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# Adult and continuing education in Europe

Pathways for  
a skill growth governance

Adult and continuing education has the dual function of contributing to employability and economic growth, on the one hand, and responding to broader societal challenges, in particular promoting social cohesion, on the other. Companies and families support important investments that have, to date, ensured important growth in both skills and the ability of the European population to innovate. Thanks to this commitment, Europe today has a wealth of organisations specialising in adult and continuing education. The sector has grown in importance, both as an increasingly significant player in the economy and in view of its capacity to respond to the demand for learning by the knowledge economy. As this book shows, adult and continuing education has a critical role to play in ensuring Europe copes with the phenomenon of education exclusion, which, repeated year after year, generation after generation, undermines social cohesion and the growth of employment. Public policies must respond to two strategic challenges: to encourage the propensity to invest in adult and continuing education and to guarantee the reduction of educational exclusion.



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EUROPEAN COMMISSION

# Adult and continuing education in Europe:

Pathways for a skill growth  
governance

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This report has been written by Paolo Federighi, who is Professor of Theories and Methodologies of Adult Education at the Department of Sciences of Education and Psychology, Florence University. In order to complete his work, he analysed the final reports, working papers and published articles from six research projects funded by the Directorate-General for Research and Innovation under the seventh framework programme.

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Paul Stanistreet, Editor of the NIACE Journal "Adult Learning", edited the text.

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## Foreword

It may surprise you that I have written this foreword for a report that is dedicated to continuing adult education given that I am responsible for EU policy for research and innovation. There is, in fact, a link because investment in continuing education increases the innovation capacity of companies. More generally, of course, continuing education helps workers keep their skills up-to-date and reduces the likelihood of labour market exclusion. It plays, therefore, a fundamental role to achieve the objectives of the Europe 2020 strategy, as regards both growth and inclusion.

We know that in spite of existing measures, unemployment across the EU is unacceptably high and skills mismatch is one of the biggest issues for our economies. We also know that the most vulnerable groups – the low skilled, the unemployed, older workers – have less access to fresh education opportunities. We need to take effective action to address this skills deficit, but this action must be underpinned by evidence-based policy making.

One of the strengths of the EU is that we can learn from our diverse range of experiences and compare and contrast different approaches. So in 2012 my services asked Professor Paolo Federighi to review the findings of several research projects on adult and continuing education that have been funded under the 6<sup>th</sup> and 7<sup>th</sup> EU Research Framework Programmes.

The data analysed and presented in Professor Federighi's review covers the adult and continuing education markets across the EU, whether they are growing or shrinking, their uptake of innovations applied to training, and the role of consultancies, big companies and other economic considerations. These data will help policy makers understand which strategies will lead to more effective governance of adult and continuing education, to help them shape dynamic learning environments adapted to different sectors, education levels and enterprise size. Special attention must be paid to the translation of demand for skills into effective training products; providing training that allows for the acquisition of real knowledge, skills or attitudes is the only way of preventing a waste of resources.

I believe this document makes a valuable contribution to an important policy debate. It proposes a number of policy priorities to support adult and continuing education, and how to best exploit the potential of existing knowledge through an 'Intelligent Decision Support System' to facilitate the ex-ante impact assessment of policy strategies.

Europe urgently needs to address the skills mismatch in its labour markets, and I commend this review, therefore, to all those involved in employment, education and inclusion policies. The EU's next research programme, Horizon2020, will build on the successes of its predecessors and will continue to support evidence-based policy making in these key areas.





## Executive summary

Adult and continuing education has the dual function of contributing to employability and economic growth, on the one hand, and responding to broader societal challenges, in particular promoting social cohesion, on the other. Companies and families support important investments that have, to date, ensured significant growth in both skills and the ability of the European population to innovate. Thanks to this commitment, Europe today has a wealth of organisations specialising in adult and continuing education. The sector has grown in importance, not only as an increasingly significant player in the economy but also in terms of its capacity to respond to the demand for learning from the knowledge economy. Adult and continuing education has a critical role to play in ensuring Europe copes with the phenomenon of educational exclusion, which, repeated year after year, generation after generation, undermines social cohesion and restricts the growth of employment. The prevalence of private intervention has created a situation in which participation in adult and continuing education is unevenly distributed, offering particular encouragement to certain groups (such as people with high levels of education or favoured social and cultural origin, and those employed in the knowledge-intensive productive sectors) while less advantaged groups are doubly disadvantaged.

Demographic dynamics mean that the population, and hence the labour force, in the 45-65 age group will increase in the next decades, while the population aged between 15 and 44 will decrease. This phenomenon, linked to the increasing number of knowledge and skill-intensive jobs, makes adult education even more relevant.

Nevertheless, the factor that, more than others, determines the likelihood of accessing learning opportunities is geography: the city, region and country of residence. This confirms the importance of past and present policies and, hence, the potential role of the state.

Public policies must respond to two strategic challenges: to encourage the propensity to invest in adult and continuing education and to guarantee the reduction of educational exclusion. Therefore, investing appropriately in adult education will contribute to overcoming the economic crisis and to meeting the Europe 2020 targets on employment, poverty reduction, education, sustainability and innovation.

Given this complex setting, research provides tools and data for helping policy-makers define effective policy measures. This publication is a review of the findings of several EU-funded research projects under the 6th and 7th Framework Programmes for Research.

The conclusions of the research projects reviewed in this publication propose a number of policy priorities to support adult and continuing education and to harvest the potential of existing scientific production. This paper surveys these conclusions and guides policy-makers in developing policy interventions which both support the growth of adult and continuing education and exploit the wealth of research and research tools available.





# 1.

The three functions of public policy for continuing vocational education and training (CVET) and adult education

The underlying rationale for public policy on adult and continuing education can be referred to three main objectives: to guarantee the availability of a skills supply adequate to the demands of economic growth; to correct the failings of initial education and training; and to support the dynamics of cohesion and social inclusion, as reflected in the European social model.

This report is based on a review of several research projects financed by the Research and Innovation Directorate General of the European Commission (Sixth and Seventh Framework Programmes for Research). In particular, it draws on Lifelong Learning 2010, “Toward a lifelong learning society in Europe: the contribution of the education system”, and the ongoing project, LLLight in Europe, “LifeLong Learning, Innovation, Growth and Human Capital: Tracks in Europe” (see Annex 2 for a list of FP6 and FP7 projects relevant to the topic). This report also takes into account the related work of other institutions, such as CEDEFOP, Eurofound, Eurostat and OECD, as well as research by academics in the area.

it” (European Commission, 2010:2). “The serious shortages of qualified personnel, as well as technical and management skills, specific for certain professions, obstruct the achievement of EU objectives in matters of sustainable growth” (European Commission, 2010:10).

According to research, three main structural factors are set to influence the shape of adult and continuing education in Europe in years to come:

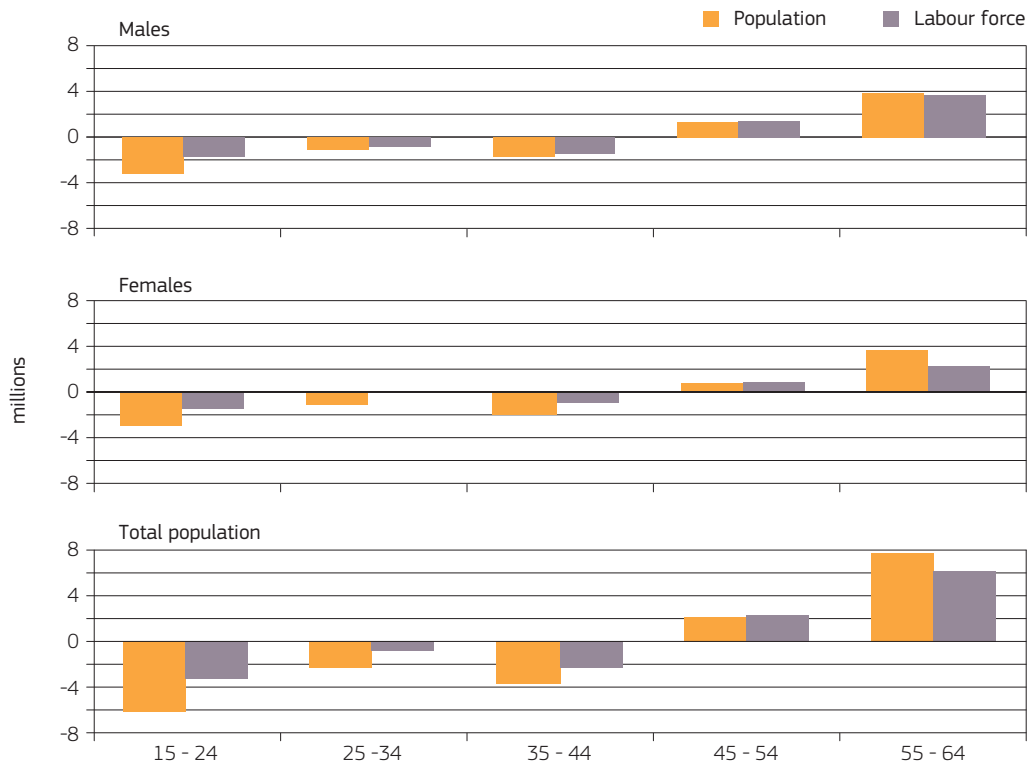
- a. **demographic dynamics** will be a very significant factor (*Box 1*). “In the next decade only the number of 45-54 and 55-64 year-olds will increase. In the age group 15-44, population and labour force will decrease. (...) In the age group 45-54, growth in the labour force will be even higher than that of the population as a result of activation measures” (Cedefop, 2010:40).

## 1.1. Guaranteeing the skills supply

Adult and continuing education public policies are the educational instrument used by governments to ensure an adequate skills supply.

In addition to guaranteeing the supply of young people with the skills required to enter the job market, public policies should contribute to the development of “a more qualified labour force, which, thanks to new models of work organisation, (*is*) capable of contributing to technological change and adjusting to

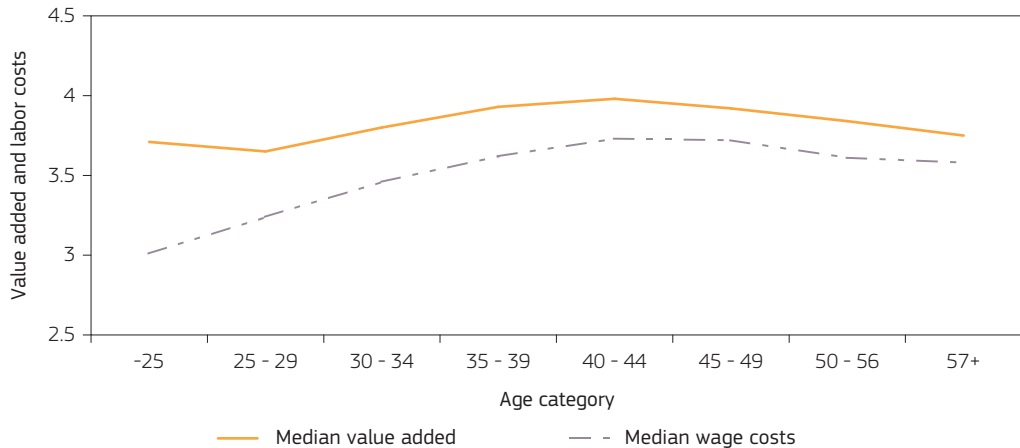
**Box 1.** Changes in population and labour force by age, 2010-20, EU-27+



Source: Cedefop (IER estimates from StockMOD).

The increase in the number of employed people aged between 45 and 64 means that this age group will bear much of the burden of responding to the need for skills in coming years. Their professional growth is necessary, if we are to rise to the challenge of demographic change. It is also possible, thanks to the reducing negative effects of ageing on the performance of workers. The extension of active life is reflected in changes to the work ability index of older workers. The ratio between ageing and productivity varies according to work quality, but, in general (Box 2), “value added is not much affected by the average age of the workforce. Labour costs increase at lower ages and are roughly constant from age 40 onwards. Apparently, as the average age of the workforce increases, the difference between value added and wage costs is smaller. Of course, we cannot derive any causal conclusion (from Box 2) as across age groups different firms are compared” (Jan C. van Ours, Lenny Stoeldraijer, 2010:10).

### Box 2. Median value-added and median labour costs by age group; log-scale

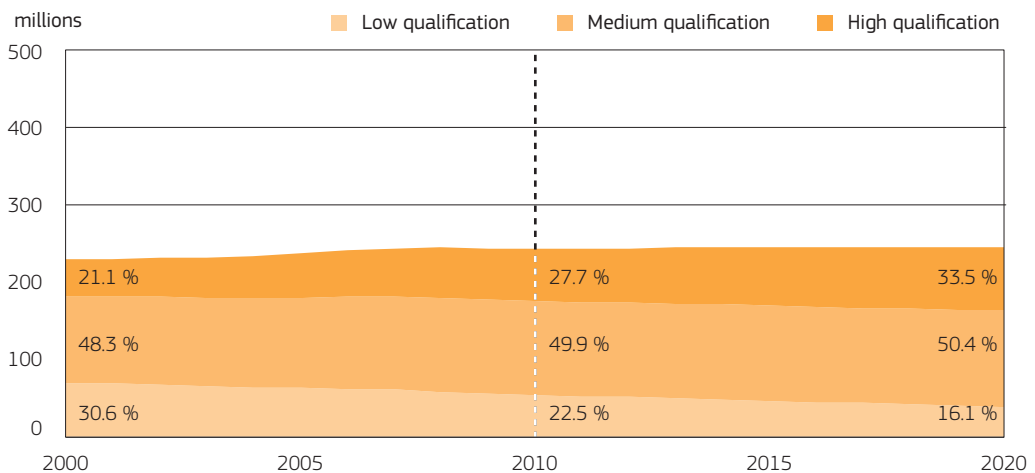


Source: Jan C. van Ours, Lenny Stoeldraijer, 2010

With the increase in more knowledge-intensive work and the corresponding decrease in work requiring physical effort, the maximum level of productivity will move progressively within the reach of older people. The possibility of extending active life should lead to increased investment in learning for adults.

- b. The second structural factor that will influence adult and continuing education is the projected increase in the number of employed people with high levels of qualification (Box 3). This will cause an **increase in demand for adult and continuing education**. “The baseline scenario projects that between 2010 and 2020 the labour force of Europe (EU-27+) aged 15+ holding high-level qualifications will increase by more than 15 million” (Cedefop, 2010:50).

### Box 3. Supply trends in labour force (15+) by qualification, EU-27+



Source: Cedefop, 2010.

The increase in numbers of highly qualified workers requires the ongoing development of skills which are at constant risk of obsolescence. Research and Eurostat findings confirm that adults with high levels of education are the group most likely to participate in lifelong learning.

The analysis of participation in education and training activities found in the Eurostat survey (Box 4) shows how, during the nine years considered, the propensity to participate doubled according to the level of qualification held.

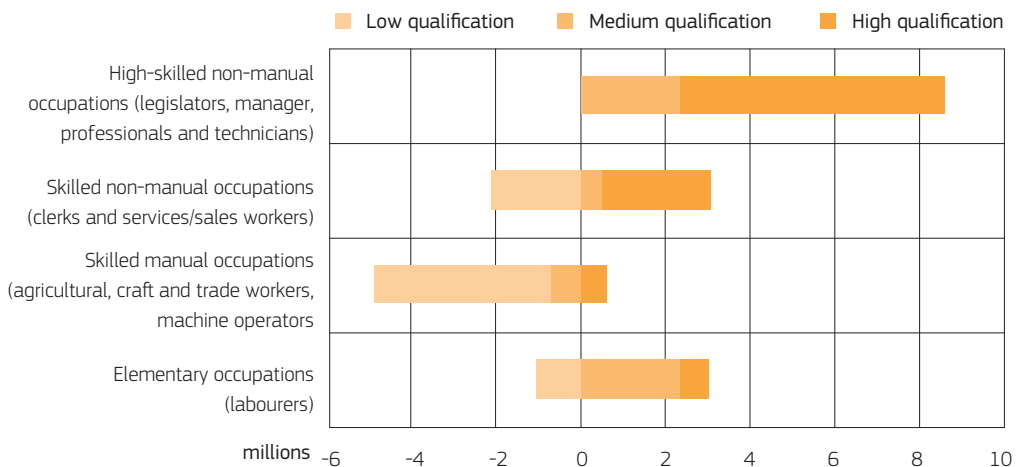
**Box 4.** Participation in formal or non-formal education and training by educational attainment - %. Age 25-64 years.

Isced levels 1997	2003	2004	2005	2006	2007	2008	2009	2010	2011
0-2	3.3	3.6	3.7	3.7	3.6	3.8	3.9	3.8	3.9
3 and 4	8.3	9.5	8.8	8.5	8.2	8.3	8.1	8.0	7.6
5 and 6	17.1	19.5	18.5	18.0	17.5	17.5	16.9	16.7	16.0
All	8.5	9.8	9.5	9.3	9.1	9.2	9.2	9.1	8.9

Source of Data: Eurostat. All Eurostat Data are extracted on 18 November 2012

- c. Third, the changing structure of employment, together with the **growing number of jobs that are more knowledge- and skill-intensive**, increases demand for professional growth among the employed (Box 5). “Many jobs (...) require more highly-skilled/qualified people than in the past (because of the) changes in the skills/qualification composition within each of these job categories” (Cedefop, 2010:71).

**Box 5.** Net employment change by occupation and qualification, 2010-20, EU-27+



Source: Cedefop, 2010

This means that nearly 15 million workers will be involved in up-skilling processes that will be achieved through both on- and off-the-job training courses, and which will be accompanied by horizontal and vertical mobility processes within the same company or that could concern companies belonging to different productive sectors.

- d. The imperative to develop skills implies the need for a sound **system for monitoring the possession of skills**. Guaranteeing an adequate skills supply means ensuring that the actors on the job market know “who knows what”. In other words, it demands a system that delineates the actual possession of skills and not just qualifications. Research (Collins, 1979 *et al.*) has shown how qualifications can be more of a barrier for admission to a social class than a function for identifying actual skills. The main purpose of higher qualifications is not necessarily to denote acquired skills, but rather to limit access to some specific professions. Since what unites a social class is a common culture, education plays a considerable role in transmitting and consolidating this common culture, regardless of the professional capabilities transmitted. “The existence of jobs with higher-level qualifications can lead to a *credentialism* rather than a more skilled workforce” (Dokery *et al.*, 2012:5). Research on the actual linguistic and mathematic skills of 15 year olds and PIAAC data, have shown the limits of the accumulation of certificates (*credentialism*) and the limited importance of qualifications with respect to information about the skills someone actually has.

## 1.2. Guaranteeing adequate equity in growth opportunities

In spite of decades of reform, the education system selects young people on the basis of their social class, not their merits. Policies should reduce the effects of educational exclusion by enriching social capital, workplace learning and the response to individuals’ intellectual growth ambitions.

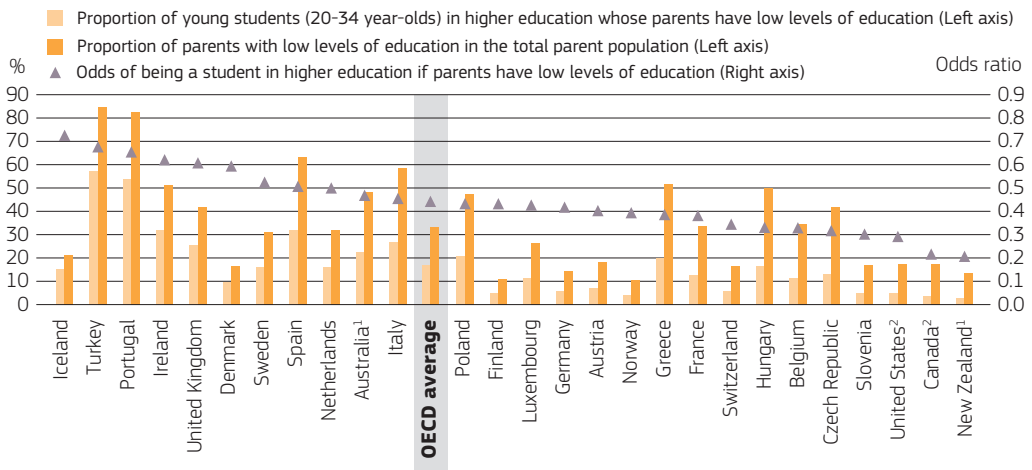
A second function of adult and continuing education policy is to correct the social exclusion produced, first of all, by the education system, from school to university, as well as by other factors that impact on the socialisation of young people. The European Commission’s *Agenda for new skills and jobs*

states: “Irrespective of age, gender, socio-economic background, ethnicity or disability, all EU citizens should have the opportunity to acquire and develop the mix of knowledge, skills and aptitudes they need to succeed in the labour market” (European Commission, 2010:10).

As far as the transition of young people from school to work is concerned, the need for adult and continuing education policies arises from the shortcomings of the initial education system. As more European countries have modernised, the number of people with access to education has grown, and people have remained in compulsory education for longer. In spite of reform, schools have not been able to provide an adequate skills supply. **Schools continue to perpetuate social distinctions** (Box 6). “The odds that a 20-34 year-old will attend higher education are low if his or her parents have not completed upper secondary education. On average across OECD countries, young people from families with low levels of education are less than one-half (odds of 0.44) as likely to be in higher education, compared to the proportion of such families in the population” (OECD, 2012:104).



**Box 6.** Participation in higher education of students whose parents have low levels of education (OECD, 2009)



Note: The number of students attending higher education are under-reported for Australia, Canada, New Zealand and the United States compared to the other countries as they only include students who attained ISCED 5A, while the other countries include students who attained ISCED 5A and/or 5B. Therefore, the omission of data on 5B qualifications may understate intergenerational mobility in these countries.

1. Data source from Adult Literacy and Lifeskills Survey (ALL) of 2006.

2. Data source from Adult Literacy and Lifeskills Survey (ALL) of 2003.

Countries are ranked in descending order of the odds of attending higher education.

“The chance that a young person whose parents have not attained an upper secondary education will attend higher education is limited”. On the other hand, “In general, students whose parents have higher levels of education are more likely to enter tertiary education. On average, a 20-34 year-old from a highly educated family is almost twice (1.9) as likely to be in higher education, as compared with the proportion of such families in the population” (OECD, 2012:104).

“On average across OECD countries, approximately half of 25-34 year-old non-students have achieved the same level of education as their parents: 13% have a low level of education (ISCED 0/1/2), 22% have a medium level of education (ISCED 3/4), and a further 15% have attained tertiary education (ISCED 5/6). More than one-third (37%) of all young people have surpassed their parents’ educational level, while 13% have not reached their parents’ level of education” (OECD, 2012:108).

The obvious failings of countries’ school systems highlight the need for adult and continuing education policies which expand access to personal and professional growth pathways. **Research on equity policies shows how they largely meet the training demand of people who start from non-disadvantaged conditions.** We have already presented data concerning the greater propensity of people with higher levels of education to participate in adult and continuing education (Box 4). Below, we show data from Eurostat’s ALS survey (Box 7), which indicate the greater propensity of employed people to train.

**Box 7.** Participation rate in education and training by labour status (2007)

Labour status	Percentage of total
employed	42.1
unemployed	24.1
inactive	16.6
European Union (27 countries)	34.9

Source of Data Eurostat

The OECD's 2000 International Adult Literacy Survey (OECD, 2000) – which understood “literacy” as the ability to understand and employ printed information in daily activities, at home, at work and in the community – supported this finding. The results were confirmed by later research, specifically the OECD's Adult Literacy and Life Skills (ALL) Survey (OECD, 2011) and the LLL2010 survey. The ALL results include a number of important facts:

- Many of the differences in the level and distribution of proficiency can be explained by social background, educational attainment and a range of variables relating to use of and engagement with literacy and numeracy and the ways adults lead their lives;
- Significant proportions of the adult population display poor levels of proficiency in one or more of the skill domains assessed and many perform poorly in all domains; and
- The differences in the level and distribution of literacy, numeracy and problem-solving skills are associated with large differences in economic and social outcomes.

