

# **mutual learning programme** of the european employment strategy

Europäische Kommission – GD Beschäftigung, soziale Angelegenheiten und Chancengleichheit

Synthesis Report

## Increasing investment in human capital through better education and skills

Autumn 2007

George Psacharopoulos  
EENEE

[www.mutual-learning-employment.net](http://www.mutual-learning-employment.net)



## Contents

1. Introduction .....	3
2. Measuring, improving and promoting effects of lifelong learning (Thematic Review seminar, Brussels, 20 September 2007).....	5
3. Matching Supply and Demand (Peer Review United Kingdom, 29-30 October 2007) .....	8
4. Recognition of non-formal and informal education (Peer Review France, 08-09 November 2007) .....	11
5. Increasing employment of older workers through lifelong learning (Peer Review Iceland, 10-11 December 2007) .....	13
6. Policy conclusions .....	17
References .....	18

## 1. Introduction

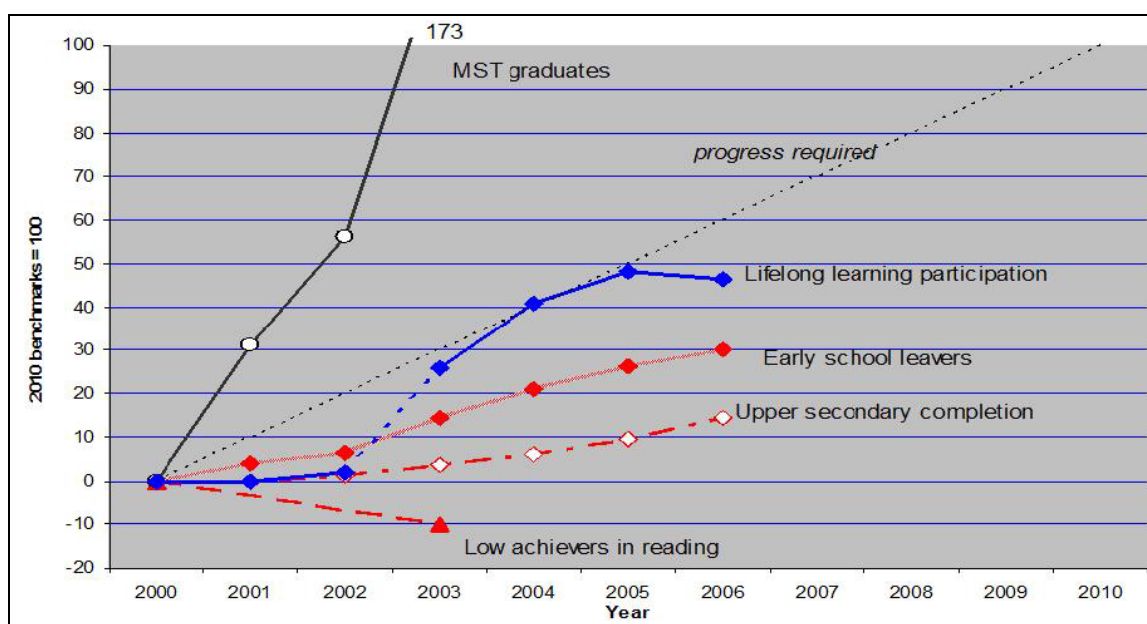
In the research community today it is widely recognised that investment in human capital is the most critical factor for economic and social development. The provision of education and training for skills leads to better employment prospects, higher earnings and productivity (European Employment Committee 2005). For this reason, knowledge and human capital formation are at the core of the Lisbon Agenda and the European Employment Strategy.

It is in this context that the European Commission has chosen “Increasing investment in human capital through better education and skills” as the theme of the autumn 2007 Mutual Learning Programme. The following activities took place in the autumn 2007 Programme: A Thematic Review seminar on “Measuring, improving and promoting effects of lifelong learning” (held in Brussels, 20 September 2007), and three Peer Reviews: “Matching skills supply and demand” (held in Wales, 29-30 October 2007), “Recognition of non-formal and informal education” (held in France, November 8-9, 2007), and “Increasing employment of older workers through lifelong learning” (held in Iceland, December 10-11, 2007). This synthesis draws on the highlights of the above activities to provide a link to the relevant policy issues.

As stressed by David White (Director for Lifelong Learning, Education and Training Policies, DG Education and Culture, European Commission) at the beginning of the seminar, we need to learn new skills and apply ourselves differently if we are going to be able to contribute at and to have a proper place in society. Those who have low skills or no skills are finding that the jobs available to them are moving east and they risk being marginalised in society. Reskilling or skilling those who do not have what is needed is crucial. That is why ministers committed themselves to putting lifelong learning in place in the Member States and most EU countries have already done so. However, there exists a lot of diversity on how different countries put the above research message into practice.

Figure 1 shows the state and progress towards meeting EU benchmarks on investing in human capital and lifelong learning. The starting point in the year 2000 is set in the graph as zero and the 2010 benchmark as 100. The results achieved in each year are thus measured against the 2010 benchmark. The diagonal line shows the progress required, i.e. each year an additional 10% of progress would have to be achieved to reach the benchmark. If a line stays below this diagonal line, progress is not sufficient. Thus there has been a lot of progress on the number of mathematics, science and technology graduates (MST), the benchmark having already been overachieved. But there is still a lot to be done regarding participation in lifelong learning, secondary school completion and achievement in reading.

Figure 1. Progress towards meeting five EU benchmarks



Source: European Commission (2007a).

One of the areas in which a great deal of progress has been made is towards the adoption of a European qualifications framework. Its purpose is to structure the whole system of qualifications across Europe so that movement becomes easier. With the qualifications framework come the whole Bologna Process, the ECTS (European Credit Transfer and Accumulation System) which makes higher learning achievements transferable and compatible, and the ECVET (European Credit System for Vocational Education and Training). The European Qualifications Framework Recommendation is about to be adopted, leading to national qualifications frameworks which will be compatible with it. Amongst other things, it will make it possible for non-formal and informal learning to be validated so those who learnt on the job will not somehow be regarded as inferior to those who learnt in a formal class (European Parliament 2007).

