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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Improving competences for the 21st Century: An Agenda for European Cooperation on Schools

{COM(2008) 425 final}

INTRODUCTION

This staff working document complements the Communication 'Competences for the 21st Century: An Agenda for European Cooperation on Schools' (COM(2008)425). It presents (a) a summary of the results of the public consultation, as well as (b) the theoretical and empirical evidence underlying the Communication.

A. RESULTS OF THE PUBLIC CONSULTATION ON SCHOOLS

1. Introduction

In July 2007, the European Commission launched a public consultation entitled "Schools for the 21st Century"[1], largely based on evidence collected through its previous work under the Open Method of Coordination, as well as on the most up-to-date research in this field. The consultation was open for five months until 15th December 2007.

The public consultation was designed to involve stakeholders in present and future European debates concerning school education; however, it did not present a proposed policy on which views were sought. On the contrary, it sought to involve participants in the development of future cooperation work by seeking their views on some important aspects of school education and on future challenges and possible solutions. Opinions were sought in particular on what the added value of European cooperation could be in addressing common challenges, while respecting the principle of subsidiarity and Member State competences.

Because of the very nature of the subject – school education being very close to the daily life of citizens across the Union – a public consultation on schools could not limit itself to the formal stakeholder organisations in this field, at European or at national level. It needed also to be open to individuals – teachers, pupils, parents or simply citizens with an interest in this aspect of our societies. Decision-makers at national, regional or local level were of course also addressed by the consultation.

The final result was a significantly varied collection of responses, ranging from the insight of the individual teacher to the reform plans of national policy-makers. However, notwithstanding the fact that some major trends emerged from the public consultation, it should be underlined that these results cannot be extrapolated to European societies as a whole nor do they have the scientific validity of research conducted under strict methodological conditions. There are three reasons for this, namely that the consultation did not intend to function as an opinion poll on this subject; the significant differences in participation figures across countries[2]; and the fact that the degree of representation of each response varies enormously.[3]

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1 SEC(2007)1009.

2 Although responses were received from all 27 Member States, two of them alone account for half the number of responses received, namely Italy (27% of the responses) and Slovenia (23%).

3 While some responses only represent the individual who signs them (e.g. a single student, teacher or parent), others are themselves the result of large consultations conducted at the level of national or European-level organisations.

The European Commission has published separately a report containing a detailed analysis of the public consultation contributions taken as a whole. The individual responses submitted to the consultation, which have also been published separately whenever their authors have given their consent, constitute a stimulating collection of views on our school education systems of much individual interest[4].

2. Main results of the public consultation

482 valid responses were received, coming from all Member States of the European Union (plus Norway), though their geographical spread was very uneven. In relation to the type of respondents, schools and teachers accounted for 36.9% of all the responses, while 27.4% came from individual students. Other individuals (11.6%) and national organisations (11.4%) were also active in the consultation. Public authorities (Ministries of Education of the Member States and local and regional authorities) accounted for 7.3% of the answers, and European level associations for 5%.

The following section summarises the main trends emerging from the consultation, question by question.

2.1. Key competences for all

How can schools be organised in such a way as to provide all students with the full range of key competences?

The main basis for this question was the Recommendation of the European Parliament and the Council on key competences for lifelong learning[5]. The contents of this Recommendation are summarised on pages 12-13 below.

There was an overall consensus among all groups of respondents that school curricula and teaching methodologies need to enable students to develop their own learning competences in a more flexible learning environment. In general there was strong support for the reinforcement of transversal competences at schools. Many responses stressing the need for schools to develop independence and autonomy among pupils, as well as responsibility for their own learning. The development of creativity and intercultural skills by schools was also strongly supported.

On the practical ways to transmit the key competences, the responses put forward a variety of proposals, which mostly emphasise the importance of active teaching methodologies and of a cross-curricular approach to supplement subject-based learning, and which sets aside time and space for students and teachers in order better to address complex issues.

2.2. Lifelong learning

How can schools equip young people with the competences and motivation to make learning a lifelong activity?

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4 http://ec.europa.eu/dgs/education_culture/consult/index_en.html

5 Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006 on *key competences for lifelong learning.* OJ L L394 of 30.12.2006, p. 10.

It is widely accepted that one of the key tasks of our school systems is to prepare students for future participation in lifelong learning. While answers to the previous question focused very much on the acquisition of the necessary competences for that purpose, most of the answers to question 2 focused on fostering positive attitudes towards and motivation for learning.

There was a clear emphasis on the need to motivate young people to learn and to involve them in the learning process. Student motivation, responsibility and autonomy, together with a learner-oriented approach, were seen as the main preconditions for the development of successful lifelong learning strategies. The ways proposed to achieve these goals were again diverse depending on the group of respondents. While students showed relatively high interest and support for student autonomy and learner oriented approaches, many schools and national level organisations stressed the need for teachers to be able to work autonomously in order to develop the pedagogic strategies that work best for them.

2.3. The Economy

How can school systems contribute to supporting long-term sustainable economic growth in Europe?

Overall this was the question that showed the lowest degree of response, with most answers coming from national authorities and European level organisations. This fact, and the fact that many respondents took issue with what they perceived as an excessive economic focus of the consultation document, is in itself interesting: it suggests some discontinuity between the world of the school and the world of the economy.

The respondents, however, also emphasised the value of cooperation between business and schools, which could be enhanced through the development of exchanges. Better career guidance and the development of labour market competences by schools were also identified as areas for improvement. These competences, however, were not necessarily understood as narrow technical skills, but rather as broad competences – social competences, learning to learn, team work, etc – which should make students more employable in the future.

2.4 Equity

How can school systems best respond to the need to promote equity, to respond to cultural diversity and to reduce early school leaving?

The high level of interest in this question this could be interpreted as a result in itself – there is a broad consensus that what happens in schools is important for equity in our societies.

The strong support for measures for students with some form of disadvantage is indeed one of the main conclusions of the consultation. In general terms there was wide support for the concept of schools that accommodate students of different backgrounds, and responses by authorities and associations showed a significant interest in the development of comprehensive policy frameworks in this respect, e.g. anti-discrimination or reinforcement of the mixity of students. The provision of out-of-school placements, mentors or second-chance schools were also often mentioned as ways to tackle early school leaving.

More and better early learning opportunities, on the other hand, were perceived as one of the most effective ways to improve the equity of the overall system by many respondents from European and national associations, as well as public authorities.

2.5. Inclusion

If schools are to respond to each pupil's individual learning needs, what can be done as regards curricula, school organisation and the roles of teachers?

More flexibility in the curriculum, allowing for it to be tailored to the individual pupil's specific needs, and more support from teachers or ancillary staff – who should increasingly act as 'coaches' or 'mentors' – were some of the key topics raised under this question. There was also considerable interest in identifying gifted pupils and making special provision for them, though strategies were not precisely defined. Moving away from a purely age-based curriculum to one more closely linked to the development of intellectual abilities was supported by some educational organisations. Assessment was raised as a further element that needs to be reconsidered in the light of the need to respond to individual learning needs.

2.6. Citizenship

How can school communities help to prepare young people to be responsible citizens, in line with fundamental values such as peace and tolerance of diversity?

The presence of some form of citizenship education in the curriculum was supported by most respondents who answered on this point, but the ways put forward to implement it, either as a separate subject or as a cross-curricular theme, were diverse.

There was a strong interest in fostering commitment to democracy through the school experience itself, e.g. by ensuring that children feel respected as individuals and involved in school decisions, for instance through school councils, or by mixing pupils in heterogeneous groups and carrying out team work or exchange of experiences between them.

Tackling bullying, violence and intolerance at schools as well as finding better ways to open up schools, as institutions, to their local communities, were also perceived as relevant for better developing citizenship.

2.7. Teachers

How can school staff be trained and supported to meet the challenges they face?

A significant agreement at all levels emerged in relation to the need to rethink current models of initial teacher education in order to link theory and practice better. It is seen as essential that those who enter the profession are supported in developing a deeper understanding of the historical, social and cultural contexts within which they work. Teacher education also needs to present teaching as a problem-solving or research-in-action activity during which teaching methods and strategies, formal or informal, are examined in relation to the children's learning and their process. Classroom management strategies were raised as another issue which needs to be better addressed by initial teacher education.

Another focus was the need to improve the in-service training of teachers in terms of quality, recognition of such training, and of resources, where many teachers feel that they do not have enough free time outside teaching in order to support their professional development.

Improved recognition of teaching as a profession was also important for many respondents, including, for some countries, the issue of increasing teachers' pay.

2.8. School communities

How can school communities best receive the leadership and motivation they need to succeed? How can they be empowered to develop in response to changing needs and demands?

