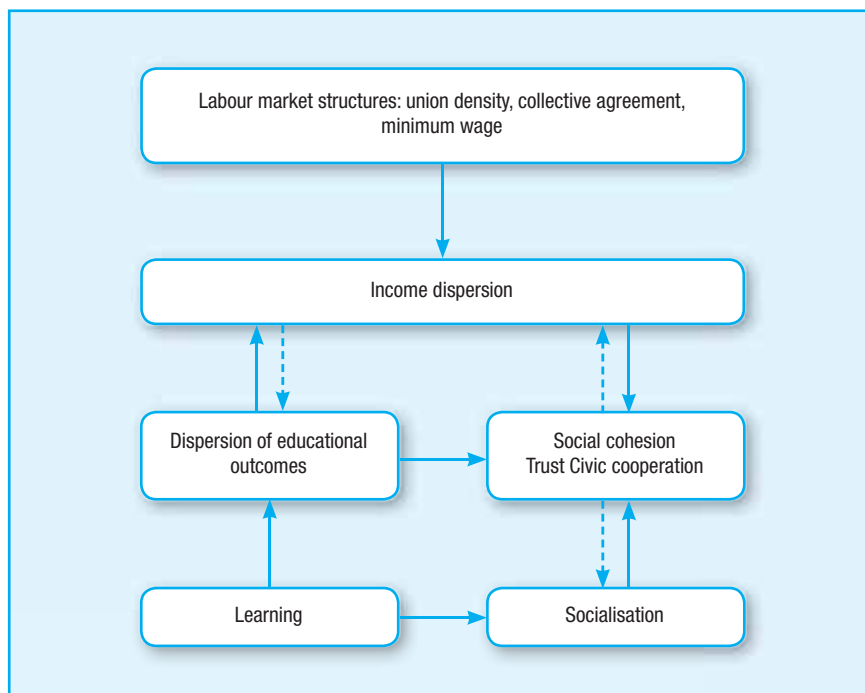
at their 'real' situation (e.g. in terms of income or social capital). Targeting VET towards specific groups also prevents those who do not fit the profile but are victims of some forms of exclusion from participating in the action. In addition, even apparently homogenous groups of socially excluded are heterogeneous in terms of skill and qualification needs. Customer-oriented designs of VET for the socially excluded, using focus groups and other techniques to involve such excluded groups in the governance of VET, seem to be more successful in terms of combating exclusion than targeted VET programmes. Finally, targeting VET programmes to specific groups, rather than fostering their integration in mainstream VET, is also a factor of social segregation in itself. Tailoring by skills, learning needs and learning capacities is substantially different from targeting by social characteristics and probably more appropriate in terms of modernising VET (Cedefop, Preston and Green, 2008).

Although social cohesion implies strong communities, low rates of crime, and other social benefits for the individual, it also implies inter-community cooperation and social solidarity across communities and social groups. These are likely to be enhanced by relative equality of incomes, strong social institutions and the prevalence of societal attitudes such as trust and tolerance. Education is found to be correlated significantly with several social cohesion indicators, directly or indirectly, such as civic and social engagement, life satisfaction, reduction in crime, political stability, and democratisation ⁽⁵⁾. But key to social cohesion is not only the level of education in a given society; educational equity influences trust and civic cooperation (Cedefop; Green et al., 2004) (Figure 2). Although social systems may be able to accommodate limited educational inequality without eroding social cohesion, beyond a certain level political and civil liberties worsen and unrest increases (Green et al., 2006). If VET contributes to improving educational equality, it will, over time, contribute to enhancing social cohesion. Initial research findings indicate that this might be the case but this finding requires further investigation (Cedefop, Preston and Green, 2008).

Being oriented towards vocational tracks, and more precisely towards specific occupations, is at the heart of social reproduction. VET has been conceived as an education orientation that traditionally leads pupils towards the lower and intermediate destinations in the occupational structure. Nevertheless, education and VET may contribute to social fluidity, i.e. they may moderate social inheritance effects, and thus improve the relative chances

⁽⁵⁾ OECD, 2006b; McMahan, 1999; Campbell, 2006.

Figure 2. Learning effects on social cohesion



Source: Adapted from Green et al., 2006, p. 54. Dotted arrows indicate possible simultaneous reverse causality.

of occupational mobility across social classes. Comprehensive education systems that either delay tracking into differentiated general and vocational pathways, or avoid too much market competition between education providers, promoting selectivity through school differentiation and diversity, promote educational equity and social mobility through education ⁽⁶⁾.

In Europe, the Nordic social-democratic model is consistent with the Lisbon goals; i.e. it achieves high productivity, high employment rates, high levels of income (and educational equality), good social protection and high social cohesion. The Nordic countries largely regulate local education within a central government framework which sets common 'goals'. Equity is an important social principle and is the basis for the social cohesion model.

⁽⁶⁾ Cedefop, Tsakarissianos, 2008; Green et al., 2006.

Compulsory education is organised in a unique system of comprehensive primary/secondary schools in which an encyclopaedic knowledge tradition and broad curricula prevail. Post-compulsory education is heavily publicly funded and strongly involves social partners in VET governance. Adult learning is more prevalent in the Nordic countries than any other region and is strongly underpinned by the social partners and the State, with high levels of State subsidy (particularly for those with low levels of education and/or for the unemployed). When used to combat social exclusion, VET is geared towards the needs of socially excluded groups with the aim of delivering a high minimum standard of education and training for all. Employer-funded training is also comparatively high. Finally, participation in adult learning is more evenly distributed across the population than in other parts of Europe, with high participation rates among low-skilled and older adults. The result of this Nordic model is low levels of inequality in skill distribution, both among adults and the young. Comparing this model with others that can be identified in Europe, it appears that three dimensions of educational outcomes seem to be crucial for achieving high levels of economic and social outcomes: the overall supply of skills for the labour market; the distribution of these skills; and the rate of participation in adult learning. The overall level of skills in the population is likely to contribute to high overall labour productivity. The distribution of these skills will affect levels of income and status inequality among employees which, together with the redistribution effects of welfare systems, will impact on social cohesion. Finally, high levels of adult participation in learning, especially through active labour-market policies, will promote high rates of employment, helping to raise social cohesion through social inclusion (Green et al., 2006).

Trends in vocational education and training modernisation

6. Improving the image and attractiveness of VET

The general impression resulting from analysing indicators of VET attractiveness in the EU is negative. Students are not particularly attracted to VET at tertiary level and the general attractiveness of VET to employers seems to be limited. Yet, participation in VET is high at secondary level and the public image of VET tends to be good.