Another area where progress has been made is that of “flexicurity”. Flexicurity aims at ensuring that EU citizens can enjoy a high level of employment security, i.e. the possibility to easily find a job at every stage of active life and have a good prospect for career development in a quickly changing economic environment. It also aims at helping employees and employers alike to fully reap the opportunities presented by globalisation. It therefore creates a situation in which security and flexibility can reinforce each other (European Commission (2007b).

## 2. Measuring, improving and promoting effects of lifelong learning (Thematic Review seminar, Brussels, 20 September 2007)

Back in the 1950s researchers in the United States solved a puzzle in accounting for the sources of economic growth (Abramovitz 1956). Physical capital, labour and land, the three traditional factors of production, failed to explain the growth of national income - output was growing much faster than the inputs. But when the labour input was redefined from a headcount measure to include the quality of such labour, the puzzle was solved (Schultz 1961, Dennison 1967). It was found that by including investment in education in an aggregate production function, much of the previously unexplained residual in economic growth disappeared. This led to what has been described as a "human investment revolution in economic thought" (Bowman 1966). We are fortunate that over the last 50 years we have accumulated a lot of evidence on the effects of education and training on employment, earnings and productivity.

**Education.** The effects of education on socioeconomic outcomes can be traced by following two routes. First, through the labour market, and second, through the wider effects of learning on the individual and society, regardless of labour force participation.

In all countries of the world, more education leads to increased participation in the labour market. In the European Union, the male labour force participation rate of those with lower secondary education is 68%, vs. 81% for those who have completed upper secondary education and 88% for tertiary education graduates. The effect of education on the labour force participation rates of females is even more pronounced, the corresponding participation rates for lower, upper and tertiary education graduates being 47%, 66% and 81%. Once in the labour market, more education translates to higher earnings. In the European Union upper secondary school graduates earn 20% more relative to those whose highest level of educational attainment is lower secondary. And tertiary education graduates earn 50% more than upper secondary school graduates.

Whether the increased earnings of the more educated correspond to increased productivity has been a hotly debated issue in the economics of education. Back in the 1970s a thesis has been forward that education might just be a screening device separating the more able from the less able workers (Arrow 1973). E.g., if differential ability could be assessed by a one-hour test, four years of university education might be a social waste. Today, based on a series of econometric evidence on identical twins and natural experiments we are confident that the screening effect has been overstated and that education has a productive value (Ashenfelter and Krueger 1994, Card 1999).

The extra earnings of the more educated over their lifetime can be compared to the costs of obtaining that extra education, leading to estimates of the rate of return to investment in education. Such rate of return can be estimated from the private point of view, i.e. comparing the after tax earnings differential of the more educated to what individuals pay for their education and forgo in terms of earnings while in school. For example, OECD (2006a) estimates of the private rates of return to investing in higher education in Europe range from 8.3% in Denmark to 22.6% in Hungary. These are extremely high rates of return compared to the yield of Bank deposits.

Social rates of return compare the before-tax earnings differentials of the more educated to the full resource cost of education, the latter including what the state pays for running schools and universities. Given the higher social cost, social rates of return are lower than private rates. According to OECD (2006a) estimates, the social rate of return to higher education in Europe ranges from 7.5% in Sweden to 13.7% in the UK. Still, such rates are much higher than the yield of alternative social investments in most countries.

Beyond the above effects that are readily observed in the market, education is associated with a host of indirect benefits that accrue to the society at large, such as less criminality, better health, increased voter participation, increased tax revenues, and less reliance on state benefits (OECD 2006b).

**Training.** When it comes to the effects of training the available evidence is not as rich as it is for education. The reason is that training is a more diverse activity taking place not only in vocational schools but also on the job. Thus one year of training in a vocational school may lead to a different level of qualification and job performance relative to training provided in a firm.

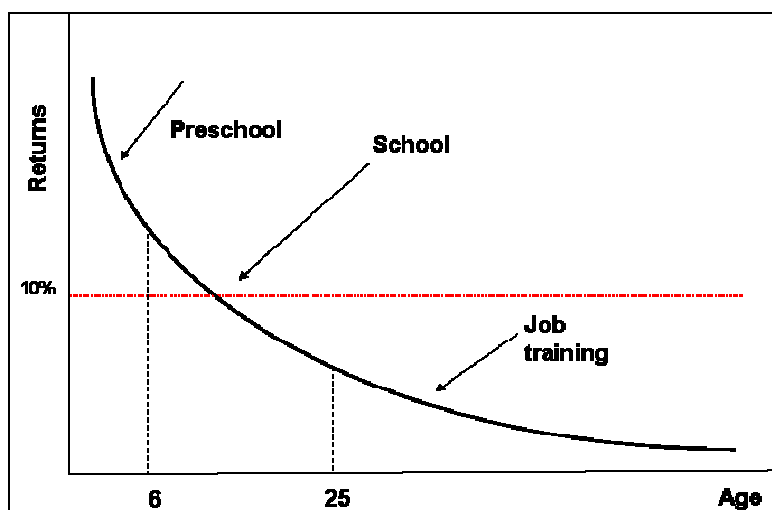
Evidence on the returns to training in the European Union is limited to a handful of countries. Most empirical studies have measured training by the incidence of participation, rather than by its length or its nature. In the UK Blundell et al. (1996) find that participation in employer provided on-the-job training increases wages by 3.6% for men, while for women there is no significant effect on wages. Participation in off-the-job training has higher returns, about 7% for men and 5% for women. When training is measured in term of its length, Booth (1993) finds that in the UK the returns to employer-provided training range from 1.0% to -0.2%.

Due to measurement problems, there is even less evidence on the productivity effects of training. In the UK, Dearden et al. (2000) find that increasing the proportion of trained workers in an industry by 5 percentage points leads to a 4% increase in value added per hour. In Italy, Brunello (2004) finds that a 10% increase in the number of hours of training increases productivity by 1.3%.

