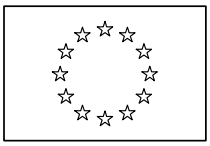

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMISSION STAFF WORKING DOCUMENT

PROGRESS TOWARDS THE LISBON OBJECTIVES IN EDUCATION AND TRAINING

Report based on indicators and benchmarks

Report 2006

CONTENT

Foreword

This Commission Staff Working Paper "Progress towards the Lisbon Objectives in the field of education and training" is the third annual report examining performance and progress of education and training systems in the EU using indicators identified and endorsed by experts from participating countries.

The first Progress report was adopted by the Commission in 2004 (SEC (2004) 73). The report analysed performance and progress since the year 2000 of 30 European countries: the then 15 EU countries, the acceding countries, candidate countries and countries of the European Economic Area. The analysis was based on 29 indicators on education and training that were considered sufficiently comparable and valid by national experts sitting on the Commission's Standing Group on Indicators and Benchmarks. The analysis centred on the five benchmarks for 2010 of European average performance levels adopted by the Council in May 2003 (OJ C 134, 7.6.2003). The second report (SEC (2005) 419), adopted in 2005 by the Commission, continued the analysis of performance and progress drawing, benefiting especially from new 2003/4 data.

This Third Progress Report follows up the analysis of the first two reports. It is based on a indicator tool of 29 indicators and the five benchmarks in the field of education and training which now covers 31 European countries (EU, Acceding Countries, Candidate countries and countries of the EEA). The 2006 report is however significantly more detailed in its analysis of performance and progress than previously. Not only does the analysis benefit from the availability of data time series for a period of up till five years (2000-2005) making it possible to highlight trends, but the analysis has also been enhanced by a series of targeted studies launched by the Commission in specific areas such as access to education, student performance, early school leavers, civics education, financing of education, and mobility.

The 2006 report is divided in two distinctive parts. This Commission Staff Working Paper analyses progress achieved towards the Lisbon objectives in education and training. A second report "Detailed analysis of progress towards the Lisbon Objectives in Education and Training" which is more detailed in terms of its statistical analysis and use of research results. This second report has been prepared in close co-operation with the Standing Group for Indicators and Benchmarks (SGIB) and endorsed by it.

The report is structured around the three Strategic Objectives of the Lisbon process in the field of education and training concerning quality and effectiveness of education and training systems; access to education and training; and the opening up of systems to the wider world. Special focus has been put on the analysis of the second strategic objective in terms of lifelong learning and the phenomenon of early school leaving. The in-depth analysis should make it possible not only to compare performance and growth of countries and eventually to identify best performance, but also to better identify the background variables explaining performance and growth.

The two reports have been prepared in close cooperation with the services of Eurostat supported by input from Eurydice European Unit and CRELL (the Joint Research Centre) the new research unit in Ispra (IT) of the Commission working in the field of "Research on lifelong learning based on indicators and Benchmarks".

EXECUTIVE SUMMARY

Reaching the European benchmarks in the field of education would imply in 2010:

- **2 million fewer young people would have left school early**
- **2 million more would have graduated from upper secondary education**
- **200.000 less 15 years olds would be low performers in reading literacy**
- **4 million more adults would participate in lifelong learning**
- **All students leaving school would be able to communicate in two foreign languages.**

Following the Conclusions of the Heads of State and Governments in Lisbon in 2000 and their endorsement of the common objectives for education and training in Europe in Barcelona, 2002, a radically new process of co-operation was launched in this area, with the overall objective of making education and training systems in Europe a world quality reference by 2010.

Ministers of education agreed on three major goals to be achieved by 2010, namely:
- to improve the quality and effectiveness of EU education and training systems;
- to ensure that they are accessible to all;
- to open up education and training to the wider world.

To achieve these ambitious goals, they agreed on thirteen specific objectives covering the various types and levels of education and training (formal, non-formal and informal) aimed at making a reality of lifelong learning.

In their first two Joint Interim reports[1] of 2004 and 2006 on the implementation of the Education and Training 2010 work programme, the Commission and the Council restate their determination to work towards the agreed goals. In the 2004 report, they agree to work simultaneously on three priority areas namely focus reform and investment on the key areas for the knowledge-based society, making lifelong learning a concrete reality, and establish a Europe of Education and Training. While the 2006 report emphasises in particular the need for reforms to secure the development of high quality education and training systems, which are both efficient and equitable.

This Commission Staff Working Paper "Progress towards the Lisbon Objectives in Education and Training" is the third annual report examining performance and progress of education and training in the EU. The report highlights key analytical messages emerging from a detailed statistical analysis[2] of progress towards these thirteen specific objectives using indicators identified and endorsed by experts from the participating countries.

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[1] *Joint Interim Report of the Council and the Commission: "Education & Training 2010: the success of the Lisbon strategy hinges on urgent reforms (2004)* and 2006 joint progress report of the Council and the Commission on the implementation of the Education & Training 2010 work programme "*Modernising education and training: a vital contribution to prosperity and social cohesion in Europe"*.

[2] Annexed report "*Detailed Analysis of Progress Towards the Lisbon Objectives in Education and Training"(February 2006)* endorsed by experts from the Member States meeting within the Standing Group on Indicators and Benchmarks. European Commission, Directorate General for Education and Culture.

A number of key messages on the progress towards the specific objectives emerge:

In the EU, presently (2005) about 6 million young people (18-24 years olds) have left education prematurely. Reaching the European benchmark of no more than 10% early school leavers would imply that 2 million more of these young people would have continued in education.

The high number of early school leavers is an obstacle to securing access to the knowledge-based society and greater social cohesion in the EU. In 2005, almost 15% of young people aged 18-24 in the EU left school prematurely and were in danger of being on the fringes of the knowledge society. The Council has agreed to reduce this rate to no more than 10% by 2010. Although some progress has been made, the majority of Member States need to increase their efforts in coming years to help reach the EU target. Best performing EU countries as regards the share of early school leavers are: Poland (5.5%), Slovakia (5.8%) and the Czech Republic (6.4%).

If present trends continue up till 2010, some 1 million students would graduate in math, science and technology every year in 2010 in the EU compared to the present level of 755.000 graduates. This should be compared to the number of MST graduate in the US which is presently 431.000 graduates per year - a production that the US wishes to double before 2015.

An adequate supply of scientists is crucial for a knowledge-based economy. The Council has set two objectives: to bring about an increase of at least 15% in the number of graduates in these fields by 2010 and at the same time to redress the imbalance between women and men. At current trends the first objective will be achieved even ahead of schedule, while there is slower progress as regards the gender balance (however, demographic trends might imply much slower growth in the long term and in some areas like maths and statistics and physical science there has been only slow growth or even a decline in the recent past). Slovakia (17.6%), Italy (12.8%) and Poland (12%) are the EU countries with the strongest growth in MST graduates. Best performing countries with regard to MST graduates per 1000 population 20-29, are: Ireland (24.2), France (22.2), and the UK (21.0), while in terms of female graduates Estonia (42.5%), Cyprus (42.0%) and Portugal (41.5%) have the highest proportion.

Achieving the EU benchmark of 85% graduation rate for 2010 would imply that some additional 2 million young people (aged 20-24 years) would have graduated from upper secondary education.

Successful participation in the knowledge society requires that each individual is equipped with a solid basic education at upper secondary education level. The Council agreed that, by 2010, at least 85% of 22-year-olds in the European Union should have completed upper-secondary education. However, the completion rate has been fluctuating around 77% since 2000. New initiatives and redoubled efforts are needed if the target is to be reached. Best performing EU countries are: Slovakia (91.5%), Slovenia (90.6%) and the Czech Republic (90.3%).

4 million more adults would participate in lifelong learning within any four week period in 2010 if the EU benchmark of 12.5% participation rate was achieved.

Individuals must update and complement their knowledge, competences and skills throughout life through participation in lifelong learning. The rate of adult participation in education and training in 2005 reached 10.8% in the EU, i.e. 2.9 percentage points higher than in 2000. A part of the increase was, however, due to breaks in time series, mainly in 2003. After and before 2003 progress was only slow. The objective set by the Council of achieving a 12.5% rate of adult participation requires Member States to step up efforts and to develop an

integrated, coherent and inclusive lifelong learning strategy. Best performing EU countries are: Sweden (34.7%), the United Kingdom (29.1%) and Denmark (27.6%).

At the age of 15 about 1 million out of over 5 million pupils are presently low performers in reading literacy. Reaching the European benchmark for 2010 would imply that 200.000 pupils would have to improve their performance in the field.

Acquiring basic competences is a first step to participation in the developing knowledge-based society. In the fundamental domain of reading literacy, the most recent data suggests that in 2003 about 20% of young people under the age of 15 in EU Member States achieved only the lowest level of proficiency. The average performance did not improve compared to 2000. The EU has still a long way to go to reach the objective set by the Council of reducing this percentage by 20% (to reach 15.5%) by 2010. Best performing EU countries are: Finland (5.7%), Ireland (11%) and the Netherlands (11.5%).

The EU would need to double the amount it invests per higher education student (i.e. an increase of nearly 10 000 euros per student and year) to match the spending level in the USA.

The EU suffers from under-investment in human resources, especially in higher education. Public investment in education and training as a percentage of GDP has grown slightly since the adoption of the Lisbon strategy, and is comparable with levels in the USA (and higher than in Japan). Rates of private investment in educational institutions seem to be (however, data availability and comparability is limited) modest in most Member States compared with the leading countries in the world, especially in higher education. There is also a need to increase the efficiency of investment and ensure that it supports the development of high quality education and training systems which are both efficient and equitable.

During the coming 10 years, the EU needs to attract at least 1 million new qualified teachers if those who will leave the profession due to retirement should be replaced.

The high proportion of older teachers in school education in the EU implies that within the period 2005-2015 more than one million teachers in Europe will have to be replaced. High-quality initial teacher training, in conjunction with a process of continuous professional development, is necessary to equip the teaching body with skills and competences for its role in the knowledge society over the coming decades.

Most EU students are not taught at least two foreign languages from an early age as requested by the Barcelona 2002 European Council.

At present (2003), an average of only 1.3 and 1.6 foreign languages per pupil are taught in the Member States in general lower- and upper-secondary education respectively. In vocational programmes at upper secondary level the average number of foreign languages taught is considerably lower. Taught language is however only the first step in the language acquisition process. To reach the objective of proficiency in at least two foreign languages, major efforts will have to be made by most countries.

Mobility of students within the Community programme Erasmus would have to more than double to reach the target of affecting 10% of the student population.

The European educational space is in the making, however too few students get the opportunity to become mobile internationally. Even though mobility within the Erasmus programme continues to increase – by 6.3% between the academic years ending 2004 and 2005 – Erasmus mobility would have to more than double to reach the target of affecting 10% of the student population.

I. INTRODUCTION

1. The re-launched Lisbon Strategy

Drawing on lessons learnt from five years of implementing the Lisbon strategy, the European Council in March 2005 decided on a fundamental re-launch of the strategy. It agreed to refocus priorities on jobs and growth within an overall objective of Sustainable Development and sought a stronger mobilisation of all appropriate national and Community resources.[3] At the same time the European Council sought a strengthening of monitoring procedures to give a clearer picture of national implementation of the strategy.

The re-launched Lisbon strategy focuses on competitiveness, growth and productivity and strengthening social cohesion. Even more than in its first phase, the revised Lisbon strategy places strong emphasis on knowledge, innovation and the optimisation of human capital. The onus put on European education and training systems is immense. Investing in research, education and innovation play central roles in generating added value and contributing to the creation of more and better jobs. Education and training are seen as critical factors to develop EU's long-term potential for competitiveness as well as for social cohesion.

2. "Education and Training 2010" within the re-launched Lisbon strategy

The Lisbon strategy and the open method of co-ordination radically changed European policy co-operation in the area of education and training. It provided a platform to discuss education and training policies at European level, and the OMC offered the opportunity to build a coherent policy framework without impinging on national competences.

Recognising the pivotal role of education and training in the knowledge society, the European Council (Lisbon) invited Ministers of Education "to reflect on the concrete future objectives of education systems," and to concentrate on "common concerns and priorities." Building on this and further mandates, the European Council In Barcelona in March 2002 approved the "Detailed Programme on the follow-up of the objectives of education and training systems" for 2010[4] and set the objective of "making [European] education and training systems a world quality reference by 2010."[5]

Following the adoption of the Detailed Work Programme, eight working groups were set up to focus on one or more of the 13 concrete objectives. Comprising experts from 31 European countries (EU member States, Acceding countries, Candidate countries and countries of the European Economic Area), as well as other stakeholders and interested EU and international organisations, their role is to support the national implementation of the common objectives set for education and training systems through exchange of good practice, study visits, peer learning activities, etc. A Standing Group on Indicators and Benchmarks was also set up to assess progress towards the objectives, and to identify models of successful policy practice.

[3] Presidency Conclusions. Brussels (2006)
[4] Detailed Work Programme.
[5] Presidency Conclusions, Barcelona, paragraph 43.

The Joint Interim Report, "*Education and Training 2010: the success of the Lisbon strategy hinges on urgent reforms",* adopted by the Commission and the Council in February 2004, was the first evaluation of progress on the Detailed Work Programme. It identified three levers as crucial to reaching the goal of making education and training systems in Europe a world-wide quality reference: firstly, focusing reform and investment on the key areas for the knowledge society; secondly, making lifelong learning a concrete reality; and thirdly, establishing a "Europe of Education and Training."

In the 2004 Joint Interim Report, the Council and the European Commission furthermore undertook to review progress every two years on implementing the Education and Training 2010 work programme,

Thus a second draft joint interim report was adopted by the Commission in November 2005.[6] Negotiations with the Council (through the Education Committee) led to adoption of the joint report in February 2006. The report is based primarily on the 2005 national reports of the Member States, EFTA-EEA countries, and the acceding and candidate countries. It delivered a number of strong political messages to the European Spring Council of March 2006 in the context of its first review of the revised Lisbon strategy. These included:

- Education and training are critical factors if the EU's long-term potential for excellence, innovation and competitiveness, as well as for social cohesion, is to be sustained. The dual role – social and economic – of education and training therefore needs to be reaffirmed, as well as the need to ensure the development of high quality systems which are both efficient and equitable. There can be no trade-off between these two dimensions.
- Education and training must be viewed as a priority for investment. The high returns it provides substantially outweigh the costs and reach far beyond 2010.
- Reforms in education and training are moving forward, but more substantial efforts are required.
- Investments, coupled with relevant quality assurance mechanisms, should be targeted on areas where economic returns and social outcomes are high.

The present annual report[7] expands on the analysis of national systems and progress towards common objectives set out in the Joint Interim Report. It charts progress towards Europe's targets in the area of education and training using a framework of indicators and benchmarks, and puts performance, where useful and possible, into a global perspective. The data gives an indication of the direction European education systems are moving in and of how they are contributing to Europe's potential to fulfil the objectives set at Lisbon.

The report highlights key analytical messages emerging from a detailed statistical analysis of progress towards the objectives that EU Council (Education) have established Based on available statistics, it analyses the three strategic objectives, highlighting good performances; it provides an overview of progress towards the 5 European benchmarks adopted by the Council in May 2003; and it highlights the role of indicators and benchmarks within the Education & Training 2010 process.

[6] Communication from the Commission « Modernising education and training: a vital contribution to prosperity and social cohesion in Europe ». COM (2005) 549 30.11.2005.

[7] The first Commission staff working paper "*Progress towards the Common Objectives in Education and Training*" was published in January 2004. The second report in March 2005.

Considering that a number of EU Member States are already achieving world-best performances in a number of areas, whereas others are faced with serious challenges, there is real added value available in exchanging information on best policy practice at European level. The attached report represents a contribution, drawing on the cooperative efforts of the Commission and the Member States, to this objective.