In the Copenhagen process, the Maastricht, the Helsinki and the Bordeaux communiqués (European Commission, 2004; 2006; 2008), enhancing attractiveness has been put forward as a key to increasing participation in VET. Increasing VET enrolment is seen not only as a means of providing people with technical and vocational qualifications needed on the labour market but also as a key contribution to the Lisbon goals, by offering qualifications to people who would not otherwise have participated in education and training beyond compulsory age.

Attractiveness is a cumulative process. People will use the system if it is attractive, which in turn will further raise its attractiveness. Increasing the number of stakeholders involved in VET and the extent to which they are involved is thus critical to attractiveness; the more VET is used by various parties, the more it is attractive to others. For instance, the more attractive VET is to employers, the more they are willing to offer good employment opportunities and wages, which raises VET attractiveness to potential and actual students in turn. Conversely, as attractive as VET could initially appear to students, lack of interest from employers would result in poor access to employment, and finally in student loss of interest in VET.

Research has identified three main groups of determinants of attractiveness of educational pathways:

- (a) schooling content and context: selectivity of pathways (more selective pathways attract high ability students), the reputation of institutions, tracks or programmes, institutional control (public or private), social origin,

- class and gender of students (Breen and Goldthorpe, 1997; Blossfeld and Shavit, 1993) and elements of governance (quality assurance and transparency) ⁽⁷⁾;
- (b) students' educational and labour-market prospects: access to further studies, in particular at tertiary level, employment perspectives (including low unemployment among a pathway's graduates, earnings, job satisfaction, good job-education match) ⁽⁸⁾;
 - (c) economic factors: financial aid or tax incentives or, on the contrary, tuition fees ⁽⁹⁾.

Our analysis of EU priorities and national policies to improve the attractiveness of VET shows that the policy approaches clearly depart from some of the determinants of attractiveness identified by research. The main axes of European policy are individualisation, expanding opportunities, and improving governance and image.

Individualisation policies make the assumption that potential VET entrants will be all the more attracted if they feel that their preferences can be accommodated, thus increasing their chances of success during both studies and labour-market entry. National policies for the individualisation of VET pathways and delivery methods include: diversifying the educational offer and the variety of VET supply; setting alternative, less demanding routes for low ability students; and modularising VET to allow learners to progress at their own pace and to complete full qualifications progressively.

The Copenhagen process promotes enlarging the range of opportunities when exiting VET pathways, either to access further learning opportunities (access to higher education or workplace learning) or employment (job opportunities, career development). National policies facilitate return to secondary general education, and contribute to avoiding making VET an irreversible choice. They also improve access from subtertiary level VET to higher academic education and developing permeability between vocational and academic institutions at tertiary level.

In the Helsinki communiqué, modern governance applied to VET should be a source of attractiveness. It entails rationalisation of the educational offer to bring transparency and clarity to users of the system; it also favours the cumulative VET process described above. Partnerships between VET

⁽⁷⁾ Conlon, 2005; Desjardins et al., 1999; Hossler et al., 1989; Tammaro et al. 2005; Lankford and Wyckoff, 1992.

⁽⁸⁾ Cedefop, Descy and Tessaring, 2001; Cedefop, Lasonen and Manning 2001; Schneeberger, 2002; Lavoie and Ross, 1999; Conlon, 2005.

⁽⁹⁾ Hossler et al., 1989; Hilmer, 1998; Lincoln and Walker, 1993.

institutions and other VET stakeholders should enhance the anticipation of skill needs and should ensure that VET quantity and quality respond to labour-market needs. Finally, such partnerships should be organised locally to ensure that VET provision addresses local needs, promoting efficiency and attractiveness. The fact that many countries have recently set up partnerships in VET, sometimes at regional level, underlines growing recognition of the importance of these partnerships. Another tool of national policy governance is quality assurance. Finally, several countries are implementing national qualifications frameworks to increase the transparency of their VET systems.

VET should be associated with excellence, improving its image and status. The Helsinki communiqué has suggested that VET should apply world-class standards and that its quality should be demonstrated in skills competitions. In the Member States actions on the status of VET tend to focus on the gap in esteem with general education, especially at tertiary level. As a result, there is an observed drift in tertiary-level VET towards increasing the academic content of programmes. In parallel, academic programmes are given greater vocational content with the aim of increasing employability of graduates from academic routes (Cedefop, Dunkel et al., 2009) ⁽¹⁰⁾.

Despite progress made on implementing policies which may act in favour of VET attractiveness, several issues remain, which are of interest for both policy and research. First, not all the recommendations of the Copenhagen process have led to concrete national measures. There is lack of achievement in providing VET students with individual guidance and support. Significant efforts aimed at better informing students on the range of opportunities VET can offer, and especially the institutional procedures to access them, are still overdue. Similar lack of progress can be observed with increasing VET student labour-market opportunities, especially with regard to traineeships, internships, better employment, wage and work conditions and further career perspectives. Social groups, teachers, trainers and students tend also to be absent from the governance of VET systems. Finally, actions to improve the image of VET by promoting excellence and world-class performance in VET content, delivery and outcomes are needed. In parallel, research has highlighted levers of attractiveness ignored by policy, such as the economic

⁽¹⁰⁾ The latter trend, although it may contribute to enhancing the legitimacy and parity of esteem of VET pathways, is driven by a need to increase the attractiveness of the academic programmes concerned, not of VET. Analysing this vocational drift should be a preoccupation of further research.

measures (financial aid or tax incentives), the selectivity of studies or the institutional control and reputation. Investigating reasons for the lack of interest in some strategies vis-à-vis others would help in reshuffling VET attractiveness policies. A methodology to approach consistently the issue of parity of esteem is also needed since the simultaneity of the initiatives taken at national or institutional levels might blur the logic and coherence of the educational offer. For example, simultaneous trends to make tertiary level pathways more vocation-oriented or more academic might be counterproductive (McCoshan et al., 2007). Finally, systematic evaluation of the attractiveness policies implemented is lacking. On all these aspects, research is called for to provide policy-makers with sound recommendations for effective action.

7. Qualifications systems, qualifications frameworks and learning outcomes

Transparent qualifications enable a better match of supply and demand for skills, and foster labour-market mobility, thus strengthening the competitiveness of Member States. Comparing and transferring qualifications across Members States has been one of the key concerns of European education policy since the Treaty of Rome as it would support the free movement of labour, one of the fundamental principles of the Union.