Given how little we know on the effects of training the OECD has launched a major new survey of adult skills (PIAAC) that should shed more light on the **benefits of lifelong learning**. PIAAC will measure consistently across countries the incidence and volume of training as well as the benefits of learning. It will be able to link adult learning to skills directly and provide a clearer picture of the returns to skills.

**The big picture.** Nobel Laureate James Heckman and his colleagues (Heckman 2000, Cunha et al. 2006) have synthesised what we know today on the social returns to the two forms of investment in human capital formation, as depicted in Figure 2. Thus, taking into account the full spectrum of education and training, the highest returns are associated with preschool education, followed in a descending order by primary education, secondary education, higher education and last training. In other words, the lower and the more general the kind of education or training, the higher the social returns. Such pattern is explained by the fact that early learning begets later learning.

Figure 2. Investment in preschool yields the highest social returns



Country performance. Based on the above background, European countries differ widely on the state of their education and training systems, as well as on the policies they are following for the improvement of lifelong learning. Whereas preschool education seems to be an absolute priority for reaping social returns, the average preschool coverage in the EU is 74% while in Ireland, Poland and Greece the preschool coverage rate is less than one third of the 3-4 years old population. Secondary students are learning less well in reading, mathematics and science in the Slovak Republic, Greece, Italy and Portugal relative to others (OECD 2004a).

In Europe 15% of students never complete upper secondary education, relative to the 2010 Lisbon benchmark of 10%. Regarding higher education, only two European universities appear in the list of the World's top-20 according to the Shanghai index - Cambridge and Oxford (Shanghai Institute of Higher Education 2007). Heidelberg, an old prestigious university, now ranks 66.

There is also wide variation among European countries regarding what they spend on education. Recent Member States spend about one third of Denmark, Austria and Norway. And the private share of the GDP spent on education is 0.6% in Europe, relative to its main competitor the United States that spends 2.4% of the GDP on education.

When it comes to training, participation of employees aged 25-64 in some form of training exceeds 50% in Scandinavian countries, whereas the typical value in most countries ranges between 10% and 40%. The average number of hours per employee ranges from 5 to 35.

In September 2000, England introduced Individual Learning Accounts (ILAs), aiming at widening participation in learning and helping to overcome financial barriers to learning faced by individuals. ILAs were available to everyone to pay for learning of the learner's choice. However, the scheme was far more popular than expected, so that the government had to announce the withdrawal of the scheme in October 2001. There were concerns about how the scheme was being promoted and about abuse of the system by learning providers, offering low value and poor quality. Thus the system was reformed, starting with two pilot projects in September 2007.

Norway has a policy on validation and recognition of non-formal and informal learning. The Norwegian lifelong learning strategy started in 1999 with the so-called Competence Reform, which gave all adults a statutory right to education, acknowledged the workplace as an important learning arena and established a system for validation and formal recognition of non-formal and informal learning.

**Partnership approach.** The social partners emphasise the importance of lifelong learning to fulfil the Lisbon objectives. Particular focus should be given to increasing the labour market participation of older workers and their involvement in training activities. The value of age was often underestimated. They advocate the right of transferability - if an employee changes company it has to be ensured that his or her training and knowledge will be recognised by the new employer. The motivation of adults to take up lifelong learning was an issue often neglected. Lifelong learning is also a tool to create better citizens. Although much had been said on the link of lifelong learning to employment, its social aspect should not be overlooked.

For a coherent education and training policy to succeed, several partners have to cooperate, e.g. the Ministry of Education, the Ministry of Labour, employers' associations and labour unions. This is exemplified in the Welsh approach to tackling skills issues that involves a high degree of partnership between the key stakeholders. It also reflects the commonly-held view that the training system is too dominated by the providers. The perceived need, therefore, is for a more demand-led approach and a key development (which applies across the UK) has been the creation of 25 Sector Skills Councils which are employer-led but, at the same time, involving other partners in the joint determination of what is needed in a particular sector.

### 3. Matching Supply and Demand (Peer Review United Kingdom, 29-30 October 2007)

At the end of World War II most countries introduced a system of manpower planning aiming at forecasting the number of qualified workers needed for economic growth and matching the supply and demand for skills (Psacharopoulos 1985). Such effort was supported by international organisations like the OECD, the World Bank and the ILO (Psacharopoulos 1991). An evaluation of the record of manpower forecasts conducted at the London School of Economics in the early seventies casts a serious doubt on the validity and usefulness of such forecasts (Ahamad and Blaug 1973). It was found that the forecasting errors were of the order of 1000% and the plans did little in reducing unemployment. Although the practice of manpower planning has diminished thereafter, many countries - as evidenced by this Peer Review - continue to make attempts to reduce the gap between skill supply and demand by less ambitious means.

Country diversity in their approach to matching the supply and demand for skills and lack of evaluative evidence on the result of such efforts are the major findings of the Welsh Peer Review.

There is no evidence that the supply of skills has matched demand. *Prima facie* evidence to this is the diametrically opposite situation of the Netherlands and the United Kingdom. Whereas several schemes have been attempted in the UK to match supply and demand, no such practice

exists in the Netherlands. Yet, the unemployment rate in both countries is virtually identical in the 3-4% range (OECD 2007a).

The development of the Welsh approach to the matching of skills supply and demand is set in the context of the devolution of skills and education policy to the constituent countries of the UK (although employment policy remains a UK-wide responsibility),

This is assisted by the work of Future Skills Wales which, over the past eight years, has been engaged on a research programme that involves numerous bodies such as schools, training providers and employers (and a series of surveys looking at employers' skill requirements), with the aim of providing a common backcloth to Welsh employment and skills policies. Associated with this, is the more recent development of a skills observatory that is bringing all the relevant data into one place for ease of access and aiming to allow the development of interactivity whereby users can not only access the data, but also contribute to it on an ongoing basis.