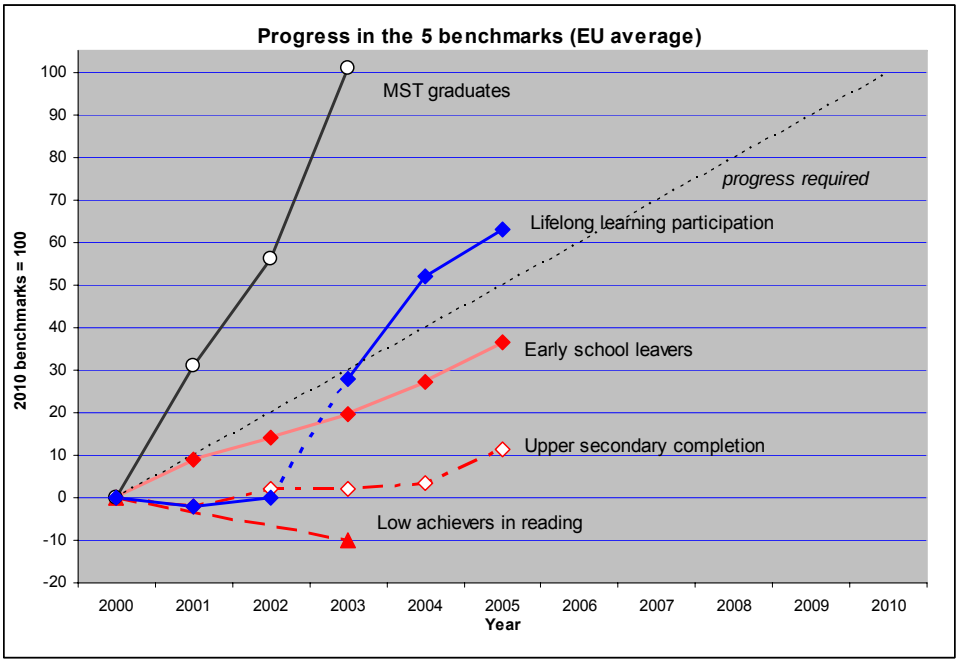
II. PERFORMANCE AND PROGRESS IN THE OBJECTIVE AREAS OF EDUCATION & TRAINING 2000-2005

- **The Member States struggle to respond to the challenge of the five European Benchmarks for 2010**

Indicators are also used as instruments for monitoring progress towards common objectives and benchmarks where these have been adopted. The stated ambition of becoming the most dynamic knowledge-based economy in the world would be hollow if it did not entail the measurement of progress. Therefore a range of guidelines and benchmarks are used to break down the overall ambition into manageable goals in different policy areas. In this sense indicators provide strategic guidance and steering for the Education and Training 2010 strategy – they function as the tools for evidence based policy at European level. By adopting five European benchmarks in May 2003, the Council undertook a political commitment. By setting-up measurable objectives, the Council indicated in which policy areas, in particular, it expected to see clear progress. However, in 2006 these goals still pose a serious challenge for education and training systems in Europe. There has been clear progress and accomplishment of the EU benchmark on increasing the number of maths, science and technology graduates. But there is too little progress against the benchmarks related most closely to the knowledge-based society and social inclusion. Unless significantly more efforts are made in the areas of early school leaving, completion of upper-secondary education, and key competences, a high proportion of the next generation will face social exclusion, at great cost to themselves, the economy and society.

Chart I.1

Overview on average performance levels in the fields of the five European benchmarks[8]



[8] 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 (=100). A diagonal line shows the progress required, i.e. each year an additional 1/10 (10%of total) of progress towards the benchmark has to be achieved to reach the benchmark. If a line stays below this diagonal line, progress is not sufficient, if it is above this line progress is stronger than needed to achieve the benchmark.

As regards lifelong learning there have been many breaks in time series, which overstate progress, especially in 2003, therefore the line 2002-2003 on LLL participation is dotted. For low achievers in reading (data from PISA survey) there are only results for 16 EU countries and for two years.

Key results

- As regards the number of MST graduates the benchmark is likely to be over-achieved, the progress required has already been achieved in 2000-2003. However, progress in reducing the gender imbalance was more limited.
- Lifelong learning participation is only on track as a result of breaks in series in several countries, which led to higher (but more accurate) participation rates and overstate overall progress.
- There is constant improvement as regards early school leavers, but faster progress is needed in order to achieve the benchmark.
- As regards upper secondary attainment there has been only little progress.
- Results for low achievers in reading have also not improved (but there are only two data points for that).

Use of weighted averages versus arithmetic averages

The EU averages produced by Eurostat and used for measuring progress show the weighted average for EU 25 (data are mostly weighted by the reference population relating to the indicator). The six largest countries determine about three quarters of the weighted average, while the share of the six smallest countries is only about 1%. Using arithmetic averages (where every Member State represents 1/25) shows the impact of smaller countries is larger. In policy terms this information might be as relevant because it shows the average improvements over systems and is thus closer to the contribution of Member States. While "weighted averages" of performance and progress show statistical data relating to the "average situation" of citizens in Europe, the "arithmetic average" shows the average national situation of education systems in the Member States.

For four of the five benchmarks (low achievers in reading, early school leavers, upper secondary attainment, lifelong learning participation) performance is better and progress higher if arithmetic averages are used. This is explained by the fact that some of the best performing countries (for example the Nordic countries, Slovenia) have relatively small populations. The only exception concerns the benchmark on the number of graduates in maths, science and technology, where some small countries (Luxembourg, Malta, Cyprus) with a limited higher education system, especially as regards MST faculties, perform below average. Hence results for this indicator are better for the weighted average, where the impact of these countries is smaller.

- **All Member States can learn from the good performers in the Union**

The objective of benchmarking of performance and progress in the field of education and training is to identify countries which perform well, so that expertise and good practice can be shared with others. This is why the Council, when adopting the Detailed Work Programme on the follow-up of the objectives of education and training systems in Europe, asked for the identification of the three best performing countries in the objective areas.

Almost half of Member States are among the three leading countries in at least one of the five areas. Good practice and expertise in the field of education and training are not, therefore, confined to a few countries of the Union.

In the three benchmark areas which target school education (early school leavers, upper-secondary education and low achievers in reading), we find strong performances in the new Member States (Poland, Czech Republic, Slovenia and Slovakia, and also Latvia as regards reducing the share of low achievers in reading), and in Finland, the Netherlands and Ireland. In post-compulsory education, the leading countries are Finland, Ireland, Sweden, Denmark, France and the UK (as regards increasing the number of MST graduates also Slovakia and Poland). Only Finland and Ireland are among the best performers in both school and post-compulsory education areas.

Best performers in the five benchmark areas

Benchmark area	Concrete target 2010	Three best performers in the EU			EU25 average	USA	Japan
Share of early school leavers (18-24) in EU.	No more than 10%	2005					
		Poland 5.5%	**Slovakia** 5.8%	**Czech Rep.** 6.4%	14.9%	(:)	(:)
Ratio of low-achieving 15-year-olds in reading literacy in EU.	At least 20% decrease (to reach 15.5%)	Change in the share of low achievers in %, 2000-2003					
		Latvia -40.2%	**Poland** -27.6%	**Finland** (-18.6%)	+2.1%	+8.4%	+88.1%
		% of low achievers in 2003					
		Finland 5.7%	**Ireland** 11.0%	**Netherlands** 11.5%	19.8%	19.4%	19.0%
Upper-secondary completion rate in EU (20-24).	At least 85%	2005					
		Slovakia 91.5%	**Slovenia** 90.6%	**Czech Rep.** 90.3%	77.3%	(:)	(:)
Graduates in MST in EU	Increase of at least 15% (=100,000 graduates or 1.6% annual increase in period 2001-2010)	Average annual increase 2000-2003					
		Slovakia +17.6%	**Italy** +12.8%	**Poland** +12.0%	+4.6%	+2.7%	-0.8%
		Graduates per 1000 population in 2003					
		Ireland 24.2	**France** 22.2	**UK** 21.0	12.3	10.9	13.9
		% females in 2003					
		Estonia 42.5	**Cyprus** 42.0	**Portugal** 41.5	31.1	31.9	14.4
Adult participation in lifelong learning in EU (25-64).	At least 12.5%	2005					
		Sweden 34.7%	**UK** 29.1%	**Denmark** 27.6%	10.8%	(:)	(:)

II.1. FIRST STRATEGIC OBJECTIVE

Improving the quality and effectiveness of education and training systems in the EU

Objective 1 is essentially about raising the quality and standard of learning to enable Europe to become a more competitive and dynamic society. The objective concerns mainly improving the skills and competences of European citizens in a cost effective manner to ensure that Europe remains competitive internationally.

This objective area consists of the following specific objectives:

1. Improving education and training for teachers and trainers
2. Developing skills for the knowledge society
3. Ensuring access to ICTs for everyone
4. Increasing the recruitment to scientific and technical studies
5. Making best use of resources

Data is available in all five specific objective areas allowing an appreciation of progress achieved the last years.

1.1 Considerable teacher recruitment needs during the next decade

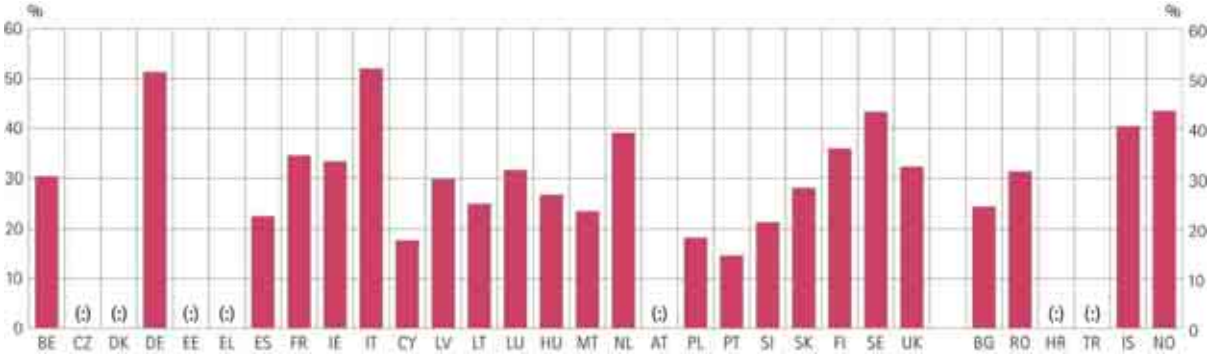
The economic and social changes in Europe proceeding from the knowledge revolution are placing increasingly complex demands on the teaching profession. Schools and teachers are expected to deal with different languages and student backgrounds, to be sensitive to culture and gender issues, to promote tolerance and social cohesion, to respond effectively to disadvantaged students and students with learning or behavioural problems, to use new technologies, and to keep pace with rapidly developing fields of knowledge and approaches to student assessment. This requires new and continuously developing knowledge and skills among the teachers.

An increasing proportion of teachers in the EU is aged over 50 – in Sweden and Germany more than 40% of teachers in both primary and secondary education are above this age. In Germany and Italy (in secondary education), almost 70% of teachers will retire in the next 20 years.[9]

Chart II.1

Teachers aged 50 or older in secondary education (2003) (%)

(ISCED 2-3)



Source: Eurostat (UOE data collection)

9 An equal distribution would have resulted in less than 50 % retiring due to age.

Overall, in countries for which data are available, the great majority of teachers retire from their profession as soon as they are offered an opportunity to do so. Teachers whose salaries rise significantly throughout their entire career, however, may be less inclined to leave the profession than those whose salaries do not progress beyond the first few years of experience.[10]

During the period 2000-2015 in the EU-25, the number of children aged 5–14 will decline noticeably. However, to reach the EU benchmarks of no more than 10% early school leavers and 85% completion of upper secondary education, on EU level more than a million additional entrants into upper secondary education are required every year up to 2010.[11]

As a consequence of these developments i.e. retirement of teachers and the quest for increasing student success rates, the need to recruit new teachers is also evident. A conservative estimate of the replacement need put recruitment requirements at more than 1 million qualified teachers over the next 10 years. It will be crucial to make teaching an attractive career choice, in order to recruit the best candidates and avoid teacher shortages.

To equip the teaching body with skills and competences for its role in the knowledge society over the coming decades it is necessary to have both high-quality initial teacher education and a process of continuous professional development keeping teachers up to date with the skills required in the knowledge based society.

Main messages on teachers:

- **Considerable teacher recruitment needs during the next decade put focus on policies and initiatives to motivate older teachers to remain in the profession and to offer them continuous professional development.**
- **The attractiveness of teaching is on the policy agenda in several countries. Policy objectives are directed towards improving the image and status of teaching, improving teaching's salary competitiveness, improving employment conditions, and securing an adequate supply of teachers in all subject areas.**

1.2 Developing skills for the Knowledge Society

• Key competences

European Benchmark
By 2010, the percentage of low-achieving 15-year-olds in reading literacy in the European Union should have decreased by at least 20% compared to the year 2000.

All individuals need a core set of competences for employment, social inclusion, lifelong learning and personal fulfilment. These competences should be developed by the end of compulsory education and should form the foundation for more advanced or specialised training, either in higher education or through other lifelong learning activities.[12] Reading literacy is hereby part of the key competence of communication in the mother tongue and is thus analysed in the following text.

[10] Eurydice, *Key data 2005* page 217-218
[11] The returns to various types of Investment in Education and Training. Final report to EC DG EAC. By London Economics. August 2005
[12] See proposal for a Recommendation of the European Parliament and of the Council on key competences for lifelong learning (COM (2005) 548 final of 10.11.2005, http://europa.eu.int/comm/education/policies/2010/doc/keyrec_en.pdf, the eight competences are Communication in the mother tongue; Communication in foreign languages; Mathematical competence and

The European benchmark of a 20% decrease in the percentage of low-achieving 15-year-olds in reading literacy by 2010 implies a decrease from 19.4% in 2000 to 15.5% by 2010 or 200 000 less low performing 15 year olds. The data from the PISA survey 2003, however, show similar shares of low achievers compared to the 2000 study. There thus seems to be no improvement in performance in the three years. In 2003, 19.8% of 15-year-old pupils in the EU countries participating in the survey were found to be low achievers in reading literacy.

A further analysis[13] of the PISA-data reveals that there is a high correlation between the mean achievement scores and the share of students achieving low score levels in reading. Among the countries participating in PISA, four out of the five countries where the share of low scoring students is the lowest (Finland, Korea, Ireland, the Netherlands and Hong Kong China) are in the top-five list as regards the average achievement scores in reading. Similarly, among the four countries whose students achieve the lowest average scores in reading, three are also among the four countries with the largest share of students performing at level 1 or lower: Italy, Greece and Turkey. There thus seems to be no trade-off between equity and performance and focussing on the important goal of reducing the share of low achievers thus can also help to increase overall performance levels.

Chart II.2

Low achievers in reading literacy (2003)

(Percentage of pupils with reading literacy proficiency level 1 and lower in the PISA reading literacy scale)

Source: OECD PISA database

EU figure: weighted average based on number of pupils enrolled and data for 16 countries (NL, LU not representative in 2000, UK in 2003, SK not participating in 2000)

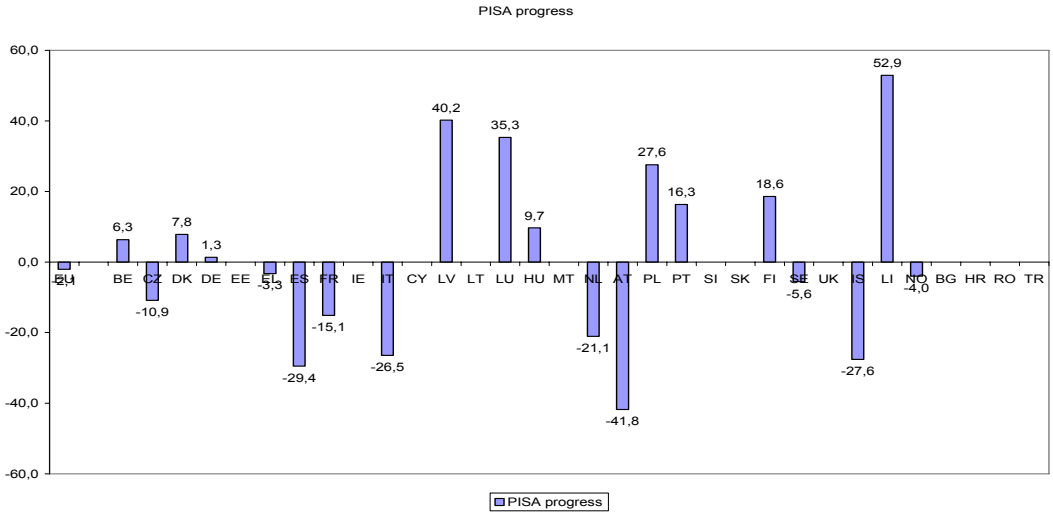
basic competences in science and technology; Digital competence; Learning to learn; Interpersonal, intercultural and social competences and civic competence; Entrepreneurship; Cultural expression.

[13] Haahr, et al (2005) *Mathematics, Science and Reading: Explaining Student Performance Evidence from PISA, TIMSS and PIRLS*,

Chart II.3

Progress 2000-2003 in the field of low achievers (%)

(Percentage of pupils with reading literacy proficiency level 1 and lower in the PISA reading literacy scale, 2003)



Source: OECD PISA database

Countries which improved their performance significantly include Poland and Latvia. The improvement in Poland and Latvia is considered by these countries to be the result of reforms in the school system implemented around 2000 and impacting on the 2003 results. Belgium, Denmark, Portugal, and Finland, have also witnessed moderate overall improvements, but these differences are not statistically significant. On the other hand, there was a considerable increase in the numbers of low achievers in Austria and Italy (results for Luxembourg, where the numbers decreased, and for the Netherlands, where they increased, are not fully comparable between the two surveys).[14] While there was no progress in reading, average scores in mathematics and in science in Europe improved since 2000 according to the PISA survey.