There is no standardised model of a qualifications system: such systems are embedded in national histories, values and policies and can apply to the sectoral or national level. This also applies to qualifications frameworks, as they are part of qualifications systems. Qualifications frameworks are political instruments that help to modernise national qualifications systems. They elaborate and describe the relationship between different qualifications, assist in recognising learning outcomes and promote the permeability between learning pathways.

Although their roots lie in medieval trade guilds and organisations, which regulated access to professions, nowadays qualifications frameworks are mainly driven by government interest in developing overarching structures for education and training sub-systems such as IVET, higher education or CVET, while providing a basis for validating non-formal and informal learning. They show the relationship between qualifications and describe the learning outcomes attached to a qualification. They engage stakeholders in new ways of recognising the (social) value of new and existing qualifications. They

also act as a quality assurance device because all qualifications mapped to them are checked and quality assured (Cedefop, Coles and Werquin, 2009). They are also tools for information, advice and guidance (IAG) as they help users to find their own paths within the qualification systems, to have their competences recognised and to consider possibilities for advancement. They help to identify possible gaps in education and training provision. They are thus tools for governance, mobility and transparency.

The large numbers of European and other countries that are reorganising existing or developing new qualifications frameworks show that this is a global phenomenon. At national level, qualifications frameworks usually emerge from reform needs: to open access to education and training by establishing explicit criteria and by releasing qualifications from their traditional formal and institutional character (Young, 2003); to increase permeability and transfer of learning outcomes between independent institutions or sectors; and to provide a basis for validating and certifying individual learning outcomes, even if non-formally or informally acquired, thereby making them available for the labour market. Developing a qualifications framework, however, requires several preconditions ⁽¹¹⁾: it must be possible to describe all qualifications in terms of learning outcomes; to depict all qualifications in a hierarchy or continuum to describe learning levels; to assess each qualification independently of the form of provision, curriculum, methods and didactic; to divide all qualifications into units which can be assigned to different levels with the same descriptors; and to employ benchmarks so that all types of learning can be accredited and assessed. Depending on the extent to which the above preconditions are met, the qualification framework will be 'strong and comprehensive' or 'weak and loose'.

In the absence of systematic impact research and evaluation of their implementation, and given that, in most countries, national qualifications frameworks (NQFs) are too new for the relevant data and analysis to be available, one can only anticipate the benefits of NQFs. These should be: developing the education and training system and the general range of education and training options on offer while reducing the complexity of the qualification system, facilitating coherence and increasing transparency; increasing career development support, advice and guidance as well as employment mobility by improving the fit between supply of qualifications, skills and competences and labour-market needs; promoting international and transnational mobility, cooperation and exchange by reciprocal recognition

⁽¹¹⁾ Cedefop, Bohlinger and Münk, 2009; Raffe et al., 2005; Young, 2003.

between providers, teachers and trainers and students/trainees and the development of a common language for qualifications; regulating and quality assuring education and training provision; and promoting lifelong learning by ensuring the transfer of knowledge, competence and skills between different settings. However, these anticipated benefits need to be put to the test, evaluated, monitored and researched.

Also, while current NQFs developed in the EU are closely related in terms of design, they draw little on the experience acquired in countries which have had such frameworks for a longer time. From such country experiences, it can be concluded: the willingness to compromise and seek consensus between framework stakeholders is a fundamental requirement but support from policy-makers is also essential; the elements of the qualifications framework need to fit together precisely and subframeworks (for higher education or VET) are themselves logical and consistent; and gradual introduction of a qualifications framework appears to be more successful than one-off development and implementation.

The European qualifications framework (EQF) adopted by the Parliament and the Council in April 2008 is a meta-framework to promote transparency, quality and mobility between qualification systems in Europe. The EQF is implemented on a voluntary basis by the Member States, who will be responsible for assigning national qualifications to the EQF levels. Following the momentum created by the EQF, the majority of countries have committed themselves politically and/or legally to developing an overarching NQF explicitly linked to the EQF. A smaller country group ⁽¹²⁾ have started preparing a NQF but have not committed themselves to putting an overarching framework in place. Only Greece and Iceland, have not started preparations and do not consider an overarching NQF as a priority ⁽¹³⁾.

The EQF levels descriptors relate exclusively to learning outcomes expressed in terms of knowledge, skills and competences, the last of these being the core concept of the EQF's reference levels. Concentration on a competence-based approach arises from an awareness of concepts of adaptive and job-based learning approaches, as well as increased acceptance of informally and non-formally acquired learning outcomes. However, there is essentially no analysis or detailed definition of knowledge, skills and competences. The definition and interpretation of these terms is left to the Member States, based on 'mutual trust'. This harbours the risk that the

⁽¹²⁾ Cyprus, Lithuania, Luxembourg, the Netherlands, Poland and Romania.

⁽¹³⁾ Cedefop (2009b).

specific grading and distinctions between individual learning levels and learning outcomes remain unclear, undermining the transparency and quality assurance function of the tool. A deeper analysis of the concept of knowledge, skills and competences would be necessary not only to provide a justifiable basis for implementing the EQF but also to provide guidance and orientation for developing and revising NQFs.

In the context of VET modernisation, it is expected that translating implicit qualifications levels into formal and explicit classifications, based on learning outcomes, will offer VET policy-makers a coordinating and planning instrument across education and training pathways, and also across sectors and labour markets. The EQF has become a catalyst offering stakeholders at national level a starting point and benchmarks for codifying qualification levels. Its particular strength is to combine the hybrid forms of knowledge, skills and competences by which the acquisition of learning contents can be paused and resumed at any point. Focusing on learning outcomes and less on learning input also allows for flexible structuring of VET paths (Muller, 2000). This, however, leads some countries to proceed fairly hesitantly with implementing the EQF. These countries fear the decline of their national VET systems and prefer relying on their experience of institution- and input-based approaches to reform qualifications systems instead of adopting a competence-based approach. Despite such reservations, focusing on learning outcomes and developing political instruments to promote qualification transparency and comparability has gained attractiveness over the past decades. Validating and evaluating the impact and added-value of this shift remains, however, an important task for future research. Systematic evaluation of the development, implementation and reform of qualifications systems and frameworks should also be part of the future research agenda at national, European and international levels. Its findings should provide sound recommendations for effective action, taking into account national and European institutional reform needs and interests.