The approach taken in Wales to some extent reflects the employment and skills framework in England, although the opportunities for a higher degree of cooperation exist in the smaller Welsh situation. However, while there appears to be some coherence between the various Welsh initiatives, all the bodies involved are at a relatively early stage in their development and so any evaluation to date has tended to be formative, and evidence of impact is limited.

The participating countries took varying perspectives on how transferable the Welsh approach would be. Many participants felt that the most notable feature of the Welsh model was the high degree of co-operation and partnership between the various stakeholders - government, intermediary organisations and employers. Also impressive was the attempt to integrate the 'three points of the triangle: skills policy, employment policy and business development policy. For some, the sector approach had much to merit it, while others pointed to the importance of an occupational focus that often transcended sector groupings. There was also some debate about the need for a more regional or local labour market focus where most skills are acquired and ultimately used, though this has to be considered in the context of the more centralised approach to education and training in some countries - sometimes underpinned by training levies on employers. Furthermore, in some of the more dynamic economies of the EU there was felt to be little scope at present in adopting an employer-led approach in the face of high labour turnover and low investment in skills acquisition. Concerns were also raised by some representatives of new member states, regarding the potential cost of adopting the Welsh approach, and it was argued that the most appropriate strategy would be to integrate elements of the Welsh approach into the existing institutional structure, rather than attempting to create new structures along the Welsh lines; in several countries (e.g France), although the institutional landscape was very different to that in Wales, there could, nevertheless be observed 'functional equivalents' of various aspects of the Welsh approach.

In Wales there are three main schemes for matching skills supply and demand:

- *Future Skills Wales* refers to a partnership between the Welsh Assembly Government, national public agencies concerned with education and economic development and bodies representing employers, employees and education and training providers. A principal activity of the partnership is to conduct large scale surveys of employers to assess skills demand and households to assess skills supply.
- The *Learning and Skills Observatory for Wales* collects a range of statistical information including, for instance, hard-to-fill vacancies. This evidence is then combined with further

information gathered from discussions with businesses, training providers, employer and sector specific bodies to help identify those areas that could benefit from improving the skills of the workforce

- *Sector Skills Councils* are employer-led organisations that cover specific sectors across the UK e.g. construction and automotive industries. The Councils produce Sector Skills Agreements setting a longer term agenda for raising productivity in each sector.

An impact assessment of Future Skills Wales has shown that efforts to engage employers directly with the FSW process met only very limited success. As yet there is lack of evidence that the above efforts have had a significant effect on the level or relevance of working skills. Only a minority of employers (13%) were aware of the sector skills councils. And of those who had heard of them, only 9% had any dealings with them in 2006.

Unlike Wales, in the Netherlands there is no clear overall strategy on this topic and no will to establish a Learning and Skills Observatory. The budgets of regional training centres are to a large extent publicly financed and based on the number of students and do not have an incentive to provide the supplies of graduates in the educational fields that meet the needs of the labour market.

In France 'Trades and Skills Prospects' provides information to companies, business sectors, social partners, employees, national and regional public authorities on the foreseeable changes in the labour market. CEREQ ('Centre d'études et de recherches sur les qualifications') conducts longitudinal surveys on school-leavers in order to understand the transition from school to work.

There are two structural constraints that may prevent the transferability of the Welsh experience to France: First, the Welsh model would suppose a retreat of the role of the state in setting skill priorities rather than employers, something that is opposite to the French tradition, and second, the Welsh strategy puts emphasis on the sectoral level whereas in the French case the regional level appears much more important in terms of setting skills priorities. Transferability of the Welsh experience to Bulgaria is also limited because its labour market is more regulated relative to the Welsh labour market.

Estonia seems to rely on a version of the classic manpower planning where labour needs forecasts are broken down into 34 sectors and 5 occupational groups. Employers feed information into the planning and implementation of state-provided education, but in some cases employers are not fully motivated to participate in this exercise. The economy of a small country such as Latvia is heavily influenced by exogenous factors, hence it is very difficult to forecast labour market needs.

#### 4. Recognition of non-formal and informal education (Peer Review France, 08-09 November 2007)

Back in 1996 OECD education ministers agreed to develop strategies for 'lifelong learning for all'. The concept of 'from cradle to grave' includes formal, non-formal, and informal learning. Contrary to formal learning that takes place in a school or a training centre, non-formal learning refers to an activity that is not usually evaluated and does not lead to certification (OECD 2007b). Typically, learning that occurs outside formal education is not well understood, made visible or appropriately valued. The recognition of non-formal learning is important for making lifelong learning a reality.

As shown in Table 1, the rate of participation in non-formal learning varies widely between countries. In Sweden, Denmark and Finland more than one third of workers receive non-formal training, whereas in Italy, Greece and Hungary participation is a mere 4%. Similarly, the length of non-formal training in a worker's lifetime ranges from nearly two years in Denmark to only two months in Italy.

Table 1. Participation rate and months in non-formal education and training, 2003

Country	Participation (%)	Total months in 40 yrs.
Sweden	40	16
Denmark	39	23
Finland	36	17
UK	27	8
Austria	19	11
France	19	18
Slovak Rep.	19	6
Belgium	16	12
Germany	12	10
Czech Rep.	11	5
Ireland	11	5
Netherlands	9	7
Poland	9	3
Portugal	7	9
Spain	6	6
Greece	4	3
Hungary	4	6
Italy	4	2
OECD average	18	2

Source: Based on OECD (2007a), Table C5.1a

The relatively low incidence and length of non-formal training helps to explain the fact that most countries in the Peer Review do not have a system of recognition in place. Although the importance of recognition is acknowledged by all, it is an exception for a country to have an institutional mechanism for validating knowledge obtained outside the formal school system.

France was chosen as the host country for this Peer Review because it has such system in place. A 2002 Law established the individual right not only to non-formal professional experiences, but also to personal informal learning. The validation of non-formal and informal learning (VAE) aims at supporting the most disadvantaged people in the labour market.