The creation of inclusive learning communities in which everyone – staff, students, parents – is involved and valued for their input is seen as key to the success of schools as organisations. In general, it is felt that school autonomy and the development of less hierarchical structures can reinforce this involvement.

While many authorities and associations favour increasing the monitoring and evaluation of schools, many teacher respondents from various countries refer to the perceived unhelpfulness of current inspectoral systems. Current trends towards a more advisory role for school inspectors are welcomed.

B. THEORETICAL AND EMPIRICAL EVIDENCE

The numbers in brackets (e.g. 1.1) refer to the corresponding paragraph in the Communication COM(2008)425.

Preparing young people for the 21st century

(1.1)

The changing nature of the skills and levels of qualification required by the economy puts great pressure on schools. A 2008 Cedefop study summarising future skills needs in Europe judges that the present trends will persist, namely 'continuing shifts away from primary industries (especially agriculture) and from traditional manufacturing industries towards services and knowledge-intensive jobs'[6]. Nevertheless, a further 13 million jobs are projected by 2015, largely in the business and miscellaneous sectors, but also in distribution and transport, and non-marketed services such as health and education[7]. This means that workforces need to adapt, with schools providing the foundation for the acquisition of new skills throughout life, particularly by adults and people at risk of unemployment.

Technological and other changes tend to polarise the demand for skills, leading to many jobs at higher levels and at the lower end of the job spectrum. There is a projected increase in jobs demanding more formal qualifications.

Chart 1.1 shows a prognosis of future skills needs. It shows demand shifting toward a higher skilled and more flexible labour force[8].

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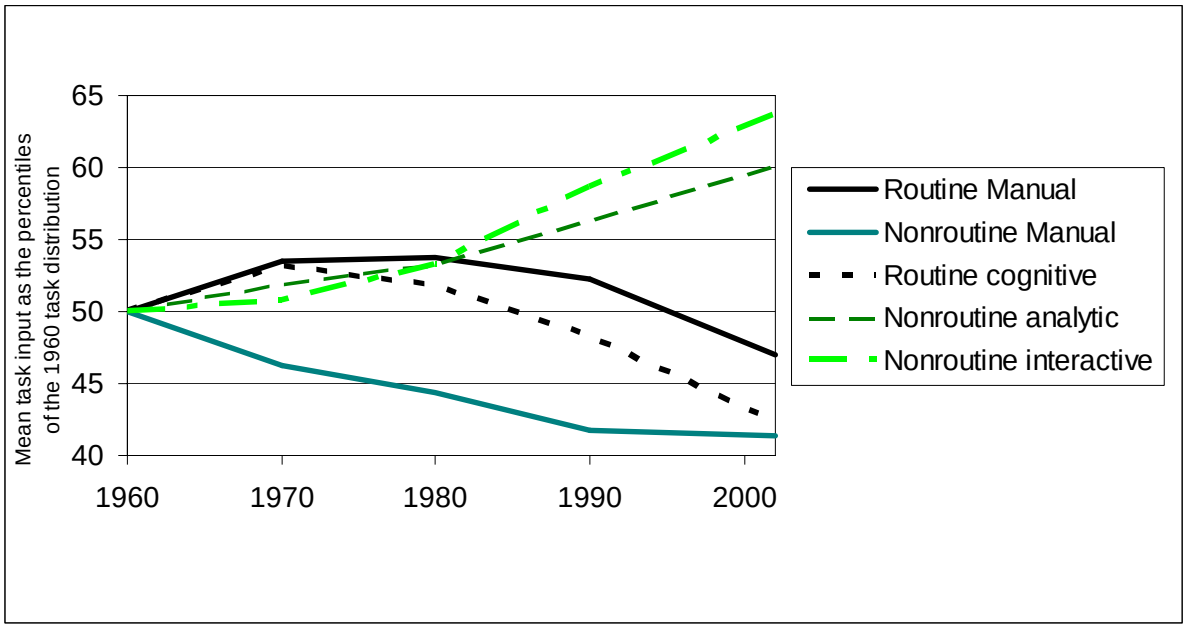
6 *Future skills needs in Europe, A medium term forecast* (Synthesis report), CEDEFOP (2008), p. 86.

7 Ibid.

8 The definition of the categories in the chart are the following: non-routine analytic (solving problems for which there are no rule-based solutions); non-routine interactive (interacting with humans to acquire information, to explain it, or to persuade others of its implications for action); routine cognitive (mental tasks that are well described by deductive or inductive rules); routine manual (physical tasks than can be well described using deductive or inductive rules); non-routine manual (physical tasks that cannot be described by such rules). See F. Levy, R. J. Murnane, *The new division of labour* (2004).

Chart 1.1: How the demand for skills has changed: economy-wide measures of routine and non-routine task input (US)



A. Schleicher, 'Europe's Skill Challenge' OECD Directorate for Education. Presentation held during the Lisbon Council, (15 October 2007).
Available online: http://www.lisboncouncil.net/media/schleicher_skills_presentation151007.pdf

Adapted from F. Levy, and R. J. Murnane, *The new division of labour* (Princeton University Press, 2004).

(1.2 - 1.4)

Many studies point to a significant impact of schooling on skills development, revealing correlations between the quality of schools and the quality of the labour force. Hanuschek and Kimko conclude that labour-force quality differences are related to schooling (but not necessarily to the resources devoted by a country to schooling); and that the quality of the labour force has a causal impact on growth[9].

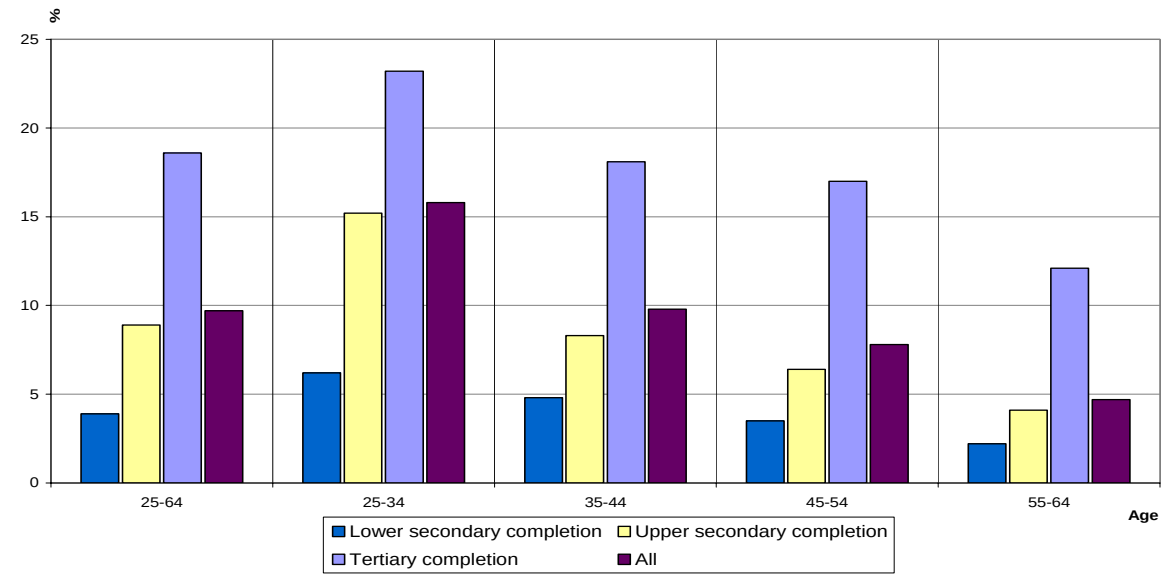
The years spent in school have a great impact in shaping people's participation in, and attitudes to, further learning. Participation in post-compulsory education and training tends to be proportional to the level of prior education. 'Typically people with higher levels of education are more easily reached by and more receptive to measures to encourage participation in education and training'[10]. Chart 1.2 below shows the participation of adults in education and training according to their educational attainment. It shows that in 2007 the highest rate of participation was for people aged between 25 and 34, regardless of their level of education; after age 34, participation rates decreased; and the participation of those between ages 55 and 64 was less than one third that of those between 25 and 34. Older persons with tertiary education also took part in lifelong learning half as frequently as

9 E. A. Hanushek, D. D. Kimko, 'Schooling, labour force quality, and the growth of nations', *American Economic Review* 90 (2000).

10 SEC(2007)1284, *Progress towards the Lisbon objectives in education and training, Indicators and Benchmarks,* p.81.

younger people with the same level of education. The chart also shows that individuals with higher levels of attainment – in any age group – participate more in lifelong learning than others with lower levels of educational attainment.

Chart 1.2: Participation in lifelong learning by age and educational attainment (EU-27), 2007



Data source: Eurostat (2008): EU Labour Force Survey.