8. Professionals developments in VET teaching and training

VET modernisation impacts on the VET teaching and training workforce. Trends and developments in VET directly or indirectly affecting teachers and trainers include increasing the attractiveness of VET, new forms of assessment and validation of competences, changes in the qualification

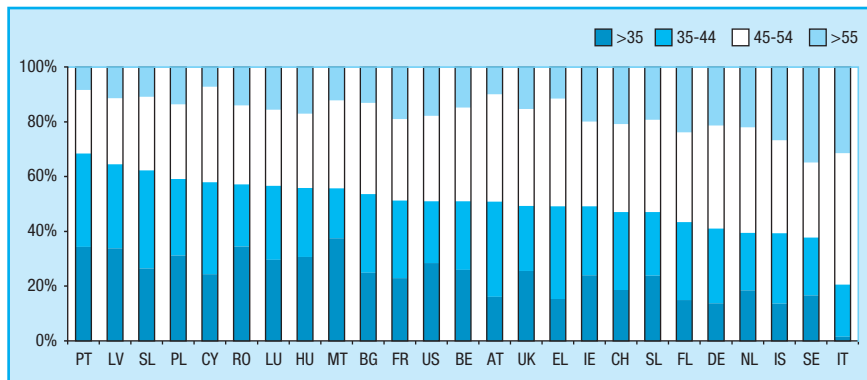
structure, modularisation and qualifications frameworks, decentralisation of provision and of the management of institutions, diversification of institutions and training providers, the development of a training market where public and private providers compete as well as funding principles based on efficiency, equity and quality. Themes and priorities for VET teachers and trainers have also to be seen in the light of the shift towards active and learner-centred methods, a regained interest in work-based learning, the required responsiveness to changes in skills needed on the labour market, to industry and local market demands and the development of information and communication technology (ICT) and multi-media.

Despite these common trends and issues, the picture that emerges from a review of qualification requirements to become a VET teacher or trainer in Europe is one of very different stages of development of what might be a thrust towards more robust professional underpinning of VET practitioners (Cedefop, Parsons et al., 2009). National reforms have added to the complexity, and there remains no common tradition for VET teacher training in Europe. Arrangements have seen some common trends such as an academisation in IVET teachers' training, but few common developments or trends across the whole of VET practice emerge. Traditions remain very different, with great diversity between – and often within – Member States reforms and adjustments. In addition, and although it is by means of continuing professional development (CPD) that most gains in quality and responsiveness of VET can be realised, CPD of VET teachers and trainers in Europe is mostly self-regulated and self-motivated. CPD is, however, richer and more regulated for IVET teachers than for any other VET professional profile. Common themes for VET professional staff competence development are: a focus on the learner; labour-market relevance (both linked to technical and employability skills); ICT and flexible delivery approaches; client or stakeholder focus, developing partnership and customising training provision to industry and local community needs; evaluating and monitoring learning outcomes; technical education system expertise (quality assurance, qualification frameworks, competence-based assessment, assessment of prior learning); and the development of peripheral competences and skills such as counselling, management and administration (Loveder, 2005).

It is difficult to discuss the situation and trends affecting VET teachers and trainers based on statistical data. In the best case, one can get insights for the entire teaching profession, although it is not clear whether the VET workforce follows similar patterns. Available data nevertheless reveal that

VET teachers and trainers represent a significant proportion – the majority in some countries – of the teaching workforce at upper secondary level ⁽¹⁴⁾. Examining the teaching profession ⁽¹⁵⁾ indicates a high proportion of older workers which bears risks of skill obsolescence and future skills shortages (Figure 3). Quantitative shortages may appear if replacement demand induced by teachers and trainers exiting the labour market or leaving the teaching profession because of occupational mobility is not met by the entrance of new teachers in the profession, while qualitative skills shortages may result from inadequate transfer of older professionals' knowledge, skills and experience when they retire. Finally, the labour-market relevance of technical and work-related knowledge of older teachers and trainers may be reduced as a result of skills obsolescence, which increases the need for CPD. However, despite such risk assessment, data on actual current or future skills shortages in VET teaching and training are scarce. It even appears that the future reduction of the youth cohort may result in VET over-capacity at upper secondary level and will reduce demand for VET teachers and trainers (Cedefop, 2008b). But there is no analysis as to whether this – as

Figure 3. **Teachers and academic staff in upper secondary education (ISCED 3), by age, 2005**



Source: Eurostat online database, UOE data collection.

⁽¹⁴⁾ Statistics available do not allow separation of VET teachers from teachers of general subjects. Data are available for all teachers in education and training programmes, distinguishing between prevocational, vocational and general programmes. No statistical information is available for trainers in enterprises.

⁽¹⁵⁾ Statistics on distribution by age are only available for the whole teaching profession.

well as other factors influencing teachers demand and supply – will outweigh the replacement demand generated by the high number of teachers and trainers reaching retirement age.

One of the issues raised in this context is the attractiveness of VET as a profession. Beyond the intrinsic motivation to teach, salaries, employment conditions and career opportunities are among the most important drivers of attractiveness. Other factors are the perceived status of teaching and factors affecting working conditions such as high immigration, heterogeneous classroom or school violence. From a policy point of view, although the level of earnings appear to be a clear lever of attractiveness, a depressed labour market may increase the relative attraction of the employment conditions of the teaching professions (job security, pension, holidays, civil servant status) despite low wages, while the eroded status of the profession or difficult working conditions may mediate negatively the effect of a salary increase.

Teacher and trainer competence and effectiveness appear to be the cornerstone of European VET reforms. In modern VET systems, teachers and trainers are at the same time professional educators and key change agents. Teachers and trainers are not neutral conduits through which reforms can be transferred to the classroom or workshop level; they are key stakeholders in VET reform and should be recognised as such. VET teachers and trainers play a dual role in the process of changing, reforming and modernising VET systems. They not only implement but may shape reforms as well as they may generate their own changes and innovations. To achieve this, a combination of making VET professionals partners and stakeholders in system change and reform and innovation agents at ground level, in the context of action research, is necessary. First, teachers and trainers should be involved in the reform process, helping to shape the VET modernising agenda. This is usually achieved through union representatives or teachers' associations. However, a robust and broadly-based VET teachers' engagement in national VET reform agenda is limited. For VET trainers, it seems almost non-existent. (Cedefop, Parsons et al., 2009). Second, action research, conducted by practitioners in their classroom or workshop with the support of external experts or researchers may play a central role in professional self-development, adaptation and self-renewal. It integrates teacher and trainer professional development, curriculum development, innovation, reflection and research. It aims at improving practices and generating innovation rather than abstract knowledge. Action research empowers teachers and trainers to become the ground agents of VET modernisation.