This means that policies for adult and continuing education aimed at promoting equity have an essential function in **maintaining acquired learning conditions** and in the **emancipation of a reduced share of the population** that can improve their own qualifications through formal adult education.

### 1.3. Guaranteeing educational and learning support for the social inclusion of people with low skills

The third, and final, function of public policy for adult and continuing education is to build inclusion opportunities for low-skilled people, whether they have no qualifications or their skills are obsolete.

Over the last decade, research has concentrated on the following targets (*Box 8*):

- a. Adults with low education attainment, defined by Eurostat as those who have attained an ISCED level no higher than 0, 1 or 2.
- b. Early leavers from education and training, defined by Eurostat as the percentage of the population aged between 18 and 24 who have attained, at most, lower

secondary education and who have not being involved in further education or training (i.e. people aged 18 to 24 who meet the following two conditions: the highest level of education or training they have attained is ISCED 0, 1, 2 or 3c short; and they have not received any education or training in the four weeks preceding the survey).

- c. Young people who are neither in employment nor in education and training – the so-called “NEETs” (those who, following the Eurostat definition, are not employed and have not received any education or training in the four weeks preceding the survey).
- d. Students who, at 15, have serious educational deficiencies, specifically in reading literacy. According to data from the Programme for International Student Assessment (PISA), reading literacy is defined as understanding, using and reflecting on written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society. Proficiency at Level 1 and below means that pupils are not likely to demonstrate success on the most basic type of reading that PISA seeks to measure.

### Box 8. Overview of four indicators of educational hardship

#### Early leavers from education and training

% of the population aged 18-24 with at most lower secondary education and not in further education or training

GEO\TIME	2004	2005	2006	2007	2008	2009	2010	2011
EU (27 countries)	16	15.8	15.5	15.1	14.9	14.4	14.1	13.5

#### Persons with low educational attainment, by age group: from 25 to 64 years

GEO\TIME	2004	2005	2006	2007	2008	2009	2010	2011
EU (27 countries)	31.6	30.6	30.1	29.3	28.7	28	27.3	26.6

#### Low reading literacy performance of pupils

Share of 15-year-old pupils who are at level 1 or below of the PISA combined reading literacy scale

GEO\TIME	2003		2006		2009		
EU (27 countries)	20.8	(s)	22.6	(s)	19.6	(s)	
s=Eurostat estimate							

#### Young people not in employment and not in any education and training (in % points of NEET rates) Age from 20 to 34 years

GEO\TIME	2004	2005	2006	2007	2008	2009	2010	2011
EU (27 countries)	19.1	18.7	17.6	16.8	16.5	18.5	19.1	19.3

Source: Eurostat

The data shown in *Box 8* refer to different types of problem: lack of qualifications, low level of skills and under-utilisation of skills possessed. However, they are indicative of the scale of the phenomenon of educational exclusion and the impact of social reproduction.

**The dysfunctions of society, school and the job market create educational exclusion, among both young people and the elderly. This increases the potential demand for education. However, policies to correct the dysfunctions have so far had limited impact.**

The data most relevant to policies on adult and continuing education concern people with low educational attainment. The data show a pattern of progressive decline, but the trend is

slow. We must also take into account the phenomenon of social reproduction, i.e. the influence of the educational attainment of parents on their children's educational prospects. The low level of education among some parents can have a major negative influence on the aspirations of their own offspring.

The data concerning the other three target groups (early school leavers, NEETs and pupils with poor reading literacy) highlight the existence of a considerable potential addition to the low-skilled population. The exception could be NEETs with upper-secondary, post-secondary non-tertiary, first- and second-stage tertiary education (levels 3-6) qualifications; who, in 2011, were 11.8% of the NEET population. In any case, we must bear in mind the risk that the skills they have gained will become obsolete because of lack of use (Desjardins, 2004).

The implementation of policies of social inclusion through adult and continuing education must take into account other factors, which are associated with the low-skilled condition (OECD, 2012:120, 202-203), for example:

- the greater risk of unemployment;
- less participation in forms of social life;
- less participation in the political life of their own country;
- greater propensity for conflict with different ethnic groups; and
- lower life expectancy.

The combination of these conditions makes the implementation of effective educational policies more difficult. There is a need for complementary, synergistic approaches between the various areas of policy.







# 2.

Using adult  
and continuing  
education  
to reduce  
the number  
of low-skilled  
people

## 2.1. Expand participation and/or one step ahead for all

Europe missed the Lisbon objective of achieving a 12.5% rate of adult participation in lifelong learning by 2010. Adult participation reached 9.1% and thereafter stagnated, a negative trend that continued in 2012. The reasons for this are still not entirely clear. However, we must be careful not only to consider the reasons for this lack of expansion. We must also ask ourselves whether the investments made contributed to making members of the various social groups advance in their capacity to contribute to European growth strategies, and, if so, how.

From this perspective, research has produced new knowledge that should be useful for constructing policies.

### 2.1.1. One step ahead in upskilling

**In spite of the crisis and the weakness of public policies, people – whether low, medium or high skilled and regardless of age – are working hard to improve their skills.**

Between 2000 and 2010, the demand for formal adult education did not uniformly follow a pattern of decline or stagnation. In some countries, significant progress was made in some

respects (*Box 9*). Demand for upskilling is consistent, though it is not evenly distributed across the age range (Beblavy *et al.*, 2012:29).

“Findings for the EU27 average show that:

- High skills increase over all cohorts (excepted for older cohorts in rare cases), but the effect is strongest for the youngest cohort.
- Low skills generally decrease, but the effect is strongest for the youngest cohorts – less clear-cut than for high skills.” (Beblavy *et al.*, 2012:16)

#### **Box 9.** Cohort analysis using the LFS macro data

<b>EU27 Average</b>		<b>low</b>	<b>medium</b>	<b>high</b>
2000	From 25 to 34 years	25.7	51.4	22.9
2010	From 35 to 44 years	23.8	48.3	27.9
2000	From 35 to 44 years	30.7	48.3	20.9
2010	From 45 to 54 years	28.9	48.4	22.7
2000	From 45 to 54 years	39.1	42.4	18.5
2010	From 55 to 64 years	38.4	42.5	19.1

Source: Beblavy, *NeuJobs*

It must be acknowledged that the European average, though positive, disguises significant variation in the performances of different countries. Contrast, for example, the results of Luxembourg or Bulgaria, which have seen falling numbers of low-skilled workers, with Italy, where the trend is negative.



**Box 10.** Cohort analysis using the LFS macro data

Luxembourg	low	medium	high
From 25 to 34 years	31.8	45.3	22.9
From 35 to 44 years	19.5	39.0	41.4
From 35 to 44 years	35.7	47.3	16.9
From 45 to 54 years	25.3	46.8	27.9
From 45 to 54 years	42.6	38.9	18.4
From 55 to 64 years	30.9	43.8	25.3
Bulgaria	low	medium	high
From 25 to 34 years	23.9	57.3	18.9
From 35 to 44 years	17.0	58.6	24.4
From 35 to 44 years	23.6	56.2	20.2
From 45 to 54 years	17.8	59.9	22.3
From 45 to 54 years	32.9	48.4	18.7
From 55 to 64 years	29.5	51.3	19.2
Italy	low	medium	high
From 25 to 34 years	40.7	48.7	10.6
From 35 to 44 years	40.8	43.4	15.8
From 35 to 44 years	48.6	40.4	11.0
From 45 to 54 years	48.9	39.1	12.0
From 45 to 54 years	60.6	29.3	10.1
From 55 to 64 years	61.8	27.5	10.7

Source: Beblavy, *NeuJobs*

**The propensity for developing skills** (measured here using participation in activities that issue certification classifiable within the ISCED framework) is consistently present in European countries and **concerns all educational levels**. However, there are countries which, while obtaining positive results in the development of high skills, do not decrease the number of low-skilled workers.

### 2.1.2. A self-regulated behaviour

The motivations of those adults who do take part in adult and continuing education are highly variable, inspired by their own changing expectations with respect to different phases of the life cycle.

Among the population there is a widespread capability for self-direction in learning. This learning culture is a wealth that public policies should cultivate, respecting individual motivations.

The propensity of adults to invest in upgrading their skills is irregularly distributed across the age groups (*Box 11*). It grows and declines according to the use adults can make of it. The two phases of life in which the propensity of citizens to upgrade their skills is mostly concentrated are the early years of entering the working world and shortly before retirement. In the first case, **skill upgrading serves to adapt and increase the skills necessary for work** (those, particularly, not catered for in school); in the second case, **training can serve to lengthen active life**. Yet we must take into account that “in almost all countries inactive persons have a much higher chance for participating in formal learning than regularly employed (either full-time or part-time) or unemployed persons.” (LLL2010, 113).

**Box 11.** Participation in formal education and training by age groups from 25 to 34 years and from 45 to 54 years- %

GEO/TIME	2003	2004	2005	2006	2007	2008	2009	2010	2011
European Union (27 countries)	7.1	8.2	8.2	7.9	8.0	8.0	8.2	8.4	8.5

GEO/TIME	2003	2004	2005	2006	2007	2008	2009	2010	2011
European Union (27 countries)	0.7	1.3	1.2	1.1	1.1	1.2	1.2	1.2	1.2

Source: Eurostat

The background trends are the same. Unlike the other age groups, the two under consideration increased or maintained their rate of participation in formal education and training, even after 2005 and the onset of the financial crisis. For both age groups, however, there was a fall in participation in informal education. We might conclude that, faced with the challenges of the crisis, people preferred to invest in training with a more immediate return.

This highlights the need to increase the capacity of individuals to manage their own learning. A self-directed learning policy entails giving powers of decision to individuals and employers, and acknowledges the right of individuals and companies to follow the motivations that prompt them to engage in training (see *Box 12*, from LLL2010:124, 129).

**Box 12.** Overview – participation events in adult education

Life Cycle			
Focus	Main Types	Sub-types	Description
Education	I Completing	Ia Finishing	Working while studying without particular connection of work and education
		Ib Entering	Being hired in late phases by an employer in need of graduates
	II Returning	II Returning	Returning to education and overruling a temporary transition to work
	III Transforming	III Transforming	General transformation using education as a basis

Life Cycle			
Focus	Main Types	Sub-types	Description
Work	IV Reinforcing	IVa Progressing	Progressing in the current field by at least one step on the educational ladder
		IVb Adapting	Making one step in the current field, in parallel to an existing one not relevant in the field
		IVc Specialising	Completing on programme as a specialization
		IVd Peaking	Completing a formal programme design for experienced professionals in the field
	V Compensating	V Compensating	Compensating the restriction of an existing pathway

Source: LLL201

As far as policy is concerned, this means not simply imposing a predetermined offer informed by supply-side considerations. **Increasing the responsibility of individuals can be supported through policies that act on the demand**, i.e. through the construction of highly personalised pathways. This is certainly, in part, to be achieved through the availability of learning sources (the learning offer), but it also requires the existence of policies and measures that free the individual's learning demand, giving the individual and the company powers of choice, including through the reduction of economic barriers (vouchers, tax deductions, etc.) and time barriers.

### 2.1.3. The national and local contexts make the difference

There is a propensity to invest in training and, when we take into account uncertified training, it is clear there is much more of this sort of investment than current studies would suggest. Nevertheless, research findings on participation are a significant indicator of the efficiency of the growth of skill quality in Europe.

The factor which most determines the possibility of accessing adult and continuing education is the territory in

which adults live and work. The most consistent differences, those that create inclusion or exclusion and exceed the weight of any other factor, are the territorial ones (*Box 13*). An individual in a poorly performing country can have a chance of accessing adult and continuing education as much as 30 times less than those living in top performance countries.

**The likelihood of having access to lifelong learning varies largely according to country and region of residence. Nevertheless, there are countries and regions that, in spite of unfavourable conditions, are making faster progress than the best-performing countries.**

**Box 13.** Participation in formal or non-formal education and training by age groups from 25 to 64 years - %

GEO/TIME	2011
Belgium	7.1
Bulgaria	1.2
Czech Republic	11.4
Denmark	32.3
Germany (including former GDR from 1991)	7.8
Estonia	12.0
Ireland	6.8
Greece	2.4
Spain	10.8
France	5.5
Italy	5.7
Cyprus	7.5
Latvia	5.0
Lithuania	5.9
Luxembourg	13.6
Hungary	2.7
Malta	6.6
Netherlands	16.7
Austria	13.4
Poland	4.5
Portugal	11.0
Romania	1.6
Slovenia	15.9
Slovakia	3.9
Finland	23.8
Sweden	25.0
United Kingdom	15.8
Iceland	25.9
Norway	18.2
Switzerland	29.9
Croatia	2.3
Former Yugoslav Republic of Macedonia	3.4
Turkey	2.9

Source of Data: Eurostat

Even within the best-performing countries, however, there are regional variations likely to be of concern to those resident in less-favoured regions (Box 14).

**Box 14.** Participation of adults aged 25-64 in education and training by NUTS 2 regions (from 2000) - %

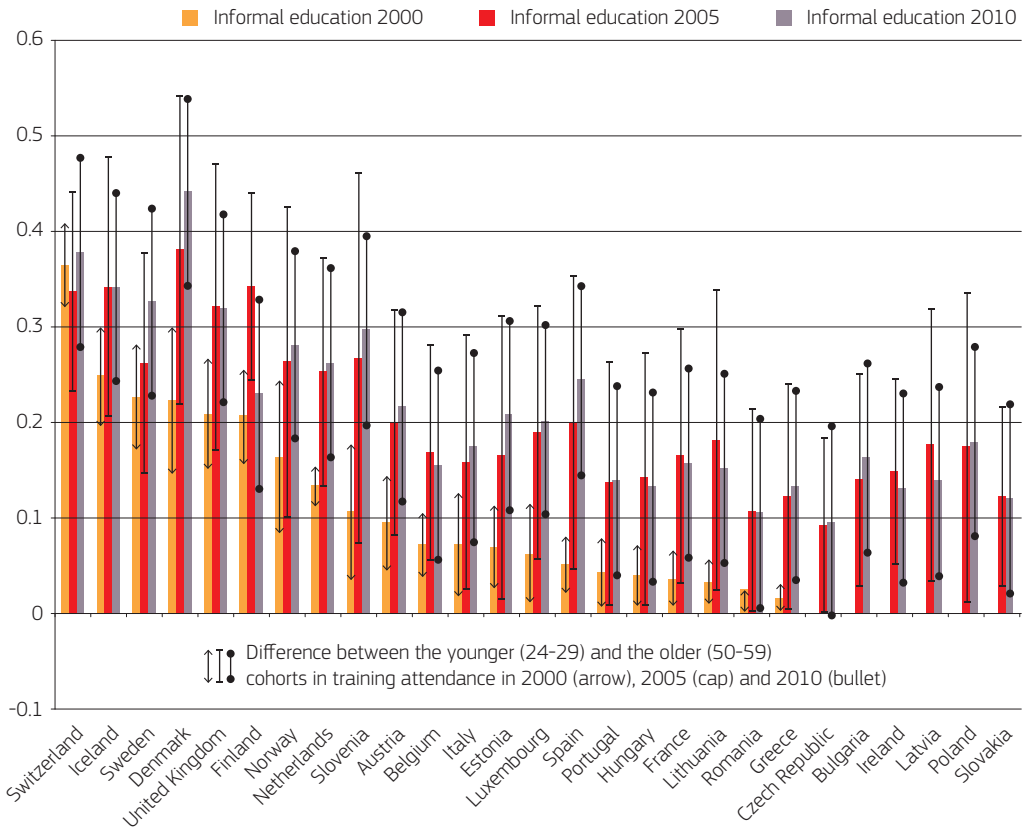
GEO/TIME	2011
Baden-Württemberg	8.8
Bayern	7.2
Berlin	9.6
Brandenburg	7.2
Bremen	9.2
Hamburg	10.3
Hessen	9.5
Mecklenburg-Vorpommern	7.7
Niedersachsen	6.4
Nordrhein-Westfalen	7.1
Koblenz	7.3
Saarland	7.8
Sachsen	7.3
Sachsen-Anhalt	6.7
Schleswig-Holstein	7.5
Thüringen	8.3

Source: Eurostat

This suggests that **what makes a difference is not a matter of national history or policy, but the capacity of the state to make an impact on the cultures, economies and conditions of the populations of its various territories.**

With this in mind, we shift our interest from an analysis of the differences between countries to a comparison of steps forward taken on national and regional levels during a certain period. The comparison of the degree of positive impact of public policies is more significant than the positioning analysis. This information gives an idea of the possible future and modifies the traditional ranking of European countries.

NeuJobs research offers useful verification on this. *Box 15* “shows the development over the years 2000, 2005 and 2010. It allows examining the evolution of workplace training up-skilling through generations instead of following specific cohorts. The figure shows that training participation increased particularly in countries where attendance was low in 2000. Those countries are gradually catching up with the best performers. This progression is mainly due to the new young generation who invest much more in up-skilling than their predecessors. In the Nordic countries and Switzerland, where training attendance is the highest in Europe, up-skilling grew less than in the South and East of Europe (excepted in Denmark where participation rose considerably between 2000 and 2005)” (Beblavy *et al.*, 2012:15).

**Box 15.** Participation in workplace training (24-34 and 50-59)

## 2.2. The institutional framework amplifies the weight of the exclusion factors

**Public policies can encourage the development of skills using regulations that reduce socio-demographic obstacles**

Analysis of the factors which exclude people from adult and continuing education confirms the weight of institutional contexts, and highlights the need for policies that reduce the effects of demographic barriers (such as gender, age, family responsibility and location), social barriers (such as early school dropout, unemployment or absence from the labour force, and part-time or temporary work contracts combined with low levels of labour market integration), and low-status barriers (like manual work). These variables form part of the panorama of issues, highlighted in research, which face disadvantaged groups found in research. The particular configuration varies according to the country, as well as to policies adopted to counteract them.

Analysis of the factors which exclude people from adult and continuing education confirms the weight of institutional contexts, and highlights the

The barriers so far identified were the object of a comparative analysis of Adult Education Survey (AES) data carried out by LLL2010. The analysis investigated the demographic and sociological barriers and examined the underlying causes of participation in formal adult education (*Box 16*).

“From the demographic perspective, this analysis revealed the presence of gender inequalities in particular for mothers who have family responsibilities to take care of a young child in the family. From the viewpoint of sociological obstacles, the multivariate analysis proved the significance of interruption in studies as an underlying mechanism for returning to formal adult education: longer interruption decreased the odds of participation in lifelong learning, particularly in those countries where attendance rates were smaller” (LLL2010:129).

**Box 16** .Socio-demographic obstacles for participation in adult education in the AES countries

Sociological obstacles**	Demographic obstacles*			
	Low level	Low-middle	High-middle	High level
Low level	FI, SE, BE		PT	
Low-middle	NO, SI		ES	
High-middle		LT	AT, DE	
High level		EE, LV, SK	CZ, HR	HU, BG, FR, CY

\* Expected disadvantage for women, old aged respondents, rural inhabitants, those with small children

\*\* Expected disadvantage for early school dropouts, those with weak integration in the LM, manual worker status, low level of income

Source: LLL2010

These results (Box 16) show how **trends in participation in adult and continuing education result from the various policies** and their effectiveness in tackling the factors shown above. This is the main explanation of the differences between countries. The LLL2010 research on the weight of labour conditions concluded: “formal adult education and labour market status are both interrelated and dynamic during the period of participation in formal adult education. Individual participants may combine work and study differently during the various periods of their programmes, but not completely at will. Available space for individual decision in this matter is expanded or restricted by institutional settings (e.g. availability of grants, leave schemes or part-time programmes). Socio-economic factors (e.g. average income) and local labour market conditions also co-determine the participant’s choices when balancing continuing formal education and economic necessities.” (LLL2010:114).

## 2.3. Availability of social capital is a precondition for growth

The growth of skills is connected to the possibility of belonging to territorial and non-territorial networks and communities that stimulate and support individual learning needs. The richer and more

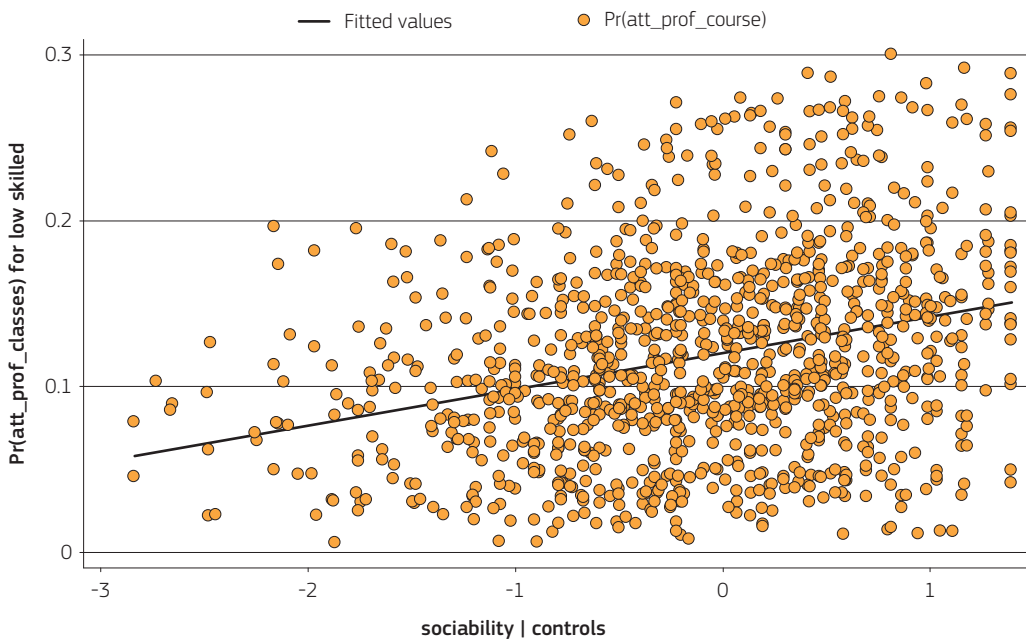
dynamic the network of friends, acquaintances, reciprocal and trusting relationships, access to social activities, the greater the social capital available. Robert B. Reich (1991) adopted the expression “community of dynamic learning”, attributing to such communities a key role in international competition and in encouraging participant growth through ongoing continuing informal exchange.

**What makes the difference is belonging to networks of dynamic learning and to communities, cities and regions with a wealth of sources of knowledge.**

NeuJobs research has shown how belonging to social networks has a positive effect on access to adult and continuing education: “all types of social capital (*considered*) have a significant and positive effect on adult learning. The size of the effect varies across the different measures between increasing the probability of participating in adult learning by 0.04% to increasing the probability by 17%. Across all measures of adult learning we identified that one more unit of the perceived importance to be socially active increases the probability of participation in adult learning by the most (17%) and that one additional friend increases this probability by the least (0.04%). We also find that the supportiveness of the social network increases the probability of participating in adult learning by nearly as much as an additional unit in the perceived importance to be politically and socially active.” (Thum, 2012:3).

The following graph (*Box 17*) shows the predicted probabilities of attending professional classes and the relationship with social capital measures, given a set of controls. The graph shows that the effect is positive, given the control variables for all three education levels (Thum, 2012:11).

**Box 17.** Scatter plot between the predicted probability to attend a professional class and the sociability scale for the low skilled



Source: Thum, NeuJobs

**The significance of belonging to dynamic learning networks and communities should inform public policy about the kinds of support that aid prosperity** (from the old to the very new infrastructures, to life associated in its new traditional and virtual forms). Participation in non-formal adult education and training is a partial measure of this phenomenon (*Box 18*).



**Box 18.** Participation in non-formal education and training by age groups  
from 25 to 64 years- %

GEO/TIME	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>European Union (27 countries)</b>	5.3	7.3	6.9	6.8	6.7	6.9	6.7	6.7	6.4

*Source of Data: Eurostat*

Between 2003 and 2011 there was a slow decrease in participation in this type of activity. It is worthwhile wondering how much this phenomenon deprives citizens of a means of developing skills.