Recent research points to strong correlations between education and well-being, though empirical data remain scarce[11]. Well-being in this context means not only educational well-being but also economic well-being and the enjoyment of civil liberties, relative freedom from crime, enjoyment of clean environment and individual states of mental and physical health. An OECD study on well-being concluded that human and social capital are closely related to the way in which institutions and political and social arrangements impact on society. It also pointed out that to sustain well-being, adequate investment in human and social capital is needed. Thus, for instance, investment in the development of knowledge and skills helps to secure economic as well as social and personal well-being[12].

The 'capability' approach developed by Amartya Sen helps illuminate the concept of well-being and its relation to education. Education is viewed as an unqualified good for human capability expansion and human freedom. The relevance of the capability approach for education, well-being and equity is that it examines issues such as the fair distribution of valued capabilities in and through education, or the availability of opportunities for pupils to convert their resources into capabilities[13].

A current OECD project shows that learning experiences can foster civic and social engagement: by shaping what people know, by developing competences that help people

11 See *European Journal of Education* 43 (March 2008) for current research on the relationship between education and well-being.

12 *The well-being of nations*, OECD (2001), pp. 10-13.

13 A. Sen, *Development as freedom* (1999); M. Walker, E. Unterhalter (eds.), *Amartya Sen's capability approach and social justice in education* (2007), p. 5.

apply, contribute and develop their knowledge, by cultivating values, attitudes, beliefs and motivations that encourage civic and social engagement, and by increasing social status. More schooling is not enough. The quality of the learning experience and approaches to learning both inside and outside school are key. Curriculum, school ethos, and pedagogy are crucial variables; learning environments that stress responsibility, open dialogue, respect and the application of theory and ideas in practical group-oriented work seem to work better than civic education on its own[14].

A review of the evidence concluded that more years of schooling are substantially associated with higher levels of well-being and better health behaviours[15].

A recent study from the UNICEF Innocenti Centre identified several factors that have an impact on children's well-being: material well-being, health and safety, educational well-being, peer and family relationships[16].

The links between school attainment and employment are well documented. The estimated long term effect on economic output of one additional year of education in the OECD area is generally between 3% and 6%[17]. Among OECD countries, completion of upper secondary level of education is typically considered to be the minimum level of education needed to obtain a satisfactory, competitive position in the labour market. As Chart 1.3 shows, on average, the rate of employment among individuals with upper secondary education is 18 percentage points higher than among individuals who have not completed upper secondary education.

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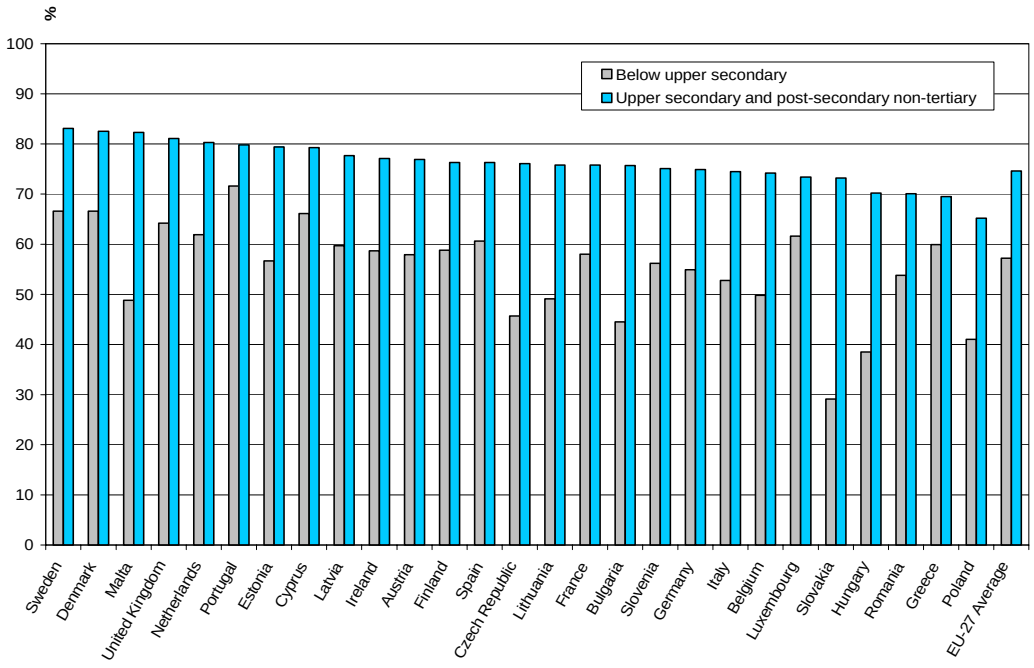
14 L. Feinstein, R. Sabates, T. M. Anderson, A. Sorhaindo, C. Hammond , 'What are the effects of education on health?', in R. Desjardins and T. Schuller (eds.), *Measuring the effects of education on health and civic/ social engagement*, OECD (2006).

15 *Understanding the social outcomes of learning*, OECD (2007), p.105.

16 *An overview of child well-being in rich countries*, UNICEF, Innocenti Centre (2007).

17 *Education at a glance*, OECD, (2006), p. 154.

Chart 1.3: Employment rates, by educational attainment (2007)
Percentage of the 25-to-64-year-old population that is employed



Data Source: Eurostat (2008): EU Labour Force Survey.

The principal impact of education on growth is estimated to be to raise the productivity of the whole workforce, rather than to increase the number of individuals able to bring about radical innovations. Low skills seem to inhibit rates of technical innovation and rates of adoption of more productive work organisation. Average skills levels explain over 55% of growth differences in GDP per capita between 1960 and 1995 in OECD countries[18].

Research has sought to estimate the relationship between human capital and economic growth using internationally comparable literacy scores (1994 International Adult Literacy Survey (IALS) data) from 14 OECD countries. The outcomes of this research indicate that a country able to attain literacy scores 1% higher than the international average will achieve levels of labour productivity and GDP per capita that are 2.5 and 1.5% higher, respectively[19].

(1.5)

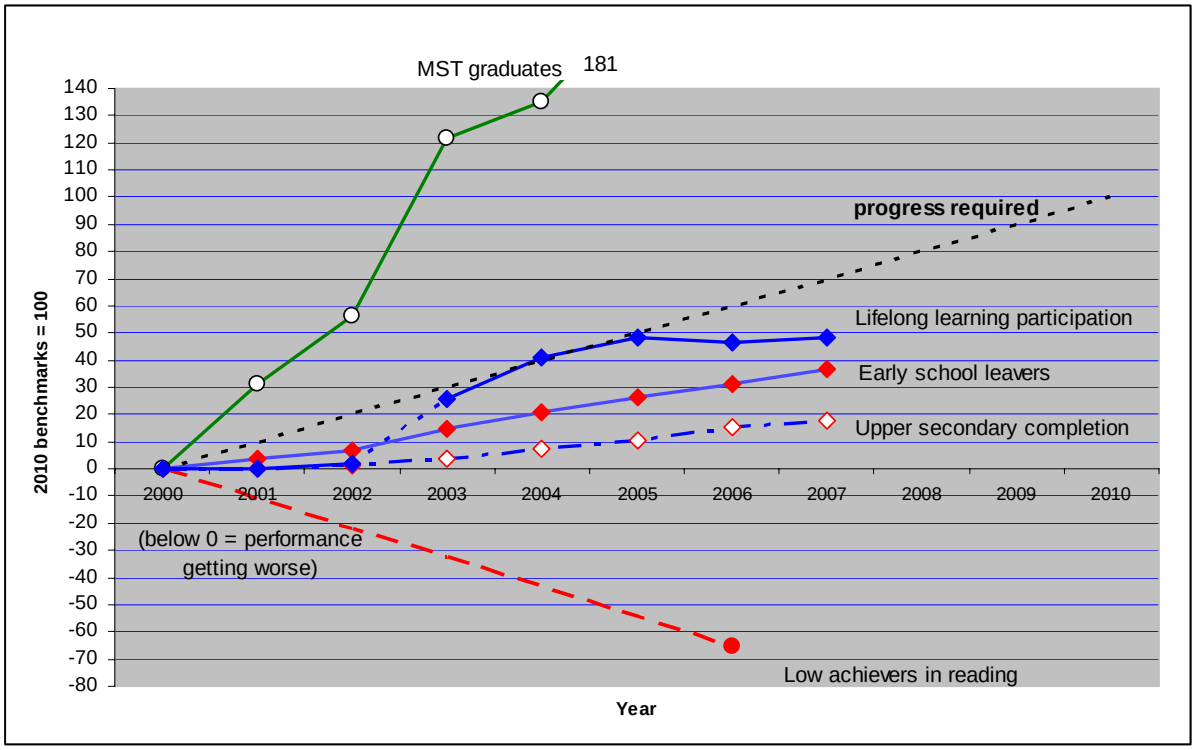
The data for the three EU benchmarks most strongly related to school education do not demonstrate sufficient progress to achieve the Union's objectives by 2010. There has been constant improvement in reducing the proportion of early school leavers, but faster progress is needed in order to achieve the benchmark. There has been slow but steady progress in increasing the proportion of young people who complete upper secondary education. The

[18] A. Schleicher, J. J. Rousseau lecture, Lisbon Council meeting, October 2007.