In view of the fact that no progress was made between 2000 and 2003, it will be a major challenge for many countries to improve their performance sufficiently to enable Europe to achieve the target in 2010. However, it is hoped that some of the reforms which were instigated by the PISA 2000 results will bear fruit in the next survey round in 2006.[15]

Main messages on basic competences

- **Average performance levels in reading did not improve in the EU in the period 2000-2003. Additional efforts will thus be needed in order to achieve the benchmark set for 2010.**
- **The strong differences in performance between countries implies that there is room for improvement for many EU Member States and that the best performing countries hold good practice to learn from.**

[14] In the Netherlands the response rate was too low in 2000 to ensure comparability; in Luxembourg the reasons for the incomparability of the results lie in the mode of implementation in 2000; in Austria the weighting of vocational schools changed between the two surveys, thus the change in performance is overstated for this country.

[15] The analysis of the 2000 results began at the end of 2001 and there was thus not much time to implement reforms before the new survey round in 2003.

- **Several of the EU countries with the highest performance at the same time show relatively low variation in student achievement scores. Equity and high performance can thus be achieved without trade-offs. Focussing on groups with lower skills levels and on reducing skills disparities within the student population could thus also boost overall performance levels.**
- **In all countries boys perform less well in reading than girls. The share of low performing boys has however to improve considerably in the future in order to reach the benchmark.**
- **The relatively low performance of migrants is an issue that needs to be addressed, also considering the increasing share of students with a migration background. The strong differences between countries in the relative performance of migrants implies that there is room for improvement in countries were migrants perform strongly below average.**

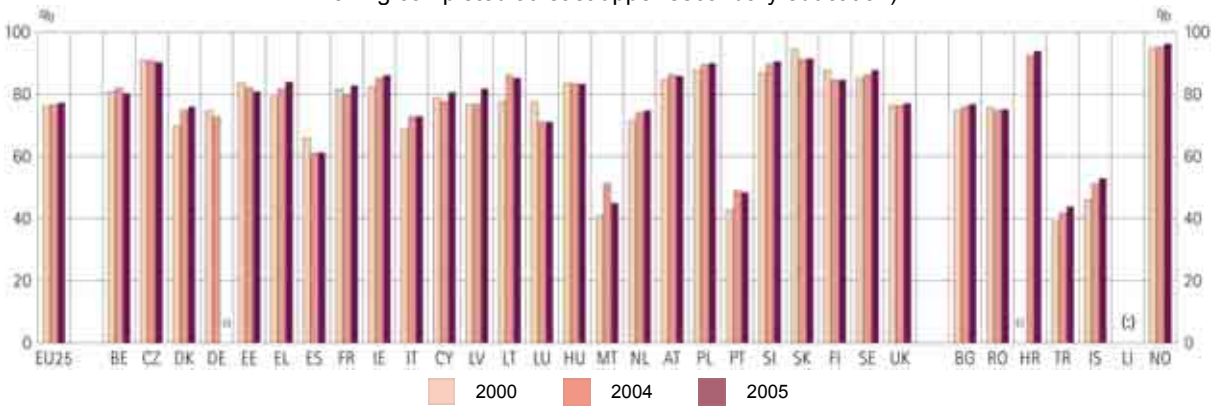
- **Completion of upper-secondary education**

European Benchmark
By 2010, at least 85% of 22-year-olds in the EU should have completed upper-secondary education.

A high level of general educational attainment among the working population is a prerequisite for a dynamic and competitive European economy. At the individual level, completing upper-secondary education is increasingly important not just for successful entry into the labour market, but also to allow students access to the learning and training opportunities offered by higher education. Lifelong learning participation is strongly correlated to the level of initial education reached.

Chart II.4

Completion of upper secondary education (2000, 2004 and 2005)
(Percentage of the population (20-24)
having completed at least upper-secondary education)



Source: Eurostat (Labour Force Survey).

In 2005 the percentage of young people (20-24) in the EU with upper secondary education reached 77%. It is noticeable that women have a 5 percentage point lead in the completion of upper-secondary education among young people aged 20-24 in the EU25. Furthermore, the performance gap between the attainment levels of national and non-nationals in the EU was close to 20 percentage points in favour of nationals.

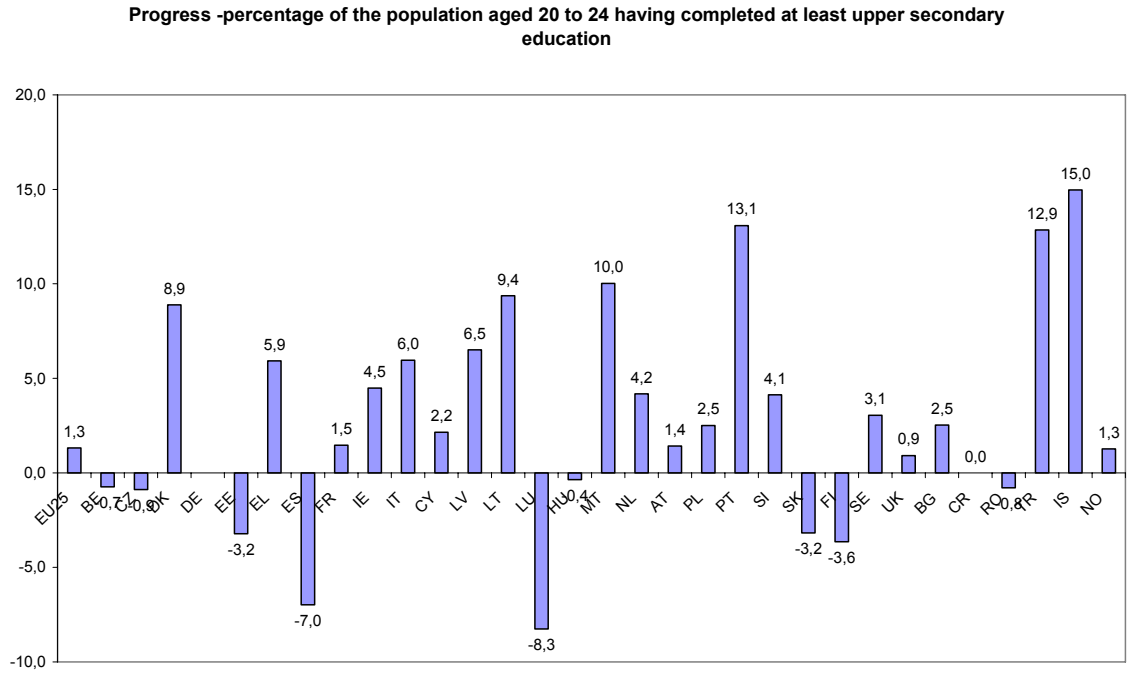
It will take considerable efforts to raise the completion rate from its present level of 77.3% to the target of 85%, given that the completion rate has only increased slightly since 2000. The

completion rate would have to improve by 1.5 percentage points per year in order to reach 85% by 2010 (compared to the current improvement rate of 0.2% per year). This benchmark implies that 2 million more young people (18-24) would have graduated from upper secondary level education in 2010 compared to 2005.

While the share of young people with upper secondary education has increased only little in Europe some countries with a relatively low share, notably Portugal and Malta, have made considerable progress in the recent past. It should also be noted that many of the new Member States already perform above the EU benchmark set for 2010 and that three of them, the Czech Republic, Slovakia and Slovenia, and in addition Norway and Croatia, already have shares of over 90%.

Chart II.5

Progress 2000-2005 in the field of completion of upper-secondary education



Source: Eurostat (Labour Force Survey).

Main messages on upper secondary attainment:

The analysis on progress made in the Member States in the field of increasing the completion rates in upper secondary education shows three major areas of concern:

- **To find innovative ways to overcome the stagnation of upper secondary education attainment rates in some countries.**
- **To address the issue of the low attainment levels of especially boys and migrants in upper- secondary education.**
- **To enable via lifelong learning adults with only lower education levels to attain upper secondary education later in life.**

1.3 Strong growth in number of math, science and technology graduates

European Benchmark 2010
The total number of graduates in mathematics, science and technology in the European Union should increase by at least 15% by 2010 while at the same time the level of sex imbalance should decrease.

Europe's future competitiveness in the global economy will depend to a great extent on its supply of scientific specialists and on ensuring that they are put to good use. Mathematics, science and technology (MST), including computer sciences and engineering are vital for the development of the knowledge-based and increasingly digital economy. The EU has a higher proportion and larger absolute numbers of tertiary graduates in these areas than the USA or Japan. However, it does not fully capitalise on this potential, as it has fewer active researchers (both in absolute and relative terms) in the labour force than the US or Japan. Europe needs to develop and increase the attractiveness of its research labour market, in order both to retain and make use of its own talent and to attract researchers and scientists from outside Europe.

In 2003 the EU had 755 000 maths, science and technology graduates compared to about 430 000 in the USA, 230 000 in Japan and over 800 000 in China. The share of MST graduates (as a % of all graduates) was at 24% slightly higher in the EU compared to the USA (19%) and Japan (23%). However, measured per 1000 inhabitants aged 20-29 Japan (13.2) has more graduates than the EU (12.2) or the USA (10.9). EU countries with a high ratio of graduates in the population 20-29 included France, Ireland and the UK. While the European growth rates are impressing they might be overstated by double-counting of graduates in the move to a BA/MA structure (not considering short programmes/BA growth would reduce the growth rate 2000-03 by about 1%). Growth in the number of MST graduates is moreover even stronger in new competitors like India and China.

Data are furthermore not fully comparable between countries, as a result of different degrees of double-counting of graduates. However, changes over time can to a certain degree be compared. The data say in general more about the number of graduations than the number of graduates (which is about 1/6 lower). A graduate can be found in some countries to be counted three times during his/her studies: as bachelor (year 3), as masters (after additional 1-2 years) and as a new PhD (3 years later).[16]

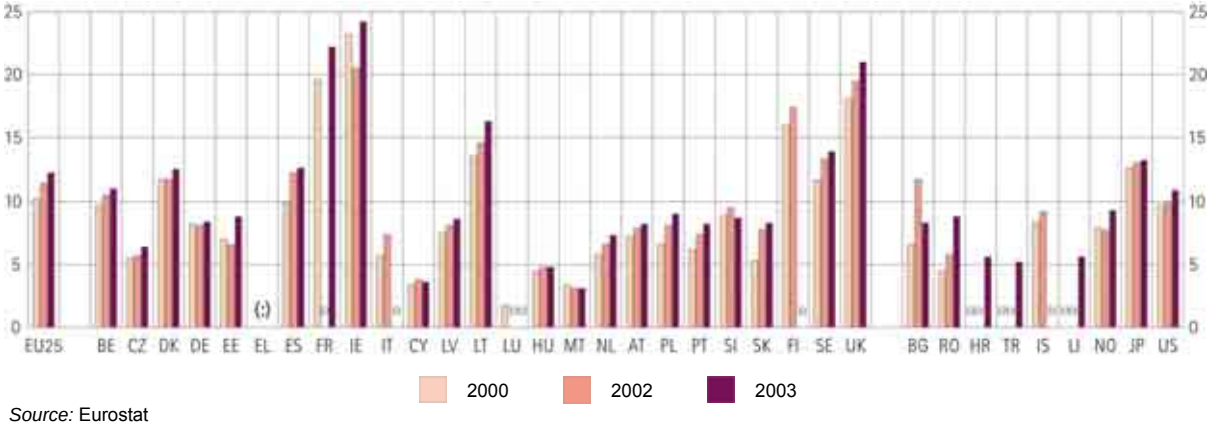
The number of MST graduates increased in the period 2000-2003 in the EU by 16% compared to a benchmark of 15% for 2010. This aspect of the benchmark has thus already been achieved. Growth was strongest (> 10% per year in 2000-2003) in Italy, Poland and Slovakia, while at the same time the number of graduates slightly declined in Denmark, Malta and Slovenia. While there has been a strong growth in computing (+53.9%) and engineering (+18.8%) the number of graduates declined in this period in physical science (-2.7%) and increased only slowly in mathematics and statistics (+6.7%).

[16] It should be noted that even if double counting is taking place in the case of some countries, these statistical practices were know when a 15% increase of the figures by 2010 were decided by the Council.

Chart II.6

Tertiary graduates in mathematics, science and technology

(Number of tertiary graduates in MST per 1000 inhabitants aged 20-29)



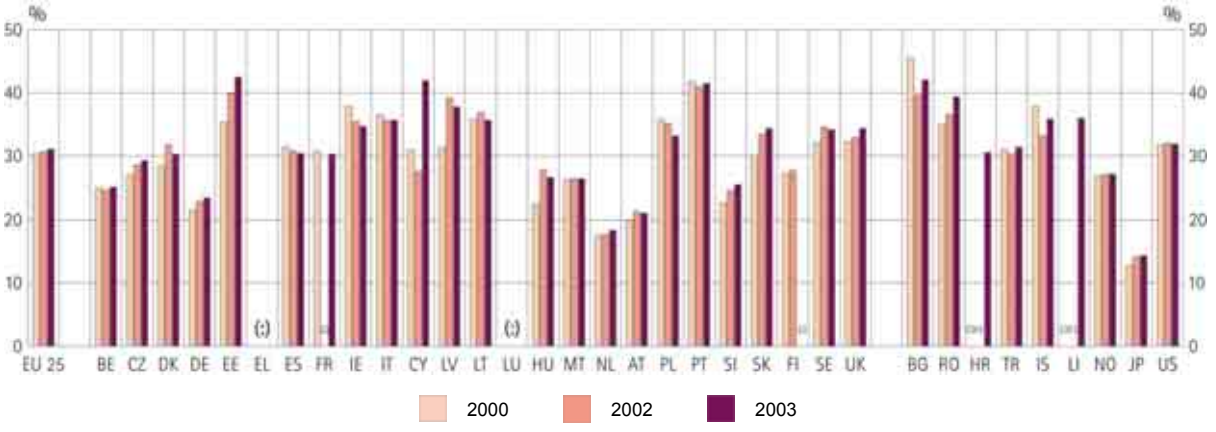
Source: Eurostat

There was only limited progress in improving the gender imbalance: the share of female graduates increased from 30.4% in 2000 to 31.1% in 2003. Estonia, Cyprus and Portugal had the highest share of female graduates whereas Latvia, Estonia and Cyprus achieved most progress in increasing the share of women in MST graduates. However, there are strong differences in the share of female graduates between disciplines. While only 1/6 of engineering graduates and 1/4 of computing graduates are female, half of mathematics and statistics graduates are female and women predominate in life sciences (over 60%).

The stagnation in the share of female MST students in recent years implies that the share of female graduates will not change much in coming years.

Chart II.7

Gender imbalance among MST graduates: female graduates as a proportion of all MST graduates

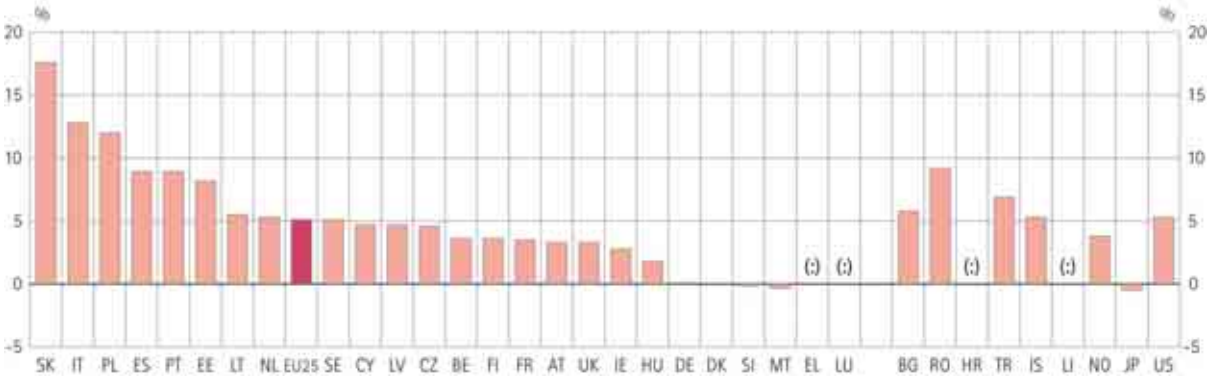


Source: Eurostat

Chart II.8

Growth of tertiary graduates from mathematics, science and technology fields (%) (2000-2003)

(Average annual growth)



Source: Eurostat

It is important to underline that demographic trends with smaller cohorts of young people in the coming years might imply that growth in the number of graduates will slow down if math, science and technology does not increase its share of the total student population. Rendering these disciplines a popular choice among students is of high importance in that respect. This issue is even more important in certain key areas such as physical sciences and in mathematics and statistics where evidence suggests that student numbers are falling in recent years.