# 3.

## Workplace learning

### 3.1. Workplace learning potential

The workplace learning potential is the factor on which the professional growth of workers depends. Workplace learning is, first of all, the result of learning embedded in day-to-day work

and is a leading competitiveness factor. In order to innovate and to deliver promptly and efficiently, EU companies depend for their survival and expansion on a committed workforce, thriving in a high-quality working environment, with safe and healthy working conditions” (European Commission, 2010:14).

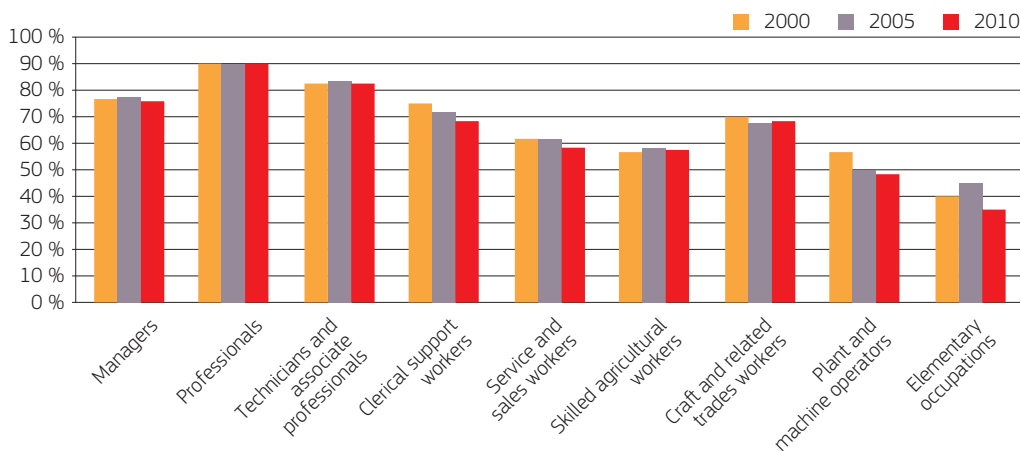
“High quality of work goes hand in hand with high employment participation. This is because the working environment plays a crucial role in enhancing the potential of the workforce and

Adult and continuing education policy can reinforce the learning potential of workplaces. It “depends on the interplay of various dimensions: human resources policies and training provided; participation of the company in innovation; learning opportunities offered on the job; worker motivation to learn; and the opportunities that the working environment gives them to use newly acquired knowledge and skills” (Cedefop, 2011:38-39). “Learning is anchored in work processes, is project-based or embedded in team working” (Cedefop, 2011:32).

All companies offer training; it is impossible to think of a company that does not found its existence on its ability to produce knowledge with respect to what and how it produces, who to sell to and how to sell (Vicari, 2008:55). A business exists as a result of the technological progress produced by its very economic activity and no longer just by external transfer: “technological advance comes from things people do” (Romer, 1994:12).

The vast majority of European workers report learning new things in the workplace (Box 19). Only in a small number of occupations is this not the case (Eurofound, 2012:99).

**Box 19.** Learning new things at work, by occupation, EU27 (%)



Source: Eurofound (2012), Fifth European Working Conditions Survey

Workplace learning can be understood only by adopting interpretative measures different to those of formal education (LLL2010).

## 3.2. Acting on the factors that increase the training potential of a workplace

“The fact that we spend a third of our daytime, and more than thirty years of our lives, in successive working environments emphasises the significance of the workplace in making lifelong learning a reality (...). We learn through work tasks, from colleagues and work

mentors, through trial and error, by solving challenges and changing job positions, as well as through the continuing training that employers may provide” (Cedefop, 2011:17).

The policy of developing the learning potential of workplaces must act at the same time on the five factors that create value for employees: job content, career prospects, benefits, a sense of belonging and the learning culture in job contracts

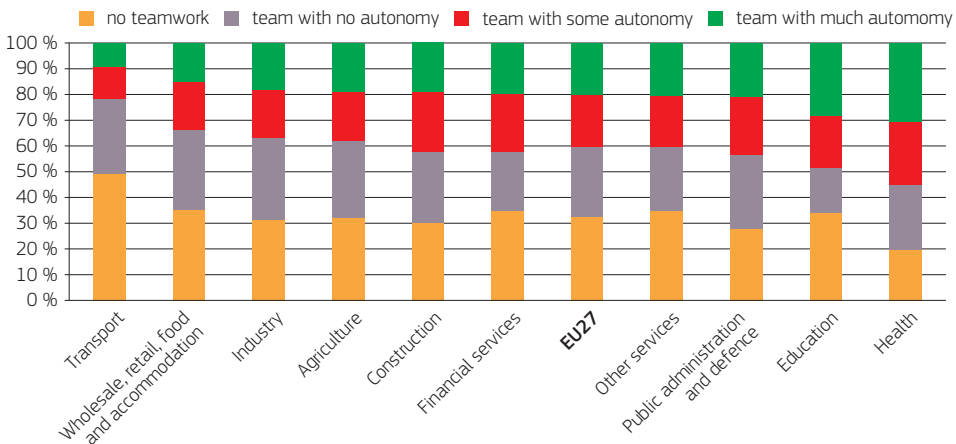
To manage the growth of skills and hence workplace performance, action must be taken on the factors that create workplace training potential.

Among the factors examined by the Fifth European Working Conditions Survey (Eurofound: 2012), we concentrate on those that have direct impact on the Learning Value Proposition that a workplace offers to employees in exchange for their services. The value offered consists in learning opportunities, structured or not, which are directly produced by the factors described below.

### a. Work content

The content of work undertaken is the worker’s primary source of learning. The variety of duties, the challenges, the degree of self-sufficiency required, the feedback from fellow workers and managers, the demands of team-working and the technologies employed, are a daily source of learning, whether or not they are encoded. The Fifth European Working Conditions Survey provides data on the various components of this factor.

For example, if we consider the types of teamwork employees take part in, an articulated framework emerges showing the important differences between the various productive sectors, in addition to their internal aspect (*Box 20*). Overall, at least two workers in five work as part of a team, with a degree of independence. Therefore, we can assume that they are doing a kind of work that offers them the possibility of analysis and evaluation and a role in decision-taking, i.e. in the continuing production of new knowledge.

**Box 20.** Types of teamwork, by sector (%)

Source: Eurofound, 2012

### b. Career prospects

Work that offers prospects of advancement, security and personal growth also increases motivation and develops a commitment to ongoing improvement. The use of worker development plans promotes professionalism and encourages workers to build future roles by taking on various work positions, usually accompanied by new learning.

The Fifth European Working Conditions Survey shows how expectations of career promotion are widespread among a significant proportion of employees. Promotion expectations are present in all worker levels (distinguished here by qualification level). This means that a significant number of employees are engaged in training processes of evaluation and self-evaluation, acquisition of new knowledge in their daily work and various types of structured training opportunities, through participation in projects and the management of new challenges. The positive picture that emerges with respect to these on-going dynamics does not, however, mean that we should not ask whether enough people are involved in career development processes – and, hence, whether all employers offer contexts capable of building people’s skills through professional development. The need to ask these questions becomes obvious when we consider the unequal distribution of this opportunity, which is concentrated among those with the highest levels of qualification (Box 21).

**Box 21.** My job offers good prospects for career advancement

EU27	2010		
	Agree	Neither agree nor disagree	Disagree
High-skilled clerical	46.2%	22.9%	30.9%
Low-skilled clerical	32.1%	24.4%	43.5%
High-skilled manual	24.9%	25.5%	49.6%
Low-skilled manual	17.6%	17.1%	65.4%
<b>Total</b>	<b>31.5%</b>	<b>22.9%</b>	<b>45.6%</b>

Source: Eurofound data base, 2013

### c. Affiliation

The culture of a workplace is an important contributing factor in people's personal and professional growth. Understanding and identifying with this culture is an essential condition for sharing the goals of an organisation. The educational potentials of work are determined by the meanings an individual finds within his own productive organisation. A certain kind of work can be considered "fully meaningful when it is done responsibly, not only due to the way it is carried out, but in relationship to the product and the consequences it generates; it opens us towards another often neglected dimension of organisational models: ethical and moral correctness in the workplace" (see *Box 22* from Morin, 2004:7).

#### **Box 22.** Characteristics of a job rich in meaning

Job characteristics	Definition
<b>Social significance</b>	Performing a job where social usefulness and the contribution it gives to society is evident
<b>Moral correctness</b>	Doing something that is morally justifiable in terms of processes and results
<b>Pleasure due to the results</b>	Feeling pleasure for one's own work, since it develops the worker's potential and helps achieve own goals
<b>Autonomy</b>	Be capable of using one's own capabilities and judgement in solving problems and in taking decisions regarding one's own work
<b>Recognition</b>	Do work that corresponds to one's own capabilities, the results of which are recognised and the salary is suitable
<b>Positive relationships</b>	Do work that allows having interesting contacts and positive relationships

Source: Morin, 2004

The results of the Fifth European Working Conditions Survey (*Box 23*) show that while "only a small proportion of workers suffer from the absence of a feeling of work well done or doing useful work, there are substantial differences between sectors. (...) Around 9% of workers report that their work 'always' or 'most of the time' involves carrying out tasks that conflict with their personal values. The variation between sectors is not large, but value conflicts appear to be most prevalent in construction and least prevalent in industry and education" (Eurofound, 2012:56).

#### **Box 23.** Your job involves tasks that are in conflict with your personal values

EU 27	Always or most of the time	Sometimes	Rarely or never
<b>High-skilled clerical</b>	9.1%	13.9%	77.0%
<b>Low-skilled clerical</b>	9.1%	12.1%	78.7%
<b>High-skilled manual</b>	10.0%	7.9%	82.1%
<b>Low-skilled manual</b>	8.6%	8.1%	83.3%
<b>Total</b>	9.2%	11.1%	79.7%

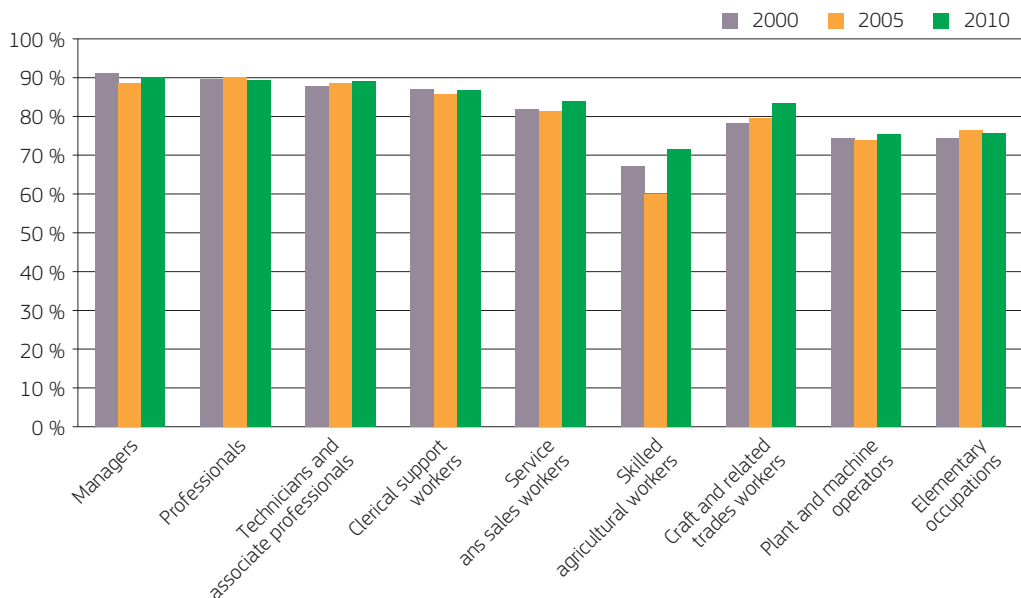
Source: Eurofound data base, 2013

#### d. Benefits

Work conditions, timing and rhythms (including the possibility of dedicating the necessary time to reflection on work and care of relationships), hygiene and health conditions (noise, physical risk, etc.) and respect for diversity (age, gender, physical and cultural characteristics) are all factors that determine the quality of the workplace as a learning environment.

The degree of satisfaction with respect to work conditions is significant as it is indicative of the suitability of the workplace as a space in which to learn (*Box 24*).

**Box 24.** Satisfaction with working conditions over time, by occupation, EU27 (%)



Source: Eurofound, 2012

The Fifth European Working Conditions Survey shows how “the differences in satisfaction with working conditions for different groups of workers are largely in line with the differences for intrinsic rewards and positive elements of the job. The same groups of workers who commonly report high levels of intrinsic rewards and positive job elements often also have high levels of satisfaction with working conditions” (Eurofound, 2012:86).

#### e. Employment contract

The type of employment contract is considered by research to be one of the fundamental instruments that influences and can foresee and regulate all or some of the factors considered above. It can provide an incentive for professional growth, linking salary improvements to the skills an individual can contribute to an organisation, or, on the other hand, link them to seniority. Furthermore, the relationship between types of employment contract and propensity for training is a subject for research. A widespread concern with the recent diffusion of flexible employment practices, such as temporary labour contracts, is that these contracts may be detrimental to economic performance because temporary workers are less likely to be trained (*Box 25*).



**Box 25.** Type of employment contract, by age group (%)

Age group	Indefinite contract	Fixed-term contract	Temporary agency contract	Apprenticeship or other training scheme	No contract	Other
Under 25	50	26	4	9	10	2
25–34	76	17	2	1	4	1
35–44	85	9	1	0*	4	1
45–54	87	7	0	0*	4	1
55+	85	8	1	0*	6	1
<b>Total</b>	<b>80</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>

\*Too small to be measured.

Source: Eurofound, 2012

As far as formal adult education – activity that leads to qualification – is concerned, the results of LLL2010 show the importance of employment contracts that allow workers to dedicate time to study (Box 26). According to LLL2010, “in almost all countries inactive persons have a much higher chance for participating in formal learning than regularly employed (either full- time or part-time) or unemployed persons. Among the unemployed this is only the case in the Wallonian part of Belgium, in Spain and in Finland. On the other hand, LM (*labour market*) status seems to make no significant difference to participation in Estonia, the Netherlands, Norway and the UK, meaning that unemployed or inactive persons have the same chance of participation in formal adult education as those with a regular job. Working part-time seems to be a supporting factor for participation of employed individuals in formal adult education in Austria, Germany, Denmark, Finland, Ireland and Sweden, meaning that part-time workers have a greater chance for participation in these countries than full-time workers. We conclude that ‘formal adult education’ and ‘labour market status’ are both interrelated and dynamic during the period of participation in formal adult education. Individual participants may combine work and study differently during the various periods of their programmes, but not completely at will” (LLL2010:113).

**Box 26.** Types of patterns of relationships between labour market activity, part-time work and participation in formal adult education

Effect of labour Pattern market activity				
Pattern type	Unemployed	Inactive	Part-time work	Associated countries
1	∅	∅	∅	Netherlands, Norway, UK-England, Wales & N.I., Estonia
2	∅	+	+	Austria, Germany, Denmark, Ireland
3	+	+	+	Finland, Sweden
4	∅	+	∅	Belgium-Flanders, Bulgaria, Cyprus, Czech Republic, Greece, Lithuania, Portugal, Slovakia, Slovenia, Scotland
5	+	+	∅	Belgium-Brussels/Wallonia, Spain

∅ no significant relationship; + significant positive relationship

Source: LLL2010 calculations based on AES 2007

The potential for learning in the workplace is the result of the ways in which the five factors are combined and the effects they have with respect to the various conditions.

### 3.3. Structuring the management of workplace learning potential

Each company has its more or less structured training system. Its effectiveness depends on the learning culture of its leaders

Increase in the supply of skills available to EU countries depends, in the main, on workplace training potential.

That is where “we spend (...) more than

thirty years of our lives” (Cedefop, 2011:17) and that is where general knowledge, wherever acquired, can be transformed into activities which contribute to economic growth and wellbeing. Structuring the management of workplace training potential means increasing the conscious intentional management of the training processes that generate learning, hence the fundamental knowledge for both organisations and individuals. This depends on the policies a company adopts with respect to the factors responsible for the growth of training potential, as discussed above. That is where the actions that favour self-directed learning come from: training through participation in productive processes rich in knowledge content, training through assimilation of knowledge already existing inside or outside the workplace. Structuring the management of these processes requires much more from companies than the creation of academies, company universities or training centres.

The Continuing Vocational Training Survey (CVTS) provides valuable information on training policies, processes and infrastructures in enterprises. The survey covers key components of training agendas in enterprises (e.g. training plan, specific budget, assessment of skills needs), organisation (e.g. the existence of a training department or team, collective agreements covering training issues) and quality approaches (e.g. evaluation of training provided). The results of the CVTS tell us that in 2005 (and also in 2010) a significant proportion of companies in EU countries had some form of organisation for managing a few types of training process.

The existence and functioning of a system for growing a company’s training potential rests mainly on the capability of leaders to develop their colleagues. The boss is a coach responsible for the learning potential of a workplace, where he performs – or should perform – continuous mentoring functions. “The fifth EWCS taps into different aspects of leadership behaviour. The findings are generally positive:

- 95% of employees affirm that their immediate manager respects them as a person;
- over 80% say that their manager provides help and support, is good at resolving conflicts, and in planning and organising the work;
- 78% of workers report receiving feedback. However, less than 70% report being encouraged to take part in important decisions.

The importance of leadership for the well-being of workers is demonstrated by the finding that employees who evaluate their manager positively are almost twice as likely to report being satisfied with their working conditions as those who evaluate their boss negatively” (Eurofound, 2012:56).

There are two challenges. The first concerns the development of managers’ capability to drive the on-going knowledge production processes of their colleagues (Box 27). The initial training given them by public and private universities should develop this type of skill, essential in exercising leadership.

**Box 27.** Your manager helps and supports you

EU27	2010		
	Always or most of the time	Sometimes	Rarely or never
High-skilled clerical	66.3%	20.7%	13.0%
Low-skilled clerical	61.4%	21.9%	16.6%
High-skilled manual	58.5%	21.2%	20.3%
Low-skilled manual	49.7%	22.5%	27.8%
<b>Total</b>	<b>59.7%</b>	<b>21.7%</b>	<b>18.6%</b>

Source: Eurofond data base, 2013

The results of the Fifth European Working Conditions Survey show that most EU workers have supportive managers. Nevertheless, one wonders how much better the results of the economic system could be if performance were improved among the leaders who manage the professional and personal growth processes of colleagues.

The second challenge concerns the trainers companies entrust with managing “compensatory” training, to fill the knowledge and skills gap. According to CVTS3, between 50% and 60% of companies doing training of this sort use the services of external trainers, meaning they make use of an external advisory service. In addition, 14% of companies undertaking training employ people under specific categories or with specific contract types to provide specific courses for them. The European Commission’s communication on ‘a new impetus for European cooperation in vocational education and training’ suggests that trainers need to further develop their pedagogical competences (European Commission, 2010b). And Cedefop underlines how “in most countries, trainers of adults are not required to hold a particular training qualification, but need to be skilled workers with a certain period of work experience” (Cedefop, 2011:81).

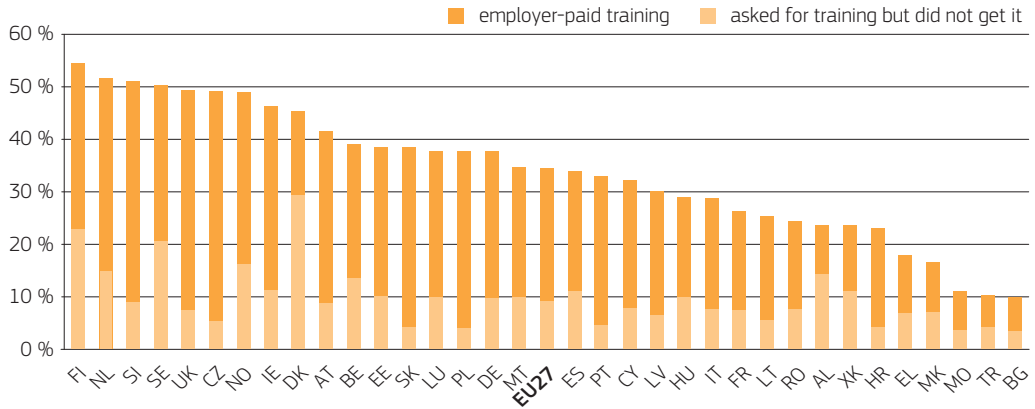
### 3.4. Imbalances among companies

Workplace learning is a resource for professional and personal growth but there are consistent imbalances in provision among companies in different countries, as well as in different production and employment sectors. The imbalances concern companies’ capability to offer training opportunities and the level of workplace learning potential.

The more outstanding imbalances are those among industries of different countries (Box 28). No matter what indicator is

used, it is common for the best performers to achieve levels five times greater than the worst. For example, more than half of employees in Finland, the Netherlands, Slovenia and Sweden undertook training in the previous 12 months, compared to fewer than one in five in Bulgaria, Greece, Montenegro, Turkey and the former Yugoslav Republic of Macedonia. In countries where a greater proportion of employees had received training in the previous 12 months, it was often also the case that more employees had asked for training but had not received it (Eurofound, 2012:104). This shows how differences accumulate and how the lack of a training offer also produces a weak demand.

**The learning potential of a workplace is influenced by organisational factors and by economic sector. Under equal conditions, what makes the difference is the country and region in which the company operates. This underlines the role of past and present public policies.**

**Box 28.** Employer-paid training requested and provided, by country (%)

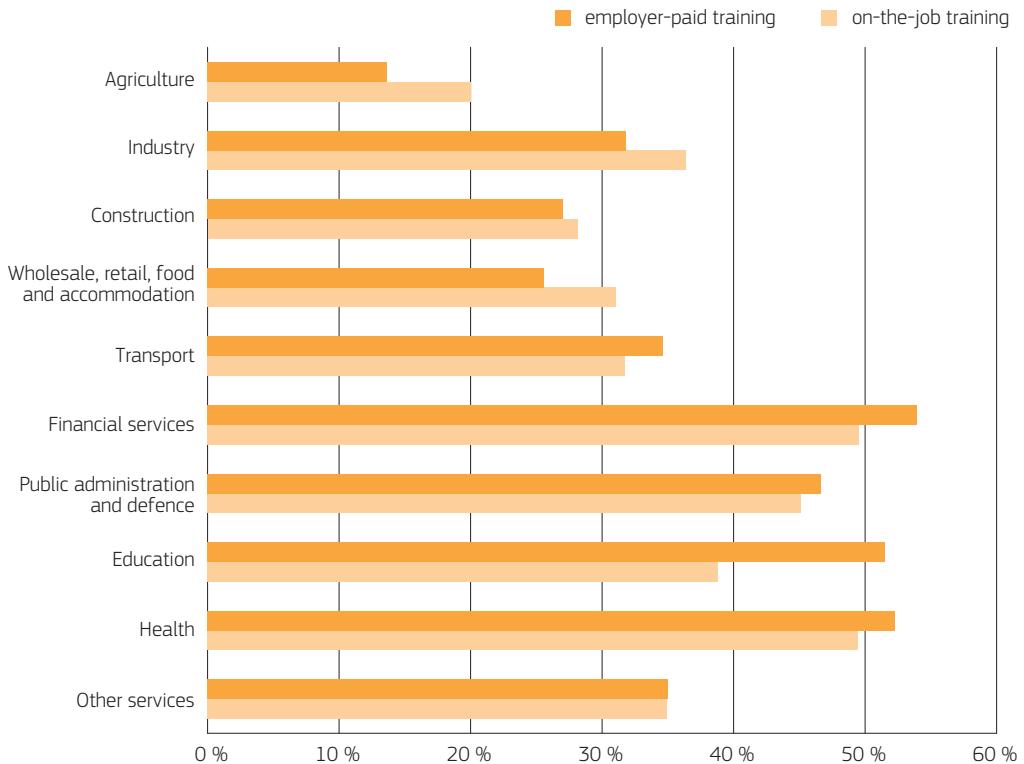
Source: Eurofound 2012

“Even when controlling for observable individual characteristics, country effects account for almost 1/2 of the explained variation in training participation. In fact, differences associated with country of residence remain, *ceteris paribus*, larger than differences associated with industry, occupation, education, age and firm size. Other factors, thus, concur in explaining the difference across countries” (Bassanini, 2005:77-78).