[19] S. Coulombe, J.F. Tremblay, S. Marchand, 'Literacy scores, Human capital and growth across fourteen OECD Countries', Statistics Canada: Human Resources and Skills Development (2004), p. 31. and appendix F, pp. 66-74, cited in *Education at a glance*, OECD, (2006), p. 155.

share of low achievers in reading has increased in the EU, though some Member States have achieved improvements.

Chart 1.4: Progress towards meeting the 5 benchmarks (EU average)



Data source: OECD (PISA), Eurostat (UOE and EU Labour Force Survey).

Source: Progress towards the Lisbon objectives in education and training. Indicators and benchmarks (2007, updated 2008).

2. FOCUS ON COMPETENCES

Implementing key competences

(2.2)

A 2006 Recommendation of the European Parliament and the Council introduced a European framework of Key Competences for Lifelong Learning[20]. The Recommendation aims to provide policy makers, teachers and learners themselves with a reference tool. It calls on Member States to ensure that all young people are given the possibility to develop the eight key competences by the end of initial education and training and that specific attention is paid to the needs of disadvantaged learners. It recommends that adults have the opportunity to learn, maintain and update their key competences throughout their lives.

The key competences are: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology,

[20] Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. OJ L L394 of 30.12.2006, p. 10.

digital competence, learning to learn, social and civic competences, sense of initiative and entrepreneurship and, cultural awareness and expression. They are all considered equally important, because each of them can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain support competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and in information and communication technologies (ICT) is an essential foundation for learning, and learning-to-learn supports all other learning activities. There are a number of themes that are applied throughout the Reference Framework: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings play a role in all eight key competences.

A 2002 Eurydice survey on key competences noted that curricula were increasingly focusing on the successful application of knowledge and skills than on the simple transmission of knowledge[21]. As a result, most education authorities had redefined their educational aims in terms of competences. Developing the capacity to apply knowledge and skills increases their "transfer value", and learning consequently becomes more attractive and beneficial for the individual and society. Some education systems have recently focused their attention on competences applicable to a maximum number of real-life situations.

Recent working papers (2004, 2007) of the peer-learning Cluster 'Key Competences-Curriculum Reform' confirm this trend[22]. The Cluster has undertaken two mapping exercises on how national policy agendas for lifelong learning and school curricula recognise key competences. Either implicitly or explicitly key competences are included in most important documents guiding school education. Much emphasis has been put on the consistency and comprehensiveness of provision – both from a systemic and from a learner perspective.

A 2006 Eurydice survey mapped how entrepreneurship education has been integrated into secondary curricula. It found that some member states explicitly recognise entrepreneurship education, others teach it as part of general subjects, while a third group of countries is developing other initiatives in the field[23]. Some Europe-wide initiatives foster entrepreneurial competences within school settings. In the framework of the 'Junior achievement' programme – running in partnership between local businesses and schools – younger students learn in interactive ways about how communities and businesses work, while older students can set up and run their own companies for a year[24].

The 2007 Commission Communication on financial education pointed out how financial literacy should be enhanced on a continuous basis at all stages of life by being integrated across subjects, such as mathematics, history and entrepreneurship[25].

A recent study on the future of the knowledge economy notes that the challenge now is to create environments for learning that incorporate both economic and civic goals. While the skills of the workforce remain important, they alone are not a sufficient source of decisive

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21 *Key competencies: A developing concept in general compulsory education*, Eurydice Survey 5 (2002).

22 Working Group B, Progress report 2004, http://ec.europa.eu/education/policies/2010/doc/lang2004.pdf; Cluster 'Key Competences, Curriculum reform', Synthesis report on peer learning in 2007. http://ec.europa.eu/education/policies/2010/doc/peer07_en.pdf

23 *Entrepreneurship education in Europe*, Eurydice (2006).

24 See: www.ja-ye.org and similar projects e.g.: http://www.ecole-et-entreprise.fr/index.htm.

25 COM(2007)808.

competitive advantage. This depends on how the capabilities of the workforce are combined in innovative and productive ways[26].

(2.3)

The European Framework of Key Competences stresses the importance of learning-to-learn as key to acquiring other competences and developing capabilities. Learning competences are not mastered in a single straightforward way but are shaped by a broad range of developmental influences to which learners are exposed in and out of school. Learning skills are increasingly not only embedded implicitly in the curriculum but are also being taught in an explicit way. Current projects focus on the development of self-reporting instruments for formative and diagnostic use by learners and their teachers[27], or on the development of pupils' learning practices rather than on their expressed beliefs (learning *how* to learn)[28]. The European Commission is currently developing an indicator of the learning to learn competence.

The importance of learning capacity in terms of performance is shown in an OECD analysis of the relative performance of students who control their learning. Students' approaches to learning measured in PISA explain one fifth of the difference in students' literacy performance. But if students' tendency to control their learning is taken as an outcome of learning, since learning autonomy is a key precondition of lifelong learning, an even stronger relationship becomes visible[29].

(2.5)

Two European projects on the impact of new approaches to teaching and learning in schools identified several barriers to change in learning and teaching: professional capacity, curriculum restraint, and lack of appropriate teaching material[30].

The report of the Cluster 'Key Competences-Curriculum Reform' claims that the successful implementation of curricula based on key competences is not in contradiction with the organisation of teaching and learning according to school subjects that can allow for a development of in-depth knowledge of a certain discipline and target the acquisition of specific skills. However, the challenges are several. All teachers, irrespective of their subject

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26 P. Brown, H. Lauder, D. Ashton, 'Education, globalisation and the future of the knowledge economy', in: D. Epstein, R. Boden, R. Deem, F. Rizvi, S. Fight (eds.), *World year book of education 2008. Geographies of knowledge, geometries of power. Higher education in the 21st century* (2008), pp.18-20. On the transformation of the relationship between education, jobs and rewards see for example: M. Lawn, 'Borderless education: imagining a European education space in the time of brands and networks', in: A Novoao , M. Lawn (eds.), *Fabricating Europe: the formation of an education space* (2002) and M. Room, *The European challenge: innovation, policy learning and social cohesion in the knowledge economy* (2005).

27 For example R. Deakin-Crick, 'Developing an effective lifelong learning inventory : the ELLI project', *Assessment in Education* 11/3(2004), pp. 247-272 .

28 For example M. James et al, *Improving learning how to learn – classrooms, schools and networks* (2007).

29 *Messages from PISA 2000*, OECD (2004); see also PISA 2003 results published in *Learning for tomorrow's world*, OECD (2004), particularly chapter 3.

30 S. Power, *Education. Policy Synthesis of EU Research Results*, Series N°4 (2007), p. 29. 'Teacher training, reflective theories and teleguidance: prospectives and possibilities in teacher training in Europe' and 'Computer –supported collaborative learning in primary and secondary education'.

specialisation, should be aware of, and feel responsible for, developing the key competences of their students in the whole school context. The development of competences is based on active and experiential learning, supporting learners' individual development and personalised learning.

Teaching and learning with subject-centred and cross-curricular elements need to be well coordinated; teachers can collaborate effectively if each member of a school community has a clear understanding of how to support the development of key competences. Pupil assessment should follow the same logic. School leadership should build on a common vision of school development and a shared or distributed approach that encourages teachers to work in teams rather than only alone[31].

Some Member States have used cross-curricular themes as ways of developing key competences. A 2005 project brought together ten case studies from five European countries in order to identify the problems schools face while dealing with cross-curricular work, and the solutions they find in doing so. Table 2.1 shows cross-curricular themes and their frequency of occurrence[32] .

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31 Cluster 'Key Competences, Curriculum reform', Synthesis report on peer learning in 2007. http://ec.europa.eu/education/policies/2010/doc/peer07_en.pdf , p.9.

32 *Cross-curricular themes in secondary education, Report of a CIDREE collaborative project* (2005) Cross-curricular themes are interdisciplinary themes, which integrate language skills (reading, speaking, listening, viewing, and thinking) with a variety of content areas, such as science, art, music and so on. They are not identical with cross-curricular or transversal competences as identified in the Recommendation on key competences mentioned before.

Table 2.1: Summary of occurrence and respective status of cross-curricular themes in 27 European countries/communities included in the survey (Maes et al., 2001).