The validation process starts with the candidate's application to the authority that issues the title. The authority verifies that the candidate meets an experience of three years minimum in connection with the targeted certification. The candidate is assisted to prepare a dossier for submission to the certifying jury composed of a minimum of a quarter of professionals. The jury is determined on the basis of the candidate's dossier or professional situation, as well as an individual interview. Since the inception of the law, over 71.000 titles and diplomas have been issued by the three principle certifying ministries.

The complexity of information to master in order to apply, from the choice of certification up to the method of financing and the required deadlines create obstacles to overcome, particularly for disadvantaged groups. The effect of the validation on the professional development of marginalised groups has not yet been assessed. The practice of validation within firms has been modest.

Some employer associations and trade unions are not very enthusiastic about the validation in order to protect their jobs. For example, validation of assistant pharmacist qualifications has been resisted by the National Joint Commission of Pharmacists. The same applies to the nursing trade unions because of the fear that this could reduce the value of qualifications in their profession. Empirical proof of the value of a VAE qualification in the labour market is still missing.

*Bulgaria* also has instituted validation of non-formal training in a 1999 Law. Persons may claim the issuance of a certificate validating their skills if they have been engaged with the professional activities in question for at least 6 months prior to validation, or after practical training for a period defined by the training institution. At present, there is no information on the number of obtained validations.

In *Cyprus* the validation of prior learning is centralised. A 1999 law was set that aimed to introduce standards for vocational qualifications. The Ministry of Education is the main promoter and coordinator of adult education in Cyprus. Although the validation of non-formal and informal learning is not high on its agenda, the Ministry does have the intention to start working towards the validation process in the near future. But given the small size of the Cypriot economy, the decentralised system of France where award authorities are many, competing with each other on the market of qualifications, is perhaps an example to avoid.

In *Greece* there is no overall lifelong learning strategy other than sporadic actions financed through the Structural Funds. The weaknesses in this field mainly stemmed from the absence of systematic recording of labour demand characteristics and consequently from the failure in recognising training demands. In the private sector, certification is offered by private educational institutes for courses offered by them but these are not officially recognised by the State. Some

major private companies (in particular in the banking and IT sector) provide certification for the in-house training courses their employees participate in.

In *Latvia* also non-formal education is accredited in a non-systematic way and there are no state regulations on validation of prior learning and work experience.

The validation system in the *Netherlands* is less transparent than the French. Qualification for employability reasons is voluntary or on demand by the employer. The Dutch system gives to the individual part of the controlling power in the validation process, and less to the education system.

The *Norwegian* system for validating non-formal competencies gained from experiences in the labour market and informal competencies in civil society is fairly advanced. Individuals with sufficient practical work experiences can take a crafts examination without passing the normal apprenticeship route and the candidates can have their theoretical training and/or apprenticeship period shortened. The unemployed can have their non-formal and informal learning assessed for free by the employment service. Immigrants who cannot provide enough documentation for their skill level can go through vocational testing in order to assess their prior learning. Adults with a right to complete their education up till the level of upper secondary school can have their prior learning assessed for free. The assessment can entail shortening of their studies.

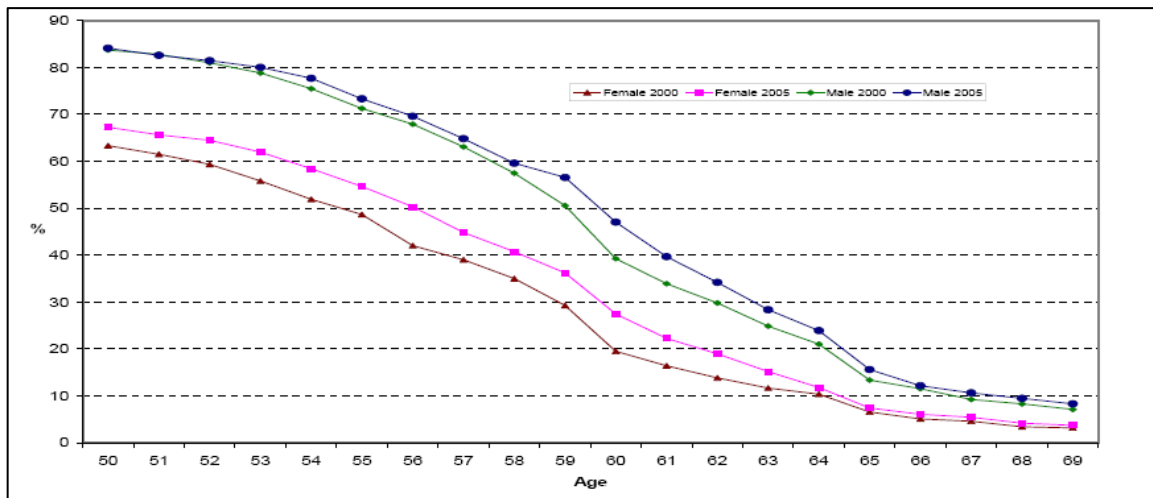
The *Swedish* system of validation is still in a phase which is not yet as developed as the French system. The VAE system in France is a national regulated system, related to a vast variety of vocations. In Sweden, the development of validation has so far focused on developing methods and systems of validation in relation to specific vocations. Yet, there is no national regulated system of validation in itself.

## 5. Increasing employment of older workers through lifelong learning (Peer Review Iceland, 10-11 December 2007)

One of the objectives of lifelong learning is to increase the employment chances of older workers. All countries in the Peer Review and beyond face the problem of a rapidly aging population. This demographic transition accentuates the challenge of employing a rising number of older workers. Human capital, as any other kind of capital, depreciates with age. Receiving education and training say, in mid-career, may not only prevent job loss but also increase earnings and permit retirement at a later age. Increasing the participation of seniors in the labour market is part of the Lisbon Strategy. In March 2001, the Stockholm Council set at 50% employment target for seniors (aged 55 to 64 years) by 2010 in the European Union.

As shown in Figure 3 the employment rate of seniors declines sharply with age, especially after the age of 59.