Another conclusion that emerges from carrying out a review of research on VET teachers and trainers is that, although structural changes affecting the VET workforce are (more or less) well-documented and evidenced, actual practices of teaching and learning in VET schools, training centres and in enterprises are not. Thus one cannot confront the discourse on new learning needs and themes for VET teachers and trainers professional development with the realities of daily work. In addition, little is known on the specific impact of continuing VET reform on teachers and trainers. Also, VET teacher and trainer initial and continuing professional development in terms of participation rates, fields, themes and skill transmission modes, is poorly documented. First, good definitions and statistics to map the field are non-existent. Second, while scattered research on VET teacher and trainer work practices is available for individual countries, empirical research does not appear to be available at international level. Policy-makers may tend to find themselves caught in a discourse that is far from actual classrooms, workshops and workplace practice and relates poorly to the reality of teaching and training in VET.

9. Issues and trends in information, advice and guidance

Information, advice and guidance (IAG) are intended to help people making educational and occupational decisions related to current or future working life. They help people clarify their interests, identify their skills and reflect on their experience to formulate plans, make career-oriented decisions and take actions accordingly.

Overall IAG is a means to increase efficiency in lifelong career decision-making. Efficiency gained through IAG might, in turn, result in increased human capital, higher wages and additional economic growth. Research has evidenced two functions for IAG at initial education and labour-market entry levels: contributing to increases in educational achievement ⁽¹⁶⁾ and improving the efficiency of occupational career decisions ⁽¹⁷⁾. As students who do not have a clear picture about their future studies and career tend to study less, IAG provision might boost education and training participation. Further, as skills beget skills, helping people making better education and training decisions

⁽¹⁶⁾ Cedefop, Borghans and Golsteyn, 2008.

⁽¹⁷⁾ Cedefop, Borghans and Golsteyn, 2008; Grubb, 2004.

contributes to maximising educational and training attainment throughout life. In terms of occupational career decisions, IAG provision contributes to reducing regret associated with initial career-related choice. This contributes to avoiding retraining and the direct and indirect costs associated with it.

At continuing training level, research findings indicate that IAG supports people in finding their way through training supply. IAG may also assist people in better timing continuing training efforts. Such support is increasingly needed because, as people progress in their working life, the percentage of those feeling they miss good career-oriented information increases steadily. This is important as older workers tend to have lower skill levels but, at the same time, are more likely to need new professional perspectives after years spent in the same activity. In the context of labour and skills shortages, demographic change and increases in the statutory pension age, IAG is also of interest for economically inactive seniors who would like to work (Mitton and Hull, 2006).

Despite these encouraging findings, research highlights fragmentation of current IAG provision. This results first from the diversity of theoretical and methodological approaches, practices, target groups, objectives and activities performed by IAG practitioners, reinforced by differences between IAG in educational, work and employment services contexts⁽¹⁸⁾. Recently trends towards decentralisation and market-orientation have further increased IAG fragmentation⁽¹⁹⁾. Decentralisation is driven by a search for responsiveness to local needs and specificities, while market-orientation is linked to increasing the efficiency of public employment services; this has resulted in outsourcing guidance services. While both decentralisation and market-orientation could be factors of flexibility, initiative and efficiency, research indicates that they raise issues of quality assurance and standardisation in the services delivered. Further, decentralisation can impede the dissemination of national labour-market information and hamper labour-market mobility. Finally, the consequence of increased fragmentation is that the very notion of guidance policy, which suggests an integrated body of objectives, means and actions, applied across the educational and employment sectors, looks fictitious. It makes it questionable whether it is possible to use guidance as a steering instrument for education, employment and social policies.

⁽¹⁸⁾ Amundson, 2006; Sultana and Watts, 2006; Plant, 2004; McCarthy, 2004; Frade et al., 2006.

⁽¹⁹⁾ Sultana and Watts, 2006; Frade et al., 2006; Cedefop, 2008d.

Three strategies for modernising IAG have received attention in the literature: the use of ICT, development of holistic approaches and training IAG practitioners. Most Member States have made major investments in ICT to develop self-service access to career guidance (Cedefop, 2008c). While self-help ICT methods seem to be effective and allow guidance practice to concentrate face-to-face interviews on those people who need the most powerful interventions, research also indicates some reservations such as a risk of digital divide and the fact that such methods are more effective when direct interaction with a counsellor complements them ⁽²⁰⁾. Holistic guidance practices are driven by a concern to reconcile both personal and professional aspirations rather than being led merely by employment concerns ⁽²¹⁾. Training of IAG practitioners tends not to have kept abreast of changing career context, lacks familiarity with labour economics, with ICT, Internet and distance education and does not give sufficient attention to the public policy dimension in guidance (McCarthy, 2004). Often specific qualifications do not even exist or are not required and apparently related fields (psychology) are regarded as proxies for guidance qualifications (Watts and Sultana, 2004; Cedefop, 2008c). This results from a lack of guidance profession regulation, reinforced by fragmentation of the sector between the education system and the labour market. This lack of regulation and adequate professional training should be addressed. Finally, to cope with IAG user diversity, awareness of diversity and multicultural competence are necessary (Alexander et al., 2005).

Research on IAG has its own weaknesses. Data and evidence on user profiles and needs, services supply, costs and outcomes are scarce. Only a few countries have established specialised career guidance research centres or programmes attempting to develop the knowledge base in a systemic way (Watts and Sultana, 2004). The lack of evaluation of IAG intervention and of efficacy studies is also patent, leading to poor knowledge of most effective guidance interventions and tools (Bernes et al., 2007). Cost-effectiveness research is also lacking.

Our review of research confirms that IAG has an important role to play in achieving the Lisbon goals: it is essential to efficiency in career-related decision making processes over the lifespan. As a consequence, better IAG provision might contribute critically to the economic and social objectives of the Lisbon process. Research suggests various ways to modernise IAG

⁽²⁰⁾ Whiston et al., 2003; Harris-Bowlsbey and Sampson, 2001.

⁽²¹⁾ Lairio and Penttinen, 2006; Hansen, 2005; Guichard, 2001; Patton and McMahon, 1999; Patton, 2005.

and maximise its impact: approach the guidance and counselling process holistically, so as to fit better the expectations of contemporary users; develop the use of new technologies in IAG practice, and design elaborated and well thought strategies to include ICT in practitioner toolboxes; and improve counsellors' curriculum through reinforcing the basics of guidance training and introducing or developing such topics as the analysis of labour market, familiarity with ICT, and awareness of such issues as accountability, productivity and multiculturalism. Literature also points out the need for further research to measure how much IAG actually contributes to educational achievement, to improving the timing of adult learning, or to reintegrating economically inactive people into the labour market. More research is also needed on fragmentation, especially on how to reconcile the need for specialisation, responsiveness, flexibility and efficiency with social and territorial equity, and with coherent policy steering. Finally, more research is also called for on the activities, costs, supply, outcomes and users of the IAG sector, as well as efficacy studies on the tools, techniques and processes of IAG practice. Research in these fields would certainly be of major importance in improving relevance, quality, and effectiveness in future European IAG practice, administration and policies.