Cross-curricular theme	*Number of countries (N=27) where this theme is included in the curriculum*	*Statutory*	*Not statutory*
1. Health / physical / sport education / life skills	25	16	9
2. Environmental / ecological education	21	14	7
3. Citizenship / human rights / co-operation / political / peace education	19	14	5
4. Social / communicative skills / reading / speech	17	13	4
5. Media education / ICT	15	11	4
6. Learning to learn / ability to think critically	13	10	3
7. Artistic / cultural education	12	8	4
8. Philosophical education / ethics	9	6	3
9. Intercultural education	10	8	2
10. Problem solving	8	6	2
11. International education	7	3	4
12. Road safety / traffic education	6	4	2
13. Preparation for the world of work / entrepreneurship education	6	4	2
14. Technological education	5	3	2
15. Economic / consumer education	4	2	2
16. Career guidance	2	1	1

Source: *Cross-curricular themes in secondary education; Report of a CIDREE collaborative project* (2005), p. 4.

The study identified a number of problems related to the implementation of cross-curricular themes at the level of teachers, pupils and the school itself. It emphasised the importance of motivation and involvement by teachers and pupils, and the importance of assessment. Problems at the school level include subject curriculum overload, timetable inflexibility, lack of infrastructure, space and especially time, the pressure of final exams and university entrance requirements, and teacher training which prepares new teachers insufficiently for working with cross-curricular themes[33].

Literacy and numeracy

(2.6-2.7)

The European Framework of Key Competences defines reading literacy as an essential part of the ability to express and interpret thoughts, feelings and facts in both oral and written form and to interact linguistically in an appropriate way in the full range of societal and cultural contexts: education and training, work, home and leisure. Similarly, a sound knowledge of numbers, measures and mathematical structures together with ability in basic mathematical operations and presentations, and understanding of mathematical terms and concepts are key

[33] Ibid., pp.67-69.

to the ability to solve everyday problems and to the willingness to use mathematical modes of thought to look for reasons and to assess their validity[34].

According to the PISA 2006 survey, the average reading score in participating EU Member States fell from 491 points in 2000 to 490 points in 2003 and to 487 points in 2006 (see Table 2.2). Performance deteriorated in a large number of Member States. The only EU country where average performance improved significantly was Poland. In relation to the EU benchmark of a 20% reduction in the proportion of low achievers in reading, the percentage of low achievers increased from 19.8% in 2003 to 21.2% in 2006 (16 EU countries). If the comparison is based on two additional countries (BG, RO) for which 2000 results are available, the result is: 21.3% in 2000 and 24.1 in 2006: a significant increase in the proportion of low achievers in the EU.

Table 2.2: Differences in reading performance between PISA 2006 and PISA 2000

	PISA 2006 reading scores			Score differences to PISA 2000		
	All students	Males	Females	All students	Males	Females
Austria	490	468	513	-2	-7	-4
Belgium	501	482	522	-6	-10	-3
Bulgaria	402	374	432	**-28**	**-34**	**-23**
Czech Republic	483	463	509	-9	-10	-1
Denmark	494	480	509	-2	-6	-1
Estonia	501	478	524	:	:	:
Finland	547	521	572	0	1	1
France	488	470	505	**-17**	**-21**	**-14**
Germany	495	475	517	11	7	***14***
Greece	460	432	488	**-14**	***-14***	**-24**
Hungary	482	463	503	2	-1	7
Ireland	517	500	534	-9	-13	-8
Italy	469	448	489	**-19**	**-22**	**-18**
Latvia	479	454	504	**21**	**22**	**19**
Lithuania	470	445	496	:	:	:
Luxembourg	479	464	495	:	:	:
Netherlands	507	495	519	:	:	:
Poland	508	487	528	**29**	**26**	**30**
Portugal	472	455	488	2	-2	6
Romania	396	374	418	**-32**	**-47**	**-17**
Slovakia	466	446	488	:	:	:
Slovenia	494	467	521	:	:	:
Spain	461	443	479	**-32**	**-38**	**-27**
Sweden	507	488	528	-9	-11	-8
United Kingdom	495	480	510	:	:	:
EU Average	482	462	504	-6	-10	-4
Iceland	484	460	509	**-22**	**-28**	**-19**
Liechtenstein	510	486	531	**28**	18	**31**
Norway	484	462	508	**-21**	**-24**	**-21**
Turkey	447	427	471	:	:	:
Japan	498	483	513	**-24**	**-25**	**-24**

[34] For full definitions, see http://ec.europa.eu/education/policies/2010/objectives_en.html#basic

Note: Differences that are statistically significant at the 95% confidence level are indicated in bold and at the 90% confidence level are indicated in bold italic.

*EU averages for PISA 2006 scores refer to EU-25, the average score difference to PISA 2000 refers to EU-18 and is the arithmetic average of country results for which data are available.

Source: PISA 2006: *Vol. 2 Data/Données*, p. 233 (Table 6.3a).

As for gender gaps in performance in reading, according to PISA 2006 almost twice as many boys as girls had low reading skills: 17.6% of 15 year old girls and 30.4 % of 15 year old boys.

The Cluster 'Key Competences-Curriculum Reform' surveyed good practice on promoting literacy from a number of Member States[35]. Several good examples from countries that perform well in PISA surveys (e.g. Finland and Sweden) show how special support to raise motivation, extra time spent on reading and special teaching methods can improve students' literacy performance[36]. A broad range of research on the subject of literacy examines the beneficial effects of early intervention, the significant impact of home literacy activities and the importance of developing good reading habits[37].

(2.8)

As far as numeracy skills are concerned, the Cluster 'Maths, Science and Technology' has concluded that 'proficiency in mathematics is today not mainly an affair about counting correctly; it is a multifarious general competence including problem solving and modelling, concept understanding, reasoning and communication, procedural efficiency, and appreciation of the role of mathematics in history, science, culture, work and society. A broad mathematical knowledge is in this aspect a part of a great cultural heritage, essential for both personal and societal self-esteem, creativity and growth'[38].

Table 2.3 shows that for most countries performance in mathematics remained broadly unchanged between PISA 2003 and PISA 2006. However for some countries there were notable changes. Among EU Member States there was significant deterioration in the case of Belgium, France, the Netherlands and Sweden and a major improvement in Greece.

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35 see Progress Report, Nov. 2004. http://ec.europa.eu/education/policies/2010/doc/basic2004.pdf

36 See for example: P. Linnakylä, 'From struggling to striving adolescent readers'; in: P. Linnakylä, I. Arffman (eds.), *Finnish reading literacy. When quality and equity meet* (2007), pp. 199-213.; S. Sulkunen, 'Authentic texts and Finnish youngsters: a focus on gender', in: ibid., pp. 175-198.; P. Linnakylä 'Reading literacy in Finland: developing equal and empowered readers', A Finnish position paper for EU project ADORE/Socrates (28.2.2007), pp. 1-17.

37 The *Journal of Research in Reading* on: http://www.blackwell-synergy.com/doi/abs/10.1111/j.1467-9817.2005.00281.x?journalCode=jrir

38 B. Johansson, Report of MST cluster on peer learning activity organised by the National Centre for Mathematics Education, Gothenburg University, Sweden, (2007), p. 12.

Table 2.3: Differences in mathematics performance between PISA 2006 and PISA 2003

	PISA 2006 Mathematics score			Score differences to PISA 2003		
	All students	Males	Females	All students	Males	Females
Austria	505	517	494	0	7	-8
Belgium	520	524	517	**-9**	**-9**	**-9**
Bulgaria	413	412	415	:	:	:
Czech Republic	510	514	504	-7	-9	-5
Denmark	513	518	508	-1	-5	2
Estonia	515	515	514	:	:	:
Finland	548	554	543	4	6	2
France	496	499	492	**-15**	**-16**	**-14**
Germany	504	513	494	1	5	-5
Greece	459	462	457	**14**	7	**21**
Hungary	491	496	486	1	2	0
Ireland	501	507	496	-1	-3	0
Italy	462	470	453	-4	-5	-4
Latvia	486	489	484	3	4	2
Lithuania	486	487	485	:	:	:
Luxembourg	490	498	482	-3	-4	-3
Netherlands	531	537	524	**-7**	-3	**-11**
Poland	495	500	491	5	7	3
Portugal	466	474	459	0	1	-1
Romania	415	418	412	:	:	:
Slovakia	492	499	485	-6	-8	-4
Slovenia	504	507	502	:	:	:
Spain	480	484	476	-5	-5	-5
Sweden	502	505	500	**-7**	**-7**	**-6**
United Kingdom	495	504	487	:	:	:
EU Average	488	496	486	-2	-2	-2
Iceland	506	503	508	**-10**	-4	**-15**
Liechtenstein	525	525	525	***-11***	**-25**	***4***
Norway	490	493	487	-5	-5	-5
Turkey	424	427	421	1	-4	-6
Japan	523	533	513	**-11**	-6	**-17**
United States	474	479	470	**-9**	-7	**-10**

Note: Differences that are statistically significant at the 95% confidence level are indicated in bold and at the 90% confidence level are indicated in bold italic.