Figure 3. Employment rate of seniors by age and sex in 2000 and 2005, EU-25 (%)



Source: Eurostat (2006)

In Europe countries differ widely in the labour force participation of older employees. In EU-25 the employment rate of seniors stood at 42.5%, being higher in Scandinavian countries and lowest in ex-Soviet countries. Iceland, however, has a record 85% labour force participation of seniors aged 55 to 64. As evidenced from this Peer Review, there are several factors that help to explain why senior labour force participation rates vary between countries.

**Retirement age.** In Iceland the retirement age is 70 whereas in countries of the former Soviet Union the retirement age until recently was as low as 55 years old. Late retirement is part of the accepted culture in Iceland whereas the same does not apply to Germany that is far from a 'pro-early-retirement-consciousness' due to nearly three decades of early exit practices. In the Czech Republic communist ideology gave people a statutory retirement age of 55 for women and 60 for men. In the Czech Republic the statutory retirement age will be 63 in 2013.

**Government programmes.** In Iceland there is a "50+" government programme, with the special task of facilitating the participation of the older age groups in the labour market. Such a programme does not exist in other countries. Lifelong learning is a concept which in Germany is practically non-existent.

**Financing of training.** In Iceland the state contributes financially to the running of adult education enterprises. This is done through contributions from the unemployment fund of the Ministry of Social Affairs and from the Ministry of Education. The government and municipal spending on adult education is about 1% of the total spending on education. Iceland applies a system of co-financing of LLL, which involves government, employers and employees, all contributing to the funding of training. By contrast, in Greece the investment by enterprises in training of adults (direct cost and labour cost of participants divided by total labour cost) is the lowest in the EU (0.9) comparing to 2.3 for EU-27. In Germany there is no law at the Federal level to allow financing of further education.

**Role of the unions.** In Iceland labour unions and employer associations assume responsibility for training older workers. This is not the case in most countries where there are no institutions that pay special attention to those that are least likely to participate in lifelong learning. In

Germany there are a few collective agreements which entitle also older workers with skill offers during the working time. But even collectively agreed entitlements are used by a small minority. In the Netherlands the government does not pursue a lifelong learning policy directed at older learners who are not in paid work. Although labour unions in Latvia are involved in organising education for their members, it is not the main focus of their activity. The unions' role in promoting LLL seems less active in Norway and hardly exists in the case of older workers. In Slovenia trade unions are fighting predominantly for basic workers' rights (wages, working time) and are not being proactive in offering education and training opportunities as in Iceland's case.

**Prior formal education.** The level of education is a relevant factor in the employability of seniors. Table 2 shows the differences in the employment rate between levels of formal education. Persons with tertiary education more often have a job than those with lower levels of education. In EU-25, 30.8% of persons aged 55-64 with the lowest education level have a job, compared to 61.8% for those with the highest. The participation of those with the lowest educational credentials is less than in other groups. This confirms the synergy between formal and non-formal education, or confirms Nobel Laureate Heckman's thesis that "earlier learning begets later learning" (Heckman 2000).

**Table 2. Participation of the 55-64 years old in EU-25 (males and females)**

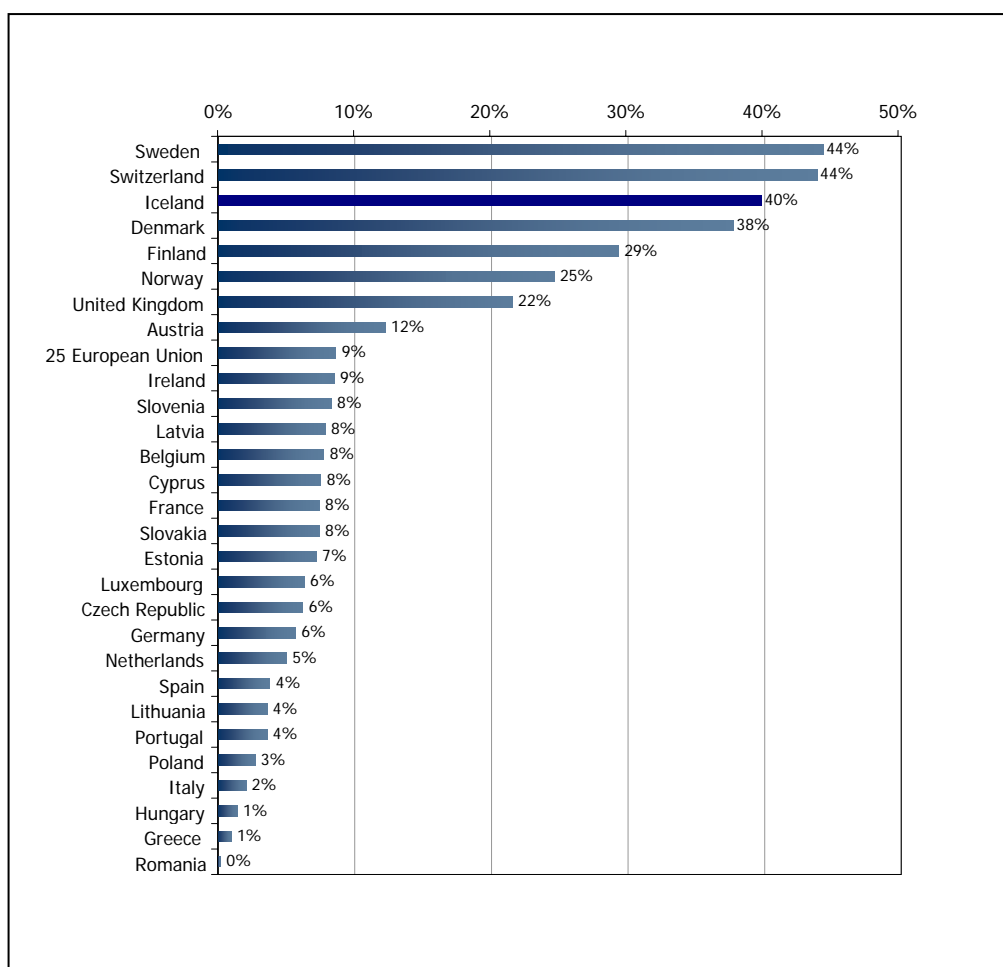
Educational level	Labour force participation (%)
Below secondary	30.8
Secondary	43.3
Tertiary	61.8

*Source: Based on Eurostat (2006).*

Ex-Soviet countries, such as the Czech Republic, face the problem that seniors got a relatively rigid formal education in a period when emphasis was given to vocational schools. The dynamic development of modern and post-modern societies and their labour markets, however, requires education of a radically different kind characterised by a broad general focus.