A further reason for the imbalance concerns companies’ learning potential. We have seen how the level of training offered by companies varies according to their economic sector (Box 29). “Employer-paid and on-the-job training are most common for employees working in the health, education, public administration and defence, and financial services sectors. These sectors are also the ones with the biggest proportions of workers (15%–20%) reporting that they need further training to cope well with the duties their job entails. The EWCS training indicators on employer-paid training and on-the-job training are associated with each other, meaning that an employee who participates in one will probably also receive the other” (Eurofound, 2012:103).

The relevance of company size to employers’ training capability must also be borne in mind. “Large firms train more than small ones. This is not surprising for several reasons: i) the collection of information, the definition of a training plan and the establishment of a training facility involve fixed costs and scale economies; ii) small firms might find more difficult to replace a worker who temporarily leaves for training; and iii) small firms might have fewer opportunities to fully reap the benefits of training through internal reallocation of workers. (...) large firms are relatively similar across countries as regards training, and the difference in training rates across countries is mostly due to the behaviour of small firms as well as to the distribution of firm size within countries”. (Bassanini *et al*, 2005:65-66).

Acknowledging the differences, we must understand to what extent the distances between economic sectors depend on the different need for investment in knowledge. Not all companies have the same level of training demand. It is a matter of understanding what, given the sector and size of a company, is the best level of investment. It would be useful then to know and evaluate the differences between companies in the same sector. This would allow us to see any imbalances due to factors of another nature – factors which could, potentially, be obviated by training policies.

**Box 29.** Participation in employer-paid training and on-the-job training, by sector, EU27 (%)

Source: Eurofound, 2012

### 3.5. Imbalances among workers

Imbalances among companies inevitably affect workers who, depending on the employment sector, will have varying opportunities for professional growth.

Each job has its potential, determined by the processes a person is involved in and by the times that can be dedicated to reflection and decision-taking. Differences between workers are important and are particularly unfavourable for the low skilled.

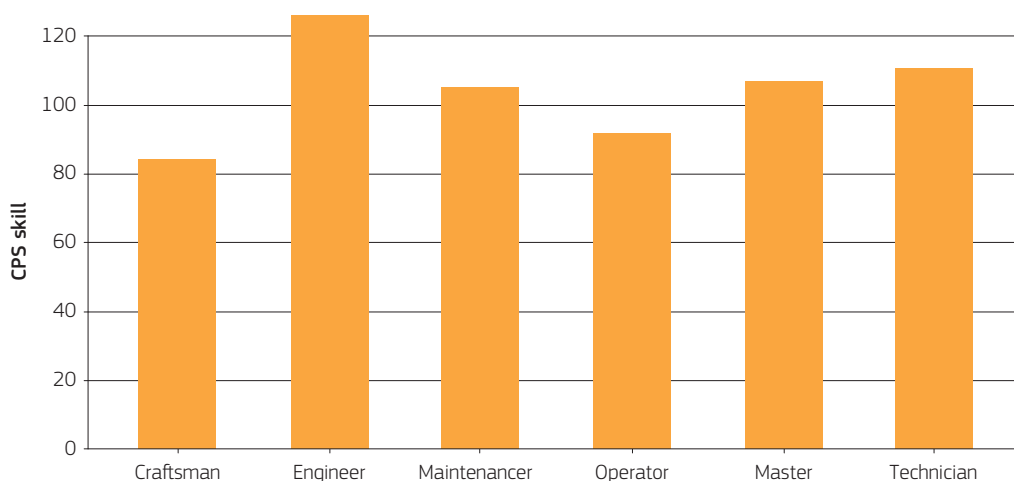
Imbalances among workers are linked to the type of work carried out and to the potential for training associated with that role, in addition to or in contrast with what is generally present in the workplace.

The learning potential of various jobs can be classified according to the time a worker can devote to reflect, the mode of cognition he/she is able to use and the types of processes he/she is involved in. Every job can combine various types of these modes of learning. Yet only the types of work that offer meta-cognitive opportunities for engagement and reflective types of cognition provide the most favourable growth conditions (Eraut *et al.*, 2007:20).

**Box 30.** Interactions between time, mode of cognition and type of process

Type of Process	Mode of Cognition		
	Instant/Reflex	Rapid/Intuitive	Deliberative/Analytic
Assessment of the situation	Pattern recognition	Rapid interpretation Communication on the spot	Prolonged diagnosis Review, discussion and analysis
Decision making	Instant response	Recognition primed or intuitive	Deliberative analysis or discussion
Overt actions	Routinised actions	Routines punctuated by rapid decisions	Planned actions with periodic progress reviews
Metacognitive engagement	Situational awareness	Implicit monitoring Short, reactive Reflections	Monitoring of thought and activity, reflective learning Group evaluation

Research on the distribution of *complex problem-solving skills (CPS)* confirms that those skills are directly related to the type of occupation a person has and, thus, **different occupations are associated with different learning opportunities** (Box 31: LLLIGHT, 2013).

**Box 31.** Complex problem solving by occupation at a large automotive company

*The complex problem solving is a measure of the capacity to effectively solve problems in dynamic environments', where some of the environments' regularities can only be revealed by successful exploration and integration of the information gained in that process (Fischer, Greiff and Funke 2012, Funke 2009, Greiff 2012)*

Source: LLLIGHT, 2013

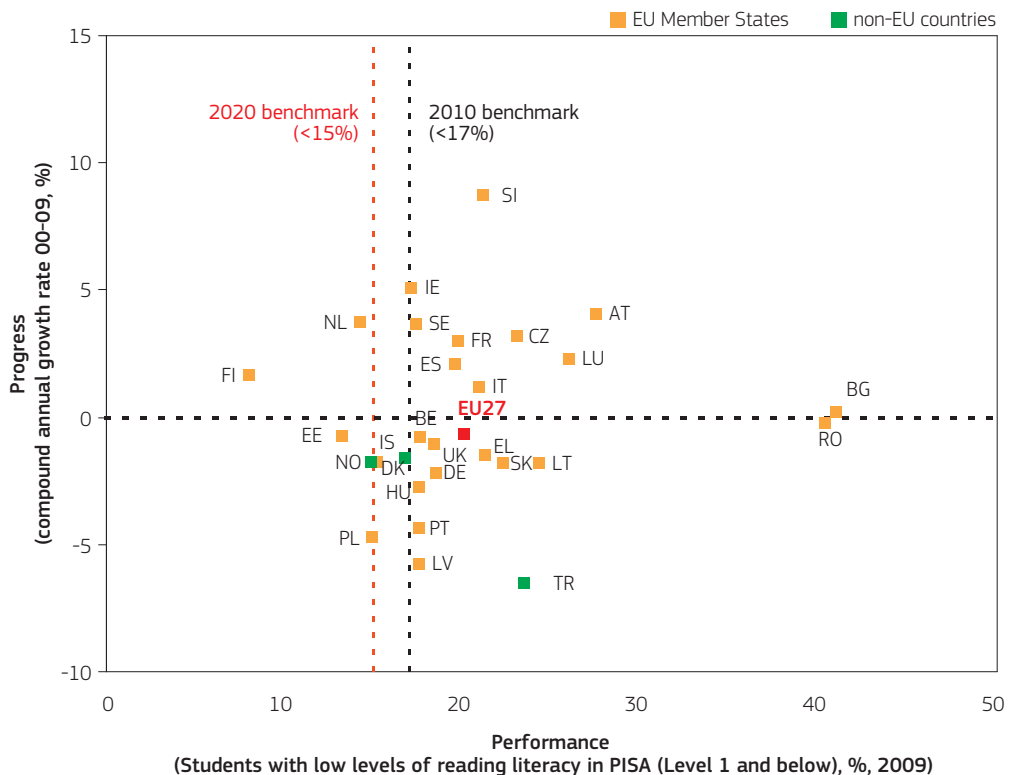
For public policies on adult and continuing education, the task is to identify those inequalities that can be addressed with educational interventions inspired by principles of equity.

The imbalances that derive from the characteristics of workplaces or that are a consequence of an inequitable distribution of opportunities accumulated during a lifetime are more difficult to remove with training. It isn't impossible but it requires **highly personalised interventions**,

which can prove costly. In addition, such interventions are limited in impact, affecting approximately 2% of low skilled people aged between 25 and 65 (Beblavy *et al.*, 2012:29). Therefore, **the impact is less significant than the annual increase in the number of young people who become adults without an adequate level of literacy skills** (PISA 2009 data show that 17.7% of 15-year-olds are low achievers in reading).

On the other hand, as the data in the preceding tables (*Boxes 21, 22, 24, 27 and 28*) show, **low-skilled workers and manual workers generally tend to get fewer benefits from structured training** and from each of the factors that determine workplace training potential. For public policy, the challenge is twofold. It is a matter of reinforcing the possibilities of acquiring new qualifications as an adult and, at the same time, reducing the number of low-skilled young people. Education and training are complementary, learning begets learning. The PISA 2009 data are unequivocal (*Box 32*). The countries with the highest number of high-performing 15-year-olds are also those with higher workplace training performance.

### Box 32. Low performers in reading literacy 2000-2009

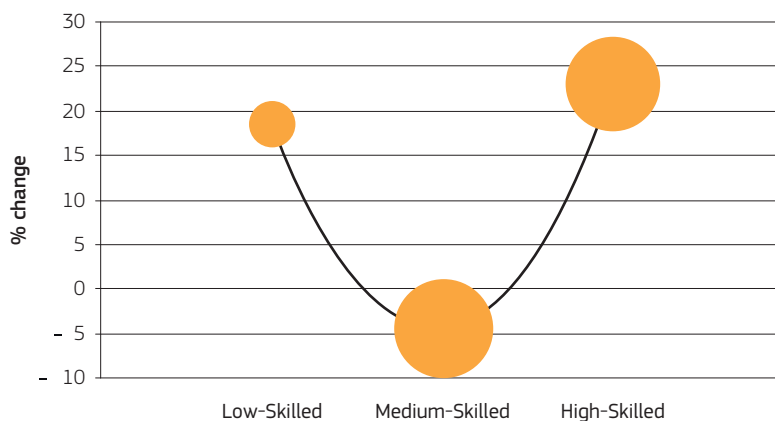


Source: European Commission (2011b), based on OECD and PISA data. Countries in the lower left quadrant have above EU benchmark level performance (low share of low achievers) and have been successful in reducing this share further in the past, while countries in the upper right quadrant have below EU benchmark performance and have not been successful in reducing this share in the past.

In addition, the effects of skills demand expressed by the labour market must be taken into consideration since, even where demand does not direct the behaviour of people, it nevertheless has the power to predict the skills that will be cultivated in work and those that will become obsolete due to lack of use (*Box 33*). Analysing the past decade, “what we would

normally expect is that demand for workers rises as the skill content of these occupations increases in a linear fashion. The picture is instead U-shaped, as predicted by job polarisation, and it is the result of an approximately 20% increase in the demand for low-skilled and high-profile occupations between 2000 and 2010 and a 4.5% decrease in the demand for middle-skilled occupations” (Maselli, 2012:23).

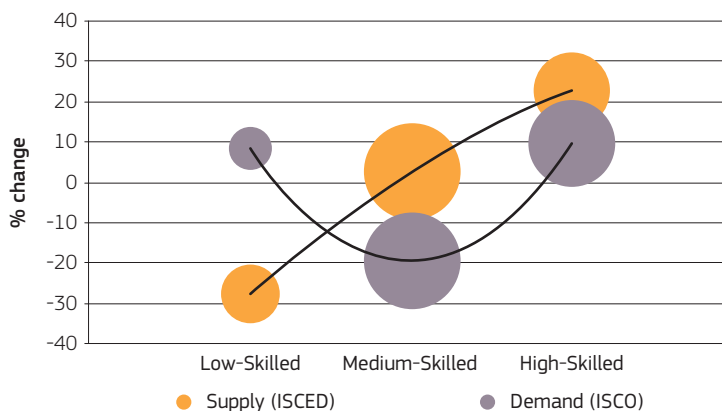
### Box 33. Job Polarisation in EU27, 2000-2010



Source: NeuJob elaboration of Eurostat – Labour Force Survey data

This situation can lead to a mismatch between the skills offer and demands of the workplace (Box 34). “There is a trend towards polarisation on the labour demand side with respect to occupations in most European countries, whereas on the supply side, the trend is towards a linear upskilling of the population. Depending on the speed of these changes and on the skill content of current demand and supply, there is a risk that in some countries a skill mismatch problem will arise. More specifically, there is a risk of vertical mismatch, meaning that there is no correspondence between the formal qualification demanded by a certain job and the qualification of the worker. (...) The vertical mismatch can be of two types: over-qualification or unfilled demand” (Maselli, 2012:26).

### Box 34. Demand and Supply of Work with Respect to Skills/Tasks in the EU27, 2010-2020



Source: Maselli, NeuJobs elaboration of Eurostat – Labour Force Survey data



This situation could result in three types of dynamic:

- a. The low-skilled demand justifies maintaining part of the population in such educational conditions, increasing if necessary the development of a non-cognitive type of skills requested by some service industry roles. Only in a few countries, such as Italy, Greece and Denmark, are there too many low-skilled workers with respect to future requests from the labour market;
- b. The under-employment and, hence, likely dispersion of medium-skilled workers, or that part of them whose skills are not upgraded. “This category risks losing the most from the future potential equilibrium, especially in Germany, Austria, Hungary, Slovakia, Slovenia, the UK and the Baltic states” (Maselli, 2012:30)
- c. The substantial maintenance of the current level of high-skilled workers.

### 3.6. The role of companies in worker upskilling

The role of companies in developing skills and, in particular, qualifications of workers, goes beyond the offer of a workplace rich in learning potential. The

LLL2010 survey identified, for example, particular actions that companies can undertake to support participation in formal adult education. These measures “can be classified into two categories:

**Public policies can have contradictory effects. They must intervene only when the role of public institutions cannot be substituted.**

1. **Supporting individual participation decisions:** here the company is not the ‘first mover’, but provides support for the participant in the form of motivation, career incentives, or even through the direct or indirect provision of time or monetary resources.
2. **Initiation by the enterprise itself:** if the company acts pro active, all the measures used to support individual participants may be supplemented by more institutionalised, company-wide measures geared towards supporting individuals or even whole groups of employees, ranging from e.g. career agreements over project specific participation plans for entire groups of employees to the establishment of formal programmes on a permanent basis” (LLL2010: 169).

We must also acknowledge the role that companies can play in supporting low-skilled workers through “the approach centred on embedded learning, which aims to build learning pathways both structured and incidental, while at work (...). In its method of developing specific competences (fine tuning), this approach consists of organising activities carried out in the workplace or elsewhere, in order to accelerate the learning of the interested adult. The most significant element is that this approach tends to bring into central focus what is going to be learnt in the workplace (...) in an informal way. It is therefore a model in which the education and training potential present in a specific social or professional activity (the manufacturing of yogurt, the production of animal feed) is used for the personal and professional development of low skilled adults. It is an approach which, for those with a low level of education, is carried out through close cooperation between government, company and other agencies, including one which also provides certification and professional qualifications” (Federighi *et al.*, for DGEAC: 10-11).

Nevertheless, there are limits to the effectiveness of learning policies in the workplace. Learning can have an impact on only some elements of human potential (*Box 35: LLLIGHT, 2013*).

**Box 35.** Human capital development potential

Element of human capital	Definition	Source	Potential to change	Potential to dissociate
<b>Cognitive ability</b>	Genetic/neural structures predefining effectiveness of learning	Innate	Fixed	Non transferable
<b>Motivation</b>	Psychological feature predefining willingness to learn	Innate	Quasi-fixed	Non transferable
<b>Personality</b>	Psychological feature predefining propensity to developing certain skills	Innate	Quasi-fixed	Non transferable
<b>Knowledge</b>	Theoretical principle-based schematic structures containing factual information or conceptual frameworks about processes, procedures and relationships	Acquired	Changeable/learnable	Transferable
<b>Skills</b>	An ability and capacity acquired through deliberate and sustained effort to use acquired knowledge in practice for carrying out activities or job functions	Acquired	Changeable/trainable	Transferable

Source: *Tamilina, 2012*

Cognitive ability, motivation, personality are elements of human capital difficult to change and to transfer through education and training.

### 3.7. The role of public policies

Public policies for adult and continuing education can positively influence the factors which are the basis of workplace learning potential (from labour contracts to career development, work conditions, supporting innovation and access to out-of-the-job training). However, it is still a problematic field of intervention. “Public policies on adult learning and company training actions may serve contradictory goals” (Cedefop, 2011:9).

Public policies do not always have a positive impact on equity in the growth of skills supply. The challenge is twofold. First, “training is not a very good redistributive instrument since its returns to disadvantaged workers are not particularly high. Second, firms are concerned with profitability and may pay little attention to the need of compensating disadvantaged individuals, even in the presence of subsidies” (Bassanini *et al.*, 2005:146).

Research on the impact of public policies remains rare and, where it is conducted, is more often directed at describing goals or investments rather than the effects they produce. Evaluations, though partial, show the shortcomings of all the measures adopted up to today, including more recent ones belonging to the model of the “government sponsored co-financed schemes”, offering financial support to individuals and firms (levy/grant schemes, train or pay and tax deduction systems for firms or subsidies, vouchers, individual learning accounts, grants from specific funds, etc. for individuals).

These financial measures have little impact on the more significant aspects of workplace learning processes. Indeed, such policies can have negative consequences, encouraging companies in need of financing to increase investments in more standardised and less effective forms of training (the ones usually financed by public policies).

The shortage of research on the impact of public policies for workplace training makes any conclusion problematic. In view of the data and trends examined, we can say that in order to avoid unexpected effects, public policies should avoid standardised interventions and intervene on specific emergencies in their own specific productive sectors. The aim should be **to concentrate resources on the training needs relevant to companies and individuals, in those cases where, without public intervention, there would be no action.**





# 4.

Management  
of training  
processes  
that generate  
innovation

## 4.1. Innovation is the result of internal learning processes

Innovation is, first of all, the result of processes of knowledge production inside workplaces. Workplace learning increases the workers' ability to innovate. That is what generates innovation and makes its external absorption possible.

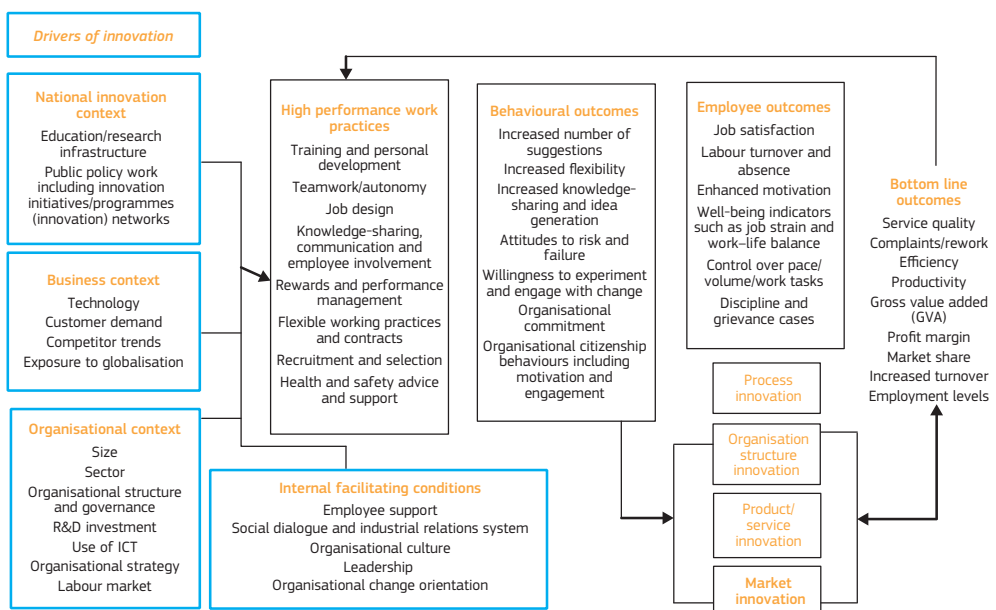
customers, competitors, and providers and of processes of knowledge creation developed within organisations. The learning potential of the places in which we live and work is what allows individuals and groups to participate in learning action that favours the production of new knowledge.

Nevertheless, not all types of training carry the same weight with regard to innovation. The greatest impact derives from learning that makes pre-existing knowledge obsolete, thus creating a competitive advantage for the organisations that have the new knowledge.

Such learning is not characterised by the transmission of knowledge that is already encoded, but by creating new knowledge through professional work. This is possible within high-performance workplaces where there are various "drivers of innovation" (Box 36). Through learning-focused management of networking policies, relationships with customers and suppliers, rewarding and defining job descriptions and their knowledge contents, and so on, it is possible to increase the ability of individuals to innovate.

Innovation-orientated learning actions – that have a direct impact on the growth of capacities of organisations and individuals to be innovative – are the primary object of public and private policies for adult and continuing education in supporting innovation.

### Box 36. Drivers of innovation



Source: Eurofound, 2012b:14

**The potential to create innovation through the workplace depends, in the first place, on the content of productive work carried out by the firm (Box 37).** Research distinguishes between organisations according to their type:

- a) Lead innovators (*strategic and intermittent*): for these firms, creative in-house innovative activities form an important part of company strategy. All firms have introduced at least one product or process innovation, developed, at least partly, in-house, perform R&D at least on an occasional basis and have introduced a new-to-market innovation. These firms are also likely sources of innovations later adopted or imitated by other firms;
- b) Technology modifiers: these firms primarily innovate by modifying technology developed by other firms or institutions. None of them performs R&D on either an occasional or continuous basis. Many firms that are essentially process innovators, innovating through in-house production engineering, fall within this group;
- c) Technology adopters: these firms do not develop innovations in-house, with all innovations acquired from external sources. An example is the purchase of new production machinery (...);
- d) Non-innovators (OECD, 2010:51-58).

**Box 37.** A Typology of Innovation Modes for EU Member Nations

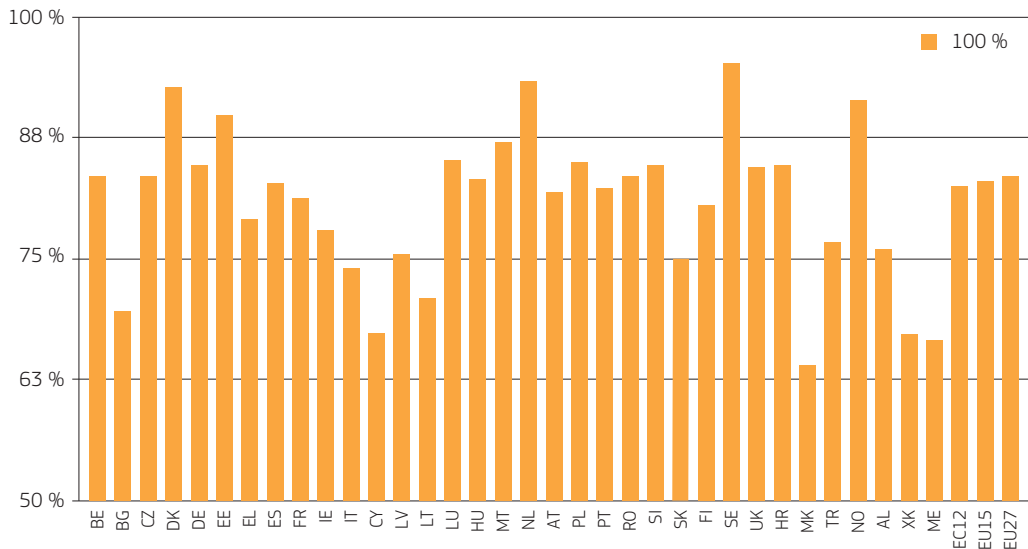
	Percentage of all firms by country in each innovation mode					Total
	Strategic	Intermittent	Technology modifiers	Technology adopters	Non - innovators	
Belgium	7	13	16	14	50	100
Denmark	5	14	11	14	56	100
Germany	10	15	25	11	39	100
Greece	4	9	5	10	72	100
Italy	6	12	15	4	64	100
Spain	2	6	5	19	67	100
France	8	12	10	11	59	100
Luxembourg	7	17	20	4	52	100
Netherlands	8	14	16	8	55	100
Portugal	3	15	16	13	54	100
UK	4	7	5	16	68	100
Finland	13	19	10	3	55	100
Sweden	11	14	14	8	53	100
Austria	8	12	20	9	51	100

Note: "strategic" and "intermittent" modes are internal distinctions of the lead innovator category Arundel et al 2007:19

In all countries, with the exception of Germany, more than half of all firms fall within the category of "non-innovators". This means that people employed in these firms have little opportunity to develop their innovative ability. This does not mean workers do *no* work with innovative

content. In fact, wherever you look in Europe, the percentage of employees whose professional work involves them in resolving unexpected problems is greater than 63% (Box 38). However, it must be acknowledged that in the organisations where the models are more favourable to developing innovative processes, access “to the organisation’s critical resources and knowledge ... sets the basis of a (...) contract between the employer and the employees” (OECD, 2012:12).