Main messages on MST graduates:

- **In line with a strong growth in tertiary education participation there has also been a strong growth in the number of MST graduates in recent years. The overall growth target of the benchmark has thus already been achieved in 2003.**
- **Despite the strong growth in the total number of math, science and technology graduates (MST) there is a decline or slow growth in certain fields like physical science and in mathematics and statistics. More efforts are needed to encourage young people to take up tertiary studies in these fields.**
- **Only little progress has been achieved so far in improving the gender imbalance. More efforts are needed to attract more women to MST studies.**
- **As regards research posts, MST graduates face bottlenecks in the labour market, partly a result of insufficient R&D financing. This also contributes to the tendency of some of the best brains to leave Europe.**

1.4 ICT: ensuring access for everyone

The precept of the Lisbon European Council[17] that every citizen should be equipped with the skills needed to live and work in the new information society was based on the recognition that the socio-economic potential of information technologies is directly related to their

[17] Presidency Conclusions, Lisbon, 2000, paragraph 9.

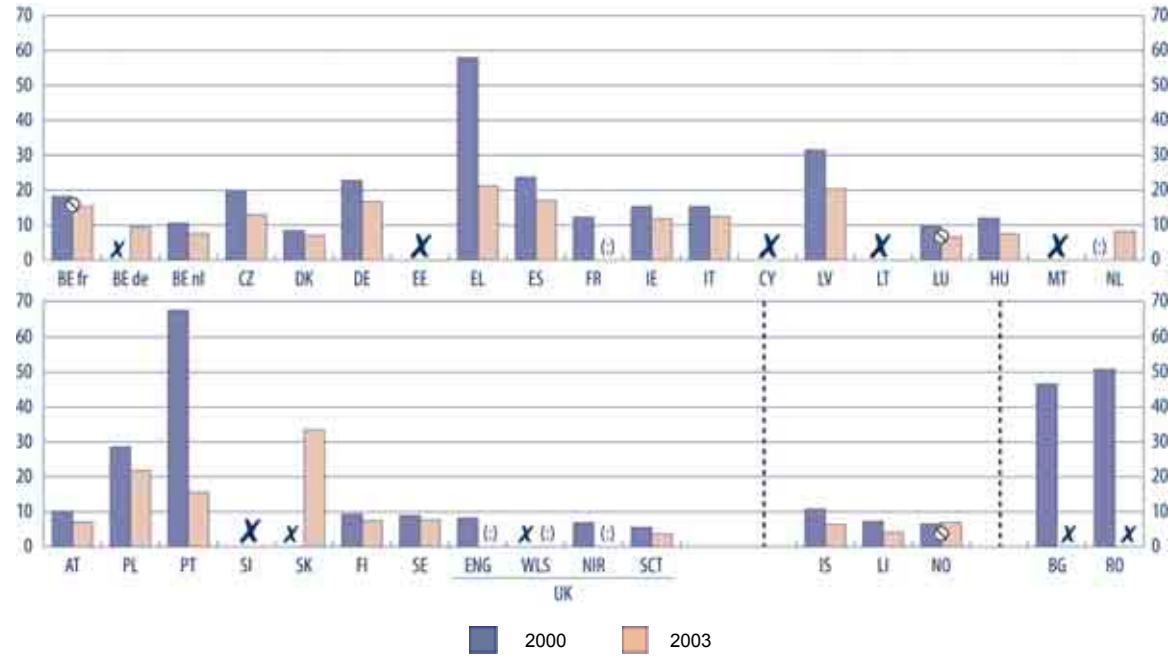
accessibility. In later European Councils, (i.e. Stockholm[18], Barcelona[19] and Brussels[20]) this message was reiterated, with particular stress on the contribution of Information and Communication Technology (ICT) skills to labour-market employability. The educational use of ICT accordingly features prominently in the Commission's e-learning strategy, as set out in its e-learning action plan,[21] and in the eLearning Programme[22], one of the four action lines is fostering digital literacy.[2] The Proposal for recommendation on key competences of November 2005 considers ICT skills as part of the basic skills and as being also essential for learning to learn.

Data from the Eurostat ICT household survey show that in 2005 in EU 25, 70% of students (16 years and older, the data do not allow a breakdown between secondary and tertiary education) used a computer at the place of education, while 60% used the Internet.

In 2003, despite noticeable progress in a number of countries, there were still many countries within the EU that had a relatively high number of pupils to each computer (chart II.9 based on pupils aged 15). The four countries with more than twenty pupils to a computer are Greece, Poland, Latvia and Slovakia. In 2003 Denmark, Luxembourg and Scotland had seven or fewer pupils to a computer.

Chart II.9

Number of pupils per computer in schools attended by pupils aged 15 (2000, 2003)



Source: OECD, PISA 2000 and 2003.

[18] Presidency Conclusions European Council, Stockholm, 2001, paragraph 10.
[19] Presidency Conclusions European Council, Barcelona, 2002, paragraph 33.
[20] Presidency Conclusions European Council, Brussels, 2003, paragraph 40.
[21] European Commission, Directorate General Education and Culture *The e-Learning Action Plan: designing tomorrow's education,* Brussels, 2001.
[22] eLearning Programme, Decision No 2318/2003/EC.

As regards Internet connections of schools the data from PISA show that in Denmark, Luxembourg, the Netherlands, Austria, Poland, Finland, Sweden and UK-Scotland, more than 80% of school computers are connected to the Internet. In Belgium (Fr), Greece, Ireland, Italy, Latvia, Portugal and Slovakia this is the case for less than 70% of computers. The countries with the three highest ratios of Internet-connected school computers also have some of the lowest pupil-computer ratios.

Strong progress as regards the number of pupils per computer has been made in the period 2000-2003 in Portugal, Greece, Latvia and Poland. Especially the Portuguese progress has been spectacular moving from about 70 pupils per computer to less than 20. It illustrates well how rapid changes in some cases can be in the field ICT and highlights the need of up to date data.

Not only are there more computers in schools, almost all schools have today internet access and the great majority of computers in schools are connected.

Apart from the infrastructure, which is the very condition for progressing as concerns ICT skills in schools, the quantity and quality of ICT usage are essential for impacting on learning outcomes. While the use of ICT is positively correlated to the increasingly important ICT skills, the relation between the frequency of ICT usage by pupils and their skills in mathematics and reading is less straightforward. Data on the relation between the intensity of ICT usage and mathematics and reading skills from the 2003 OECD PISA survey implies that there is an optimum level of ICT usage as regards these skills and that beyond this optimum more does not automatically mean better.

Main messages on ICT:

- **ICT penetration in schools is continuously increasing. In most EU countries, in 2003 more than 70% of the available school computers were connected to the Internet.**
- **Despite considerable progress since 2000, there were in 2003, however, still many countries within the EU with a high number of pupils to each computer.**
- **There is a positive correlation between the availability of computers at school and average learning outcomes.**
- **However, as regards ICT usage, more is not always better. Data from PISA 2003 on frequency of ICT usage and pupils performance in mathematics and reading imply that there is an optimum level of ICT usage. Beyond this level quality of use is more important than quantity.**

1.5 Considerable growth in investment in education

Investment in human capital through is one of the key factors for strengthening Europe's position in the knowledge economy and to increasing social cohesion in the 21st century. The European Council of March 2000 in Lisbon acknowledged this by calling for "a substantial annual increase in per capita investment in human resources".[23]

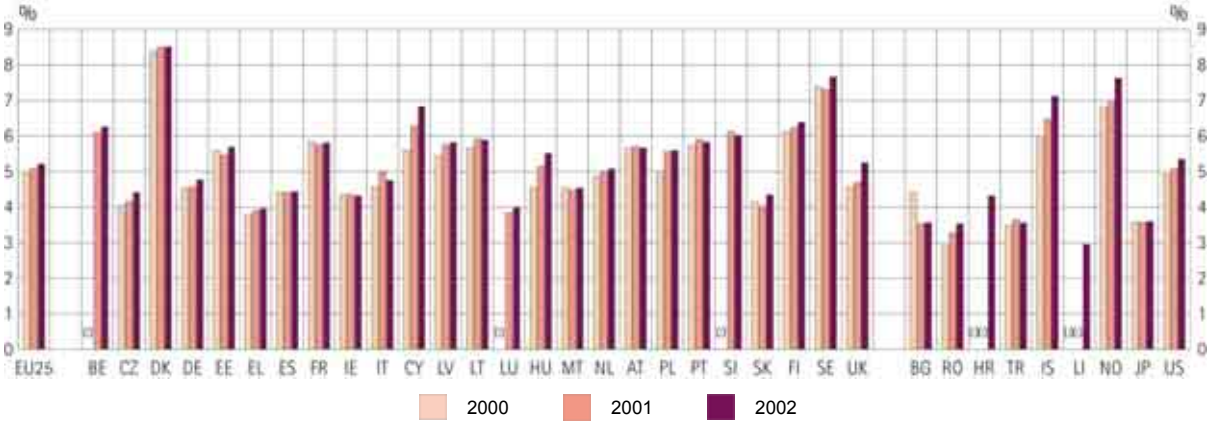
[23] Presidency Conclusions, Lisbon, 2000, paragraph 26.

Since the population is relatively stable and since GDP is increasing a growth in the percentage of GDP spent on education can be considered as a proxy for an increase in per capita investment in human resources

There were considerable variations between countries in their levels of total *public expenditure on education and training as a percentage of GDP* in 2002 (Chart II.8). Denmark has the highest relative spending at more than 8% of GDP, followed by Sweden at over 7%. While most countries fall within the 4-6% bracket, in Greece public spending on education amounts to slightly less than 4% of GDP.[24]

Chart II.10

Total public expenditure on education as a % of GDP (2000, 2001 and 2002)



Source: Eurostat

In 2002 total public expenditure on education as a percentage of GDP increased in 19 EU countries over 2001, while decreasing in six. In particular the new Member States increased public spending on education and training, with the Czech Republic, Cyprus, Hungary and Slovakia showing an increase of more than 0.25% percentage points of GDP. Of the old Member States the UK showed the strongest increase in spending. A large part of the growth in spending on an EU level in 2002 is in fact due to the strong growth in the UK. Spending in the EU25 increased from 4.94% of GDP in 2000 to 5.22% in 2002, an increase of 0.28 percentage points. It thus amounted to about 500 billion Euro in 2002, a real increase of about 8% compared to 2000 (if based on constant 1995 prices).

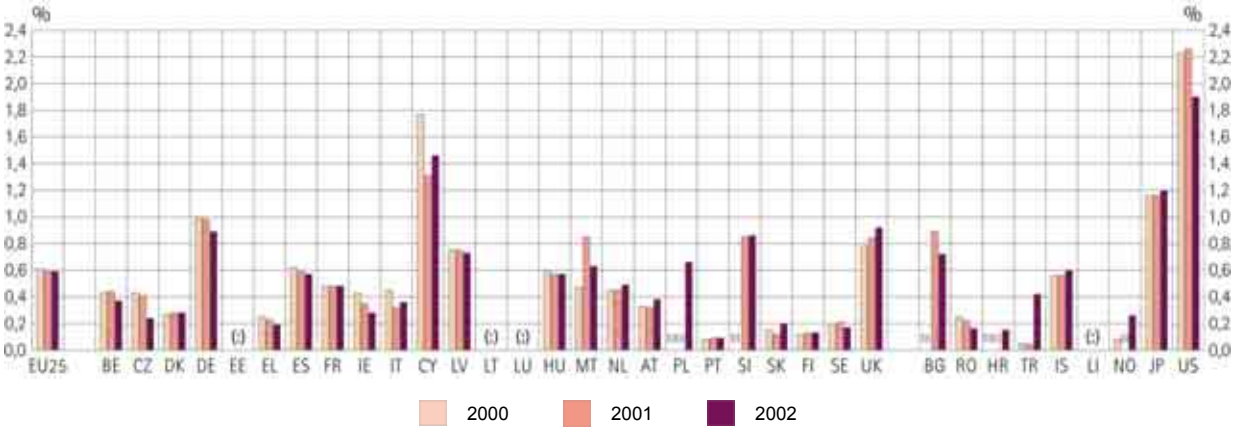
In the light of the trend shown above, it may be concluded that in the period 2000-2002 the EU made progress towards the Lisbon objective of ensuring "a substantial annual increase in per capita investment in human resources."

However, public spending as a % of GDP did not increase in all Member States and private spending in this period stagnated. An increased private contribution is considered necessary to increase availability of resources and improve efficiency of spending.

[24] The data for Luxembourg relate only to primary and secondary education. For the two levels combined spending in Luxembourg as a % of GDP is above the EU average. As a result of a high per capita GDP, spending per pupil is furthermore relatively high in Luxembourg. Expenditures reported for the tertiary level are for all activities performed by higher education institutions, including both education and research.

Chart II.11

Expenditure on educational institutions from private sources in % of GDP (2000, 2002)



Source: Eurostat

There is furthermore still underinvestment in certain fields like higher education and vocational training. Spending per student in most Member States increases by education level and is thus on average highest at tertiary level and lowest at primary level. The strong growth in the number of tertiary students implies a need for additional investment.

In 2002 public spending on tertiary education (for all activities, including both education and research) in the EU amounted to 1.14% of GDP (of which direct public spending 0.95%) compared to 1.40% in the US (1.17%). There was in 2002 an even larger gap in private spending on higher education: 0.2 % in the EU and 1.42 % in the US. To match the US level of public and private spending[25] the EU would have to spend an additional 140 billion Euro per year from public and private sources on tertiary education.

[25] There is some double counting when adding up total public and private spending, because a part of public transfers (e.g.: financial aid to students) is counted twice (in some countries financial aid to students is partly used by beneficiaries to make payments to tertiary educational institutions, which is also recorded under direct educational expenditure. Another concept is using direct public and private educational expenditure to avoid double counting. Both concepts show in 2002 a similar spending gap of 140 billion Euro. Using 2001 data results in a gap for total public and private spending of about 180 billion Euro.

II.2. SECOND STRATEGIC OBJECTIVE

Facilitating the access of all to education and training systems

This Strategic Objective of the "Education and Training 2010" programme, "Facilitating the access of all to education and training systems", contains three objectives focused on open learning environment, making learning more attractive and supporting active citizenship, equal opportunities and social cohesion. It brings the issue of the equity of the education and training systems to the forefront.

According to this strategic objective, all citizens should have equal access to education and training.[26] The needs of vulnerable groups, particularly people with disabilities and people with learning difficulties, as well as those living in rural/remote areas or having problems in reconciling their work and family commitments should especially be addressed. The need to focus on these groups of the population was re-affirmed by both, 2004 and 2006 Joint Council/Commission reports on implementation of the 'Education and Training 2010' work programme.[27]

The foundations for the participation in education and training, and therefore for successful personal development and professional life, are already set in early childhood. Participation in pre-primary education is crucial for those children who are at risk of being excluded due to various factors (for example low economic and educational status of their parents or special needs).

However, current demographic trends imply that Europe will need to rely not only on well-educated younger generations, but also on older workers – it is imperative to increase the labour-market participation of older people, women, migrants and minority and raise overall employment levels.[28] The integration (or re-integration) of these groups into the labour force will entail providing them with the skills and competencies they need to participate in a fast-paced knowledge-based economy. Moreover, all citizens will need to up-date their skills and qualifications throughout life for continuing personal and professional development.

Young people who leave education without recognised qualifications are at a disadvantage in the labour market. Their personal and social development is curtailed and they are at increased risk of poverty and social exclusion. First of all certain groups of early school leavers are likely to experience greater disadvantage than others, in particular those who leave the system before completion of primary education.

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[26] In this report 'access' is understood as a right to participate ('participation'). Participation means that an individual has a real opportunity to experience education or training. It is different from another, more 'formal' definition of access, which stresses the importance of having the *right* to participate in education and training, without being concerned with whether this right can actually be exercised in practice.

[27] 2004 joint progress report of the Council and the Commission on the implementation of the Education & Training 2010 work programme "Education & Training 2010: the success of the Lisbon strategy hinges on urgent reforms" and Draft 2006 joint progress report of the Council and the Commission on the implementation of the Education & Training 2010 work programme "Modernising education and training: a vital contribution to prosperity and social cohesion in Europe".

[28] Presidency Conclusions European Council, Barcelona, 2002, Part III, Contributions to the deliberations, p.48.

The necessity of increasing particularly the participation of adults in lifelong learning and of reducing the number of young Europeans who leave the school with no more than lower secondary education has led the Council to establish benchmarks in these two areas towards the strategic objective of facilitating the access of all to education and training. Moreover, these two targets form together with a target to raise the educational attainments levels part of the European Employment Strategy since 2003. But the progress in these areas is rather slow. Therefore, the European Council of 23-24 March 2006 itself has again stressed that efforts should be intensified to reach the agreed targets in reducing early school leaving and raising educational attainment levels. [29]

Questions of citizenship, equal opportunities and social cohesion are essential dimensions of education and training. Learning democratic values and democratic participation by all school partners should be promoted to prepare people for active citizenship.[30] However, the absence of internationally comparable data on active citizenship (as indeed, a standard definition of what active citizenship means or includes) hinders analysis in this area.