10. Conclusions

Increasing Europe's competitiveness while preserving the European social model, coping with population ageing, reducing unemployment, tackling labour-market skills needs and shortages and improving enterprises' economic performance are all key factors exerting pressures on VET, pushing for its modernisation. However, VET is not only reacting to changes; as research shows, it can also become a driver of success and competitiveness for European economies and societies. The fourth research report on modernising vocational education and training has gathered evidence of the role VET plays in sustaining economic development, promoting active ageing, ensuring adequate skill supply, supporting corporate innovation capacity, promoting growth and productivity, combating social exclusion and improving social cohesion.

Good governance of VET is one effective policy response to the increased uncertainty for economies and individuals that characterises our times. Research indicates two key levers – institutional and professional – for policy action to modernise VET:

- (a) research on VET attractiveness emphasises the need for institutional action, to diversify the VET offer, to open routes for lower-ability students and options to return to general education either at secondary and tertiary level, to modularise and to implement quality assurance, as well as to develop partnerships. The pan-European trend towards developing qualifications frameworks, in particular, shows the importance of institutional reforms in modernising VET. Qualifications frameworks have become fashionable instruments because they are tools for governance, mobility and transparency simultaneously. However, assessing the impact of qualifications frameworks and whether they achieve the range of institutional benefits expected, promote lifelong learning and modernise qualifications systems, should be a priority for future research;
- (b) teacher and trainer competences and effectiveness appear to be the cornerstone of European VET reforms. They are required not only to be up-to-date professionals, but also education systems and governance experts, aware of the implications of new institutional arrangements as well as being able to dialogue with industry and the local community. VET teachers and trainers are also key stakeholders in VET reform and ground agents of change. Improving IAG provision is also essential to enhancing efficiency in education- and career-related decision-making over the lifespan. Research suggests various ways to modernise IAG and maximise its impact, all dealing with improving professional practice.

A key finding of the fourth research report is that, although the context against which the VET agenda is set is well-documented and researched, the links to and consequences for VET modernisation are weakly addressed in general. The priorities for enhanced cooperation in VET are almost entirely driven politically, by governments and social partners, without being informed systematically by sound research. In addition, research currently commissioned on VET priorities mostly reviews national, sectoral or sometimes local experiences but is rarely based on theoretical or empirical analyses. There is also a lack of systematic policy evaluation and impact research. Research and policy are not sufficiently connected, and tend to follow their own agendas.

From a policy point of view, this carries the risk that the expected benefits of VET modernisation will not be achieved. Moreover, the lack of research and sound evidence promotes trial and error approaches. Applied research and timely evaluations should be undertaken to inform policies as they develop and are implemented, confront them with theory and analyse their effectiveness and impact. In a European context, including comparative dimensions in such research and evaluations will maximise the potential for policy learning.

List of abbreviations

CPD	continuing professional development
CVET	continuing vocational education and training
CVT	continuing vocational training
EQF	European qualifications framework
EU	European Union
IAG	information, advice and guidance
ICT	Information and communication technology
ISCED	international standard classification of education
IVET	initial vocational education and training
NQF	national qualifications framework
OECD	Organisation for Economic Cooperation and Development
R&D	research and development
VET	vocational education and training

Country codes

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

Bibliography

- Alexander, C.M. et al. Building multicultural competencies in school counselor trainees: an international immersion experience. *Counselor Education and Supervision*, 2005, Vol. 44, p. 255-266.
- Almeida, R.; Carneiro, P. *The return to the firm investment in human capital*. Bonn: IZA – Institute for the Study of Labor, 2006 (IZA Discussion papers No 1937).
- Amundson, N. Challenges for career interventions in changing contexts. *International Journal for Educational and Vocational Guidance*, 2006, Vol. 6, p. 3-14.
- Bernes, K.B. et al. Career guidance and counselling efficacy studies: an international research agenda. *International Journal for Educational and Vocational Guidance*, 2007, Vol. 7, p. 81-96.
- Black, S.E.; Lynch, L.M. How to compete: the impact of workplace practices and information technology on productivity. *Review of Economics and Statistics*, 2001, Vol. 83, No 3, p. 434-445.
- Blossfeld, P.; Shavit, Y. (eds.). *Persistent inequality*. Boulder: Westview Press, 1993.
- Blundell, R. et al. Human capital investment: the returns from education and training to the individual, the firm and the economy. *Fiscal Studies*, 1999, Vol. 20, No 1, p. 1-23.
- Breen, R.; Goldthorpe, J.H. Explaining educational differentials. Towards a formal rational action theory. *Rationality and Society*, 1997, Vol. 9, No3, p. 275-305.
- Brunello, G.; Gambarotto, F. Do spatial agglomeration and local labor market competition affect employer-provided training? Evidence from the UK. *Regional Science and Urban Economics*, 2007, Vol. 37, No 1, p. 1-21.
- Campbell, D.E. What is education's impact on civic and social engagement? In Desjardins, R.; Schuller, T. (eds). *Measuring the effects of education on health and civic/social engagement*. Paris: OECD, 2006.
- Cedefop. *Vocational education and training: the European research field: first research report; background report, volumes 1-2*. Luxembourg: Publications Office, 1998 (Cedefop Reference series).

- Cedefop. *Modernising vocational education and training: fourth report on vocational training research in Europe; background report, volume 1*. Luxembourg: Publications Office, 2008a (Cedefop Reference series; 69).
- Cedefop. *Implications of demographic change for vocational education and training in the EU*. Luxembourg: Publications Office, 2008b (Cedefop Panorama series; 162).
- Cedefop. *From policy to practice a systemic change to lifelong guidance in Europe*. Luxembourg: Publications Office, 2008d (Cedefop Panorama series; 149).
- Cedefop. *Career development at work: a review of career guidance to support people in employment*. Luxembourg: Publications Office, 2008c (Cedefop Panorama series; 151).
- Cedefop. *Modernising vocational education and training: fourth report on vocational training research in Europe; background report, volume 2*. Luxembourg: Publications Office, 2009a (Cedefop Reference series; 70).
- Cedefop. *Continuity, consolidation and change: towards a new VET era*. Luxembourg: Publications Office, 2009b (Cedefop Reference series; 73).
- Cedefop. *Modernising vocational education and training: fourth report on vocational training research in Europe; background report, volume 3*. Luxembourg: Publications Office, forthcoming (Cedefop Reference series; 71).
- Cedefop; Bohlinger, S.; Münk, D. European strategies and priorities for modernising vocational education and training. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 3*. Luxembourg: Publications Office, forthcoming (Cedefop Reference series; 71).
- Cedefop; Borghans, L.; Golsteyn, B. Modernising vocational education and training: the importance of information, advice and guidance over the life-cycle. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 1*. Luxembourg: Publications Office, 2008 (Cedefop Reference series; 69).
- Cedefop; Coles, M.; Werquin, P. The role of national qualifications systems in helping to modernise vocational education and training systems. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 3*. Luxembourg: Publications Office, forthcoming (Cedefop Reference series; 71).