**Box 38.** Does your work involve solving unforeseen problems on your own?



Source of Data: Eurofound, 2013

Access to the possibility of producing what has not been thought of before is itself subject to distributive rules adopted by the organisation and to the intensity with which they are promoted. It depends on the organisational model and practices, which, in general, determine an organisation’s learning potential. In Box 37 we show the organisational work that, using people management, creates work contexts favourable to innovation. Each of the actions considered by the survey, and by other research (OECD, Eurofound, Cedefop), is important in order to support and develop individuals’ ability to innovate.

## 4.2. Organisational models that favour innovation ability and innovation-orientated training

Innovation ability develops in companies that adopt organisational models which encourage forms of innovation-orientated training. This is made possible by reinforcing networks of dynamic learning, inside and outside the company.

Organisational models that favour growth in the ability to innovate stand out from the others because they adopt a learning model (called “discretionary”) in which the expertise of individual professionals is characterised by

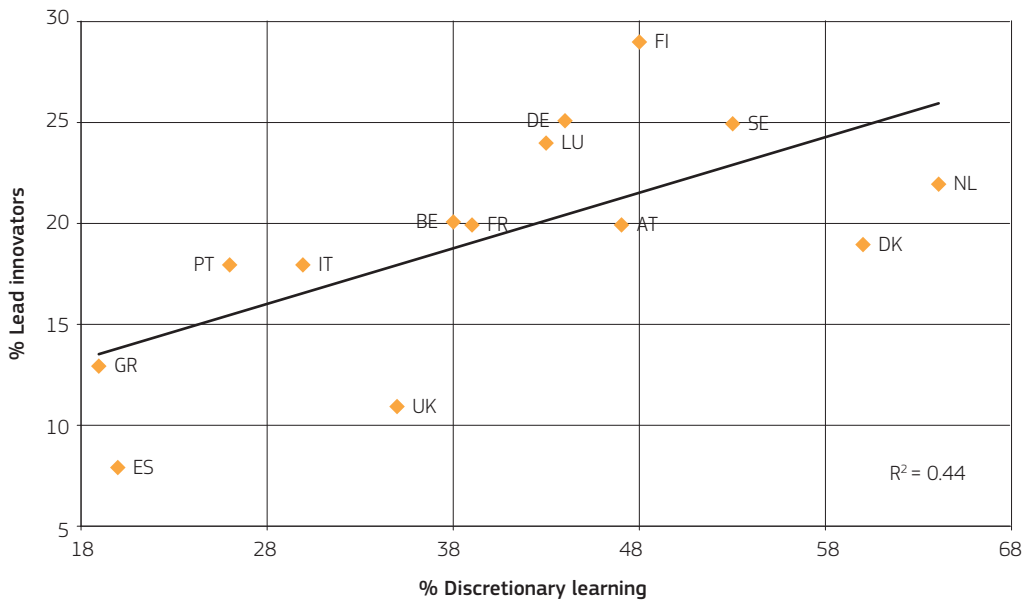
high levels of autonomy at work, learning and problem solving, task complexity, self-assessment of quality of work and, to a lesser extent, autonomous teamwork (OECD, 2010; Cedefop, 2012).



This type of organisation – more than any other model (such as lean production, Taylorist or “traditional”) – is capable of increasing the number of “lead innovators” (Box 39).

Adult and continuing education policies which support innovation will favour the implementation of discretionary learning models.

**Box 39.** Relation between discretionary learning and percentage of lead innovators



Source: OECD, 2010:53

If we consider the educational factors that encourage the presence of discretionary learning organisations we find “there is a slight correlation between tertiary educational attainment and the discretionary learning type of work organisation, but, interestingly, the correlation between the proportion of enterprises providing CVT for their employees and the discretionary learning type of work organisation is stronger. (...) It cannot be argued that tertiary education does not play a crucial role in developing more learning-intensive work organisations and innovative capacity; however, given the differences between the indicators of CVT provision and tertiary education, the bottleneck seems to be not at the level of tertiary education but at the level of firm-specific CVT” (Cedefop, 2012:38).

One of the factors most correlated with the presence of discretionary learning organisations is firm investment in vocational training (the percentage of firms that offer vocational training and the percentage of participants in vocational training as a proportion of employees in all enterprises).

**Training with a direct impact on innovation does not have the characteristics of either formal or informal education, but is mainly based on participation in activity which produces innovation.** Analyses of training methods that have a more direct correlation with innovation suggest that neither internal nor external training is as significant a factor as participatory, on-the-job training. Results (Box 40) demonstrate that “the reason why ‘any other forms of training’ correlates most strongly with the innovation index might be explained

by the fact that it includes, to a large extent, learning at the workplace and is, therefore, more firm-specific” (Cedefop, 2012:42).

**Box 40.** Summary innovation index 2006 and type of training and innovation index 2005 (CVTS3)

	INTERNAL CVT 2005	EXTERNAL CVT 2005	ANY OTHER FORMS OF TRAINING 2005
CORRELATION BETWEEN TYPE OF TRAINING AND INNOVATION INDEX	0.49	0.28	0.68

Source: MERIT, 2006; Eurostat, 2006. Quoted in Cedefop, 2012

Innovation has the characteristic of being the product of participatory processes. “Participatory innovation is placed in opposition to traditional technocratic views of innovation as being driven by experts, often located in R&D departments and can be included in the category of ‘non-R&D innovation’.” (Eurofound, 2012:27).

Training through participation in newly known production processes is achieved only because there exist jobs with high learning potential. This implies that **embedded learning is the type most likely to generate innovation.**

Embedded learning consists in incorporating learning into work specially constructed to encourage the development of people through work and to accelerate the achievement of levels of excellence in their respective job positions. It is aimed at individuals as well as groups, in moments that are distinct from work activities, though closely intertwined.

Embedded learning which leads to innovation takes the form of actions which support the specific cognitive processes already present in work activity, in the various phases of creating solutions, process management, evaluation of results and personal development, transfer of acquired knowledge to collaborators, and the further growth of personal skills through, for example, joining new teams.

Research considering embedded learning, for the purposes of developing innovation ability, attributes particular importance to two types of training: dynamic learning networks and error management work.

Research on learning actions associated with dynamic learning networks attaches importance to the role of firm-specific devices (even shared by several organisations) that support the construction of learning partnerships for innovation. Research has examined various correlated activities. The most studied among these are the various forms of knowledge-brokering, internal and external to firms. Internal brokering expands in proportion to firm size: the larger the firm the greater the need to achieve, internally, opportunities for mutual learning and cross-fertilisation to support innovation (Hoegel *et al.*, 2001). External brokering concerns, first of all, training that accompanies the research and construction of forms of cooperative learning aimed at feeding the innovation processes of the cooperating organisations.

Research on training concerned with error management is, as one might expect, the most developed due to the function that error correction and prevention can have with respect to

innovation of either product or process (OECD, 2010). Its first fields of application were the sectors of airspace production, justice and health.

Error management has a crucial role in the acquisition and differentiation of professional knowledge (Bauer, 2008; Ericsson, 2006). Research has consistently considered the factors useful in assessing the reliability of a system, evaluating potential damage generated by an error, analysing its cause and the possibilities for prevention (Glendon, Clarke, McKenna, 2006). It was here that research in matters of 'workplace learning' began producing important contributions for identifying types of learning devices and training activities that manage errors, as an important source of professional learning and innovation (Bauer, 2008; Cseh, Watkins and Marsick, 2000; Ericsson, 2006). Applied research shows how training actions are developed in organisational contexts with strongly structured training policies and with the capability to manage the plurality of types of training actions that usually accompany the use of errors as a source of learning and innovation.

### 4.3. National and regional policies concur with context quality

The challenge for adult and continuing education policy is to concentrate interventions in a way that encourages the spread of lead innovators and discretionary learning organisations. This can only happen as the result of manifold policies – from those concerned with labour force development to those focused on infrastructures and finance. Nevertheless, policies for training in support of innovation must receive specific attention to ensure they are not exclusively concerned with the offer of skills, guaranteed or with standard policies for formal training.

Comparative analysis (*Box 40*) shows how there is a close relationship between countries in which there exist discretionary learning organisations and the presence of lead innovators. "The four less technological developed southern nations are characterised by both low levels of enterprise continuing vocational training and low use of discretionary learning, while the more developed northern and central European nations are characterised by relatively high levels of enterprise training and by high level use of the discretionary learning forms" (OECD, 2012:65).

This means that in countries where the presence of discretionary learning organisations is under-developed, interventions centred on innovation transfer are not very effective (investments in R&D, territorial innovation systems, increase in the number of graduates). What is missing is a capability by potential beneficiaries to absorb these interventions. To be meaningful, these **policies must be accompanied by measures that develop both the learning culture and the ability to innovate within organisations.**





# 5.

Markets and systems of adult and continuing vocational and training: the governance challenge

## 5.1. The weight of adult and continuing education in markets

It is necessary to make local, national and European training markets more dynamic and accessible. They are indispensable in increasing the skills supply in Europe

Adult and continuing education has important market weight. Understanding and monitoring the progress of the training industry is a precondition of effective governance of the assets that contribute

to the growth of a country's skills supply. Some EU countries have placed the matter high on the policy agenda. The Social and Economic Council of the Netherlands, for example, accepts that the post-initial training market will become increasingly important, convinced that, in the Netherlands, "the training market for working people must become more dynamic" (*Advies* 2012/02).

Understanding the adult and continuing education market across the piece still poses methodological difficulties that are, as yet, unresolved by research. Nevertheless, the demand of economic actors has prompted several companies specialising in market studies (Key Note, Report Linker, Outsell and others) to construct overviews of the market. Training Industry's Doug Harward states that: "the global market for training expenditures in 2011 was about \$287 billion. We expect the market to grow to about \$292 billion in 2012. We believe North America represents about 45% of the global market (\$130.5 billion) and Europe to be about 29%, or \$82.7 billion of the global market. Asia comes in at \$28.1 billion (10%), India \$20.7 billion (7%), Australia \$8.7 billion (3%), South America \$6.3 billion (2%), Africa \$3.5 billion (1%), and the rest of the world \$6.3 billion (2%). Approximately 75% of the global spend for training is in North America and Europe. Asia and India, the two most populated regions in the world, combined make up about 17% of the global market" (Harward, 2012; on the same matter see also Silber *et al.*, 2012).

Data regarding individual European countries do not lend themselves to comparison, but it is evident that they tend towards greater volumes than those estimated. For example, a study carried out nationally by the Social and Economic Council of the Netherlands (Rosenboom, Tieben, 2012) shows that in the post-initial training market there are about 19,000 training agencies at work (*Box 41*). Of these, about 13,000 are freelancers. Furthermore, researchers estimate, their turnover for 2010 is €3.2 billion.

### Box 41. The Dutch post-initial training turnover: €3.2 billion

Omzet per personeelsleden categorie	< 200.000 euro	200.000 - 500.000 euro	500.000 - 1.000.000 euro	1 miljoen - 5 miljoen euro	5 miljoen - 10 miljoen euro	10 miljoen - 20 miljoen euro	20 miljoen - 50 miljoen euro	> 50 miljoen euro	Aantal resp.	Totale omzet per personcat	Omzet per bedrijf	Populatie	Aantal bedrijven * omzet per bedrijf
ZZP-ers	127	11	3	1	0	0	0	0	142	9.595.526	67.574	15.137	1.022.867.638
2 tot 10	35	8	4	2	0	0	0	0	49	7.555.975	154.204	3.125	481.887.500
10 tot 50	3	2	2	1	2	0	0	0	10	12.567.655	1.256.766	480	603.247.680
Meer dan 50	0	0	1	1	0	1	1	0	4	31.500.000	7.875.000	136	1.071.000.000
<b>Totaal</b>	<b>165</b>	<b>21</b>	<b>10</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>205</b>	<b>61.219.156</b>	<b>298.630</b>	<b>18.878</b>	<b>3.179.002.818</b>

Note: Companies in the range of 50-100 employees, from 100 to 500 and over 500 employees are included in the over-50 category

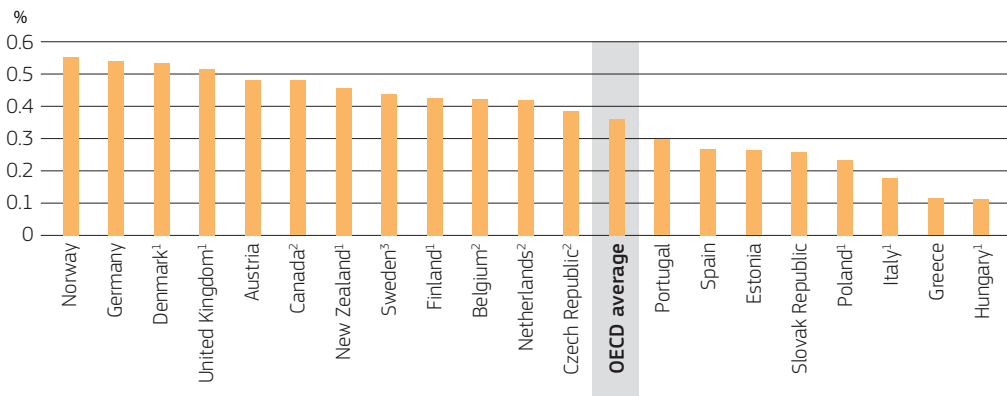
Source: Rosenboom, Tieben, 2012:10

As far as the UK is concerned, Key Note (2012) argues that training "is one of the largest and most influential industries in the country. It is one of the sectors that truly drives the economy and over the past few years it has mirrored the expansion and contraction of the UK economy. (...) After two years of continuous decline in the market value of off-the-job training, a slight increase was observed in 2010/2011, with value rising to £19.5 billion; although this is still considerably less than the £21 billion reported in 2007/2008, before the recession took a hold of the UK economy.

It should be noted, however, that training in the public sector has seen some significant cut backs in recent years and this is expected to continue in the near future” (Key Note, 2012).

The data provided refer to the monetary mass moved by adult and continuing education (estimated through different methods). Nevertheless, to identify the volume of investments by companies and people, indirect and opportunity costs should also be considered. The former are little documented. Labour costs, for example – for employer-sponsored non-formal education only (Box 42) – represent 0.4% of GDP in those OECD countries for which information is available (OECD, 2012:408).

**Box 42.** Annual labour costs of employer-sponsored non-formal education as a percentage of GDP (2007) Employed 25-64 year-olds



Source: OECD, 2012

One characteristic of the adult and continuing education market is that it is strongly fragmented – made up of markets of various sizes and functional capabilities. The major problem for public policy comes from the presence of “thin markets”, articulations in which the actual and potential number of learners may be too small to attract training providers (Box 43). “They are recognised as occurring in occupational, industry and geographic areas, alone or in combination (...). The atomisation of training as demand grows for smaller and more specific skill sets also contributes to thin markets.” (Ferrier, F., *et al.*, 2008:8).

**Box 43.** Type of thin markets

- ▶ *Thin markets for training in occupational areas:* these occur where there are few people seeking training for a particular occupation and can include both traditional occupations that have declined (such as blacksmithing), as well as some new or emerging occupations for which demand for training is currently low but may grow in the future.
- ▶ *Thin markets for training in particular industries:* these occur where there are few people seeking training for employment in a particular industry. Geography can be a factor—some industries have a strong presence in some regions and very little in others (for example, mining, forestry, shipbuilding).
- ▶ *Thin markets for training within a geographic area:* these occur where populations are sparse and/or distances between towns are vast.

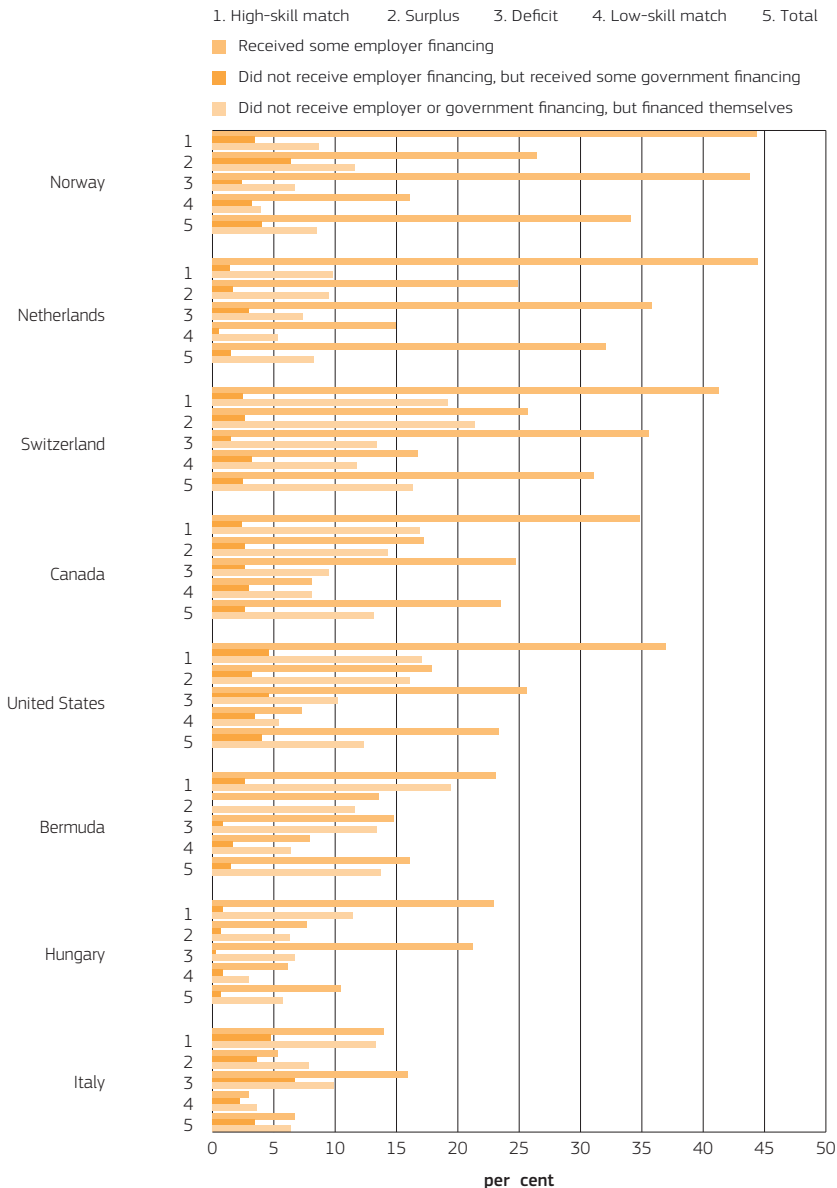
Source: Ferrier *et al.*, 2008:30

The thin market presence is the main factor that motivates public policy activation.

## 5.2. Financial support for training demand

In order of importance, companies, families and the state guarantee financial support to individuals engaged in adult and continuing education (*Box 44*). The state has a financial support function between 1.75 and 16 times less than that guaranteed by companies, and between 1.75 and 7.5 times less than that guaranteed by families.

**Box 44.** Participation, source of financing and skill mismatch Percentage of adults aged 16 to 65 years (excluding full-time students aged 16 to 24) receiving adult education and training during the 12 months preceding the interview, by source of financing, by match-mismatch categories, and by country, 2003 and 2008



Source: Adult Literacy and Life Skills Survey, 2003 and 2008.



The role of the state is less than that of companies and families, even with respect to low-skilled workers.

Generally, fewer public resources are invested in training than private ones. The propensity for private individuals to invest in training is positive, but means that the economic and social system may need rebalancing

The relationship between the role of the state and the role of companies

varies from a maximum of 1.5 to a minimum of 15 times lower for workers who are low-skilled and do work suited to their level. The position of the state is even worse with respect to low-skilled workers with a deficit of skills compared to the work carried out. In this case, the relationship between state and companies varies from 2.3 to 21. Even the relationship between state and family intervention shows a strong imbalance: 2.7 to 14.7 times lower.

“Government financing appears to reach at least equally those in medium to high skill matched situations and those in surplus situations. This is consistent with findings that reliance on market-based approaches and performance criteria used to allocate funding for targeted strategies may end up benefiting those who already have the most skills because they are most likely to succeed” (OECD, Statistics Canada, 2011:287).

On the other hand, as the Fifth European Working Conditions Survey shows, in employer-funded training an unequal distribution of opportunities is produced by the propensity of companies to privilege support interventions in favour of people from whom a higher return of investments in training can be expected: “The divide between clerical and manual occupations is very clear. In 2010, over 50% of managers and professionals and 48% of technicians and associate professionals received employer-paid training, compared with only 26% of craft and related trades workers, 28% of service and sales workers, 28% of plant and machine operators, and 33% of clerical support workers” (Eurofound, 2012:102).

Beyond these indicative values, there is no precise information on the volume of investment from the various economic subjects and the respective monetary flows. There are problems in collecting such information. In 2004 the US Department of Labor Employment and Training Administration commissioned a study of occupational training to present a preliminary picture of the total spending on job training in the United States. Data came from many sources, including federal government, state and local government, private employers, philanthropic foundations and individual workers. Yet this study too was limited to providing estimates on federal and state investments. The results presented in the final report provided a picture that was worse than the one documented by the Adult Literacy and Life Skills Survey (ALL), with a relationship between public and private expense of 1:9 (Mikelson, 2004).

Partial and approximate knowledge of all the financial resources circulating in the adult and continuing education market can be considered one of the factors that prevent public policy on adult and continuing education being fully effective.

### 5.3. The offer of training goods and services

The quantity and quality of the multiplicity of public and private training activity, large and small, specialised in the various fields of knowledge, make Europe fairer and more competitive. Public policies must encourage growth.

The results, in terms of economic return and participation in education, are the outcome of a vast array of different training activity. If we consider adult and continuing education from an overall viewpoint – taking into account policy

areas from social inclusion to innovation – the variety of actors seems unlimited, and involves policymaking in areas such as health, culture, research, labour services and social services. Research provides information focused on two priority spheres: formal adult education and continuing education.

LLL2010 research sets out a typology of formal adult education, within which there exist the following ‘organisational fields’:

- (Initial) General Education
- (Initial) Vocational Education
- Training in the context of Active Labour Market Policies (Retraining, Remedy Training, Welfare to work programmes, Occupational Rehabilitation)
- On the job training/off the job training in enterprises and organizations, provided internal (by the enterprises) or by external training providers
- Management Training, Human Resource Development, Organization Development, provided internal (by the enterprises) or by external training providers
- Professional Education, geared by professional/occupational bodies (LLL2010:91)

In the continuing education field, we encounter a wider classification that can vary depending on country (*Box 45*).

#### **Box 45.** Type of organisations

Public and private organisations in NL	Private sector in UK
Non university higher education	Management consultants, coaches and personal development specialists;
University higher education	Business schools, private colleges and independent educational establishments such as academies;
Secondary level professional training	Trade associations and membership institutions, including Chambers of Commerce and employer representative bodies;
Education	Arts and cultural bodies;
Secondary professional education (combined)	IT companies;
Distance Learning	Publishers;
Training companies (*)	Corporate universities

*Note:* In NL there are 16,541 training companies in a total of 19,062 organisations found

*Sources:* NL-Rosenboom, Tieben, 2012:33; UK- Simpson, 2009:14

These types of organisation guarantee an offer that potentially covers a vast range of training needs (Box 46).