**Participation in lifelong learning.** As shown in Figure 4 there are marked differences in across EU countries. It so happens that the labour force participation of seniors is higher in countries where seniors participate highly in lifelong learning. In Iceland over a 12 month period 4 out of every 10 persons take part in some kind of non-formal training activity. In Greece only 1.9% of the adult population aged 25-64 participated in lifelong learning activities, compared to 9.6% in EU-27 and to about 40% in Iceland. In Cyprus among those aged 55-64 only 2.7% have received training. The participation rate in non-formal education in Iceland for the 55-64 age group is 40%, while in Cyprus the corresponding figure is only 7%.

Figure 4. Participation in informal education, 55-64 years old



**A booming economy.** As evidenced by the case of Iceland and the UK, labour force participation of seniors increases during the upturn of the business cycle. When the labour market is tight employers are more willing to hire older workers. When there is a downturn, preference is given to younger and cheaper workers. In the UK employers have traditionally treated older workers as a marginal group, to be drawn into the labour market during periods of growth and labour shortage, and ejected in recessions. Most employers do not actively seek to recruit people after the age of 50.

**Supply and demand.** Beyond offering opportunities for older workers to participate in some form of training, often there is no demand for it. E.g., the notion of 'going to school again' is something that a major share of Czech elderly population abhors.

**Barriers.** Discrimination against older workers, due to stereotypes without any economic justification lowers the labour force participation of seniors. For example, there is evidence of age discrimination in the Norwegian labour market where older workers have more often part-time jobs than younger workers.

**Youth unemployment conflict.** In view of the high youth unemployment in Europe, many countries have faced the dilemma of reducing the retirement age to make room for the young, or increase the retirement age in order to employ older workers. In The Netherlands, the low participation of seniors is due to a large degree to policies implemented from the early 1980s onwards, which were intended to remove older workers from the labour market in order to reduce the high level of youth unemployment.

Also in Slovenia early retirement was one of the policy measures used by the Employment Service in the 1990s to reduce the number of unemployed and the burden on the state. In the long term though, such measures increased the inactive-to-active population ratio and endangered the sustainability of the pension system.

Given the pending insolvency of most retirement funds in Europe, Governments are opting for extending rather than reducing the retirement age so as to increase the number of contributing participants to retirees. This might be the correct approach as there is no evidence that older workers displace younger ones. E.g., whereas the retirement age in Iceland is 70, i.e. well above any country in the EU, the youth unemployment rate in Iceland is 8.2% vs. 17.1% in EU-27.

## 6. Policy conclusions

The activities of the semester contributed to our better understanding on how to along with the difficulties and remaining challenges inherent in increasing investment in human capital through better education and skills:

- Lifelong learning strategies need to be comprehensive and should cover all systems and levels of education and training.
- Lifelong learning strategies should be designed in partnership with all the stakeholders, in order to ensure that continuous learning is possible.
- Education dead-ends should be avoided. More efforts should be made to reduce
- drop-outs and early school leaving.
- Learning pathways should be flexible so that workers of all ages are able to participate.
- Prior learning out of the formal school system should be recognized and certified.
- Education and training policies should be evidence-based.
- Special attention should be paid to vulnerable groups such as the immigrants and older workers.

Based on the material presented at the Thematic Review seminar and the Peer Reviews there are a series of policy leads that may assist policy makers to increase investment in human capital through better education and training:

- The evidence on the effects of formal education on socioeconomic outcomes is more solid than investment in training or informal learning. Out of the many steps in the formal education ladder, preschool education seems to have the highest beneficial socioeconomic outcomes. The importance of pre-primary education is increasingly

recognised. It is now known that the best return on educational investment is achieved if it is made during a child's early life. In the first eight years of their lives, children lay down competences in a wide range of areas, in which they subsequently learn. If they do not acquire those competences, they will find it extremely difficult to perform later. The autonomy and accountability of higher education are an accepted objective that is far from being realised yet but on which serious progress is being made.

- Attempting to match the future supply and demand for particular skills continues to be an elusive activity. In many countries unemployment coexists with labour shortages in particular skills. This discrepancy is due to the unpredictable character of technological change.
- Validation of skills obtained through work experience is still in its infancy in most countries. Given the non-institutional character of informal learning, certification of skills obtained outside the formal school and training system remains very elusive.
- Participation in lifelong learning is still relatively low in the European Union. This is due to both supply and demand factors, i.e. training for older workers is not as organized as that for the school age population, and many older workers may not perceive the benefits associated with further education or training.
- The employability of older workers depends more on the institutional retirement age and the amount of prior formal education, rather than participation in lifelong learning. Countries with a long tradition in late retirement exhibit higher labour force participation of older workers.
- Transferability of the experience on the above themes from one country to another is limited to the degree in which the state regulates labour (as in France), relative to the market (as in the UK).

At the same time, there remain a significant number of areas that present a challenges, such as:

- Reducing secondary school-leaving and increasing secondary attainment, in which there are significant failures.
- Increasing the disappointing participation of older workers and low-skilled workers in continuing education.
- Making vocational education and training more attractive, so that it is not seen as a second-class form of education.
- Ensuring that a transition is possible between vocational education and higher education.
- Improving the knowledge base for policy
- Ensuring sustainable funding, which will entail different finance structures at different levels of education
- Raising the skills levels of the population.
- Focusing on people who are at a socio-economic disadvantage – the primary determination of a child's educational performance is still the educational performance of the parents.