*EU averages for PISA 2006 scores refer to EU-25, the average score difference to PISA 2003 refers to EU-19 and is the arithmetic average of country results for which data are available.

Source: PISA 2006: *Vol. 2 Data/Données*, p. 235 (Table 6.3b).

The gender difference in mathematics was less than a third as large as for reading, and in all Member States boys outperformed girls or there were no significant differences.

PISA results also show strong correlations between students' attitudes towards mathematics and mathematics performance. In Table 2.4 below, 'attitudes' refers to students' interest in and enjoyment of mathematics, their instrumental motivation (meaning external rewards such as good jobs etc.), their self concept (their belief about their own mathematical competence) self efficacy and anxiety. The highest negative impact on performance is caused by anxiety,

while the highest positive impact is by self-concept in mathematics, followed by interest and instrumental motivation.

Table 2.4: Relationship of students' attitudes towards mathematics and mathematics performance (2003)

	Classification group	Attitudes towards mathematics									
		Change in the mathematics score per unit of the index									
		Interest in and enjoyment of mathematics		Instrumental motivation in mathematics		Self-concept in mathematics		Self-efficacy in mathematics		Anxiety in mathematics	
		Effect	*	Effect	*	Effect	*	Effect	*	Effect	*
Austria	A	8,7		-3,7	<	25,7	<	45,5		-25,1	>
Germany	A	10,2		1,1	<	22,7	<	50,2		-28,1	>
Denmark	B	27,7	>	20,9	>	46,5	>	50,8	>	-44,6	<
Finland	B	30,5	>	26,9	>	45,5	>	45,9		-41,9	<
Sweden	B	27,0	>	23,0	>	47,0	>	52,8	>	-42,8	<
Belgium	C	15,0	>	11,0		23,3	<	45,2		-26,1	>
Luxembourg	C	6,7	<	0,0	<	19,1	<	40,5	<	-25,0	>
Netherlands	C	14,3		6,1		22,2	<	44,6		-22,6	>
Czech Republic	D	22,5	>	10,7		39,8	>	55,5	>	-42,1	<
Hungary	D	10,0		7,9		28,4	<	52,6	>	-33,2	
Poland	D	15,6	>	17,0	>	46,0	>	53,3	>	-46,4	<
Slovakia	D	12,1		6,3		44,5	>	55,0	>	-44,8	<
France	E	20,9	>	13,7	>	28,3	<	47,4		-25,0	>
Greece	E	23,7	>	14,9	>	42,6	>	45,5		-34,5	
Ireland	E	17,4	>	7,7		34,4		47,5		-32,9	
Italy	E	10,3		8,5		25,3	<	52,4	>	-33,2	
Portugal	E	14,2		17,3	>	36,8	>	55,3	>	-34,2	
Spain	E	20,4	>	19,4	>	31,9		42,7	<	-26,7	>
EU-18 average		***15,8***		***10,8***		***31,1***		***49,5***		***-32,0***	
OECD average		***11,9***		***8,5***		***32,4***		***47,2***		***-35,3***	
Iceland	F	24,5	>	17,7	>	39,7	>	40,2	<	-33,4	
Norway	F	34,3	>	28,5	>	46,6	>	46,8		-42,1	<
Turkey	F	16,9		12,9		34,8		48,6		-34,6	
Japan	F	27,6	>	23,9	>	21,2	<	54,9	>	-14,3	>
United States	F	7,8	<	13,6	>	35,1		46,7		-34,4	

Note: * indicates that the effect is statistically significantly greater (>) than that of the OECD average; effect is statistically significantly less (<) than that of the OECD average.

Data Source: PISA 2003.

Source: OECD (2007): *Education at a glance 2007*, p. 100 (Table A5.2a).

The report *Science education now: a renewed pedagogy for the future of Europe* prepared by an expert group for the European Commission on science education and mathematics, chaired by Michel Rocard, explored the prospects of new pedagogies for more effective science education and called for school science teaching pedagogy to shift from mainly deductive to inquiry-based methods[39]. The Nuffield Foundation emphasises that it is crucial that science education offer value for all and not only for future scientists. 'For this reason the goal of

[39] *Science education now: a renewed pedagogy for the future of Europe*, European Commission (2007).

science education must be first and foremost, to offer an education that develops students' understanding both of the canon of scientific knowledge and how science functions'[40].

Nevertheless not all studies in the field identify a strong correlation between positive attitudes and good performance. An analysis of the data from TIMSS 1999, which measured both student attainment and student attitude towards science, shows that the higher the average student achievement, the less positive is their attitude towards science[41].

Personalised approaches to learning

(2.9 - 2.11)

An approach based upon individuals' competences implies more personalised teaching and learning. An OECD collection of studies on personalising learning pointed out that 'one size fits all' approaches to school knowledge and organisation are ill adapted both to individuals' needs and to the knowledge society at large'[42].

Personalised learning is not identical with individualised learning; it 'can be seen as an approach in educational policy and practice whereby every student matters, it equalises learning opportunities in terms of learning skills and motivation to learn'[43]. Evidence from a Eurydice survey shows that a personalised approach does not exclude group processes; on the contrary, personalised approaches are often carried out within group processes[44].

Järvelä has identified and explored the main arguments for personalising learning and for fostering learning capacity. Personalising learning can increase collaborative efforts and networked forms of learning. It can increase students' interest and engagement in learning activities and their curiosity and creativity can be inspired by it. It can contribute to better learning results if students learn with the aim of developing better learning strategies, technological capacity for individual and social learning activities and learning communities with collaborative learning models. Personalised learning can take into account different values, and cultural features can be respected if the individual person and his/her needs are deemed important. Lastly it can potentially improve the use of technology in education[45].

Emerging evidence shows that 'systems capable of achieving universally high standards are those that can personalise the programme of learning and progression offered to the needs and motivations of each learner'[46]. According to the OECD project '*No more failures. Ten steps to*

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40 *Science education in Europe: Critical reflections.* A report to the Nuffield Foundation (Jan. 2008), p.7.

41 Y. Ogura, *Graph of student attitude v student attainment*. Based on data from: M. Martin et al, TIMSS 1999 International Science Report: findings from IEA's repeat of the third international mathematics and science study of the eighth grade (2000).

42 *Schooling for tomorrow: personalising education*, OECD (2007).

43 S. Järvelä, 'Personalised learning? New insights into fostering learning capacity', in: *Schooling for tomorrow: personalising education*, OECD (2007), pp. 31-46.

44 Based on PIRLS 2001 data a breakdown of pupils by the organisational approach most often used to teach reading showed that teachers use whole-class teaching, ability grouping and individualised instruction in the classroom. Nevertheless whole-class teaching seems to be dominant. In *Key data on education in Europe*, Eurydice (2005), p. 287.

45 Ibid., pp.42-43.

46 D. Istance, 'Directions for schooling and educational innovation from recent OECD analyses', Presentation given at the Slovenian Presidency conference on 'Promoting innovation and creativity: schools' response to the challenges of future societies' (April 2008). Also about the use of whole-class

equity in education', several classroom practices can help to identify early those who fall behind and to give them extra support. Methods such as formative assessment (discussed below) and reading recovery strategies in the US, a hierarchy of formal and non-formal interventions in Finland, extra teaching in Flanders and *programmes personalisés d'aide et de progrès* in France all help the student to catch up[47]. It remains to be explored how the personalisation agenda can avoid systemic inequality and move towards less specified, controlled and standardised approaches in favour of greater creativity and diversity.

Assessing learning outcomes

(2.12)

Black and William (Assessment Reform Group, UK) synthesised evidence from over 250 studies linking assessment and learning. The conclusion was that initiatives designed to enhance the effectiveness of the way assessment is used in the classroom to promote learning can raise pupil achievement. They also found evidence that the gain was likely to be even more substantial for lower-achieving pupils[48].

According to them, less effective assessment approaches are those that encourage rote and superficial learning, over-emphasise grading rather than advising learners, use competitive teaching approaches which de-motivate some pupils, and in which feedback, testing and record-keeping serve more a managerial than a learning function.

Criteria for assessment that improves learning include: it is embedded in a view of teaching and learning of which it is an essential part; it involves sharing learning goals with pupils; it aims to help pupils to know and to recognise the standards they are aiming for; it involves pupils in self-assessment; it provides feedback which leads to pupils recognising their next steps and how to take them; it is underpinned by confidence that every student can improve; it involves both teacher and pupils reviewing and reflecting on assessment data[49].