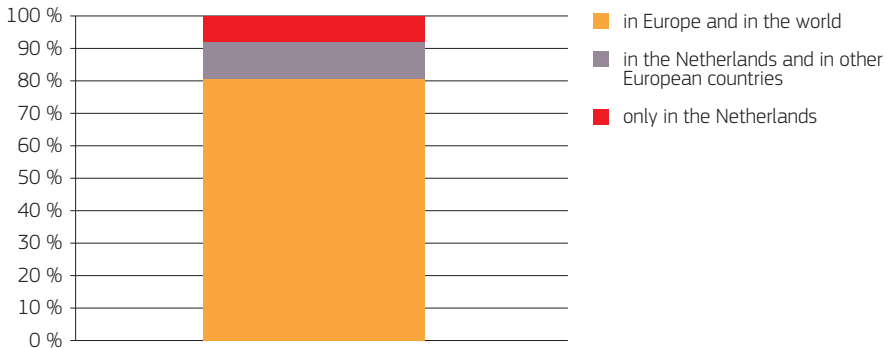
**Box 46.** Types of training offered

UK	Netherlands
<ul style="list-style-type: none"> <li>← Training for school leavers and graduates: for example, for employability and job readiness.</li> </ul>	<ul style="list-style-type: none"> <li>Communication / personal behaviour effectiveness (professional techniques)</li> </ul>
<ul style="list-style-type: none"> <li>← Professional and technical training: for example, law, medicine, architecture, engineering and finance, and where initial training has usually been provided through the education system.</li> </ul>	<ul style="list-style-type: none"> <li>Instruction and training</li> <li>General Management</li> <li>Care, wellbeing, sports</li> </ul>
<ul style="list-style-type: none"> <li>← Functional training: for example, financial management, HR management, project management, quality assurance, and sales and marketing.</li> </ul>	<ul style="list-style-type: none"> <li>Organisation and management of human resources</li> <li>Sales and commerce</li> <li>Language courses</li> </ul>
<ul style="list-style-type: none"> <li>← Management and organisational development: for example, general management, leadership, strategic planning, and business process improvement.</li> </ul>	<ul style="list-style-type: none"> <li>ICT, finance, economics</li> <li>Health and safety</li> <li>Logistics</li> </ul>
<ul style="list-style-type: none"> <li>← HR and personal development: for example, team working, communication skills, stress management, and assertiveness. Outdoor training is a small but significant high-value sub-sector of the HR and personal development training market.</li> </ul>	<ul style="list-style-type: none"> <li>Marketing &amp; PR</li> <li>Legal subjects</li> <li>Product quality</li> <li>Purchasing</li> <li>“OR” company courses (regulated by law)</li> <li>Environment</li> </ul>
	<ul style="list-style-type: none"> <li>Controller / auditing</li> </ul>

Sources: UK - Key Note's market report quoted in Simpson, 2009:15  
 The Netherland - Rosenboom, Tieben, 2012:13

Territorially, however, distribution is unequal. Depending on area, the presence of training providers as a percentage of the total business population can vary from between 0.4% to 1%. It is evident from this that some European regions face much greater difficulty in raising skills levels.

The uneven distribution of training is not necessarily an obstacle for all those requesting training. For a growing slice of the market, the part interested in advanced specialist training for knowledge workers, there are global training providers (Box 47).

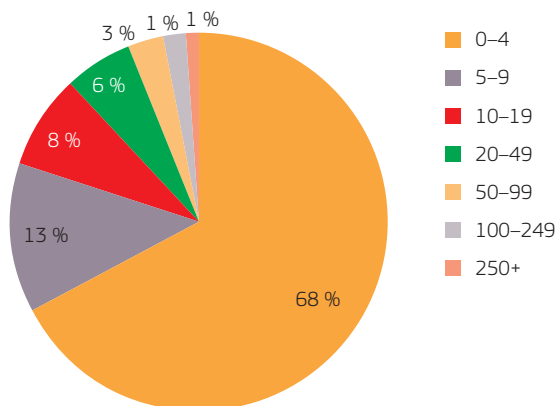
**Box 47.** Reference markets of training industries operating in the Netherlands

Sources: Rosenboom, Tieben, 2012

Unsatisfied demand for advanced training at local level receives a double response in the form of:

- the growing presence of global training industries, capable of offering on a local level – whether present or remote – the know-how of organisations operating on a worldwide level and enriched by the vast number and variety of customers they work for; and
- the formative offer of highly specialised training industries operating in other countries, but conceived to attract trainees from all over the world.

The market is characterised by an abundance of training providers, many with fewer than 10 staff (71% in the UK and 98% in the Netherlands). In recent years, the number of such providers has increased in spite of the economic crisis (between 2000 and 2008 the number has doubled in the UK – Simpson: 11). The smaller providers, even if they don't offer all the advantages of large training companies, do guarantee cost containment due to strong competition, and they do facilitate access to training for those who are not in a condition to procure the services of market leaders for themselves (Box 48).

**Box 48.** Training providers by number of employees in the UK

Source: IDBR 2008, quoted in Simpson:12

In conclusion, adult and continuing education is a service-orientated system based on relationships of exchange of goods, services and capitals between different economic subjects (companies, families, the state) operating on local, national and global levels. This means that in order to get the right balance of functions, public policy must intervene on the existing circuit of production/distribution/exchange/consumption of services. Policymakers cannot limit themselves to interventions which affect only those who operate within sectors directly or indirectly dominated by public financing. In fact, these are an extremely limited part of the sector's monetary circuit. Such a narrow approach explains why, in many cases, adult and continuing education policies have limited impact.

## 5.4. Public policies for market governance

Public policies for governance of the adult and continuing education market must acknowledge and act on the following three observations:

- “there are many different – mostly private – providers;
- the cost of training is footed largely by enterprises and working people;
- Government plays only a limited role”. (SER, 2012:2).

These observations lead us to conclude that:

1. Public intervention should complement and not compete with private intervention;
2. Public resources should prioritise correcting market imbalances;
3. Ensuring fairness in the distribution of resources that allow access to training is a function to be addressed mainly by public intervention; and
4. The effectiveness and guarantee of transparency of the relationship between costs and benefits is the basis for a healthy optimisation of resources targeted on the sector.

### 5.4.1. Complementarity between public and private resources

In a market economy the imbalance of public and private investment in adult and continuing education is normal.

**Public policies must aim at complementing the public and private training industries**

“With perfectly competitive capital and labour markets, there is little role for policies pursuing efficiency” (Bassanini *et al.*, 2005:136). The case of the Eastern European socialist states was different, as the “State was so profoundly involved into the formation of skills, that there was no need in the proactive training policies managed by the enterprises”. But there were other limits (LLL2010:84).

In a market economy the imbalance is justified by a division of educational responsibility according to which companies and families have the duty to provide personal and professional growth (after schooling has ended). Governments are mainly responsible for removing barriers

to the growth of investment by private individuals and the development of the training market. This frees up public resources and allows them to be concentrated on functions that guarantee fairness and correct market functioning. A different role would require an unsustainable quantity of public resources and would depress the training market.

In this context, the priority duty of public policy concerns reducing the barriers that prevent access by new economic subjects to the sectors of the training market which are directly influenced by public financial intervention or which do not favour collaboration between public and private institutions.

#### 5.4.2. Correcting market imbalances

**To correct market imbalances, public policies can adopt financial measures which favour companies and families. Not all of them have the same effectiveness**

Correcting market imbalances in order to ensure the efficient use of training goods and services is a function of governance. This can be achieved by “establishing effective incentives and

cost-sharing arrangements, to enhance public and private investment in the continuing training of the workforce, and increase workers’ participation in lifelong learning. Measures could include: tax allowance schemes, education voucher programmes targeted at specific groups, and learning accounts or other schemes through which workers can accumulate both time and funding” (European Commission, 2010:6).

The variety of financial measures adopted by public policies in Europe is wide (*Box 49*). Characteristically, they act directly on individuals and companies with the aim of increasing their propensity to assume training costs (direct, indirect and opportunity).

**Box 49.** Financing adult education: the space of revenues and expenditures by economic unit (financial resources)

Economic unit		Revenues from	Expenditure for
Learners/ families		Current income: wage, salary, income from rent, interest or grants	Tuition fees, interest on loans, amortisation of loans, general taxes (pro rata) or earmarked education tax, drawing right contributions, saving account contributions, cost of living
		Past income: former savings, heritage, drawing right account	Tuition fees, cost of living
		Future income: loan, credit	Tuition fees, cost of living
Workers/ employees		Current income: wage, salary, income from rent, interest or grants	Tuition fees, interest on loans, amortisation of loans, general taxes (pro rata) or earmarked education tax, drawing right contributions, saving account contribution, cost of living
		Past income: former savings, heritage, drawing rights	Tuition fees, cost of living
		Future income: loans, credits	Tuition fees, cost of living

Economic unit		Revenues from	Expenditure for
Private organisations	Employers	Sales, rent, interest, tax/levy exemption/ reduction/rebate from state or educational funds, grants/ subsidies/ premium	Expenditures for learning of staff (fees, take over of loan interest or loan amortization, selective grants to staff members, general (pro rata) or education tax, levy contribution to state or learning funds), contributions to drawing rights or individual educational saving/ individual learning accounts
	Employers associations/ employers' educational funds	Employers' contributions, fees, sale of counselling services and own education programmes, tax exemptions/ reductions, rebates	Contributions/ grants or loans to supra-firm training institutions, general tax (pro rata), selective grants or loans to learners
	Unions	Member contributions, fees, sale of counselling services and own education programmes, tax exemptions/ reductions, rebates	Contributions/ grants or loans to supra-firm training institutions, general tax (pro rata), selective grants or loans to learners
	Churches	Contributions, fees, donations, taxes from members	Expenditures for own learning institutions and programmes, selective grants or loans to learners
	NGO's/ Welfare Organisations	Contributions/ donations from individuals or organisations, sales of counselling services, tax exemption or reduction, state subsidies	Expenditures for own learning institutions and programmes, selective grants or loans to learners
	Donors	Contributions/ donations from individuals, organisations or states, sales of counselling services, tax exemption or reduction, state subsidies	Expenditures for learning institutions and programmes (capital investment/ infrastructure), selective grants or loans to learners
State	National level, regional level, community level	Tax revenues from the tax system (general taxes, special taxes, education taxes), revenues from educational levy systems, sales of public services against fees, foreign aid (EU)	Expenditures (capital and recurrent) for own learning institutions, revenues foregone by: tax exemptions/ reductions/ rebates to learners/workers/employees/ employers/ associations (employers, unions), NGO's, churches; matching grants or categorical aid, grants or loans to learners

Many of these measures have been the object of research. Cedefop, in particular, examined several of them:

1. Sectoral training funds in Europe, 2008  
([www.cedefop.europa.eu/EN/publications/12944.aspx](http://www.cedefop.europa.eu/EN/publications/12944.aspx))
2. Individual learning accounts, 2009  
([www.cedefop.europa.eu/EN/publications/12896.aspx](http://www.cedefop.europa.eu/EN/publications/12896.aspx))
3. Tax incentives to promote education and training, 2009  
([www.cedefop.europa.eu/EN/publications/5992.aspx](http://www.cedefop.europa.eu/EN/publications/5992.aspx))
4. Sharing the costs of VET – Schemes in the new Member States, 2009  
([www.cedefop.europa.eu/EN/publications/5021.aspx](http://www.cedefop.europa.eu/EN/publications/5021.aspx))
5. The role of loans in financing vocational education and training in Europe, 2012  
([www.cedefop.europa.eu/EN/publications/19857.aspx](http://www.cedefop.europa.eu/EN/publications/19857.aspx))
6. The use of payback clauses to promote training, 2012  
([www.cedefop.europa.eu/EN/publications/20294.aspx](http://www.cedefop.europa.eu/EN/publications/20294.aspx))
7. Training leave in Europe (2012)  
([http://www.cedefop.europa.eu/EN/Files/5528\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/5528_en.pdf))

The use of tax incentives is probably the most effective measure. “Tax incentives have many positive aspects and are appreciated by employers and individuals, particularly for their reduction in education and training costs and their low levels of bureaucracy”. Yet tax incentives also have their limits “as they end up favouring those groups already with best access to education/training” (Cedefop, 2009a:13). Nevertheless, the use of tax incentives can be considered the primary measure for encouraging those economic actors who have an income to engage in education. Tax incentives, in fact, favour those who pay more taxes. In spite of these considerations, “data show they are not the backbone of public education and training policies. In fact, they account for a very small percentage of total public expenditure on education and training, as most Member States opt for direct funding and provision of these services” (Cedefop, 2009a:13). This happens in spite of the lesser effectiveness of policies focused on direct financing of the training offer and their undesirable effects (financing the training firms which are incapable of operating independently on the training market, increase of financing destined to overhead costs, etc.).

The jointly governed bipartite or tripartite sectoral training funds (STFs) have opposing characteristics. They are financed by a compulsory training levy on the enterprises’ payroll. Levies range from 0.1% to 2.5%, depending on the country. It is a form of voluntary or compulsory training levy/tax on work strongly promoted by public policies with direct social-partner involvement. Comparative studies provide – alongside some positive findings – evidence of certain limits, for example:

- (a) compulsory contributions (levies) to training are sometimes seen by employers as adding to high employment costs;
- (b) not all enterprises benefit from training activities supported by STFs, despite training levies being compulsory (particularly SMEs);



- (c) difficulties and costs in meeting all the conditions required to file grant applications and comply with STF procedures (red tape/bureaucracy problem);
- (d) levy-based funding schemes are often criticised because of high deadweight effects (subsidising programmes that would have been provided in any case);
- (e) a risk of dullness as STFs benefit from captive resources (compulsory contributions) irrespective of the quality of the services and training activities provided;
- (f) STFs are sometimes criticised for being particularly concentrated in providing specific sector-related skills, reflecting very much employers' perspectives and needs and not so much those of individual employees. (Cedefop, 2008:13, 14)

Soliciting member states to adopt financial measures “to enhance public and private investment in the continuing training of the workforce, and increase workers’ participation in lifelong learning” (European Commission, 2010:6) has the positive effect of not limiting public policies for financing the offer. Nevertheless, research shows that such measures must be carefully selected and their costs and benefits properly considered. Otherwise, they can create further undesired imbalances.

### 5.4.3. Guaranteeing greater equity

The function of guaranteeing a greater level of equity through public investments should not be taken for granted. Research shows that “those living in poverty and those who have left school early and experience educational disadvantage together with poverty, are frequently omitted as an identifiable target group for priority with regard to national or institutional policy in relation to access to education – in a wide number of countries” (LLL2010:186).

The levels of disadvantage with which some adults live demonstrates the importance of the safeguard function of equity margins in a market which tends

to reproduce social inequality. The equity principle allows public financing to avoid high deadweight effects and to invest in those who would not have access to training without public intervention.

**There is a solution for the low skilled: more formal education, as soon as possible, even outside the school and university**

Despite this, public investment engages fewer low-skilled workers than private investments. Yet, unlike private investors, governments give proportionally more attention to citizens with lower levels of education (*Box 44*). The impact is constrained because of the limited availability of public investments. This limit is aggravated by the low impact of financial measures on the participation of low-skilled workers and by the modest contribution of training in improving their conditions of life.

If we consider the results of research on some of these measures, we find their main weakness to be their impact capacity with respect to low-skilled workers. So, for example:

- a. tax incentives act exclusively on those whose tax levels make the policy measure significant;
- b. loans are effective for those who hope to have an income that covers the debt for the duration of reimbursement;

- c. vouchers are potentially effective for everyone, but studies show that high-skilled workers prevail among users;
- d. individual learning accounts are potentially better able to favour access by the low-skilled, but this depends on measures that accompany them (individual orientation, information, limitation of or recourse to closed catalogues, monitoring, etc.);
- e. leave schemes apply to a limited range of employed workers, usually with permanent contracts.

Furthermore, if we examine research on the return of training investments, we can see how low-skilled and disadvantaged workers obtain relatively low returns from training (Bassanini *et al.*, 2005:150). If investment in training low-skilled workers has limited effects, it is unlikely that their costs will be taken on by companies or by individuals and their families.

The ineffectiveness of financial investments combined with the scarce returns of participation and training work are largely attributable to the lack of cognitive prerequisites that allow low-skilled workers to take advantage of such training. The solution is to engage them in formal adult education pathways: “by increasing the basic skills of the work force, in terms of literacy, numeracy and cognitive and communication abilities, policy can contribute both to directly raise the standard of life of disadvantaged individuals and to increase the private incentive to train” (Bassanini *et al.*, 2005:150).

This is why measures in favour of low-skilled workers must, in order to be effective, tend towards the combination of different provisions. First of all, they must aim at financing the formal education of adults who consent to upgrading basic knowledge and achieving related certifications. Second, they must intervene on the creation and quality of institutions of formal adult education. And third, they must guarantee, for each individual, conditions conducive to participation. In fact, “outreach strategies will only work if other barriers such as finance and lack of proximity to the educational institution are overcome. Decentralised community-based locations for learning, such as community lifelong learning centres, provide examples of progressive outreach strategies for reaching marginalized communities and individuals” (LLL2010, 186).

## 5.5. Investment transparency and effectiveness

### 5.5.1. Greater transparency and method

The need to optimise financing for adult and continuing education is made more acute by the limited availability of resources. The objective is further hampered by the scarce and partial information available to governments regarding the actual amount of public funding destined for the sector. The adoption of smart and intelligent policies depends on data that can guarantee the pertinence of public support and demonstrate the adequacy of the impact produced.

“To have good results, order must be put in the processes and methods of public decision (...) A logic of monitoring and evaluation of legislation must be guaranteed in order to ensure

transparency, constant information on the state of implementing measures, and an objective evaluation of the results obtained as a basis for new reforms” (Monti, 2012:22).

### 5.5.2. The risk of mismanagement and corruption

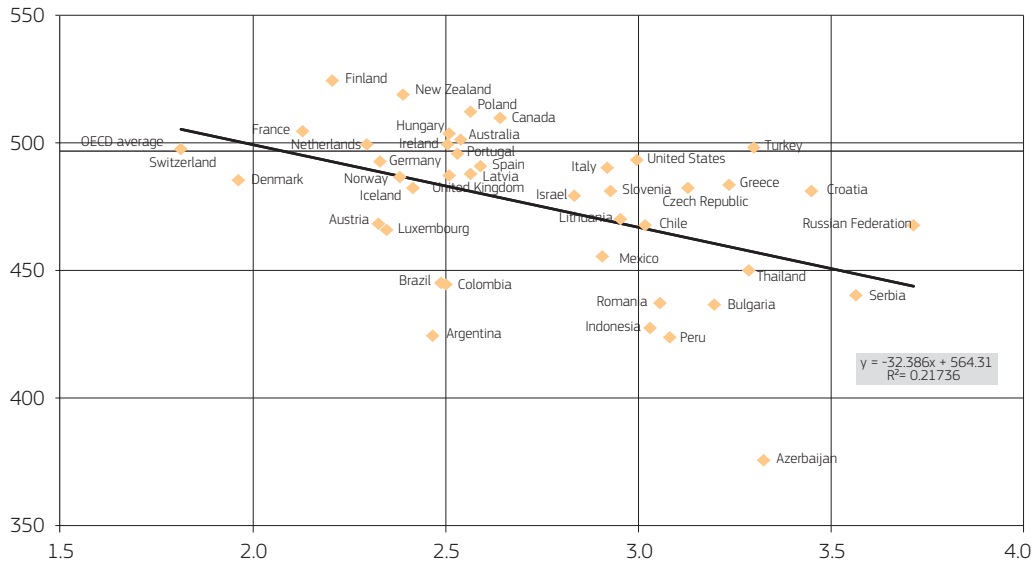
The scarcity of information about public financing implies a low level of protection with respect to the risks of mismanagement and corruption. A report commissioned by Germany’s Federal

**Corruption also concerns the public policies of adult and continuing education. It reduces the quality and effectiveness of investments and increases exclusion from lifelong learning.**

Ministry for Economic Cooperation and Development states that “corruption can be found at macro, meso and micro levels in the education sector. So called ‘grand corruption’ involving large sums is found essentially in the field of procurement (school buildings, textbook production, etc.), while ‘petty corruption’ is found in the other areas” (Ochse, 2004:3). The issue is worth attending to because “education is seldom considered to be the most corrupt public sector” (Poisson, 2010:3) and because corruption can undermine the effectiveness of public investment in the sector.

In its 2013 report, Transparency International maintains that “Corruption and poor governance is a major impediment to realizing the right to education, and to reaching the Millennium Development Goals and Dakar Education for All Framework for Action by 2015. Corruption not only distorts access to education, but affects the quality of education and the reliability of research findings. From corruption in the procurement of school resources and nepotism in the hiring of teachers, to the skewing of research results for personal gain, major corruption risks can be identified at every level of education and research systems” (Transparency International, 2013).

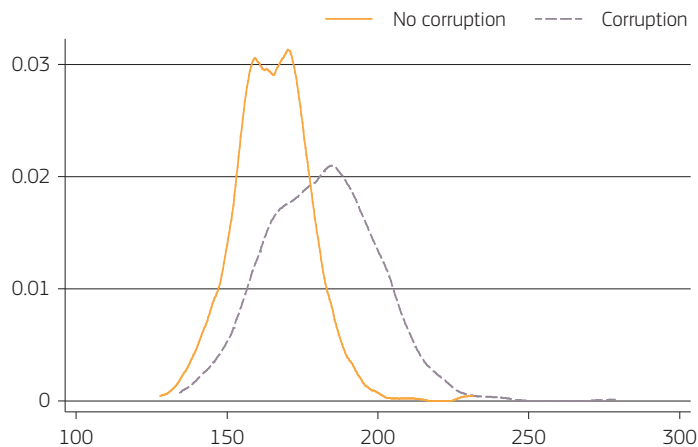
The relationship between corruption of the school system and learning outcomes of students has already been highlighted by in-depth studies carried out on the data of the PISA survey (*Box 50*).

**Box 50.** Mean reading score in PISA 2009 and perceptions of corruption

Global Corruption Barometer/Transparency International: To what extent do you perceive the education system in this country to be affected by corruption? (1-5 strongest)

Source: OECD PISA 2009 Database, Transparency International.

This relationship was further confirmed by a survey comparing the various Brazil municipalities (Box 51). It showed that “leakages from educational resources can be an important constraint on school quality. Using a novel dataset of corruption in education and schooling outcomes across public schools in Brazil, we find that student test scores on a national standardized exam and pass rates are significantly lower, and dropout rates are significantly higher in municipalities where corruption is prevalent” (Ferraz *et al.*, 2012:22).

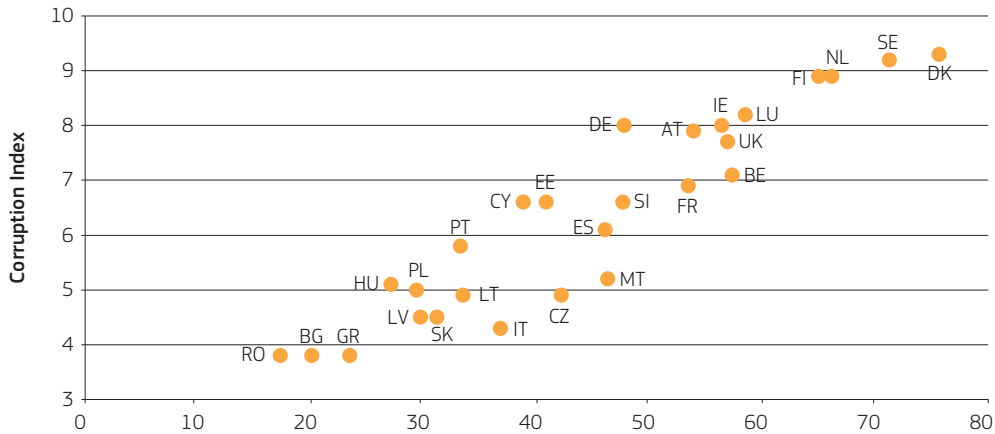
**Box 51.** Distribution of test scores for mathematics by corruption

Notes: Panel display kernel densities of 2005 test scores aggregated at the school level. The densities were estimated depending on whether the school resided in a municipality where corruption was detected in education.