This part of the report is focused on participation of European population in education and training within a lifelong perspective as well as on issue of early school leaving.

2.1 Increasing participation in education and training within a lifelong perspective

European Benchmark
By 2010, the European Union average level of participation in lifelong learning should be at least 12.5% of the adult working-age population (age 25-64)

Making lifelong learning a reality requires inclusive and coherent education and training systems, which are attractive both to young people and adults, as well as comprehensive strategies for lifelong learning which overcome the traditional barriers between the various parts of formal education and training and non-formal and informal learning. Member States have actually committed themselves to develop truly coherent and comprehensive lifelong learning strategies by 2006.

- **Approaching nearly universal participation levels in pre-primary education**

A target to increase participation in pre-primary education to 90% of all children from the age of 3 years to the beginning of compulsory schooling was set by the Barcelona European Council of 2002 primarily in view of promoting the integration of young women on the labour market.[31] However, this employment related objective has obvious impact on educational and social development of children concerned.

Pre-primary education plays an important role in children's emotional and cognitive development, facilitates the transition from playful learning to formal learning and contributes to children's success during compulsory schooling, including positive impact on combating early school leaving and on further participation in lifelong learning (both targets covered by European reference levels (benchmarks) for 2010).[32]

[29] Presidency Conclusions European Council, Brusels 2006, point 38.
[30] The focus on increasing social cohesion was affirmed especially by the Laeken European Council in December 2001 which was the basis for the definition of a list of social inclusion indicators (the "Laeken indicators").
[31] Presidency Conclusions European Council, Barcelona, 2002.
[32] For example, the PISA survey found substantial association between attending pre-primary education and performing well at the age 15, even after correcting for the fact that students with more advantaged

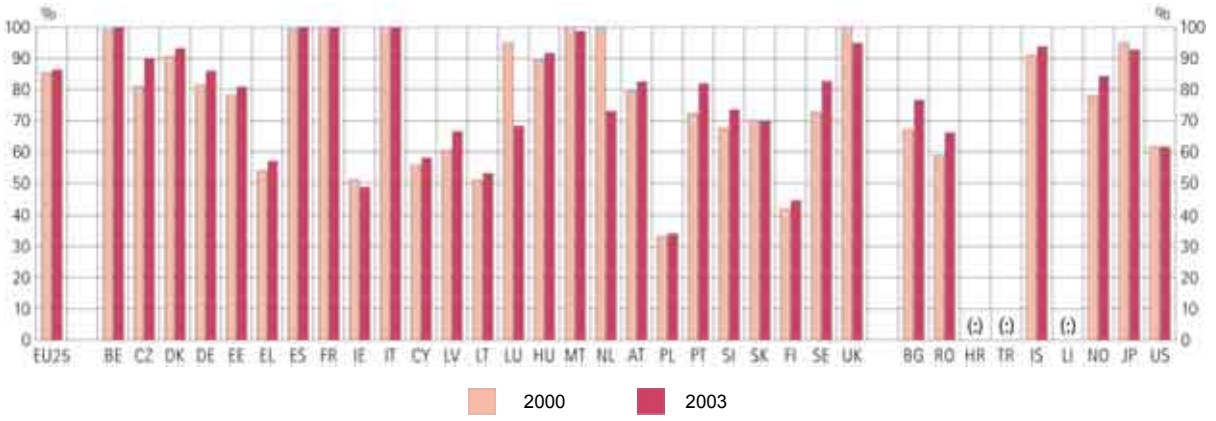
Increasing participation in pre-primary education is therefore particularly important for reducing inequalities caused by the lower socio-economic status of families, the educational attainment of parents, the difference between the languages spoken at home and language of instruction in school, or the ethnic background such as the situation of certain groups of migrants or Roma children in individual Member States.

The indicator used in this area presents the percentage of 4-year-olds who are enrolled in pre-primary institutions or in primary education.[33]

Chart II.12

Participation in pre-primary education (2000-2003)

(Participation rate of 4-year-olds in education)[34]



Source: Eurostat (UOE data collection)

Additional notes:
Data covers the participation of 4 year olds in pre-primary or primary education.
BE: data exclude independent private institutions, but these institutions are attended only by a very limited number of students.
IE: There is no official provision of ISCED level 0 education. Many children attend some form of ISCED 0 education but data are for the most part missing.
NL: reference data of collecting these data was changed in 2002 from 31 December to 1 October.

As shown in Chart II.12, from 2000 to 2003 the increasing trend, which started in the majority of countries after the 1960s, continued: the participation of four-year-olds in education increased from 85.4% to 86.3%. In 2003, the average rate in the EU was higher than in the USA, but lower than in Japan.

However, participation rates still vary widely across Europe. In France, Belgium, Italy, the UK and Spain, the participation of four-year-olds is almost universal, whereas in some

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background are more likely to do both. According to the authors of the report (OECD, 2005. *Learning for Tomorrow's World. First results from PISA 2003)* this suggests that pre school investment may have effects that are still marked and widespread across the student population 8-10 years into a child's education (and in some cases greater for the least advantages students).

[33] According to the ISCED definition "programmes at level 0, defined as the initial stage of organised instruction, are designed primarily to introduce very young children to a school-type environment, i.e. to provide a bridge between the home and a school-based atmosphere". That means day care without educational element is excluded.

[34] The population data and the education data come from different surveys not carried out at the same dates of the year. Population data are in several countries based on a census carried out several years before. This can result in deviations even if both types of surveys are reliable. Also for some countries there is an inflow of pupils/students from other countries, who are not included in the population statistics. These aspects explain why the participation rates exceed 100% in some countries.

countries only about one half or less of 4- year-olds participates in education. In Greece pre-primary education is only officially available from the age of 4 onwards, and in Ireland, the Netherlands and the UK, four-year-olds are already enrolled in primary education.[35] Relatively low participation rates in some countries are influenced by how the national educational systems are organized and governed. For example, in Finland the majority of 4-year old children attends day care centres which are not considered as educational institutions even when certain education is applied there and staff is highly qualified.

Participation of children in pre-primary education in individual countries correlates with a series of factors:[36]

First of all, government regulations which regulate the statutory age at which children start the compulsory phase of education and access to pre-primary education as a statutory right as well as parental leave, have an impact on the extent of participation.

Secondly, participation in pre-primary education is further influenced by cultural norms regarding the age at which children should be placed in care outside the home.

Thirdly, labour market conditions are of relevance. In the countries where the labour market is highly flexible with a wide offer of part-time jobs, the participation of children in pre-school age in education is higher. Research shows that an increase of 1% in part-time employment relates to an increase of enrolment rates in pre-primary education by 0.3%.[37]

A further factor influencing the participation in pre-primary education is the availability and affordability of pre-primary education. Practice varies widely across Europe in the structure and the extent to which it is state- supported or private. On average, OECD countries, for which such data are available, pay around 75% of the costs of pre-primary education through public funds, with parents paying the remaining 25%, but there are wide variations between countries.[38]

Main messages on participation in pre-primary education:

- **Participation rates in pre-primary education in the EU are increasing steadily and have reached more than 86% of 4 year olds in 2003. However, there are significant differences between countries- it varies between 30% and nearly universal participation.**
- **Participation in pre-primary education is important first of all for the groups of children at risk of social exclusion-it helps to reduce inequalities in the later life.**
- **Participation rates in pre-primary education can be explained mainly by the following factors:**
  - ***Governmental regulations***
  - ***Cultural norms and family context* , including employment**
  - ***The availability and affordability of pre-primary education.***

[35] Eurydice (2005). *Key Data on Education in Europe 2005.*
[36] Findings from M.S. Otero & A. Mc Coshan (2005). *Study on Access to Education and Training* are presented here. The study was prepared for the Commission.
[37] ibid.
[38] OECD (2001). *Starting Strong: Early Childhood Education and Care*.

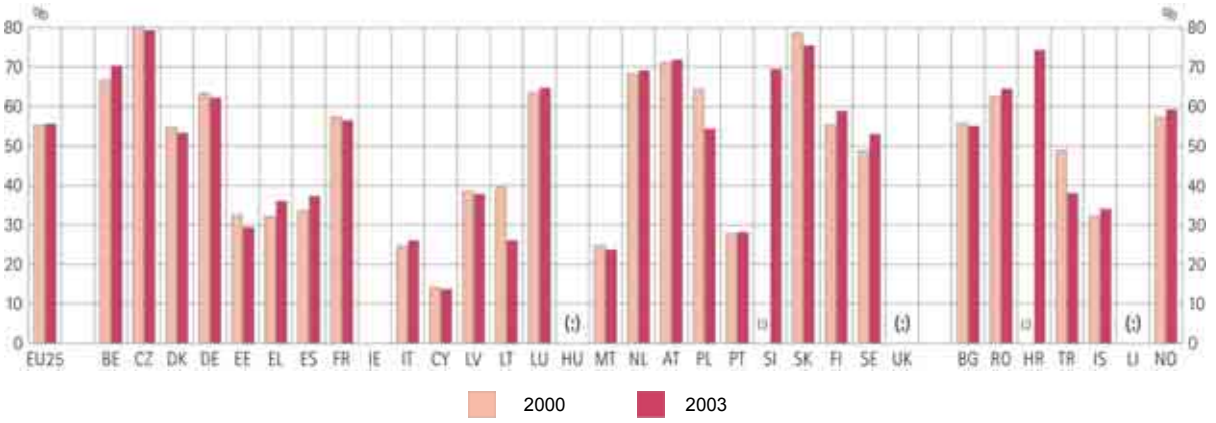
- **Vocational stream in upper secondary as an opportunity for young people "at risk"**

Recent comparative research suggests that the education and training systems which allow young people to participate relatively early in vocational education, mostly at the level of upper secondary education (ISCED 3), better meet the educational needs of some pupils at risk, and therefore positively influence the phenomenon of early school leaving.[39]

Chart II. 13

Participation in vocational stream of upper secondary education (2000, 2003)

(Percentage of pupils in upper secondary education enrolled in vocational stream)



Source: Eurostat (UOE data collection)

Additional notes:
Pre-vocational education is included in general education.
BE: data exclude independent private institutions, but these institutions are attended only by a very limited number of students. Data include social advancement secondary education.
DE 2003: data include for the first time data on ISCED 3C (ca 17 000 students)

On the other hand, high participation rates in vocational streams in combination with education and training systems which are less flexible and limit access to tertiary education or do not encourage young people leaving this type of education for further studies, may represent a barrier for reaching higher average levels of educational attainment among the entire population in these countries.

The participation rates of students in vocational streams of upper secondary education did not change significantly in the EU in the past years, representing 55.6% of all students enrolled in 2003. There were significant differences between countries reaching nearly 80 % in the Czech Republic and less than 15 % in Cyprus and Ireland. The values close to the EU average figures about 50% are observed in all Nordic countries as well as in France and Poland.

However, in countries with low levels of participation (Cyprus, Italy, Malta and Portugal), the scope of participation in vocational stream in upper secondary education has to be seen in the context of the whole system of vocational education and training within the country, mainly as concerns how strongly developed the sector of pre-vocational education and training and post-secondary vocational education (not tertiary) are in the country.

[39] For example, P. de Broucker (2005). *Without a Paddle*, analyses this phenomenon in relation to share of early school leavers in the 0ECD countries.

From 2000 to 2003 participation in vocational stream of upper secondary education decreased in nearly all new Member States; of these countries, Poland experienced the highest decrease - the participation of students in vocational streams decreased by 10% in 3 years and reached the level slightly below the EU average in 2003. Simultaneously, the share of those upper secondary graduates (ISCED 3) with qualifications giving access to higher education within this group increased. The decrease of participation rates in these countries highly correlates with substantial change of the economies as a consequence of the decline of traditional industries such as textiles or heavy engineering as well as with the change of structure of professions.[40]

In 2003, the highest proportion of students enrolled in vocational stream of upper secondary education was observed in the Czech Republic and Slovakia (79.3% and 75.4% respectively). These two countries are characterized by low ratios of early school leavers, but also by relatively low participation in higher education. This might indicate that the systems of vocational education and training in these countries are strong, highly developed and very well meeting the educational needs of a high proportion of young people, including of young people at risk The attractiveness of VET remains however a challenge for many countries. This is a crucial objective to support access to lifelong learning.

On the other hand, the education and training systems with a very strong vocational stream in upper secondary education simultaneously may not adequately stimulate for participation in further studies because the aim of vocational education and training (VET) is according to the definition developed by European Training Foundation (ETF) 'to equip people with skills and competences that can be used in the labour market.[41] Even in the case when the students leave the education and training with qualification allowing direct access to higher education, only a low proportion of them continues in further tertiary studies.[42]

Also it has to be stated that the vocational streams of upper secondary education produce in some countries significantly higher proportion of early school leavers of the total number of enrolled students in this stream than general upper secondary education.[43] Despite the lack of data, many countries are faced with a growing student preference for general education. In comparison with general secondary education, VET is less attractive first of all for academically oriented young people in many countries. Attempts to raise the image of VET, also by increasing access to higher education, have been made in all Member States.[44]

As regards the gender dimension, slightly less females (53.8 %) than males (57.4%) were enrolled in vocational stream in upper secondary education within EU in 2003.

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[40] European Commission, Directorate General Education and Culture (2005). *Achieving the Lisbon goals. The contribution of VET.*

[41] Ibid, p.8.

[42] For example, in Slovakia about nearly 100 % of all graduates from general upper secondary education in opposite to only about 50 % equally qualified graduates of vocational stream of upper secondary education continued in tertiary education in 2004. (Source: UIPS (2005). Statisticka rocenka skolstva.).

[43] For example in Norway, in the 1999 cohort, 84 per cent of pupils in general studies completed their education within five years. The corresponding figure for pupils and apprentices in vocational studies was 55 per cent. To drop out from upper secondary education in Norway means that the pupil or apprentice is no longer registered in upper secondary education. The reason could be that they have started another education, travelled abroad or become employed, among others. See http://www.ssb.no/english/subjects/04/02/30/vgogjen_en/.

[44] European Commission, Directorate General Education and Culture (2005). The Achieving of Lisbon goals. The contribution of VET. Brussels, pp. 72-73.

Main messages on participation in vocational stream of upper secondary education:

- **Proportion of students enrolled in vocational stream of upper secondary education is relatively stable as regards EU level, but participation rates vary significantly between countries reaching from nearly 15% to nearly 80 %. There is a decreasing tendency of participation in vocational stream of upper secondary in nearly all new Member States**
- **The increase of the attractiveness of vocational education and training remains an important challenge for the majority of countries to ensure higher lifelong learning uptake.**
- **The vocational stream of upper secondary education meets in most cases very well the requirements for an immediate entrance in the labour market, however, there is a challenge for an increase of participation of this group of graduates in tertiary education.**

- **Ongoing increase of participation in tertiary education**

Participation in tertiary education has been increasing since many years in the EU. Over the past 30 years, the number of EU students has, on average, almost doubled (quadrupling in Poland; tripling in Greece, Spain, Ireland, Finland and Island). In 2003, European students enrolled in tertiary education represented already about half of the European population in a typical student age (20-24 years).[45]

However, as shown in the Chart II.14, participation in tertiary education varied widely between countries representing values between about 30% and almost 90% as a proportion of the 20-24 year age group.[46] Also it has to be stated that the position of individual countries could be different when another age group of population would be selected taking into account the fact that in some countries relatively high proportion of students are students belonging to the age group over 24 years (for example in Sweden, the UK, Denmark, Spain, Latvia, Austria and Germany) or when a concept of a net enrolment would be applied (see also Chart II.15).

Participation in tertiary education is expanding not only in some countries which showed low participation rates in the mid-1990s, such as Greece, but also in countries that already had high participation rates, like Nordic countries. Only two Member States (Austria and Germany) have experienced a slight decrease of enrolments in tertiary education as a proportion of the age group 20 to 24 year olds between 2000 and 2003 that, as it can be seen from the chart below, in both cases represent a further fall compared to 1998.