Further studies also argue that assessment should help students' day-to day learning process. 'Assessment should be designed and implemented with the goal of achieving maximum validity both in terms of learning outcomes and learning processes. It should help to advance learning as well as determine whether learning has occurred'[50].

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teaching, same-ability grouping and personalised instruction see *Key Data on education in Europe* Eurydice (2005), p. 287 (figure E.17). Based on teachers' questionnaire and PIRLS 2001 data.

47 For more detail on these see: S. Field et al, *No more failures. Ten steps to equity in education*, OECD (2007), particularly pp. 94-99.

48 P. Black and D. William, 'Inside the black box: raising standards through classroom assessment', *Phi Delta Kappan*, 80/ 2. (October 1998).

49 'Assessment for Learning: beyond the Black Box', Assessment Reform Group, (1999) p. 7. http://www.qca.org.uk/qca_4354.aspx

50 A. Pollard, M. James, Teaching and Learning Research Programme, UK (submission to consultation 'Schools for the 21st Century' 2007); C. Ayala, 'Formative Assessment Guideposts' , *Science Scope*, 28/4 (2005), pp. 46-48.

(2.13)

An OECD study on formative assessment in the secondary classroom suggested that areas for improvement include the alignment of summative and formative assessment, evaluation cultures in schools and links between classroom, school and systemic assessment evaluation[51].

The Cluster 'Key Competences-Curriculum Reform' has concluded that the assessment of transversal competences remains a major challenge. A recent European project on 'New Assessment Tools for Cross-curricular Competencies in the Domain of Problem Solving' identified a lack of conceptual clarity as a major issue. Despite the high profile given to 'problem solving' as a necessary educational skill, there is little precision within policy documents about what this actually means; and, while it is possible to assess problem solving skills in school settings and on a large scale, it is impossible to identify a general, unique 'problem solving competence'[52].

According to a recent Eurydice study on the autonomy of teachers it is clear that in many Member States teachers have a significant degree of autonomy in internal assessment procedures. The three aspects of assessment examined are: the choice of criteria for internal assessment, responsibility for deciding whether pupils repeat a year, and the part played by teachers in devising the content of examinations for certified qualifications. In the great majority of countries, schools are responsible for choosing the basis on which their pupils will be internally assessed and in many countries schools have full autonomy in this area. The situation is very different as regards the involvement of schools and teachers in devising the content of written examinations for certified qualifications. No European country administers examinations of this kind for the completion of primary education (ISCED 1). In countries which hold examinations at ISCED level 2, they are only rarely devised at school level [53].

A Cedefop comparative study (forthcoming, 2008) involving 32 countries observes that the specification of learning outcomes is being used in a range of countries that are modernising their school systems. The focus on what learners are expected to know, understand or be able to do at the end of a learning process stimulates reform of systems, curriculum, pedagogy and assessment[54]. In compulsory schooling there are two different ways in which learning outcomes are given prominence: in the first, a core of learning outcomes is defined with reference to the school curriculum, to be achieved through the experience of learning (some outcomes are linked to specific subjects, others are learnt across the whole curriculum); in the second, holistic approach, the learning outcomes that the learner should achieve by the end of a phase or whole school education are associated with agreed aims and objectives of the education system and only then are appropriate subjects and groupings of subjects identified and brought into play. The possible shared ownership of learning outcomes gives an important role to stakeholders (including social partners, teaching and training professionals, research communities, learners and the wider community). The study gives an overview of the learning outcomes approach on general education in all the Members States[55].

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51 *Formative assessment. Improving learning in secondary classrooms*, OECD (2005), pp. 84-88.

52 S. Power, *Education. Policy synthesis of EU research results.* Series N° 4, (2007), p. 28.

53 For more details concerning specific countries see 'Levels of autonomy and responsibilities of teachers in Europe', Working document, Eurydice (forthcoming, 2008), Chapter 2.

54 *The shift to learning outcomes. Policies and practices in Europe*, CEDEFOP (forthcoming, 2008)

55 Ibid., in particular chapter 5. pp. 51-52, and chapter 6. pp. 58-64.

The learning outcomes approach and its impact on the design of content is reflected in the Recommendation establishing the European Qualifications Framework for lifelong learning (EQF)[56]. It sets 2010 as the recommended target date for countries to relate their national qualifications systems to the EQF, and 2012 for countries to ensure that individual qualification certificates bear a reference to the appropriate EQF level. The development of National Qualifications Frameworks in the Member States, which gained speed significantly since 2005, responds directly to the EQF proposal and has contributed to the overall shift to a learning outcomes based approach in Europe.

3. HIGH QUALITY LEARNING FOR EVERY STUDENT

Better early learning opportunities

(3.4 - 3.5)

Member States committed themselves in 2002 to provide childcare to 90% of children between the age of 3 and compulsory school age[57]. The Commission's proposed Employment Guidelines 2008-2010 note that securing childcare coverage of at least 90 % of children between 3 years old and the mandatory school age and at least 33 % of children under 3 years of age by 2010 is a useful benchmark. Guideline 18 invites Member States to promote a lifecycle approach to work through better reconciliation of work and private life and the provision of accessible and affordable childcare facilities and care for other dependants.

The growing awareness of the benefits of pre-school education has given more impetus to that commitment. The Council Conclusions on efficiency and equity in European education and training systems point out that pre-primary education brings the highest rates of return over the whole lifelong learning process, especially for the most disadvantaged[58]. The Staff Working Document supporting the Commission's Communication on this theme demonstrates 'the positive effects of high quality pre-primary provision on children's intellectual and social behavioural development'[59].

Rates of participation in pre-school education have increased over recent years, and a significant number of Member States are already well beyond the Barcelona objective; however, the situation across the EU is very diverse, as shown in Chart 3.1:

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56 Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning, OJ C 111 of 6.5.2008.

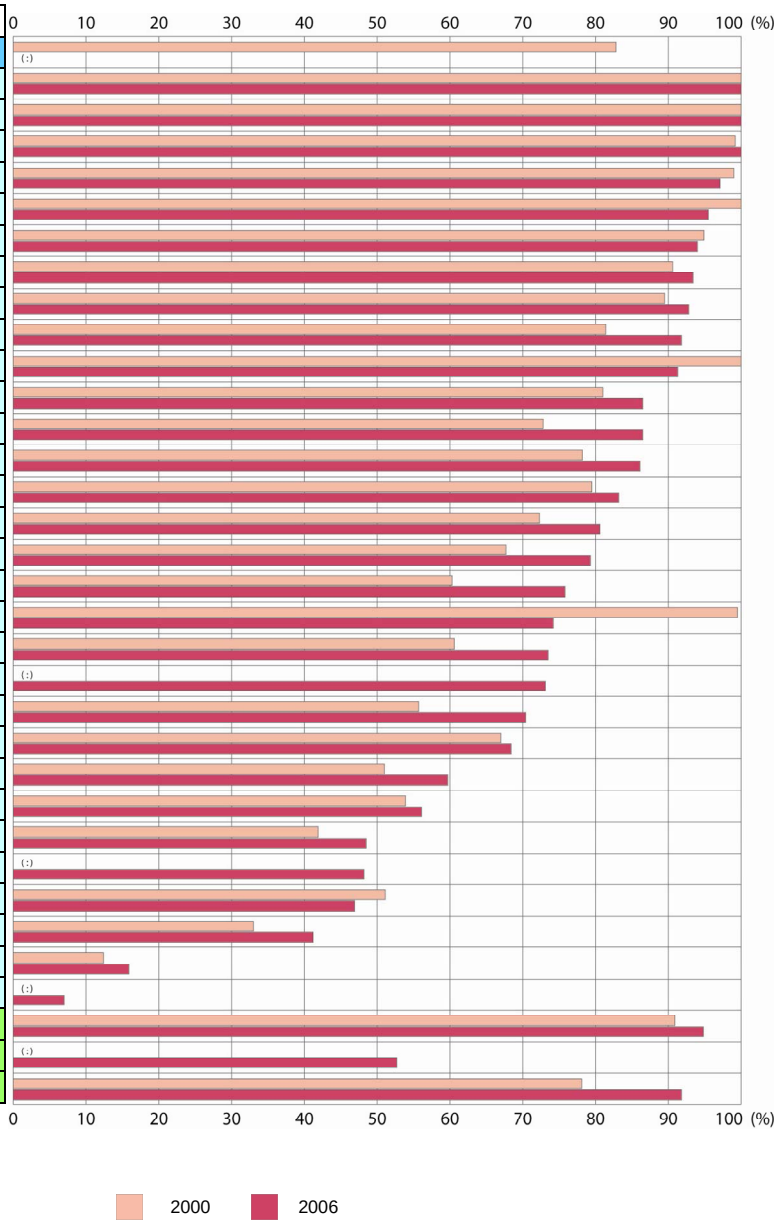
57 Barcelona European Council Conclusions (Spring 2002), p. 20.