Source: Ferraz *et al.*, 2012:30

The relationship between the corruption index and the European Lifelong Learning Index (ELLI) is worth highlighting (Box 52). The European countries with a greater corruption index are those in which the conditions necessary to guarantee public participation in learning opportunities are weaker.

**Box 52.** ELLI and Corruption Index



Source: Bertelsmann Stiftung, Transparency International, 2009

The various types of corrupt practice found in the education system are also to be found in the adult and continuing education system. The overall result of such practices is to considerably reduce the quality and efficiency of public spending in the sector and, consequently, has a negative impact on the results and on the impact of the initiatives assumed. In other words, public investments – already marginal with respect to private ones – see their volume reduced further because of mismanagement and corruption (Box 53).

**Box 53.** Corrupt practices in the education sector

Areas	Corrupt practices
Finance	<ul style="list-style-type: none"> <li>Transgressing rules/procedures;</li> <li>Inflation of costs and activities in budget estimates</li> <li>Embezzlement</li> </ul>
Specific allowances (fellowships, subsidies, etc.)	<ul style="list-style-type: none"> <li>Favouritism, nepotism</li> <li>Bribes</li> <li>Bypassing criteria</li> <li>Discrimination (political, social, ethnic)</li> </ul>
Construction, maintenance and school repairs	<ul style="list-style-type: none"> <li>Fraud in public tendering</li> <li>Collusion among suppliers</li> <li>Embezzlement</li> <li>Manipulating data</li> <li>Bypass of school mapping</li> <li>Ghost deliveries</li> </ul>

Areas	Corrupt practices
Distribution of equipment, furniture and material (incl. Transport, boarding, textbooks, canteens and school meals)	<ul style="list-style-type: none"> <li>• Fraud in public tendering</li> <li>• Collusion among suppliers</li> <li>• Siphoning of school supplies</li> <li>• Purchase of unnecessary equipment</li> <li>• Bypass of allocation criteria</li> <li>• Manipulating data</li> <li>• Ghost deliveries</li> </ul>
Writing of textbooks	<ul style="list-style-type: none"> <li>• Fraud in the selection of authors (favouritism, bribes, gifts)</li> <li>• Bypass of copyright law</li> <li>• Students forced to buy materials copyrighted by instructor</li> </ul>
Teacher appointment, management, payment and training	<ul style="list-style-type: none"> <li>• Fraud in the appointment and deployment of teachers (favouritism, bribes, gifts)</li> <li>• Discrimination (political, social, ethnic)</li> <li>• Falsification of credentials/ use of fake diplomas</li> <li>• Bypass of criteria</li> <li>• Pay delay, sometimes with unauthorised reductions</li> </ul>
Teacher/school staff behaviour (professional misconduct)	<ul style="list-style-type: none"> <li>• Ghost teachers</li> <li>• Absenteeism</li> <li>• Illegal fees (for school entrance, exams, assessment, private tutoring, etc.)</li> <li>• Favouritism/nepotism/acceptance of gifts</li> <li>• Discrimination (political, social, ethnic)</li> <li>• Private tutoring (including use of schools for private purpose)</li> <li>• Sexual harassment or exploitation</li> <li>• Bribes or favours during inspector visits</li> </ul>
Information systems	<ul style="list-style-type: none"> <li>• Manipulating data to misrepresent</li> <li>• Selecting/suppressing information</li> <li>• Irregularity in producing and publishing information</li> <li>• Payment for information that should be provided free</li> </ul>
Examinations and diplomas, access to universities	<ul style="list-style-type: none"> <li>• Selling exam information</li> <li>• Examination fraud (impersonation, cheating, favouritism, gifts)</li> <li>• Bribes (for high marks, grades, selection to specialized programmes, diplomas, admission to universities)</li> <li>• Diploma mills and false credentials</li> <li>• Fraudulent research, plagiarism</li> </ul>
Institution accreditation	<ul style="list-style-type: none"> <li>• Fraud in the accreditation process (favouritism, bribes, gifts)</li> </ul>

## 5.6. Policies according to results

### 5.6.1. Good-quality data for smart policies

Orientating the adult and continuing education market through public policies is more complex than simply managing a system. The policy-making process must intervene on a wider variety of problems and is influenced

by a greater number of actors. To avoid being opinion-based, it needs quality data to: support the decision-making process; inform the choice of the problems to be tackled; elaborate policy options; carry out impact analysis; compare possible options; and structure monitoring and evaluation (European Commission, 2009:21). Each of these key analytical steps relies on good-quality data (European Commission, 2009:18).

**The availability of quality data on educational conditions is in continual development. It allows countries to know and compare the effectiveness of policies and the economic and social attractiveness of their territories**

As far as adult and continuing education is concerned, governments use an increasing variety of sources to identify – by comparing countries – their position with respect to the results of public and private policies, the educational conditions in their territories, and the progress achieved (*Box 54*).

#### **Box 54.** List of the more important European sources

- ▶ The European Union Labour Force Survey (EU LFS), which covers employment related data needs, and gives information on demographic background (household and individual) and on education and training: [www.epp.eurostat.ec.europa.eu](http://www.epp.eurostat.ec.europa.eu)
- ▶ The *Continuing Vocation Training Survey (CVTS)* provides comparable statistical data on continuing vocational training, skills supply and demand, training needs; the forms, contents and volume of continuing training; the enterprises own training resources and the use of external training providers and the costs of continuing training.
- ▶ The *Adult Education Survey (AES)* is part of the EU Statistics on lifelong learning. The EU AES is a pilot exercise. The survey covers participation in education and lifelong learning activities (formal, non-formal and informal learning) including job-related activities, characteristics of learning activities, self-reported skills as well as modules on social and cultural participation, foreign language skills, IT skills and background variables related to main characteristics of the respondents.
  - *Education at Glance* (published yearly) by OECD
  - The *Programme for International Student Assessment*, which is an internationally standardised assessment of how far students near the end of compulsory education have acquired knowledge and skills that are essential for full participation in society.
  - *Programme for the International Assessment of Adult Competencies* assess the level and distribution of adult skills across countries

Source: adapted from European Commission, 2009

These sources have been enriched by analysis systems that have progressively extended attention towards the complexity of adult education. The European Lifelong Learning Index (ELLI), for example, is an instrument fine-tuned to make “lifelong and life-wide learning more tangible and measurable”. ELLI offers the possibility “to make international comparisons of

the ‘state of play’ of lifelong learning in countries and, where available, regional comparisons within specific countries” (Hoskins *et al.* 2010:10). It adopts, as a reading key for each country or territory, the four learning dimensions (according to the UNESCO definition): learning to live together, learning to be, learning to know and learning to do. For each dimension, ELLI measures the conditions necessary for the population’s participation in learning, and examines the effects such participation should produce.

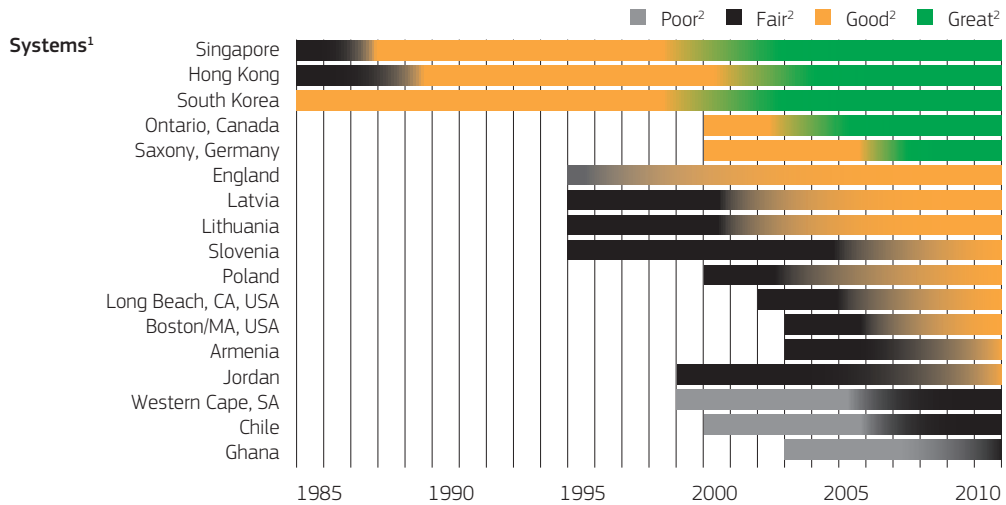
It is a useful instrument “to gain a preliminary picture or indication of how (a) country or region is performing in regards to others” (Hoskins *et al.* 2010:10). At the same time, by monitoring the preconditions, ELLI allows us to identify potential causes of existing learning conditions.

In Germany, the ELLI model was applied on a regional level, to reflect the preconditions for future economic and social success in each region. “The German Learning Atlas is the first indicator-based regional monitoring instrument for lifelong learning in Europe. It is based on a composite index that (...) allows observation and comparison of the conditions for lifelong learning in all 412 German administrative districts and cities, as well as in the federal states. (...) At present, the German Learning Atlas combines 38 factors into an overall index and four partial indexes. The German Learning Atlas yields information on the quality of learning and development conditions found in their regions by individuals in all phases and areas of life” (Schoof *et al.*, 2012:3)

Other studies have built models of comparison based on measuring progress on positioning the countries or regions with respect to various indicators. Even though they have so far been applied only to the school system, they are of high interest for adult and continuing education policies. This is clear in the case of a study on *How the World’s Most Improved School Systems Keep Getting Better*. In this report, McKinsey sorts out systems according to starting points and progression (Box 55). “These performance stages continue – from poor to fair, fair to good, good to great, and great to excellence – and are in turn unravelled according to intervention clusters within given contexts.(...) We see the clusters of interventions, different for those starting from a weak base than those who have already had significant success. We see the pathways playing themselves out in each type of context. We see what it takes to ignite system change, what specific strategies achieve breakthrough, what interventions build ever-increasing momentum, how systems can sustain improvement, and especially how they can go to the next stage of development” (Michael Fullan, in: Mourshed, 2010:6).



**Box 55.** Improvement from poor to fair to good to great



1 Systems were categorized across time as poor, fair, good, or great based on their average performance across test instrument, subject, and age group in each year where assessed. Systems also improve within each phase (e.g. England improved significantly within 'good' without reaching 'great'). Universal scale start date marks the beginning of available student assessment data during the reform time period

2 Score cut offs: Excellent >560 (none of our sample systems achieved this level); Great 520-560; Good 480-520; Fair 440-480; Poor <440.

Source: TIMSS, PISA, NAEP, national and provincial assessments; McKinsey & Company interventions database

**5.6.2. Increasing the effectiveness of policies through forecasting devices**

These data sources are useful for understanding education conditions, the wealth of human capital in a territory and the progress achieved. They are helpful in developing strategic goals, but they do not tell us how to construct the policies that can produce change.

For that, we need information on the effectiveness of the policies we might adopt and their correlated measures; we need to create effective *ex-ante* impact analyses; and we need to identify the various likely policy options:

**Policy-making processes do not make use of all the resources available. Increasing effectiveness is possible by building intelligent decision-support systems devices**

“Most governments require sound evidence on both the effectiveness of outcomes and the effectiveness of implementation and delivery of policies, programmes and projects. The availability of both types of evidence is often in short supply” (Davies, 2004:24)

Studies of the impact of adult and continuing education policies are not abundant. Reviews produced by the European Commission complain that “the analysis of the data gathered on country level, have indicated that major directions took place in terms of policies, structures, legislation and financial arrangements, but they have not provided the data needed to provide firm conclusions as to the results and impact of the mobilisation strategies put in place” (Broek, 2010:99).

Nevertheless, if we examine all the research carried out on the subject in the last decades on a worldwide level we can see that there is an emerging empirical database (consider, for example, what was produced by the vast network of public and private research centres existing in numerous EU and OECD countries, in addition to research promoted in support of the World Bank and UNESCO). Therefore, the scarcity of studies could be alleviated by programmes with the following aims:

- a) *capitalisation of the existing knowledge base and systematic development of research on the impact of adult and continuing education policies.*

The quantity is vast. “Evidence-based policy and practice uses a range of types of research evidence, and is usually guided by the questions being posed rather than by any one type of research evidence” (Davies, 2004:15). Therefore, every policy that is not based merely on the opinions of individuals or lobbies has enriched the knowledge base by making use of the various types of evidence-based research. There is a body of knowledge and know-how about adult and continuing education policy-making, but it is largely tacit, hidden inside institutions and only partially encoded and systemised. Yet each new policy initiative has to be founded on shared reasoning and facts and, therefore, it is reasonable to suppose that this involved the elaboration of one of the possible types of research evidence (Box 56).

**Box 56.** Types of Research Evidence



Source: Davies, 2004:15

- b) *reinforcement and systemisation of research in forecasting the future demand for adult and continuing education*

This is a sector scarcely covered by research. It is important because it indicates the direction policies might take and because it addresses Europe’s need “to regain cognitive leadership by re-invigorating its capacity to invent the future” (European Commission 2050, 2012:26).

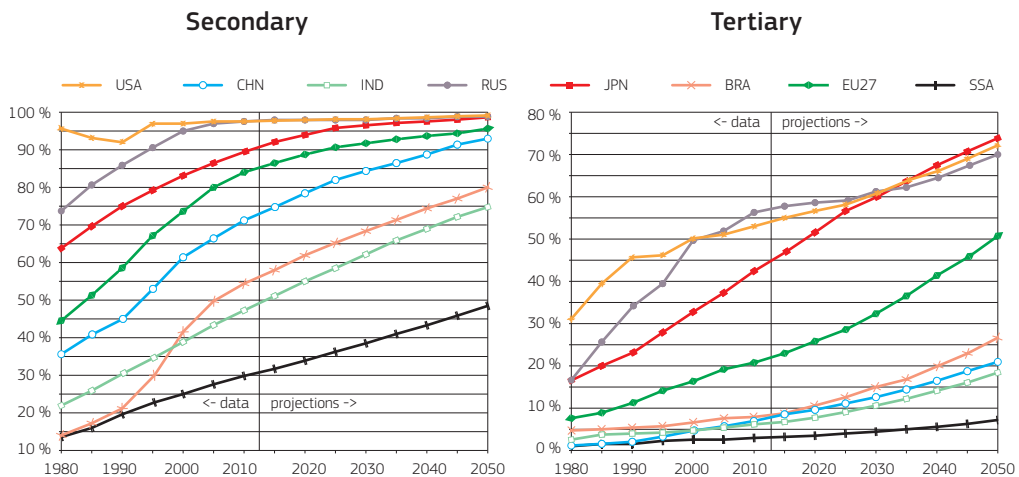
In policy-making, forecasting studies are important because they provide four fundamental orientations: *long-term planning* (to know where scarce resources should be allocated),

*orientation* (to know the human capital potential of a country), *realistic target setting* (to know the right time to implement changes), and *motivation for near-term investments* that only produce long-term benefits (Lutz *et al.*, 2004:4).

Studies of future demand for adult and continuing education are rare, though some examples show that the subject is meaningful. Let us take, for example, a recent CEPII update on the educational levels of the working-age population over the 1980-2050 period (Box 57). It shows that Europe in 2050 will move quite close to the secondary-school educational levels of the more advanced economies worldwide – though without catching up with them. As far as tertiary education is concerned, current efforts will serve only to maintain current levels of disadvantage (Box 57).

These data have implications for policy in both tertiary education and adult and continuing education policy (which will be required to fill the gap). It is important to note that these forecasts are built by using qualifications as a basic proxy. Surveys such as PISA and PIAAC have questioned the use of qualifications as a proxy for actual competences among the working-age population. The stimulation of research in the sector could help to overcome the difficulty “to produce appropriate methods for showing how the educational composition of the adult population changes as a consequence of specific school enrolment rates” (IASA).

**Box 57.** Educational level in selected countries and zones, 1980-2050, (percentage of working-age population)



Notations: USA = United States; RUS = Russian Federation; JPN = Japan; EU27 = European Union; CHN = China; BRA = Brazil; IND = India and SSA = Sub-Saharan Africa.

Source: Barro & Lee for data, Fouré *et al.* (2012) for projections. Quoted also in The Cepii Newsletters, n.49, 1Q, 2012

Forecasting studies are used for understanding the processes of developing human capital over the long to medium term. Studies forecasting the demand of skills in Europe, carried out by Cedefop (2009b, 2010), tend in the same direction. However, the short and medium term also needs to be taken into consideration. Forecasting should also concern specific decisions and, in particular, the likely effects of policy measures to be adopted (for example: tax incentives versus co-financed schemes). The inheritance of the various types of evidence-based research could allow this to be achieved.

c) *Simplification of access to information through intelligent decision-support systems that would accompany the policy-making process in its various phases.*

As of the 1980s, “there have been significant developments in the technologies needed to enable cognitive systems, such as machine learning, reasoning, perception and multimodal interaction. Improvements in processors, memory, sensors and networking have also dramatically changed the context of cognitive systems research” (Nilsson, 2009:35). It is now possible to encourage the application of ICT and computer science to the different phases of the policy cycle (from agenda setting to evaluation).

A special issue of the journal *Artificial Intelligence and Law* (planned for 2012) was dedicated to the theme of “modelling policy-making”. The journal focuses particularly on “using and integrating a range of subcomponents information extraction, text processing, representation, modelling, simulation, reasoning, and argument to provide policy-making tools to the public and public administrators”. This type of research, which has found important applications in various fields (from healthcare to managing the environment), should be extended to the adult and continuing education field. This would help sector policies “to go beyond rhetoric and consider concrete policy answers to expand learning opportunities for all adults” (OECD, 2003:3).

Strengthening information-processing softens the bounded rationality of decision-making. But this doesn't necessarily guarantee a change in the policy agenda. “Political processes are generally characterized by stability and incrementalism, but occasionally they produce large-scale departures from the past. Stasis, rather than crisis, typically characterizes most policy areas, but crises do occur” (True *et al.*, 1999:155). Long periods of minimal or incremental change have intervals of sudden, unpredictable radical change. The punctuated equilibrium theory, applied to policy, helps us understand the reasons for long periods of stagnation. This happens in adult and continuing education, as in palaeontology and evolutionary biology, because a certain force of change must first accumulate in order to overcome all the cognitive and institutional frictions.







## Conclusions

Ensuring the existence of a skills supply that meets the needs of the productive system while achieving an adequate level of social cohesion depends on citizens having the opportunity to develop their skills when they enter the job market and, thereafter, for the rest of their lives.

Adult and continuing education responds to structural concerns and widespread need. This is why **demand for adult and continuing education has grown between 2007 and 2011, in spite of the economic crisis**. There have been a small number of exceptions, and, of course, demand has grown at different intensities in different places, but it is nevertheless important to note that this is a general trend that has concerned both low-skilled and high-skilled citizens.

One reason for this is the **growing number of providers**. Considering just the work-based training sector, training providers represent between 0.4% and 1% of companies. It is a much vaster field than the traditional perception of adult and continuing education would lead us to imagine.

Nevertheless, the dimensions of the sector are not such as to avoid distribution problems. These are accentuated by the fact that **“education and training services have become a commodity that can be traded like any other service”** (Eurofound, 2011:34). In the near future, “marketisation may take off in a big way (...), accelerated by pressure on public finances” (Eurofound, 2011:43). In fact, already today adult and continuing education has a significant market value – amounting, for example, to €3.2 billion in the Netherlands alone. **Participation in adult and continuing education is supported in the main by companies and families**. They are the social actors who sustain most of the cost. The state plays a marginal role, which concerns only narrow sections of the population, particularly the less advantaged ones. Companies are the main actor; understandably, since adult and continuing education is a lever for achieving the strategic objectives. For companies, growth of personnel is a goal to be pursued, to some extent, through off-the-job training, but, above all, through on-the-job training. Yet the desired outcomes are not to be attained simply through formal, non-formal and informal training. It is the outcome of the learning potential of each company, that is to say, the content of work, the career prospects offered to personnel, the values shared and the sense of belonging that is created, the benefits, and the culture of training expressed through contracts of employment.

When the intervention of companies is not sufficient, it is the families who intervene. In each country included in the surveys considered, **the weight of the families was always at least three times greater than that of the state** (the ratio varies from a minimum of 2.7 to a maximum of 14.7).

The prevalence of private intervention has created a situation in which participation in adult and continuing education is unevenly distributed, offering particular encouragement to certain groups, including:

- people with high levels of education;
- employed people;
- those, in particular, employed in the knowledge-intensive productive sectors;
- people with a more favoured social and cultural origin;
- younger people; and
- the non-disadvantaged in general.



Nevertheless, **the factor that more than others determines the likelihood of accessing learning opportunities is the city, the region and the country of residence.** This confirms the importance of past and present policies and, hence, the potential role of the state.

**The dimensions that the market of adult and continuing education has taken on require that public policies take a different approach** than that which would usually be considered appropriate to managing a system or public service, administrated in a monopoly or oligopoly regime.

Policy interventions must be informed by two basic considerations. The first concerns the existence in Europe of an inheritance of skills which should be safeguarded and increased. **Policy should not concentrate just on what is missing. It should also concern understanding and increasing the human potential present in Europe.** Post-school, little is known about the quality and consistency of this potential. We recognise the outcomes of the skills possessed by the active population and their impact on companies and society. But we know little about their possible sub-use or their adequacy with respect to future challenges.

The second consideration concerns the existence in Europe of a high number of low-skilled adults (in 2011, 26.6% of people aged 25 to 64 had an education level below that expected in lower secondary education). In spite of the fact that research indicates potential solutions in terms of policy and other interventions, current strategies will lead to minimal change (in the past five years there has been an improvement of 0.7% per year). Even this evaluation may be optimistic since, over the course of coming years, the number of low-skilled adults will be constantly increased by the low-skilled young people produced by the school system and by the progressive rise in the quality of basic skills necessary to live and work in the Europe of the future. To this end, we must ask whether the continuing phenomenon of a high number of low-skilled citizens is objectionable simply on grounds of social justice, or if the social cost of low-skilled workers is compensated by the abundance of a workforce willing to do jobs that require low skill levels. Yet, even in this second case, **the low-skilled phenomenon still requires corrective interventions since it is perpetuated by forms of social reproduction and entails, therefore, the loss of capable people.**

Public policies must concentrate on objectives that safeguard and develop the behaviours of those who operate and invest in the human growth potential of Europe. At the same time, they must take on duties for correcting the distortions of the adult and continuing education market and, therefore, operate by regulating it and by devising interventions which redistribute opportunities (without depressing the investment of investors).

### **a. policy priorities**

The research considered suggests the following policy priorities on the demand front:

- Concentrate public interventions on adopting rules that reduce the economic and social barriers that hamper access to training opportunities for various levels of the population;
- Concentrate the use of public financial resources on rebalancing functions, i.e. directing them to people, companies, territories that, without public intervention, would not find an answer to their growth needs;

- Take on as a priority the sensitive reduction of the number of low-skilled citizens who, without public intervention, would see their conditions of social and work exclusion progressively worsen; and
- Use direct incentives to encourage those who invest in training, and cautiously use forms of taxation, though finalised at training.

The research considered suggests on the following priorities on the offer front:

- Use regulative and financial instruments to promote autonomous initiatives that increase the training potential of companies;
- Promote expansion of the training market by reducing obstacles – including those of an institutional nature – that hamper growth of the training industries, cooperation and competition among the various public and private actors, and eliminate the barriers of monopolistic and oligopolistic regimes;
- Promote the presence of all sizes of training provider: micro, small, medium and large, whether operating in just one territory or on a worldwide level. Variety ensures a greater likelihood of finding pertinent answers to individual training demand and cost containment; and
- Promote improvement of offer quality, making the university system assume duties of initial training of the sector operators and sustaining research orientated to training innovation.

Public policy will be able to recoup spending on orientation in the training market if it can optimise investments. Therefore, policy-makers must define a clear vision of the desirable and possible conditions, and they must adopt policies and measures which evidence suggests will deliver the desired results.