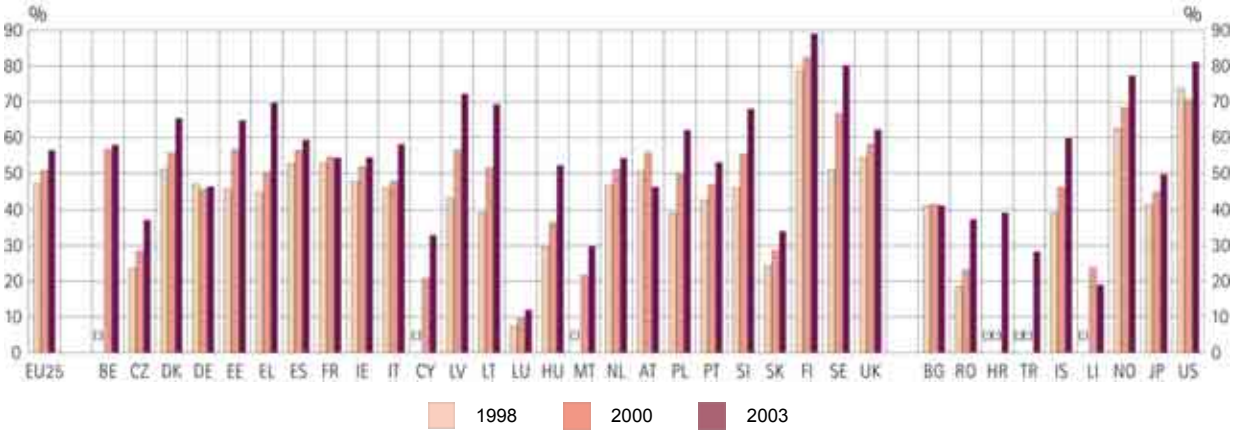
[45] The concept of gross enrolment rate is used. The *gross* enrolment rate is the total number of students enrolled in tertiary education divided by the number of people in an appropriate age range for tertiary education that means, all enrolments in ISCED 5-6, independent of age, as a percentage of 20-24 year olds in population.

[46] Luxembourg presents even lower figures at around 10%, but this is because the majority of students studies abroad. Also the low values for Malta and Cyprus are influenced by this fact.

Chart II.14

Participation in tertiary education (1998, 2000 and 2003)

(All enrolments in ISCED 5-6, independent of age, as a percentage of 20-24 year old in population)



Source: Eurostat, UOE data collection

Additional notes:
BE: Data exclude independent private institutions, but these institutions are attended only by a very limited number of students.
DE, SI: Data exclude ISCED level 6.
LU: Most national tertiary students study abroad and are not included.
CY: Most students in tertiary education study abroad and are not included in the enrolment data, but they are included in the corresponding population data. In addition, all boys aged 18-24 are in compulsory military service. The participation rates are thus underestimated.

In general, participation rates in tertiary education in new Member States and candidate countries were in 1998 lower than those of EU15 countries, but the trend towards increased participation is in the majority of them strong. Whereas in 1998 their participation rates in tertiary education ranged from 20% to about 45%, in 2003 they reached the values between 30% and 70%. Growth is also in these countries not related to their initial position in the first year of reference, since countries that were already performing at higher levels in 1998 – such as Poland, Baltic countries and Slovenia – are amongst those who have experienced a higher absolute increase in participation in the period up to 2003.

Participation in tertiary education does not seem to relate to whether the access to tertiary education is open (such as in Germany, France, Italy or the Netherlands), whether a special entrance examination needs to be passed (such as in Greece, Spain and majority of new Member States) or whether places are available (as in the UK or Sweden).

In most EU countries, participation rates have increased substantially more since 2000, when the Lisbon strategy was approved, than in the period before 2000. However, also the participation trends in tertiary education in EEA countries, Japan and the USA experienced a strong increase after 2000. This may suggest that also structural reasons and other factors may be responsible for this increase.[47] Indeed, for example the USA witnessed a decrease in participation rates during the period 1995-2000, but a pronounced increase after 2000 but still below European countries such as Finland and Sweden.

[47] The Bologna process could influence participation in higher education in the future. The two-cycle courses make first degrees shorter in some European countries, thereby lowering costs and making them more attractive to students and reducing drop-outs. Some countries which had a structure closer to that to be generalised through the Bologna process, such as the UK, Denmark and some new Member States, have exhibited higher levels of participation tertiary education than countries in which long degrees were general, such as Spain, Italy or Germany.

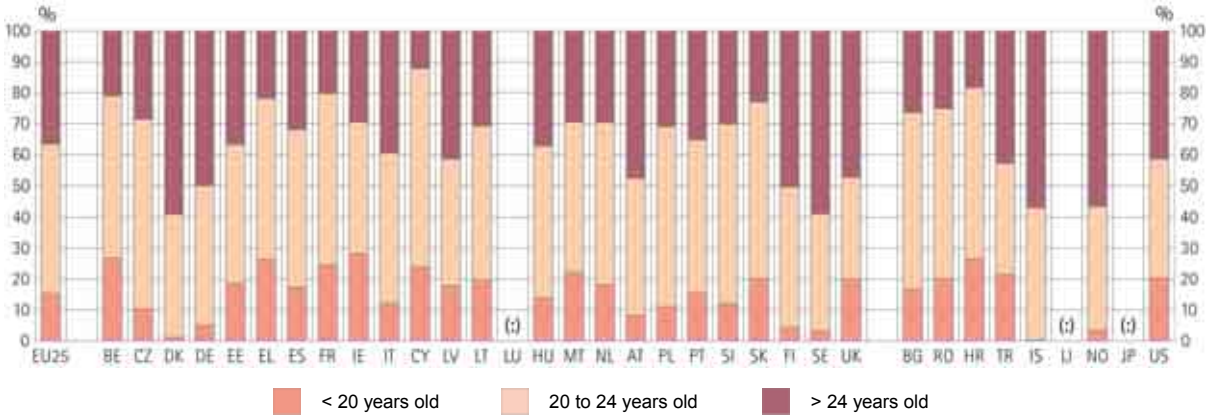
As concerns the participation of older students (over 24 years) in tertiary education, this group represented 36.7% of all students enrolled in tertiary education in the EU in comparison to the slightly higher proportion 41.4% in the USA in 2003.

Also here, the situation in individual European countries varies widely. Very high proportions of older students (more than 50 %), much higher than the EU and the USA percentages, are observed in Sweden, Denmark, Finland and Germany, but also in Iceland and Norway. On the contrary, older students are underrepresented in tertiary student population in Cyprus (12.2%), but also in Belgium, France, Greece and Slovakia with proportions at about 20 % .

Chart II.15

Age distribution of tertiary students

(Tertiary students (ISCED 5-6) in the age groups below 20 years, 20-24 years and above 24 years as a percentage of tertiary students, 2003)



Source: Eurostat (UOE Data collection)

Additional notes:
BE: Data exclude independent private institutions, but these institutions are attended only by a very limited number of students.
DE, SI: Data exclude ISCED level 6.
LU, Most tertiary students study abroad and are not included.
CY: Most students in tertiary education study abroad and are not included in the enrolment data, but they are included in the corresponding population data. In addition, all boys aged 18-24 are in compulsory military service. The participation rates are thus underestimated.
LU, JP: Data by age not available.
IT, PL: Data by age in ISCED 6 not available, all ISCED 6 included in age above 24 years.

Many internal and external factors have impact on participation in tertiary education.[48]

Participation in higher education still depends to an important extent on the education and occupational status of the parents and, more generally, at macro-level, on the degree of income socio-economic inequalities in a given country. Various social, financial and geographical barriers were identified as regards participation of disadvantaged to tertiary education in individual countries.[49]

The government investment and regulations play an important role in shaping participation in tertiary education. The public sector is a large provider of higher education and it defines conditions for participation, including number of admitted students, mainly by financing higher education. The government can also adopt strategies in relation to financial support to students with disadvantaged background.

[48] Mainly findings from M.S. Otero & Mc Coshan (2005). *Study on Access to Education and Training* .
[49] See for example A. Forsyth & A. Furlong (2005). *Socioeconomic disadvantage and access to higher education*.

Other factors have an impact on participation in tertiary education as for example:

- Number of students leaving secondary education with qualifications giving access to higher education;
- The nature of education and training system, in particular whether the country has a strong system of vocational education and training that can function as an alternative to higher education or not.
- Demographic trends, in particular the number of people aged under 25.

Main messages on participation in tertiary education:

- **Further progress is still needed within EU to increase the participation in tertiary education by those young people who fulfil the requirements for entry in tertiary education and do not participate by now as well as by those over typical student age to address the problem of ageing and prolongation of professional career/employment.**
- **Significant inequalities still exist as regards the participation in tertiary education. Various social, geographical and financial barriers continue hinder the access of variously disadvantaged European citizens to tertiary education.**

- **Increase of participation of adults in lifelong learning still remains a challenge**

When adopting a European reference level (benchmark) on participation of adults in lifelong learning Member States agreed to achieve 12.5% of 25 to 64 years old participating in any type of education and training within "the last four weeks" taken from the survey date till 2010.

In 2005, Member States achieved EU average participation level of adults in lifelong learning of 10.8%. Based on progress already achieved it can be expected that the EU reference level (benchmark) on participation of adults in lifelong learning will be reached in 2010.

However, when examining progress since 2000 it must be noted that there were breaks in time series between 2002 and 2003, as well as 2004 and 2005, which make the statistical data less comparable over time in many EU countries. The methodological changes have improved the comparability of data between the countries but overstate progress within the EU as well as in individual countries (higher figures than in the years before notably in France, Sweden and Spain).

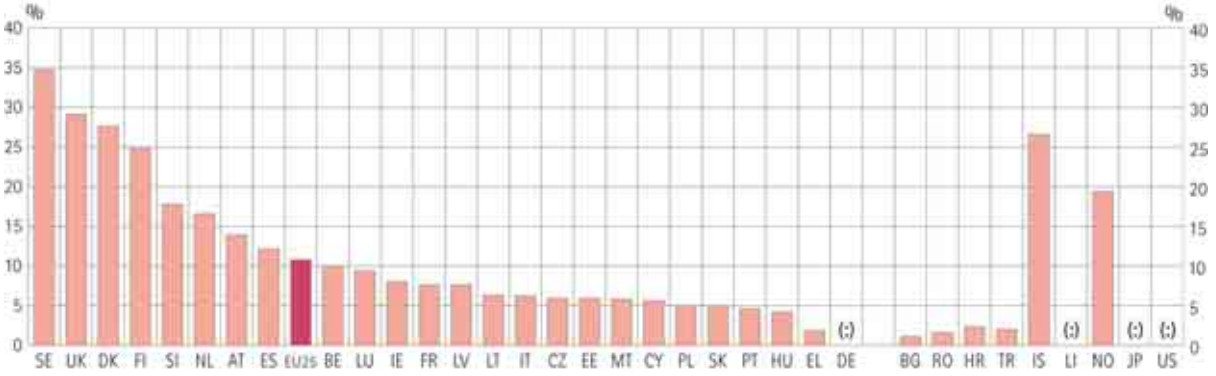
The analysis also shows, that there are countries in which more progress could be achieved, and areas where further improvement is needed, for example in order to reduce inequities between groups of the population (based on socio-economic background, level of the educational attainment, rural/urban areas, different age groups etc.) as concerns participation.

In order to achieve higher progress, eight Member States (Belgium, Estonia, Finland, Latvia, Malta, the Netherlands, Portugal and Spain) have set quantified national targets on participation in lifelong learning in their Lisbon National Reform Programmes 2005.

Chart II.16

Participation of adults in lifelong learning (2005)

(Percentage of population aged 25-64 participating in education and training in four weeks prior to the survey, ISCED 0-6)



Source: Eurostat (Labour Force Survey)

Additional notes:
- DE: data for 2004.
- LU, MT and the UK: provisional data.

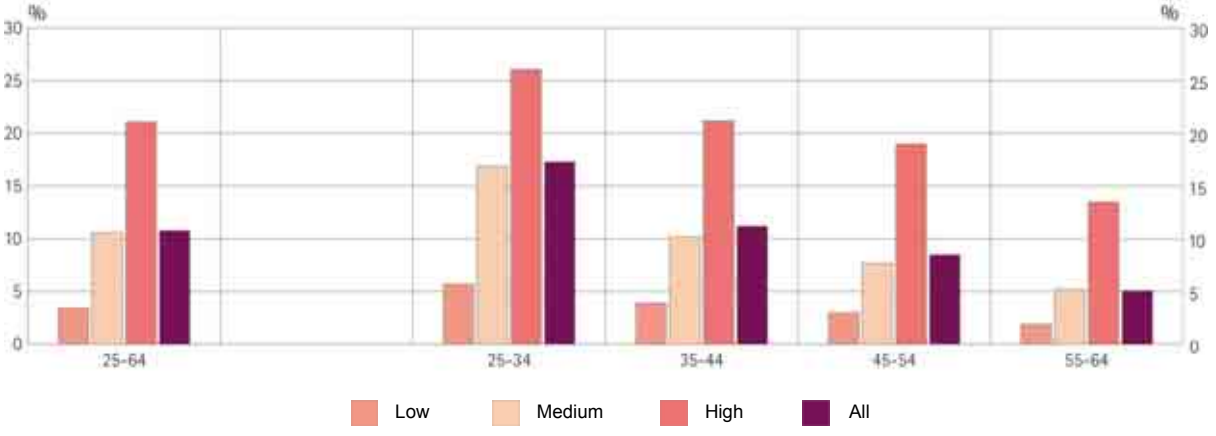
In 2005, the four best performing countries in the field of participation of adults in lifelong learning were Sweden, Denmark, Finland and the UK, followed closely by Slovenia, the best performing new Member State, and the Netherlands and Austria.

All other EU countries were below the average performance level of 12.5%. Greece, Portugal, Slovakia and Hungary have participation rates at or below 5%. Among the candidate countries, participation rates in Bulgaria and Romania were at the very low level of less than 2%.

As regards the gender dimension of participation, in most countries women participated more in lifelong learning than men, independently of their educational attainment levels. Also persons with higher initial educational attainment levels and younger generations are more privileged in this respect: high educated people participate seven times more in lifelong learning than low educated, and participation decreases after the age of 34.

Chart II.17

Participation in lifelong learning by age and educational attainment, 2005



Source: Eurostat (Labour Force Survey)

Additional notes:
- DE : data for 2004.
- LU, MT and the UK : provisional data.

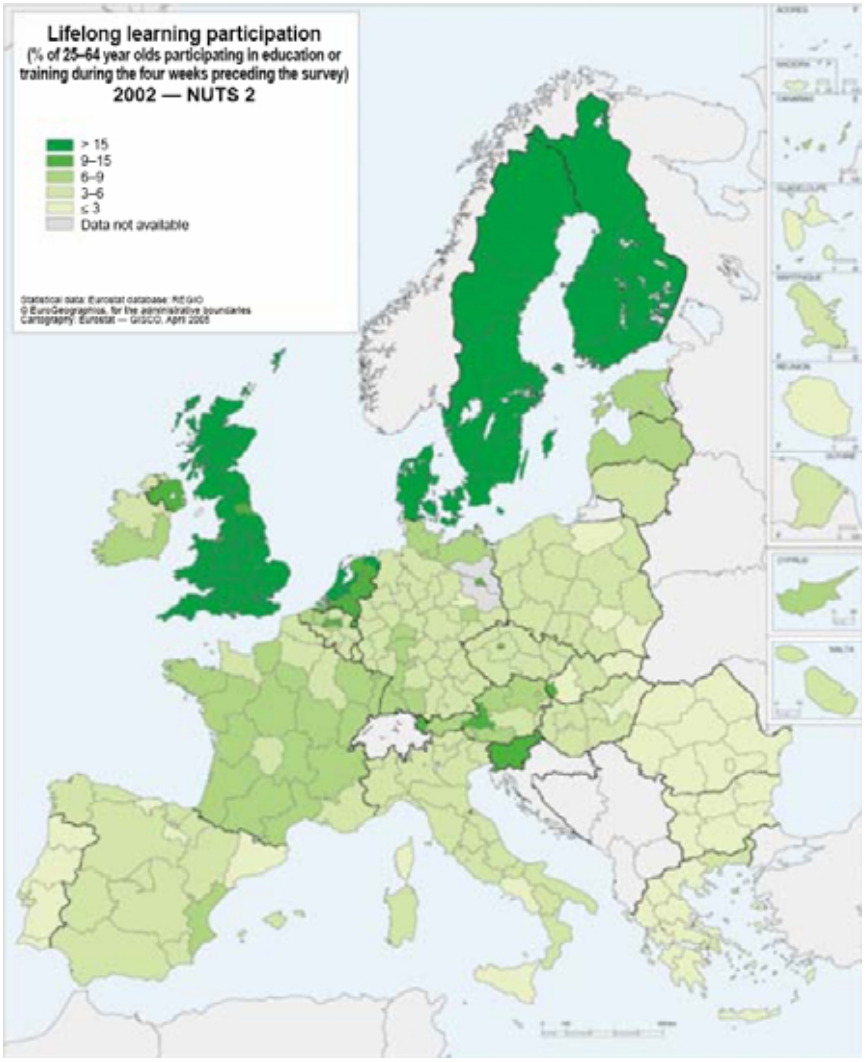
Regional data allows us to see the participation in lifelong learning in the EU from another perspective illustrating diverse levels of participation on a sub-national level.