- Cedefop; Descy, P.; Tessaring, M. *The value of learning: evaluation and impact of education and training: third report on vocational training research in Europe: synthesis report*. Luxembourg: Publications Office, 2005 (Cedefop Reference series; 61).
- Cedefop; Dunkel, T. et al. 'Through the looking glass': – diversification and differentiation in vocational education and training and higher education. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 2*. Luxembourg: Publications Office, 2009 (Cedefop Reference series; 70).
- Cedefop; Green, A. et al. Non material benefits of education, training and skills at a macro level. In Cedefop, Descy, P.; Tessaring, M. (eds). *Impact of education and training. Third report on vocational training research in Europe: background report*. Luxembourg: Publications Office, 2004 (Cedefop Reference series; 54).
- Cedefop; Lasonen, J.; Manning, S. How to improve the standing of vocational compared to general education: a collaborative investigation of strategies and qualifications across Europe. In Cedefop, Descy, P.; Tessaring, M. *Training in Europe: second report on vocational training research in Europe 2000: background report, volume 1*. Luxembourg: Publications Office, 2001 (Cedefop Reference series).
- Cedefop; Parsons, D. et al. The training and development of VET teachers and trainers in Europe. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 2*. Luxembourg: Publications Office, 2009 (Cedefop Reference series; 70).
- Cedefop; Preston, J.; Green, A. The role of vocational education and training in enhancing social inclusion and cohesion. In Cedefop. *Modernising vocational education and training: fourth report on vocational training research in Europe: background report, volume 1*. Luxembourg: Publications Office, 2008 (Cedefop Reference series; 69).
- Cedefop; Strietska-Illina, O. Skill shortages. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 1*. Luxembourg: Publications Office, 2008 (Cedefop Reference series; 69).
- Cedefop; Tessaring, M. *Training for a changing society: a report on current vocational education and training research in Europe 1998: first research report; synthesis report*. Luxembourg: Publications Office, 1999 (2nd ed.) (Cedefop Reference series).

- Cedefop; Tessaring, M.; Descy, P. *Training and learning for competence: second report on vocational training research in Europe: synthesis report*. Luxembourg: Publications Office, 2001 (Cedefop Reference series).
- Cedefop; Tikkanen, T. The learning society as a greying society: perspectives of older workers and lifelong learning. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 2*. Luxembourg: Publications Office, 2009 (Cedefop Reference series; 70).
- Cedefop; Tsakarissanos, G. Social mobility and VET. In Cedefop. *Modernising vocational education and training: fourth report on vocational training research in Europe: background report, volume 1*. Luxembourg: Publications Office, 2008 (Cedefop Reference series; 69).
- Cedefop; Ward, T. Geographical mobility. In Cedefop. *Modernising vocational education and training: fourth report on vocational education and training research in Europe: background report, volume 1*. Luxembourg: Publications Office, 2008 (Cedefop Reference series; 69).
- Collier, W. et al. Training and establishment survival. *Scottish Journal of Political Economy*, 2005, Vol. 52, No 5, p. 710-735.
- Conlon, G. The determinants of undertaking academic and vocational qualifications in the United Kingdom. *Education Economics*, 2005, Vol. 13, No 3, p. 299–313.
- Dearden, L. et al. *Who gains when workers train? Training and corporate productivity in a panel of British industries*. London: The Institute for Fiscal Studies, 2000 (Working paper).
- Dearden, L. et al. The impact of training on productivity and wages: evidence from British panel data. *Oxford Bulletin of Economics and Statistics*, 2006, Vol. 68, No 4, p. 397-421.
- Desjardins, S.L. et al. Modelling the college application decision process in a Land-Grant University. *Economics of Education Review*, 1999, Vol. 18, p. 117–132.
- Eurofound – European Foundation for the Improvement of Living and Working Conditions. *Employment security and employability: a contribution to the flexicurity debate*. Luxembourg: Publication Office, 2008.
- European Commission. *Declaration of the European Ministers of Vocational Education and Training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training*. Brussels: European Commission, 2002.

- European Commission. *The Bordeaux communiqué on enhanced European cooperation in vocational education and training. Communiqué of the European Ministers for Vocational Education and Training, the European social partners and the European Commission, meeting in Bordeaux on 26 November 2008 to review the priorities and strategies of the Copenhagen process*. Brussels: European Commission, 2008.
- European Commission. *The Helsinki communiqué on enhanced European cooperation in vocational education and training: communiqué of the European Ministers of Vocational Education and Training, the European social partners and the European Commission, convened in Helsinki on 5 December 2006 to review the priorities and strategies of the Copenhagen process*. Brussels: European Commission, 2006e.
- European Commission. *The Maastricht communiqué on the future priorities of enhanced European cooperation in vocational education and training (VET): review of the Copenhagen declaration of 30 November 2002*. Brussels: European Commission, 2004.
- European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit D1. *Employment in Europe 2007*. Luxembourg: Publications Office, 2007.
- Frade, C. et al. *Adult guidance systems in five European countries: a comparative analysis*. Leonardo Programme Guidance in Europe project – ES/04/C/F/RF-80900. Edinburgh: ICAS – Institute of Chartered Accountants of Scotland, 2005.
- Fraser, S. et al. The relationship between training and small business performance: an analysis of the Barclays Bank small firms training loans scheme. *Environment and Planning C: Government and Policy*, 2002, Vol. 20, No 2, p. 211-233.
- Green, A. et al. *Education, equality and social cohesion*. Basingstoke: Palgrave, 2006.
- Grubb, N.W. An occupation in harmony: the roles of markets and government in career information and guidance. *International Journal for Educational and Vocational Guidance*, 2004, Vol. 4, p. 123–139.
- Guichard, J. A century of career education: review and perspectives. *International Journal of Educational and Vocational Guidance*, 2001, Vol. 1, No 3, p. 155–176.
- Hansen, F.T. The existential dimension in training and vocational guidance: when guidance counselling becomes a philosophical practice. *European Journal Vocational Training*, 2005, No 34, p. 49-62.