## **b. research priorities**

The research which has, over the last decade, supporting adult and continuing education policy, has examined the basic knowledge needs relative to fields such as the management and improvement of the quality of adult learning, recognition of skills, monitoring systems and orientation. At the same time, we must acknowledge the progress made by certain studies, conducted on an international level, and by the individual research centres of EU and OECD countries. The wealth of data now available demands on-going monitoring and the promotion of forms of cooperation within the framework of large, shared programmes. This would increase the complementarity of investment and the use of the results by policy-makers.

To ensure that government strategies and policies targeting adults are successful, it is vital that they are based on concrete evidence, experience and knowledge about people's situations. Evidence-based policy-making in the field of adult learning calls for comprehensive and comparable data on all key aspects of adult learning, for effective monitoring systems and cooperation between the various agencies, as well as for high-quality research activities (Council Resolution on a renewed European agenda for adult learning, 2011/C 372/02).

The policy results will correspond to expectations only if these policies are founded on evidence, if information and evaluations are consistent, broad and rigorous and, in particular, if they take into account the foreseeable impact of the measures adopted.

Research carried out on a worldwide level has generated sufficient knowledge and know-how to foster policies of adult and continuing education which deliver the desired results. New devices, refined by research in the field of artificial intelligence, can give policy-makers easier access to available scientific knowledge and the possibility of foreseeing the impact of the policy measures that have been adopted.

**Research should produce an *intelligent decision-support system*** that facilitates the impact analysis *ex-ante* of the policy measures for adult and continuing education by gathering and analysing evidence, identifying and diagnosing problems, proposing possible courses of action and evaluating the proposed actions.

### *1. Orientating the adult and continuing education market*

As noted above, research affirms that “education and training services have become a commodity that can be traded like any other service” (Eurofound, 2011:34) and that “marketisation may take off in a big way in the coming years, accelerated by pressure on public finances” (Eurofound, 2011:43). In spite of this fact, the policies of adult and continuing education are largely aimed at orientating only the public component of that market. One of the reasons for this is that the adult and continuing education market is still mostly unknown to public policy, in spite of the fact that it has an important slice of the national economy, with a significant share of turnover and an important number of micro, small and medium training industries.

To address this, research should provide knowledge of the economic make-up of the adult and continuing education market in the 27 EU countries, the fundamental characteristics of the economic actors, the dynamics that determine its growth or depression, the trends regarding absorption of innovations applied to training (ICT), the processes of market globalisation and the role of the large consultancy and training multinationals.

The results should help us to understand which strategies and policies can ensure more effective governance of adult and continuing education.

### *2. Developing learning potential and innovation ability in workplaces*

The Council recommends “ensuring flexible arrangements adapted to different training needs of adults, including in-company training and workplace-based learning” (Council Resolution on a renewed European agenda for adult learning, 2011/C 372/03).

The personal and professional growth of people working depends, first of all, on the quality of the job and its learning potential. Research has provided quite an in-depth picture of the factors that determine the learning potential of a workplace, but we still have limited knowledge of the way in which learning potential is activated in different kinds of people.

This implies that we need to study the interconnections between the fundamental factors of people-management policies and their training implications. It means knowing the various ways in which factors interact, among them: the training contents of the work being carried

out, the prospects of career development, the benefits of educational importance, compensation policies, the sense of belonging and value sharing.

Research should determine how the combination of these factors can be managed for the personal and professional growth of workers. Likewise, a study should be made of the internal and external factors of a company that determine growth in the ability of individuals and work groups to innovate. In this case too, the end result should be knowledge of the types of public policy that increase people's innovation ability in workplaces.

### *3. Guaranteeing the pertinence of learning opportunities with respect to the demand for skills*

Adapting and developing the skills supply of the active population is a fundamental function of adult and continuing education. Research periodically provides data related to the demand for skills, present on the job market and in its various articulations, in the short and medium period.

Yet there is a passage of the skill creation chain that, if not adequately managed, risks taking value from the preceding needs analysis. It is the translation of training needs into a training offer. What is it that guarantees that the training response allows the acquisition of knowledge, skills, or attitudes that enable one to effectively perform the activities of a given occupation or function to the standards expected in employment?

Without convincing answers to this question, training effort risks being wasted.

This matching function is managed today by governments, by applying national standards (curriculum vitae or standardised didactic units), or by using processes determined by the opinions of the actors involved or, more simply, by the offer available.

Research should determine how public policies can support the planning of personalised training responses.

In educational design, "Training decision support systems" based on artificial intelligence can play a significant role. "Intelligent decision support systems", through the interpretative analysis of large-scale needs data with intelligent and knowledge-based methods, allow planners and designers to quickly gather information and process it in various ways in order to take decisions about the more appropriate learning pathway.

The device should be created both for planning the training offer on a territorial and organisational level, and for specific training activities.

### *4. Expanding the effectiveness of learning actions*

Research developed within the framework of neurosciences, if applied to adult and continuing education, can have an impact on the effectiveness of learning actions. "An improved dialogue between neuroscience and education will be critical in supporting the development, application and evaluation of educational programmes based on a sound scientific understanding of the brain" (Howard-Jones, 2008:16)

Neuroscience research has already achieved important results that can help build learning environments that encourage learning development. Changing the life and work environment

has a direct impact on the brain and its behaviour. This field of research is particularly important for managing learning processes in the workplace. Research can help understand how to adapt them to the various learning and performance needs.

Interdisciplinary research that unites education sciences and neurosciences can help adult and continuing education policy-makers understand how to conceive regulatory interventions that make possible the intentional management of informal education generated by the work environment and in other types of context.





# Annexes

## Annex 1 – List of References

Arundel, A., Lorenz, E., Lundvall, B.-Å., Valeyre, A. (2007), How Europe's economies learn: a comparison of work organisation and innovation mode for the EU-15, in: *Industrial and corporate change*, Vol. 16. No 6, pp. 1175-1210.

Barrow, S., Mosley, R. (2005), *The Employer Brand, Bringing the Best of Brand Management to People at Work*, Chichester, John Wiley & Sons.

Bauer, J. (2008), *Learning from Errors at Work Studies on Nurses' Engagement in Error-Related Learning Activities*, Regensburg, University of Regensburg.

Bassanini, A., Booth, A., Brunello, G., De Paola, M., Leuven, E. (2005), *Workplace Training in Europe*, in: IZA DP No. 1640, Bonn.

Beblavy M., Thum, A-E., Potjagailo, G. (2012), Where and when does adult learning happen? A cohort analysis of adult education acquisition in Europe, Neujobs Working Paper N. 4.3.2.

Broek, S.D., Buiskool, B.J., Hake, B. (2010), *Impact of ongoing reforms in education and training on the adult learning sector (2nd phase). Final report*, Zoetermeer, the Netherlands Research voor Beleid.

Bruce, L., Aring, M.K., & Brand, B. (1998). Informal Learning: The New Frontier of Employee & Organizational Development. In *Economic Development Review*, 15(4): 12 – 18.

Cedefop (2008a), *Terminology of European education and training policy- a selection of 100 key terms*, Luxembourg: Office for Official Publications of the European Communities.

Cedefop (2008), *Sectoral training funds in Europe*, Tesseloniki, Luxembourg: Office for Official Publications of the European Communities.

Cedefop (2009 a), *Using tax incentives to promote education and training*, Tesseloniki, Luxembourg: Office for Official Publications of the European Communities.

Cedefop (2009 b), *Future skill supply in Europe. Medium-term forecast up to 2020: synthesis report*, Luxembourg: Office for Official Publications of the European Communities.

Cedefop (2010), *Skills supply and demand in Europe Medium-term forecast up to 2020*, Luxembourg: Publications Office of the European Union, 2010.

Cedefop (2011), *Learning while working. Success stories on workplace learning in Europe*, Luxembourg: Publications Office of the European Union.

Cedefop (2012), *Learning and innovation in enterprises*, Luxembourg: Publications Office of the European Union.

Collins. R. (1979), *The Credential Society: An Historical Sociology of Education and Stratification*, New York, Academic Press.

Cross, J. (2007). *Informal Learning: Rediscovering the Natural Pathways that Inspire Innovation and Performance*, Pfeiffer, San Francisco, CA.



Cseh, M., Watkins, K. E., & Marsick, J., Victoria (2000), *Informal and incidental learning in the workplace*, in G. Straka (Ed.), *Conceptions of self-directed learning: theoretical and conceptional considerations* Munster, Waxmann: pp. 59-74.

Davies, PH (2004), *Is Evidence-Based Government Possible?*, Jerry Lee Lecture 2004, 4th Annual Campbell Collaboration Colloquium Washington DC, 19 February 2004.

Desjardins, R. (2004), *Learning for Well Being: Studies Using the International Adult Literacy Survey*, Institute of International Education, Stockholm University, Stockholm.

Dohmen, D., Timmermann (2010), *Financing Adult Learning in times of crisis*, Brussels, GHK.

Dockery, A.M., Miller, P.W. (2012), *Over-education, under-education and credentialism in the Australian labour market*, National Centre for Vocational Education Research – Australian Government, Adelaide.

Eraut, M., Hirsh, W. (2007), *The Significance of Workplace Learning for Individuals, Groups and Organisations*, Oxford & Cardiff University, ESRC Centre on Skills, Knowledge and Organisational Performance.

Ericsson, K. A. (2006), *Reproducibly superior professional performance in a changing world: How it is maintained and improved by deliberate practice*. Presentation at the EARLI SIG Professional Learning and Development Conference, Heerlen, The Netherlands.

Eurofound (2007), *Fourth European Working Conditions Survey*. Luxembourg: Publications Office.

Eurofound (2011), *Educational and training services: Anticipating the challenges. Overview report*, Dublin, Authors: Tine Andersen, Hanne Shapiro, Tom Loney and Clara Emilie Ellegaard.

Eurofound (2012), *Fifth European Working Conditions Survey*, Publications Office of the European Union, Luxembourg.

Eurofound, (2012b), *Work organisation and innovation*, Publications Office of the European Union, Luxembourg, Authors: Cox, A., Rickard, C., Tamkin, P.

European Commission (2009), *Guidance for assessing Social Impacts within the Commission Impact Assessment system*, Ref. Ares (2009)326974.

European Commission (2010), *An Agenda for new skills and jobs: A European contribution towards full employment*, Strasbourg, 23.11.2010 COM 682.

European Commission (2010b), *A New impetus for European cooperation in vocational education and training to support the Europe 2020 strategy: Commission Communication*, Documents COM(2010) 296.

European Union, Council (2011), *Council Resolution on a renewed European agenda for adult learning*, Official Journal of the European Union, 2011 C372.

European Commission (2011b), Commission Staff Working Document. *Progress towards the common European objectives in education and training (2010/2011). Indicators and benchmarks*, Brussels, SEC, 2011, 526 final.

European Commission, Directorate-General for Research and Innovation, Social Sciences and Humanities (2012), *Global Europe 2050*, Luxembourg: Publications Office of the European Union.

European Commission, Eurostat (2012), *CVTS 4 Manual*, Version 6.

Federighi, P., Torlone, F., edited by (2010), *Low skilled take their qualifications "one step up"*,. Final Report of the Study "*Enabling the low skilled to take their qualifications one step up*", the European Commission-DG EAC, Firenze University Press.

Ferraz, C., Finan, F., Moreira, D.B. (2012), *Corrupting Learning: Evidence from Missing Federal Education Funds in Brazil*, Bonn, IZA DP No. 6634.

Ferrier, F., Dumbrell, T., Burke, G. (2008), *Vocational education and training providers in competitive training markets*, National Centre for Vocational Education Research – Australian Government, Adelaide.

Fischer, A., Greiff, S. and Funke, J. (2012), *The Process of Solving Complex Problems*, The Journal of Problem Solving, 4(1), 19 – 42.

Fouré, J., Bénassy-Quéré, A., Fontagné, L. (2012), *The Great Shift: Macroeconomic Projections for the World Economy at the 2050 Horizon*, CEPII Working paper 2012-03. Available at <http://www.cepii.fr/anglaisgraph/bdd/baseline.htm>, also in The CEPII Newsletter, N° 49, 1Q 2012.

Funke, J. (2009), *Complex problem solving: a case for complex cognition?*, Cognitive Processing, 11(2), 133 – 142.

Glendon, I., Clarke, S. G., & McKenna, E. F.(2006), *Human safety and risk management*, Boca Raton, FL, Taylor and Francis.

Greiff, S. (2012), *Dynamic Problem Solving: a New Assessment Perspective*, Forthcoming in Applied Psychological Measurement.

Hallak, J., Poisson, M. (2007) *Corrupt schools, corrupt universities: What can be done?* Paris: UNESCO Publishing.

Harward, D. (2012), *How big is the training market?*, in: [www.Trainingindustry.com](http://www.Trainingindustry.com)

Hoegl, M., Gemuenden, H.G. (2001), *Teamwork Quality and the Success of Innovative Projects: A Theoretical Concept and Empirical Evidence*, in: *Organization Science*, Vol. 12, No. 4, July–August 2001, pp. 435–449.

Hoskins, B., Cartwright, F., Schoof, U.(2010), *Making Lifelong Learning Tangible! The ELLI Index – Europe 2010*, Gütersloh, Germany, Bertelsmann Stiftung.

Howard-Jones, P. (2008), *Neuroscience and Education: Issues and Opportunities. A Commentary by the Teaching and Learning Research Programme*, London, ESRC

IASA, [www.IIASA.ac.at](http://www.IIASA.ac.at), Population and Human Capital. KeyNote (2012), *Training Market Report 2012*. [www.KeyNote.co.uk](http://www.KeyNote.co.uk)

LLL2010 (2011), *Final integrated Report Towards a Lifelong Learning Society in Europe: The Contribution of Education System*, Tallin, Working Paper n. 77, compiled by Ellu Saar and Triin Roosalu.

Lutz, W., Goujon, A., Wils, A. (2005), *Forecasting Human Capital: Using Demographic Multi-State Methods by Age, Sex, and Education to Show the Long-Term Effects of Investments in Education*, Working Paper WP-07-03, Education Policy and Data Center, Washington, DC (Academy for Educational Development).

Maselli, I. (2012), *The Evolving Supply and Demand of Skills in the Labour Market*, in: NeuJobs Forum, Challenges Facing European Labour Markets: Is a Skill Upgrade the Appropriate Instrument?, Intereconomics.

Mikelson, K.S., Nightingale D. (2004), *Estimating Public and Private Expenditures on Occupational Training in the United States*, U.S. Department of Labor Employment and Training Administration NW Washington.

Minchington, B., (2010) *Employer Brand Leadership - A Global Perspective*. Torrensville. Collective Learning Australia.

Monti, M. (2012), *Cambiare l'Italia, Riformare l'Europa. Un'Agenda per un impegno comune*, 23 dicembre 2012.

Morin, E. (2004), *The meaning of work in modern times, Conference. 10th World Congress on Human Resources Management*, Rio de Janeiro, Brazil, August, 20th, 2004.

Mourshed, M., Chijioke, C., Barber, M. (2010), *How the world's most improved school systems keep getting better*, McKinsey & Company, [www.mckinsey.com](http://www.mckinsey.com)

Nilsson, N. J. (2009), *The quest for artificial intelligence. A history of ideas and achievements*, Cambridge, Cambridge University Press.

Ochse, K.L. (2004), *Preventing Corruption in the Education System. A Practical Guide*. Eschborn, Deutsche Gesellschaft für Technische Zusammenarbeit, Commissioned by Federal Ministry for Economic Cooperation and Development, Germany.

OECD (2003), *Beyond Rhetoric: Adult Learning Policies and Practices*, Paris, OECD Publications.

OECD and Statistics Canada (2005), *Learning a Living: First Results of the Adult Literacy and Life Skills Survey*, Ottawa and Paris.

OECD (2010), *Innovative workplaces: making better use of skills within organisations*, Paris, OECD Publishing.

OECD, Statistics Canada (2011), *Literacy for Life: Further Results from the Adult Literacy and Life Skills Survey*, OECD Publishing.

OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing.

OECD and Eurostat (2005), *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*, 3rd edition, OECD, Paris, [www.oecd.org/sti/oslomanual](http://www.oecd.org/sti/oslomanual)

Poisson, M. (2010), *Corruption and Education*, Bruxelles-Paris, International Academy for Education and International Institute for Educational Planning-Unesco.

Reich, R. B.(1991), *The Work of Nations Preparing Ourselves for 21st-Century Capitalism*, New York, Knopf.

Romer, P.M. (1990), *Endogenous Technological Change*, in: The Journal of Political Economy, Vol. 98, N. 5, Part 2: The Problem of Development: A Conference of the Institute for the Study of Free Enterprise Systems (Oct., 1990), pp. 571- 5102.

Romer, P.M. (1994), The origins of endogenous growth, in The Journal of Economic Perspectives, Vol. 8, n.1, pp-3-22.

Rosenboom, N, Tieben, B. (2012), *Marktmonitor private aanbieders van beroepsopleidingen*, SEO Economisch Onderzoek, Amsterdam.

Schoof, U., Blinn, M., Schleiter, A., Diaz, M., Jacob, E (2012), *The German Learning Atlas. Making Lifelong Learning Tangible on a Regional Level*, Gütersloh, Germany, Bertelsmann Stiftung.

Schuller, T., Watson, D. (2009), *Learning Through Life: Inquiry into the Future for Lifelong Learning*, Leicester, NIACE.

SER- Sociaal-Economische Raad (2012), *Werk maken van scholing. Advies over de postinitiële scholingsmarkt*, Den Haag.

Silber, J. M., Condra, P. (2012), *Education and Training*, Equity Research, New York, BMO Capital Markets Corp., September 2012

Simpson, L. (2009), *Sector paper: The private training market in the UK*, IFFL Sector Paper 2, National Institute of Adult Continuing Education, Inquiry into the Future for Lifelong Learning, Leicester.

Statistics Canada, Organisation for Economic Co-operation and Development (2005), *Learning a Living. First Results of the Adult Literacy and Life Skills Survey*, Minister of Industry , Canada and Organisation for Economic Cooperation and Development (OECD), Paris.

Tamilina, L. (2012), *LLLight Project's approaches to human capital measurement*, LLIGHT Project Position Paper, No. 2012-2, p. 19.

Transparency International (2013), *Global Corruption Report: Education*, [http://www.transparency.org/research/gcr/gcr\\_education](http://www.transparency.org/research/gcr/gcr_education)

True, J. L., Jones, Bryan D., Baumgartner, F. R. (1999), *Punctuated-Equilibrium Theory Explaining Stability and Change in Public Policymaking*, in: Paul Sabatier, Editor, Theories of the Policy Process, Boulder-Oxford, Westview Press.

Thum, A-E., Beblavy M. (2012), *Do Acquaintances and Friends make us Learn? Social capital and lifelong learning in Germany*, Brussels, NeuJobs Working Paper N. 4.3.

Van Ours, J.C., Stoeldraijer, L. (2010), *Age, Wage and Productivity*, Bonn, IZA. Discussion Paper No. 4765, February 2010

Vicari, S. (2008), *Conoscenza e impresa*, in Sinergie, n. 76, 2008, pp. 43-66.

## Annex 2 – List of European research projects

INNOSERV – Innovative Social Services Platform ([www.inno-serv.eu](http://www.inno-serv.eu))

LLL2010 – Towards a lifelong learning society in Europe: the contribution of the education system (<http://lll2010.tlu.ee>)

LLLight'in'Europe – LifeLong, Learning, Innovation, Growth and Human Capital, Tracks in Europe ([www.lllightineurope.com](http://www.lllightineurope.com))

NEUJOBS – Creating and adapting jobs in Europe in the context of a socio-ecological transition (<http://www.neujobs.eu>)

WALQING – Work and Life in New and Growing jobs (<http://www.walqing.eu>)

YOUNEX – Youth, unemployment, and exclusion in Europe: A multidimensional approach to understanding the conditions and prospects for social and political integration of young unemployed” (<http://www.younex.unige.ch>)

## Annex 3 – List of Acronyms

ACVET	Adult and Continuing Vocational Education and Training
AES	Adult Education Survey
ALL	Adult Literacy and Life Skills Survey
CEDEFOP	European Centre for the Development of Vocational Training
CEPII	Centre d'Etudes Prospectives et d'Informations Internationales
CVET	Continuing Vocational Education and Training
CVTS	Continuing Vocational Training Survey
ELLI	European Lifelong Learning Index
EWCS	European Working Conditions Survey
IALS	International Adult Literacy Survey
IIASA	International Institute for Applied System Analysis
ICT	Information and communication technology
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
LFS	Labour Force Survey
NAEP	National Assessment of Educational Progress (USA)
NEET	Young people neither in employment nor in education and training
NCVER	National Centre for Vocational Education Research (Australia)
OECD	Organisation for Economic Cooperation and Development
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
R&D	Research and Development
SEO	SEO Economisch Onderzoek
SER	Sociaal-Economische Raad of the Netherlands
STF	Sectoral Training Funds
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VET	Vocational Education and Training
6 and 7 FP	Sixth and Seventh Framework Programmes for Research

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## Definitions

CVET policies address adults who work with “Education or training after initial education and training – or after entry into working life aimed at helping individuals to:

- improve or update their knowledge and/or skills;
- acquire new skills for a career move or retraining;
- continue their personal or professional development.” (Cedefop, 2008a).

Adult education policies refer to a wider field, which includes CVET, and extends to the entire range of formal, non-formal and informal learning activities, general and vocational, undertaken by adults after leaving initial education and training (European Union, Council 2011:3).

Both definitions are consolidated and shared, being the fruit of more than half a century of verifications and improvements (started by Unesco in Helsinki in 1949). They still strongly identify learning with school and training and with some professional courses. Everything that does fall within these systems is considered informal, extraneous and uncertified. However, for adults, particularly in the workplace, acquiring knowledge takes place within strongly structured and regulated processes, no less than learning processes in formal educational systems. This is why research on the subject began to adopt new categories: deliberative training and natural training. The first one corresponds to all activities that intentionally produce people’s personal and professional growth. The second one corresponds to the other activities which are achieved outside a project intentionally built by a social actor.

In the pages that follow we will use data originating from various surveys, each one of which has its definition of the field, not always perfectly comparable or well-defined.

The definition adopted in Eurofound (2012) distinguishes between the concept of “cognitive factors” (which includes work tools, knowledge-management processes, and also skills and learning), “skills” (identified with the capabilities and knowledge that allow work to be carried out), “training” (defined as activity accessed by paying a fee) and “training on the job” (meant as training received on the workplace).

The definition adopted by the Continuing Vocational Training Survey (CVTS) is more restrictive since it refers to the “training” phenomenon, limiting identification to situations in which the training is: planned in advance (is the result of a decision in the enterprise), organised or supported with the specific goal of learning (the primary objective is the acquisition of new competences or the development and improvement of existing competences), and financed fully or at least partly by the enterprise. Hence, the dimension of cognitive factors is not considered. “There must be an actual activity or event or set of activities or events, which can be identified as a specific and separate period of training, rather than an on-going activity that cannot be distinguished from work (learning by experience or random learning is to be excluded)” (European Commission, Eurostat, 2012:21).

The definition adopted by Eurostat ([www.eurostat.eu](http://www.eurostat.eu)) for identifying participation in lifelong learning includes all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences, within a personal, civic, social, and employment related

perspectives. It considers learning activities to be: any activities of an individual organised with the intention to improve his/her knowledge, skills, and competences. Intentional learning (as opposed to random learning) is defined as a deliberate search for knowledge, skills, competences, or attitudes of lasting value. Organised learning is defined as learning planned in a pattern or sequence with explicit or implicit aims.

Formal education is defined as education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous “ladder” of full-time education for children and young people, generally beginning at the age of five to seven and continuing to up to 20 or 25 years old.

Non Formal Education is defined as any organised and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life-skills, work-skills, and general culture.

In the following pages, we will use the term “adult and continuing education” to include both CVET and adult education concepts. It is an expression that has been used in the USA for this purpose since the early 1980s, when the American Association for Adult and Continuing Education was established. Nowadays, the term is also adopted by some national statistical centres (like National Centre for Educational Statistics at USA Department of Education) or by national institutions (like the National Institute for Adult Continuing Education in England and Wales).



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