As it can be seen from the map below, participation in lifelong learning is high (over 15% or more) in all regions in Finland, Sweden, the United Kingdom and the Netherlands. In Sweden it is even higher - close to or above 30%.[50]

The participation rates are especially low in all regions in Greece (apart from North Greece), Bulgaria and Romania, in some regions they are even below 1%.

Within countries, the highest participation rates in lifelong learning are often found in the capital regions. This is, however, not at all always the case. The region in Sweden with the highest participation rate, Övre Norrland, is the most rural part of Sweden. In France, the highest participation in lifelong learning is in Alsace, 8.7%. In Italy, Sardegna has the highest percentage, 6.1%, in the Netherlands Utrecht, 17.8% and in Austria Salzburg, 10.1%.

Chart II.18



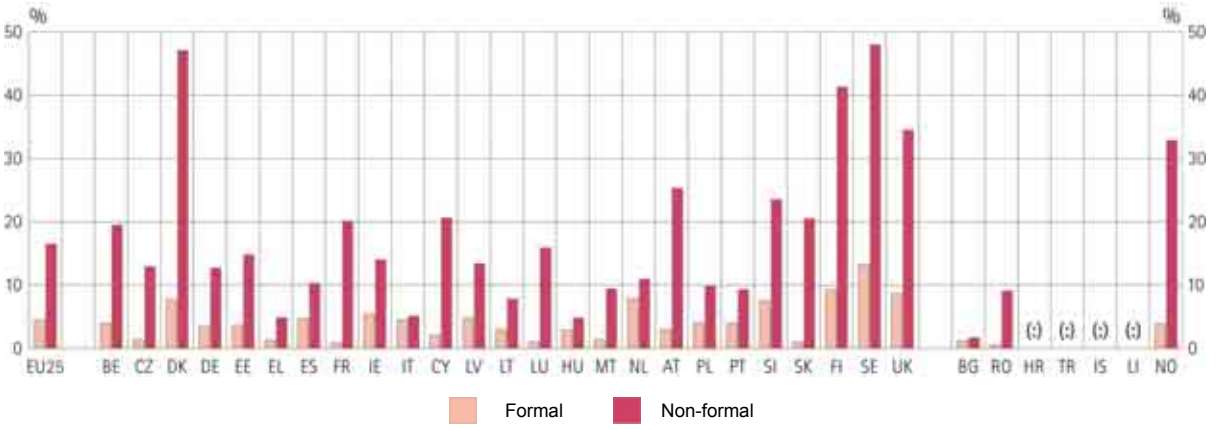
Source: Eurostat

[50] Eurostat (2005) Regions: Statistical yearbook 2005.

The data from LFS ad hoc module on participation in lifelong learning from 2003[51] allow a more detailed analysis of the participation of adults in lifelong learning, especially as concerns their participation in formal and non-formal education and training.[52]

Chart II.19

Rate of participation (%) of 25-64 year olds in formal and non-formal education and training, 2003



Source: Eurostat LFS, ad-hoc module on Lifelong Learning 2003. Target population: 25-64 years, reference period: 12 months..

The Chart II.19 shows, that in 2003 4.5% of the European population aged 25-64 had participated in formal education during the previous 12 months according to the ad hoc module of the Labour Force Survey on lifelong learning. However, participation of adults in non-formal education was more than three times higher (16.5%) than in formal education.

The difference in participation rates between highly educated and low educated people in non-formal education was sometimes, according to this recent survey, extremely significant: In some countries the proportion of the population participating in non-formal education was more than ten times higher for highly educated people than for the low educated; the ratio drops to below 2% only in Denmark and in Sweden. Also in Greece, Spain, Italy, Lithuania, Malta and Hungary the difference between high and low-educated as concerns their participation in lifelong learning is relatively low, but at the same time overall higher rates of non participants are registered in these countries.

As regards participation by fields of study, nearly 20% of all participants participated in computer science courses. Highest participation rates (above 20%) were recorded in Austria, Belgium, Denmark, Greece, Spain, Ireland, Italy and Luxembourg. Only 7.2% of all

[51] See the data in the Detailed analysis of the progress in Annex

[52] According to the definition used, lifelong learning encompasses all purposeful learning activities, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. Participation in *formal education* (i.e. the regular educational system of each country), *non-formal education* (i.e. organised and sustained educational activities that do not correspond exactly to the definition of formal education) and *informal learning* (i.e. activities outside formal or non-formal education, of a low-level of organisation, such as self-study) is distinguished. However, the comparability with the data on participation of adults in lifelong learning covered by EU benchmark (12.5% in 2010) is limited because of at least two most significant reasons: 1) reference period taken into account by respondents in the surveys is different (four weeks before survey in standard LFS, 12 months before survey in LFS ad hoc module); 2) different interpretations of informal learning in individual countries.

participants attended language courses, with highest participation rates in the Czech Republic (22.5%), followed by Hungary, Luxembourg, Latvia and Austria.

Adults that participated in non-formal education spent in average 84 hours during the last 12 month per individual, according to the survey. The number of hours of participation was practically the same for people with high and low educational attainment levels. The countries with highest volumes of learning per individual expressed in hours (ranging from 156hrs to 105hrs on average) record lower participation rates in non-formal education that means that in these countries relatively few persons participate in lifelong learning but they participate during long periods in contrast to countries with an overall higher level of participation but lower volumes of participation expressed in hours.

When we look at the participation in non-formal education from the perspective of integration in the labour force, the unemployed and the economically inactive persons participate more in formal education, whereas the employed persons which participate more in non-formal education.

However, the data also show that more than half of the 24–65 year old Europeans did not participate in any kind of learning during the period of 12 months prior the survey.

Moreover, results of another survey carried out by Eurobarometer on vocational training of 2004 [53] , show that only one in five Europeans intends to do more training in the near future, and one in five intends to do less. About two in five will undertake the same amount of training as last year. The main reasons for doing less training in the future are according to this latter survey: Many people are not aware of the need of any new skills for their work (26%); some believe not to have the time (20%); some feel appropriate training is not on offer (18%); and some think the employers do not make the necessary time or funding available (17%).

Making time available during working hours would encourage citizens to undertake more training, but the main incentive seems to be financial support. Funding of training by the employer and support by public measures (e.g. learning accounts, vouchers, and tax relief and more appropriate recognition of skills and qualifications) could increase participation in lifelong learning in general and in continuing vocational training in particular.

Main messages on participation of adults in lifelong learning:

- **Participation of adults in lifelong learning is heading toward the European benchmark for 2010, but breaks in data series in several countries overstate the progress made.**
- **However, many inequalities in access to lifelong learning still remain. Adults with a high educational attainment level are more than six times as likely to participate in lifelong learning than low skilled; in non-formal education it is even ten times more. Furthermore, older age groups participate much less than the younger ones.**
- **Increasing participation of adults in lifelong learning is also a challenge with a regional dimension. Some regions in the EU are remaining behind even in countries with overall high levels of participation.**

[53] European Commission (2004). Special Eurobarometer 216 "Vocational Training".

- **Policies to increase participation in lifelong learning should therefore especially focus on low educated, participation of older age groups in education and training as well as on the regional dimension.**
- **Therefore it is crucial for Member States to implement their commitment to have comprehensive and coherent lifelong learning strategies in place by 2006.**

2.2 Too many young people still leave the school early and do not continue in any kind of learning

European Benchmark
By 2010, an average ratio of no more than 10% early school leavers should be achieved.

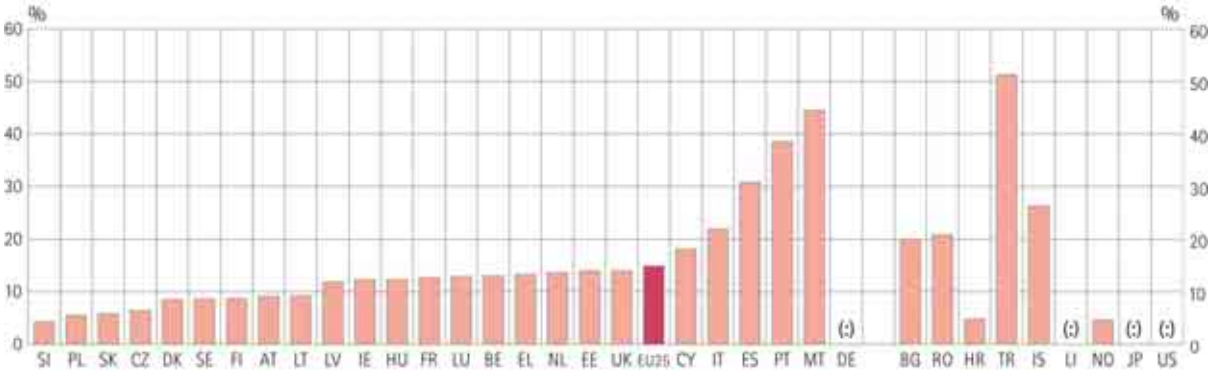
Young people who leave education without recognised qualifications are less likely to participate in lifelong learning and face a disadvantage in the labour market in today's knowledge-based society. Their personal and social development is curtailed and they are at increased risk of poverty and social exclusion. These facts led the Council to the adoption of a benchmark on early school leavers and to the inclusion of the target to reduce early school leaving in the European Employment Strategy in 2003.
In 2005, every sixth young person aged 18 to 24 had still left school in the EU with no more than lower secondary education and did not participate in any kind of education or training: 14.9% of this age group of young people were early school leavers.

On the other hand, the Czech Republic, Denmark, Lithuania, Austria, Poland, Slovakia, Finland and Sweden, and Norway, all have rates of early school leaving well below the European reference level (benchmark) for 2010 (no more than 10%).[54] The new Member States, with the exception of Malta and Cyprus, generally perform much better than the EU25 average in the area of early school leavers.

Chart II.20

Early school leavers (2005, %)

(Share of the population aged 18-24 with only lower-secondary education and not in education or training)



Source: Eurostat (Labour Force Survey 2005)

[54] However, in Denmark, Slovakia and Finland there is a high variation of results over time partly influenced by a low sample size, but never exceeding 10 %.

Additional notes:
- Breaks in time-series in 2004: Belgium, Lithuania, Malta, Poland, Portugal, Romania
- Poland: only vocational training included.
- 2004 data provisional for: Germany, Ireland, Italy, UK.
- FR: changes in the reference period in 2003 (formerly one week preceding the survey).
- SI: data unreliable or uncertai.n
- SK: restrictions on autonomous learning (2003).
- DE: exclusion of personal interest courses (2003).
- CY: excludes students abroad.
- DK, LU, IS, NO, EE, LV, LT, MT, SI: high degree of variation of results over time partly influenced by a low sample size.
- FI (from 2000), SE, BG (from 2001),IE, LV, LT (from 2002), HU, FI, AT (from 2003): data lacks comparability with former years due to changes in the survey characteristics.
- EU: aggregates provided using the closest available year result in the case of missing or provisional data.

As regards the gender dimension, in the majority of EU countries (except of the Czech Republic, Luxembourg and Austria) there were more male (17.1%) than female (12.7%) early school leavers.

There was an improvement in the average EU share of early school leavers in the period 2000-2005, bringing the latest figure to 14.9%. However, this is still far in excess of the European benchmark of a share of early school leavers of 10% in 2010. In order to achieve more progress, seven Member States leaving (Belgium, Estonia, Latvia, Malta, the Netherlands, Portugal, and Spain) have set quantified national targets on reducing early school in their Lisbon National Reform Programmes 2005.

A study prepared on early school leavers for the European Commission in 2005 has shown that there are series of factors that might influence the levels of early school leaving in individual countries.[55]

Social origin is an important factor affecting young people's probability of continuing in education or dropping out of school early. Pupils tend to leave education without completing upper secondary education when their parents also have low levels of education (ISCED 1-2); this is however not the case in Finland. The most striking difference between individual countries is in the percentages of early school leavers among youth with parents with very low levels of education (ISCED 1-2) especially in the countries of Southern Europe (80% in Spain, 68% in Italy and 66% in Greece and comparatively low in Slovakia, Finland, Hungary, Sweden and Austria (below 30%). However, also the 3% to 11% of families in which at least one of the parents obtained university education are confronted with early school leaving. The same is valid for certain families with upper secondary education as highest educational attainment (2%-21% of families). Thus, although socio-economic background plays an important role, the phenomenon is much more complex and other variables intervene.

Secondly, pupils' experiences of school are also a significant predictor of early school leaving. This was again confirmed by the PISA survey 2003 which shows that there is a high correlation between early school leavers and students performing at the lowest levels of proficiency (level 1 and lower).[56]

Thirdly, foreign/ethnic background is another factor influencing early school leaving. Early school leaving is according to the data available from Labour Force Survey (LFS) more than

[55] E. Kritikos & C. Ching (2005). *Study on Access to Education and Training, Basic Skills and Early School Leavers* (http//europa.eu.in/comm./education/doc/reports/doc/earlyleave.pdf). More data could be also found in the annexed report "Detailed analysis of progress towards the Lisbon objectives in Education and Training".
[56] OECD (2001). *Knowledge and Skills for Life – First Results from PISA 2000.*

two times higher among non-nationals than among nationals (30.1% in contrast to 14.9%).[57] Nearly half of non –national pupils leave the school at an early age in Spain and 40 % and more in Greece, Cyprus and Portugal.

Early school leavers do not represent a homogenous group. They differ for example as regards the highest educational level attained, including intergenerational differences, as well as differences as regards the age when they left the school without reaching upper secondary educational attainment.

Comparing data on children's educational attainment and the attainment levels of their parents generation one notices a remarkable improvement that especially younger generations in Southern European countries have made. In all countries of the EU the percentages of young people with at least upper-secondary education is higher than the percentage of parents with the same level of education.

At present, already 77% of early school leavers have attained lower secondary education. However, in Luxembourg and Portugal there are more early school leavers with only primary education. It is notable also that in Bulgaria more than 10% of the early school leaver population has less than primary education.

Whereas for the majority of countries the share of people without formal education or below lower secondary level has decreased, it has slightly increased in Ireland, Lithuania, Slovakia and the UK. Of the countries with the highest share of early school leavers, Malta and Spain now have much higher share of early school leavers who have attained lower secondary level instead of primary. In Portugal this share is still quite low but has increased.

The average age of young people leaving education without completing upper secondary education ranges from 14.5 (Greece) to 19.6 years (Denmark). Also in Italy, Hungary, Slovakia, Romania and Spain, young people start to leave education earlier than in other countries (at around the age of 15). In Nordic countries this age is higher mainly because it is more common for certain groups of young people in these countries to attend the courses within non-formal education rather than to be involved in formal education.

Generally, people avail of opportunities to obtain upper secondary education mainly until the age of 30; after this it is rather seldom.

Individual governments try to cope with the problem of early school leaving in their countries differently. In the majority of them, national reforms in the area of education and training are mostly targeted at secondary education (reforms of general and vocational education), the length of compulsory education, specific initiatives and programmes focused on various groups of early school leavers as well as on elimination of external negative factors influencing this phenomenon, including the availability of support and guidance mechanisms.

[57] Data source LFS 2005. Nationality is interpreted as citizenship. Citizenship is defined as the particular legal bond between an individual and his/her State acquired by birth or naturalisation, whether by declaration, option, marriage or other means according to national legislation. It corresponds to the country issuing the passport. For persons with dual or multiple citizenship who hold the citizenship of the country of residence, that citizenship should be coded. The variable about nationality takes into account own country national, a person from another EU15 country or a person from a non-EU15 country. The comparability of the data is limited because this variable is linked to the Member State's specific laws on naturalisation.

First of all, differentiating the content of post-compulsory educational programmes and especially offering a wide variety of choice might according to the majority of the governments increase young people's motivation to stay longer in education. There seems to be a tendency among governments to offer more vocational options in post-compulsory education to ensure that young people who are at risk of dropping out gain some kind of qualification and proof of skills. Moreover, the reform efforts undertaken seem to be additionally targeted at better matching these vocational programmes to the needs of the labour market to increase the chances of finding a job afterwards.

Availability and easy access to 'second-chance' education positively influences the participation of young people who left school without completion of upper secondary education in education later in life in those countries that offer some form of organised second-chance education. It seems so that a longer compulsory education or a higher age when young people finish compulsory schooling alone does not necessarily mean that more young people will succeed in obtaining an upper-secondary qualification. The countries with the highest age when they finish compulsory schooling (18-19 years old, based on compulsory part-time education schemes), all have an early school leavers rate at around the 10% level. However, for all other countries there seems to be no strong link to the level of the early school leavers' rate.

It is difficult to measure the real impact of targeted interventions, but some specific measures implemented in the countries in which the rate of early school leavers is steadily decreasing seem to have a positive influence on retaining specific risk groups longer in education and helping them towards obtaining a qualification.