- Harris-Bowlsbey, J.; Sampson, J.P. Computer-based career planning systems: dreams and realities. *Career Development Quarterly*, 2001, Vol. 49, No 3, p. 250–260.
- Hilmer, M. Post-secondary fees and the decision to attend a university or a community college. *Journal of Public Economics*, 1998, Vol. 67, p. 329–348.
- Hossler, D. et al. Understanding student college choice. In Smart J.C. (ed.). *Higher education: handbook of theory and research*. New York: Agathon Press, 1989, Vol. 5, p. 231–288.
- Ilmarinen, J. *Towards a longer worklife! Ageing and the quality of worklife in the European Union*. Helsinki: Finnish Institute of Occupational Health, 2006.
- Lairio, M.; Penttinen, L. Students' career concerns: challenges facing guidance providers in higher education. *International Journal for Educational and Vocational Guidance*, 2006, Vol. 6, No 3, p. 143–157.
- Lankford, H.; Wyckoff, J. Primary and secondary school choice among public and religious alternatives. *Economics of Education Review*, 1992, Vol. 11, p. 317–337.
- Lavoie, M.; Ross F. Is it worth doing a science or technology degree in Canada? Empirical evidence and policy implications. *Canadian Public Policy*, 1999, Vol. 25, No 1, p. 101-121.
- Lee, B.-H. Is Levy-grant scheme for employer-provided training effective? The experience of Korean employment insurance system. *Seoul Journal of Economics*, 2004, Vol. 17, No 2, p. 235-253.
- Lincoln, I.; Walker, A. Increasing investment in higher education: the role of a graduate tax. *Education Economics*, 1993, Vol. 1, No 3, p. 211-226.
- Liu, X.; Batt, R. The economic pay-offs to informal training: evidence from routine service work. *Industrial and Labor Relations Review*, 2007, Vol. 61, No 1, p. 75-89.
- Loveder, P. *World trends in staff development: implications on the performance of technical education institutions*. Adelaide: NCVET, 2005.
- McCarthy, J. The skills, training and qualifications of guidance workers. *International Journal for Educational and Vocational Guidance*, 2004, Vol. 4, p. 159–178.
- McCoshan, A. et al. *Beyond the Maastricht communiqué: an analysis of selected VET priority areas*. Birmingham: Ecotec, 2007.
- McMahon, W. *Education and development: measuring the social benefits*. Oxford: Oxford University Press, 1999.

- Mitton, L.; Hull, C. The information, advice and guidance needs of older workers. *Social Policy and Society*, 2006, Vol. 5, No 4, p. 541–550.
- Muller, J. *Reclaiming knowledge*. London: Routledge, 2000.
- Ng, Y.C.; Li, S. Training and productive efficiency in transition economies. *Oxford Economic Papers*, 2003, Vol. 55, No 4, p. 607–624.
- OECD. *Live longer, work longer*. Paris: OECD, 2006a.
- OECD. *Society at a glance – OECD social indicators 2006 edition*. Paris: OECD, 2006b.
- Patton, W. A postmodern approach to career education: What does it look like? *Perspectives in Education*, 2005, Vol. 23, No 2, p. 21–28.
- Patton, W.; McMahon, M. *Career development and systems theory: a new relationship*. Pacific Grove, CA: Brooks/Cole, 1999.
- Plant, P. Quality in career guidance: issues and methods. *International Journal for Educational and Vocational Guidance*, 2004, Vol. 4, p. 141–157.
- Raffe, D. et al. *The introduction of a unified system of post-compulsory education in Scotland*. Edinburgh: CES – Centre for Educational Sociology, 2005 (IUS Working papers).
- Schneeberger, A. Education under pressure to modernise: the challenges of structural change, new educational ambitions and globalisation. *European Journal Vocational Training*, 2002, Vol. 25, p. 64–79.
- Sultana, R.G.; Watts, A.G. Career guidance in public employment services across Europe. *International Journal for Educational and Vocational Guidance*, 2006, Vol. 6, p. 29–46.
- Tammaro, A. et al. (eds). *Recognition and quality assurance in LIS: new approaches for lifelong learning in Europe*. The Hague: IFLA – International Federation of Library Associations and Institutions, 2005.
- Watts, A.G.; Sultana, R.G. Career guidance policies in 37 countries: contrasts and common themes. *International Journal for Educational and Vocational Guidance*, 2004, Vol. 4, No 2 3, p. 105–122.
- Whiston, S.C. et al. Does treatment modality affect career counselling effectiveness? *Journal of Vocational Behavior*, 2003, Vol. 62, No 3, p. 390–410.
- Young, M. National qualifications frameworks as a global phenomenon: a comparative perspective. *Journal of Education and Work*, 2003, Vol. 16, No 3, p. 223–237.
- Zwick, T. Continuing vocational training forms and establishment productivity in Germany. *German Economic Review*, 2005, Vol. 6, No 2, p. 155–184.
- Zwick, T. The impact of training intensity on establishment productivity. *Industrial Relations*, 2006, Vol. 45, No 1, p. 26–46.



CEDEFOP

European Centre for the Development
of Vocational Training

Modernising vocational education and training

Fourth report on vocational education
and training research in Europe:
executive summary

Luxembourg:
Publications Office of the European Union

2009 – VI, 42 pp. – 17 x 24 cm

ISBN 978-92-896-0594-6

TI-78-09-678-EN-C

Free of charge – On request from Cedefop

No of publication: 4068 EN

Modernising vocational education and training

Fourth report on vocational education
and training research in Europe:
executive summary

Between 2006 and 2008, the European Centre for the Development of Vocational Training (Cedefop) conducted research on the needs and ways of modernising VET in the EU beyond 2010. The resulting papers are the basis of Cedefop's fourth report on VET research. This executive summary reviews the major issues analysed in the report, and the findings and conclusions reached. It outlines the expectations placed on VET by policy-makers, firms, labour markets, VET professionals and users, and society as a whole. The major challenges and future prospects for policy and research are also presented.

TL-78-09-678-EN-C



CEDEFOP

European Centre for the Development
of Vocational Training

Europe 123, 570 01 Thessaloniki (Pylea), GREECE
Postal address: PO Box 22427, 551 02 Thessaloniki, GREECE
Tel. +30 2310490111, Fax +30 2310490020
E-mail: info@cedefop.europa.eu
www.cedefop.europa.eu

4068 EN

Free of charge - On request from Cedefop



Publications Office