- Using the potential of Europe's large and increasing migrant populations, by tackling problems of educational adaptation.
- Ensuring high-quality teaching by introducing new ideas and concepts.

By way of summary, at the present state of our knowledge and experience, the safest bet for a country to increase investment in human capital and create skills, is by giving priority to basic formal education, e.g. increasing preschool participation of disadvantaged groups and reducing the number of early school leavers, or improving cognitive learning. To the extent that there is a solid formal education base, investment in later learning and employment is facilitated. Attempting to put the cart before the horse may further delay the achievement of the Lisbon objectives.

## References

- Abramovitz, M. (1956), "Resources and output trends in the United States since 1870," *American Economic Review*, 46 (2): 5-23.
- Ahamad, B. and Blaug, M. (1973). eds. *The Practice of Manpower Forecasting*. Elsevier, 1973.
- Arrow, K. (1973), "Higher education as a filter" *Journal of Public Economics*, 2: 193-216.
- Ashenfelter, O. and A.B. Krueger (1994). "Estimates of the Economic Return to Schooling from a New Sample of Twins." *American Economic Review* 84(5): 1157-1173.
- Blundell, R., Dearden L., and Meghir C. (1996), *The Determinants and Effects of Work-Related Training in Britain*, Institute for Fiscal Studies, London
- Booth, A. (1993), Private Sector Training and Graduate Earnings, *Review of Economics and Statistics*, 76, pp. 164-70.
- Bowman, M.J. (1966), "The human investment revolution in economics thought," *Sociology of Education* 1 (1): 29-46.
- Brunello, G. (2004), "La formazione continua nelle grandi imprese italiane: un'analisi dei risultati della seconda indagine ISFOL", ISFOL, Rome.
- Card, David (1999). "The Causal Effect of Education on Earnings". In: Orley Ashenfelter,
- David Card (eds.), *Handbook of Labor Economics, Volume 3A*: 1801-1863. Amsterdam: North-Holland.
- Cunha, Flavio, James J. Heckman, Lance Lochner, Dimitriy V. Masterov (2006). Interpreting the Evidence on Life Cycle Skill Formation. in: Eric A. Hanushek, Finis Welch (eds.), *Handbook of the Economics of Education*. Amsterdam: North-Holland.
- Dearden, L., Reed H. and Van Reenen J. (2000), Who gains when workers train? Training and corporate productivity in a panel of British industries, *Centre for Economic Policy Research Discussion, Paper No. 2486*.

- Denison, E.F. (1967). *Why growth Rates Differ?* Brookings Institution, 1967.
- European Commission (2007a). "Delivering lifelong learning for knowledge, creativity and innovation" COM 703. Brussels, 12.11.2007.  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0703:FIN:EN:PDF>
- European Commission (2007b). "Towards Common Principles of Flexicurity: More and better jobs through flexibility and security." Communication from the Commission COM (xxx).  
[http://ec.europa.eu/employment\\_social/news/2007/jun/flexicurity\\_en.pdf](http://ec.europa.eu/employment_social/news/2007/jun/flexicurity_en.pdf)
- European Employment Committee (2005). "Contribution of human capital – Background note"  
[http://ec.europa.eu/employment\\_social/employment\\_strategy/opinions2005\\_en.htm](http://ec.europa.eu/employment_social/employment_strategy/opinions2005_en.htm)
- European Parliament (2007), "Legislative resolution of 24 October 2007 on the proposal for a recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework for lifelong learning"  
([http://ec.europa.eu/education/policies/educ/eqf/index\\_en.html](http://ec.europa.eu/education/policies/educ/eqf/index_en.html))
- Eurostat (2006). *The employment of seniors in the European Union*. Eurostat
- Heckman (2000). "Policies to foster human capital ". *Research in Economics* 54: 3-56.
- Krueger, A.B. (1999). "Experimental estimates of education production function". *Quarterly Journal of Economics*, 114: 497-532.
- OECD (2004a). *Learning for Tomorrow's World – First Results from PISA 2003*. Paris: OECD.
- OECD (2006a). *Education at a Glance*. Paris: OECD.
- OECD (2006b). *Measuring the Effects of Education on Health and Civic Engagement*. Paris: OECD.
- OECD (2007a). *Education at a Glance*. Paris: OECD.
- OECD (2007b). " Recognition of Non-formal and Informal Learning"  
[http://www.oecd.org/document/25/0,2340,en\\_2649\\_37455\\_37136921\\_1\\_1\\_1\\_37455,00.html](http://www.oecd.org/document/25/0,2340,en_2649_37455_37136921_1_1_1_37455,00.html)
- Psacharopoulos, G. (1985). "The Manpower Requirements Approach." In *International Encyclopedia of Education*, eds. T. Husen and N. Postlethwaite. Oxford: Pergamon Press, 1985: 3204-08.
- Psacharopoulos, G.,(1991). "From Manpower Planning to Labour Market Analysis." *International Labour Review* 130 (4): 459-74.
- Schultz, T.W. (1961). "Investment in Human Capital," *American Economic Review*, 51: 1-17.
- Shanghai Institute of Higher Education, Jiao Tong University (2007)  
(<http://ed.sjtu.edu.cn/rank/2006/ARWU2005TOP500list.htm>).

## Autumn 2007 papers of the Mutual Learning Programme of the EES

### *Thematic Review seminar:*

For more information on this Thematic Review Seminar and to view all relevant documents prepared for it (available in English, French and German), please visit:

<http://www.mutual-learning-employment.net/thematicreviews/>

### *Peer Reviews:*

UK: [http://www.mutual-learning-employment.net/stories/storyReader\\$232](http://www.mutual-learning-employment.net/stories/storyReader$232)

France: [http://www.mutual-learning-employment.net/stories/storyReader\\$224](http://www.mutual-learning-employment.net/stories/storyReader$224)

Iceland: [http://www.mutual-learning-employment.net/stories/storyReader\\$220](http://www.mutual-learning-employment.net/stories/storyReader$220)