Main messages on early school leavers:

- **There has been continuous progress in recent years in reducing the number of early school leavers, but progress must be faster to reach the EU benchmark of 10% in 2010.**
- **Progress within EU highly depends on the progress achieved by few countries which despite a considerable effort and improvement in recent years still remain far behind European benchmark. However, also in the countries with relative low rates of early school leavers much remains to be done regarding specific groups (for example families wit low social-economic status, migrants, Roma).**
- **People avail of opportunities to obtain formal education (upper secondary education) mainly up to the age of 30; after this age it is rather unusual. Therefore, after this age efforts should be focused first of all on increase of their participation in non-formal education.**
- **The extension of compulsory schooling for example up till the age of 18 might have certain positive impact on reducing early school leaving, but there are probably other factors influencing it even more.**
- **The increasing of participation in pre-primary education of specific groups of children at risk of early school leaving due to family, ethnic and socio-economic background might contribute to higher progress in this area within EU.**

II.3 THIRD STRATEGIC OBJECTIVE

Opening up education and training systems to the wider world

This Objective focuses on strengthening links to working life, research and society at large and opening up educational systems to ensure international mobility and cooperation. Likewise it emphasis that pupils and students should make full use of opportunities to increase their cultural and linguistic competence, as well as taking part in the building of European Educational Space.

This objective area consists of the following specific objectives:
1. Strengthening the links with working life and research, and society at large
2. Developing the spirit of enterprise
3. Improving foreign language learning
4. Increasing mobility and exchanges
5. Strengthening European co-operation

The lack of data implies that the present report only measures and analyse progress in the areas of foreign language learning and mobility.

3.1 Most students lack adequate language skills to communicate across borders within the EU

The modern information society is premised on the faculty of efficient communication, and in such a diverse linguistic and cultural landscape as Europe, this presupposes a commitment on the part of European citizens to acquire each other's languages. Early foreign-language acquisition is, moreover, the forerunner to the better cultural understanding and increased mobility within the emerging European area of lifelong learning. Furthermore, a labour force with practical language and intercultural skills enables European enterprise to compete effectively in the global market-place.

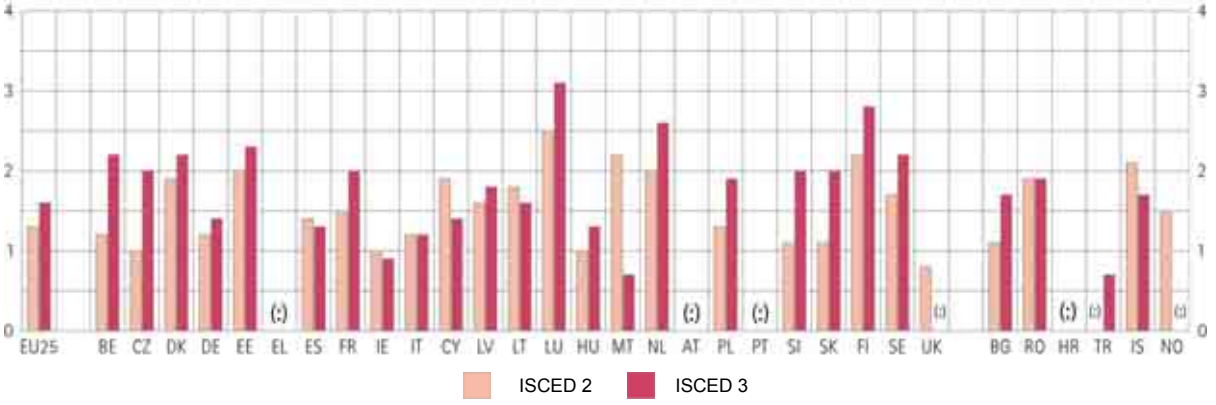
The Barcelona European Council in 2002 gave support to the issue of language learning when it called for "the mastery of basic skills, in particular by teaching at least two foreign languages from a very early age".[58] In consequence, knowledge of foreign languages is now recognised as one of the key competencies that should be intensively pursued within the lifelong learning framework.

But there has been little progress in increasing the number of foreign languages taught from 2000 to 2003. An average of 1.3 and 1.6 foreign languages (2003) are currently taught per student in general lower- and upper-secondary education respectively in the Member States. Averages of two or more languages are taught at upper-secondary level in eleven countries: Belgium, the Czech Republic, Denmark, Estonia, France, Luxembourg, Netherlands, Slovenia, Slovakia, Finland, and Sweden.

[58] Presidency Conclusions European Council, Barcelona, 2002, paragraph 44..

Chart II.20

Average number of foreign languages learned per pupil in general and pre-vocational lower/upper-secondary education, 2003



Source: Eurostat (UOE).

The concern of language proficiency among European students is exacerbated by the fact that more than half the students follow vocational streams where the average number of foreign languages taught is considerably lower.

English dominates among the foreign languages taught. 46% of pupils in primary education and 91% in general secondary education in the EU are taught English as a foreign language. It is the most-favoured foreign language even when not a compulsory subject.

Data from the Eurobarometer survey shows that self reported foreign language skills of the population in less populous countries are better than in bigger countries. In smaller countries like Luxembourg, Latvia, Malta, the Netherlands, Lithuania, Slovenia, Denmark, Sweden and Estonia close to 100% report that they are able to hold a conversation in a foreign language. This compares to Hungary (29%), UK (30%), Spain (36%), Italy and Portugal (36%) and France (45%). Germany is the best performing of the bigger countries, where 62% of the population report that they are able to hold a conversation in a foreign language.

Curricula in the vast majority of countries offer all pupils the possibility of learning a minimum of two foreign languages during compulsory education.[59] In spite of this possibility, the proportion of pupils who learn at least two foreign languages in lower secondary education is less than 50 % in the majority of countries.

The average number of foreign languages taught per pupil will have to increase by at least 25% to raise the European average to the objective of two foreign languages taught per pupil.

Current indicators address languages taught. However, the Barcelona European Council has proposed the development of a language competence indicator, which will measure pupils' actual proficiency in this field.

[59] Eurydice (2005). *Key Data on Teaching Languages at School in Europe*.

Main messages on teaching of foreign languages:

- **Language acquisition is a precondition for increased mobility within the emerging European area of lifelong learning. There are however strong indications that the goal of the Barcelona council of teaching at least two foreign languages from a very early age is very far from being attained. It is also clear that a large proportion of the European population deem themselves incapable of holding a conversation in a foreign language.**

3.2 The European educational space in the making

Mobility of students, teachers and research staff helps developing European citizenship and European awareness as well as stimulating the free movement of persons within Europe hence also contributing to the creation of a truly European labour market. The Conclusions of the Lisbon Council, mindful of the potential of mobility as an economic and a social good, specifically requested that measures be taken to foster the mobility of students, teachers, trainers and research staff.[60]

A joint recommendation by the Parliament and the Council in 2001 called for increased political cooperation to eliminate obstacles to movement. The recommendation was followed up with substantial action, both at Community and national level, which has led to a series of positive results. Examples are the EUROPASS framework for the transparency of qualifications and competences[61] and the development of a credit transfer system for vocational education and training, and the Commission proposal for a recommendation on the quality of mobility of September 2005[62] as called for by the Education Council of November 2004. The Recommendation consists of ten guidelines, addressed mainly to the sending and receiving organisations responsible for mobility.

Indicators for monitoring progress in the field of mobility suffer from a number of important deficiencies. The UOE[63] data collection focuses on tertiary students with foreign citizenship[64], which is not the same thing as mobile students. Moreover, indicators on mobility undertaken through the European mobility programmes do not contain the full scope of mobility. Most of Erasmus mobility is regarded as credit mobility, as it is temporary and denotes going to another country to gain knowledge and experience in addition to what is learned at home. In contrast, longer-term mobility (diploma mobility) is mobility aimed at gaining a diploma abroad.[65]

[60] Presidency Conclusions European Council, Lisbon, 2000, paragraph 26.

[61] Cf. Proposal for a decision of the European Parliament and of the Council on a single framework for the transparency of qualifications and competences (Europass) of 17 December 2003; Decision n°2241/2004/EC of the European Parliament and of the Council on a single Community framework for the transparency of qualifications and competences (Europass).

[62] Recommendation of the European Parliament and of the Council 2005/0179 (COD).

[63] The UNESCO-UIS/OECD/EUROSTAT data collection on education statistics.

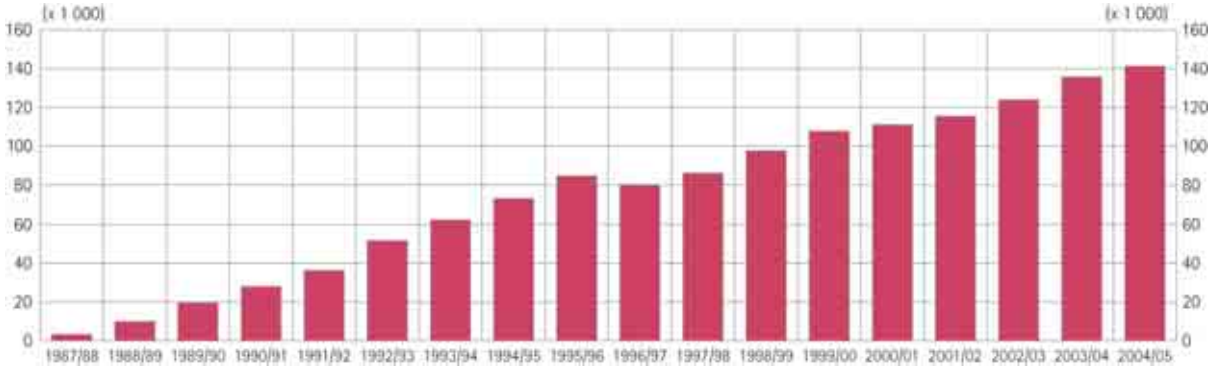
[64] For a comprehensive overview of the present state of mobility statistics see "Statistics on Student Mobility within the European Union." Final report to the European Parliament prepared by Kassel University, October 2002.

[65] The term 'diploma' is used in a wide sense and may refer to a degree, certificate or other diploma.

However, a considerable part of overall mobility is supported through Community programmes such as Erasmus. In 2005, 87% of all European Universities across 31 countries took part in the ERASMUS Programme.

Chart II.21

Mobility within the Erasmus programme



Source: DG Education and Culture (Erasmus programme)

The number of Erasmus students is continuing to increase – the total number increased by 6.3.% between 2003/04 and 2004/05.The increase was substantial in the new member states where the participation rose by 35%. Between 1987/88 and 2004/05, more than 1.3 million students studied abroad under the aegis of the Erasmus programme.

Main message on mobility:

- **Despite increasing mobility particularly within the European Union, the current mobility levels do not allow 10% of the student population to be affected by Erasmus mobility.**

III. NEW INDICATORS – TOWARDS A COHERENT FRAMEWORK OF INDICATORS AND BENCHMARKS

In the area of education and training, the policy demand for using indicators to measure progress towards the common objectives has increased since Lisbon. The Education Council has clearly confirmed its intention to monitor and measure the contribution of education and training to the overall Lisbon strategy through the use of indicators and benchmarks. Consequently, the Detailed Work Programme presented jointly by the Commission and the Council[66] to the European Council meeting in Barcelona in 2002 included an indicative list of 33 indicators for measuring progress towards the agreed 13 concrete objectives of the education and training programme.

In response to this request, and with the assistance of a Standing Group on Indicators and Benchmarks (SGIB) and of Objective Working Groups composed of experts from all Member States, the Commission established a framework of 29 indicators for measuring progress towards the Common Objectives. A first report, *Progress towards the Common Objectives in Education and Training*, was published in January 2004.[67]

However, the Joint Interim Report from the Council and the Commission of February 2004[68] underlined the need to improve the quality and comparability of existing indicators, particularly in the field of lifelong learning. Consequently, it requested the Standing Group on Indicators and Benchmarks and all existing Working Groups to propose, by the end of 2004, a limited list of new indicators for development.

Based on input from these working groups, the Commission presented strategies on the development of new indicators in education and training in the Staff working paper "New Indicators on Education and Training". Short, medium and long-term strategies were proposed for the following areas:

1. Key competencies, and particularly learning-to-learn
2. Investment efficiency
3. Information and Communication Technology (ICT)
4. Mobility
5. Adult education
6. Vocational education and training
7. Languages
8. Professional development of teachers and
9. Social inclusion and active citizenship

The Council conclusions of 24 May 2005 on new indicators in education and training[69] support the strategies proposed by the Commission. The Council recognised that "enhanced co-operation in education and training could be used for the establishment of a coherent indicator framework supported by appropriate data sources, going beyond the 2010 Lisbon

[66] Presidency Conclusions European Council, Stockholm , 2001, paragraph 11.
[67] http://europa.eu.int/comm/education/policies/2010/doc/progress_towards_common_objectives_en.pdf
[68] "Education and training 2010"- The Success of the Lisbon Strategy Hinges on Urgent Reforms, adopted jointly by the Council and the Commission on 26 February 2004.
[69] OJ (2005/C 141/04) 10.6. 2005.

horizon". Hence, it is recognised by the Council that the development of such a framework is a long-term project lasting beyond 2010, but could be one of the tangible outcomes of enhanced European co-operation in the field of Education and Training.

The Council also recognised that the establishment of the "research unit on lifelong learning (CRELL)" at the Joint Research centre at Ispra could significantly increase the Commission's research capacity in terms of the development of new indicators. Hence, in co-operation with CRELL[70], the Commission has taken steps to start developmental work in a number of the above mentioned fields.

In the area of **Learning to learn** the "*European Network of Policy Makers for the Evaluation of Education Systems"* has been asked for its appreciation of existing methodologies for measuring learning to learn skills. The network will also evaluate the feasibility of implementing existing methodologies in a cross country pilot survey. A recommendation to the Commission is expected by July 2006.

In the area of **investment** efficiency the UOE enquiry has been enhanced by the Commission (Eurostat) to collect new data sets relating to costs per graduate, duration of studies and dropout rates. Methodological studies have furthermore been launched to examine possibilities of improving the quality of data on private spending and of aggregating data on public and on private spending into a single indicator.

In the area of **Information and Communication Technology** (ICT) existing Eurostat survey vehicles (ICT household survey, ICT enterprise survey) are used to collect more data on ICT usage and elearning. A specific eLearning survey is furthermore in preparation within the 2010 context. Studies have furthermore been carried out to valorise data from the OECD PISA survey in this context.

In the area of **mobility** the UOE data collection has been revised, in order to make it possible to identify "physical mobility" (i.e. non-resident students) more accurately, and to combine it in some cases with "cultural mobility" (i.e. non-citizens). First results from this exercise (with data from 2003/2004) are expected in March 2006. These more accurate data on mobility will continue to be collected in UOE, and more and more countries will be able to submit the data when the national data collections have been adapted to the new request.

In the area of **adult education**, the Commission (Eurostat) in close co-operation with Member States prepared a new survey (Adult Education Survey) which started to be implemented in some Member States already in 2005. The survey will contribute first of all to the improvement of quality and comparability of data on participation of adults in lifelong learning.

In the area of **adult skills**, the Commission in close co-operation with Member States identified EU data needs on adult skills, including adult skills which should be assessed. At present it is examined, if these data needs could be covered by a survey focused on adult skills measurement which is under preparation by OECD, or if a new EU survey needs to be developed.

[70] Centre for Research on Lifelong Learning based on Indicators and Benchmarks (CRELL).

In the area of **vocational education and training**, the Commission (Eurostat) is in the process of finalising of preparatory work for a new wave of the survey on continuing education and training in enterprises which will be implemented in Member States in 2006.

In the area of **languages**, the Commission has proposed the modalities for developing the necessary tools to gather data to feed the European Indicator of Language Competence.[71] The Commission is now awaiting the response of the Council to its proposed approach.

In the area of the **professional development of teachers**, the Commission is following the request of the Council of co-operating with the OECD, which is currently preparing a survey on teachers. In co-operation with EU member states, the Commission endeavour to ensure that the issue of the professional development of teachers is covered by the OECD survey.

In the area of **social inclusion and active citizenship**, the Commission is trying to use of existing survey vehicles to collect more of the data needed. These vehicles include the Eurostat Labour Force Survey and its ad hoc modules, the Eurostat EU-SILC survey and the Civic Education Survey of the IEA. Existing data sets will furthermore be better exploited to produce additional indicators on social inclusion.

By the end of 2006, the Commission will report back in full to the Council on the initiatives it has taken in terms of developing new indicators. The Commission will also assess the progress made towards the establishment of a coherent framework of indicators and benchmarks for the follow-up on the Lisbon objectives in the area of education and training. Finally, it will reconsider the suitability of the existing 29 indicators used for monitoring progress.

[71] "The European Indicator of Language Competence" COM (2005) 356 1/8 2005.