58 OJ C 298/3 of 8.12.2006.

59 SEC (2006) 1096, pp.16-17.

Chart 3.1 Enrolment in pre-primary education
Enrolment rates at ISCED levels 0 and 1 for 4-year olds

2000	2006 p	Country
82.8	:	EU-27
100	100	France
100	100	Italy
99.2 i	100 i	Belgium
99	97.1	Spain
100	95.5	Malta
94.9	94	Luxembourg
90.6	93.4	Denmark
89.5	93.1	Germany
81.4	92.8	Hungary
100	91.3	United Kingdom
81	86.5	Czech Rep.
72.8	86.5	Sweden
78.2	86.1	Estonia
79.5	83.2	Austria
72.3	80.6	Portugal
67.7	79.3	Slovenia
60.3	75.8	Romania
99.5	74.2	Netherlands
60.6	73.5	Latvia
:	73.1	Slovakia
55.7	70.4	Cyprus
67	68.4	Bulgaria
51	59.7	Lithuania
53.9	56.1	Greece
41.9	48.5	Finland
:	48.2	Croatia
51.1 i	46.9 i	Ireland
33	41.2	Poland
12.4	15.9	FYR Macedonia
:	7	Turkey
90.9	94.8	Iceland
:	52.7	Liechtenstein
78.1	91.8	Norway



Data source: Eurostat (UOE data collection)
(:) Missing or not available, (i) See information notes, (p) Provisional data
(i) Some countries have participation rates of 100% or close for children aged 4 (as BE, FR, ES and IT where children typically start the school at the age of 3 (see also the Eurydice publications on national education systems);
BE: Data exclude independent private institutions. Data from the German speaking community is missing;
IE: There is no official provision of education at ISCED level 0;

Most research in the field to date has been undertaken in the United States. It has been argued that high quality early childhood education and care provide one of the few effective policy means of increasing social and economic opportunities for disadvantaged (minority)

communities and, therefore, for society as a whole[60]. Eurydice will shortly publish a broad overview of the existing evidence on this subject at European level[61].

High quality pre-school education and care has also been found to foster the emergence of skills in the areas of language, literacy, maths and science, as well as supporting the development of young children's learning-related socio-emotional skills, in particular self-regulation and social competence[62]. Investment in effective high quality pre-school programmes for low income and ethnic minority children, who would otherwise be insufficiently prepared for school, seems to be a specially powerful tool[63].

The OECD's project 'Starting Strong' also analysed the social and educational returns of early educational intervention. It refers to the Perry pre-school study (US) that shows the long term benefits, for both individuals and society, of investment in early education. Education achievement levels at age 14 also seemed to be particularly low for those who had not participated in some form of pre-school education[64].

In Europe, the UK project 'Effective Provision of Pre-School Education' (EPPE), a longitudinal (5-year) study investigating pre-school settings, and a study by the European Agency for Development in Special Needs Education (EADSNE), both highlight the importance of social/behavioural, as well as cognitive, outcomes of early childhood education and care[65]. The forthcoming Eurydice study mentioned above reveals the most recent evidence on the long-term positive effects on social-emotional competence, self-regulation and intrinsic motivation.

PISA 2003 results also showed a strong correlation between pre-primary education and reading scores. Positive results were even more significant in the case of pupils with some form of disadvantage[66]. PIRLS 2006 showed a very strong correlation between the time spent in pre-primary education and achievement. Reading achievement clearly increased with the amount of time spent in pre-primary educational settings[67].

Other studies emphasise the importance of quality in early-years provision. A European Childcare and Education study based on longitudinal data from Austria, Germany and Spain found that the quality of childcare (particularly within the family but also within institutions)

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60 J. J. Heckman, 'Skills formation and the economics of investing in disadvantaged children', *Science* 5278 (2006), pp. 1901-1902; J. J. Heckman, *Invest in the very young*, Centre of Excellence for Early Childhood Development (2004); J. J. Heckman, 'Investing in disadvantaged young children is an economically efficient policy', Forum for building the economic case for investments in pre school (January 2006).

61 *Tackling social and cultural inequalities through early childhood education and care*, Eurydice (forthcoming 2008). See also *Starting Strong*, I-II, OECD (2001, 2006) and *Policy Brief, Lifelong learning and human capital*, OECD (July 2007).

62 M. M. McClelland, A. C. Acock, F. J. Morrison, 'The impact of kindergarten learning related skills on academic trajectories at the end of elementary school', *Early Childhood Research Quarterly* 21 (2006), pp. 471-490.

63 Ibid.; S. Berlinski, S. Galiani, P. Gertler, *The Effect of Pre-Primary Education on Primary School Performance* (Feb, 2006); *Investing in youth: an empowerment strategy*, BEPA (2007).

64 *Starting Strong*, II, OECD (2006), p.105.

65 K. Sylva et al, *The effective provision of pre-school education (EPPE) project 1997-2004: Final report*, DfES (2004); *Early childhood intervention*, Summary Report, EADSNE (2005).

66 Cited in SEC(2007)1284, p. 27.

67 *Progress in international reading literacy.* International report, PIRLS (2006), p.162.

was the most important predictor for almost all indicators of children's developmental status at age eight – more important than the quality of the primary school setting. This was the case for all socio-economic groups[68].

Promoting system equity

(3.6)

In its Communication on Efficiency and Equity in European education and training systems[69] and its accompanying Staff Working Paper[70], the Commission put forward evidence that, viewed in a wider perspective, equity and efficiency[71] are mutually reinforcing. In its Conclusions on the subject, the Council, accordingly invited Member States to consider whether their present arrangements for funding, governing and managing their education and training systems adequately reflect the need to ensure both efficiency and equity, and to examine possible ways of improving them in order to avoid the high costs of educational inequity[72].

Notwithstanding the importance of the efficiency perspective, the concept of educational quality clearly cannot be reduced to the relationship between inputs (resources) and outputs (educational outcomes, often measured as results in achievement tests). High quality school education does not necessarily always result in high scores in international achievement tests, for example when significant numbers of students come from disadvantaged backgrounds, for which the school has not been able to compensate completely.

Quality cannot be judged by attainment levels in some subjects alone. The European Commission developed in 2000 a framework for assessing the quality of school education in Europe based on 16 indicators in five main quality areas[73]. This framework is based on indicators on attainment (in Mathematics, Reading, Science, ICT, Foreign Languages, Learning to Learn and Civics), on success and transition (drop-out rates, completion of upper secondary and participation in tertiary education), on the monitoring of education (the evaluation and steering of school education, parent participation), and on resources and structures (education and training of teachers, participation in pre-primary, number of students per computer and educational expenditure per student). The framework therefore covers many of the dimensions involved in raising the quality of school education.

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68 S. Power, *Education*, *Policy Synthesis of EU Research Results*, Series N°.4. (2007), p. 22.

69 COM(2006) 481 final.

70 SEC(2006) 1096.

71 Educational *efficiency*, is defined in the Staff Working Paper SEC(2006) 1096 (p. 6) as 'a measure of how resources/inputs allocated to the educational system (…) are converted into outputs for individuals (…) as well as for the economy and society'. Equity is described in the Communication (page 2, footnote 2) as 'the extent to which individuals can take advantage of education and training, in terms of opportunities, access, treatment and outcomes. Equitable systems ensure that the outcomes of education and training are independent of socio-economic background and other factors that lead to educational disadvantage and that treatment reflects individuals' specific learning needs'.

72 OJ C 298/3 of 8.12.2006.

73 *European Report on the quality of school education: Sixteen quality indicators*, European Commission (2000).

A recent study on the common characteristics of most successful school systems highlights the central role of setting high expectations for all students – and staff[74]. There is convergence among many analysts that successful education systems should deliver transparent outcomes of a high calibre, evenly distributed across society[75].

However, in some Member States, the variation in achievement between schools can be as much as 1½ or even 2 times the OECD average[76]. On average across OECD countries, differences between schools account for 33% of the OECD average variance in the performance of 15-year-olds. Finland achieves not only the highest overall performance but has one of the lowest levels of variation in student performance (14% of the OECD average). Other countries in which performance is not closely related to the schools in which students are enrolled include Ireland, Denmark, Spain, Poland, Sweden, Estonia and Latvia. By contrast in Germany, Bulgaria, Czech Republic, Austria, Hungary, Netherlands, Belgium, Italy and Slovenia the variance in student performance is between one and a half times and twice the OECD average[77].

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74 M. Barber, M. Mourscheds, *How the world's best-performing school systems come out on top*, McKinsey & Co. (Sept. 2007), p. 27.

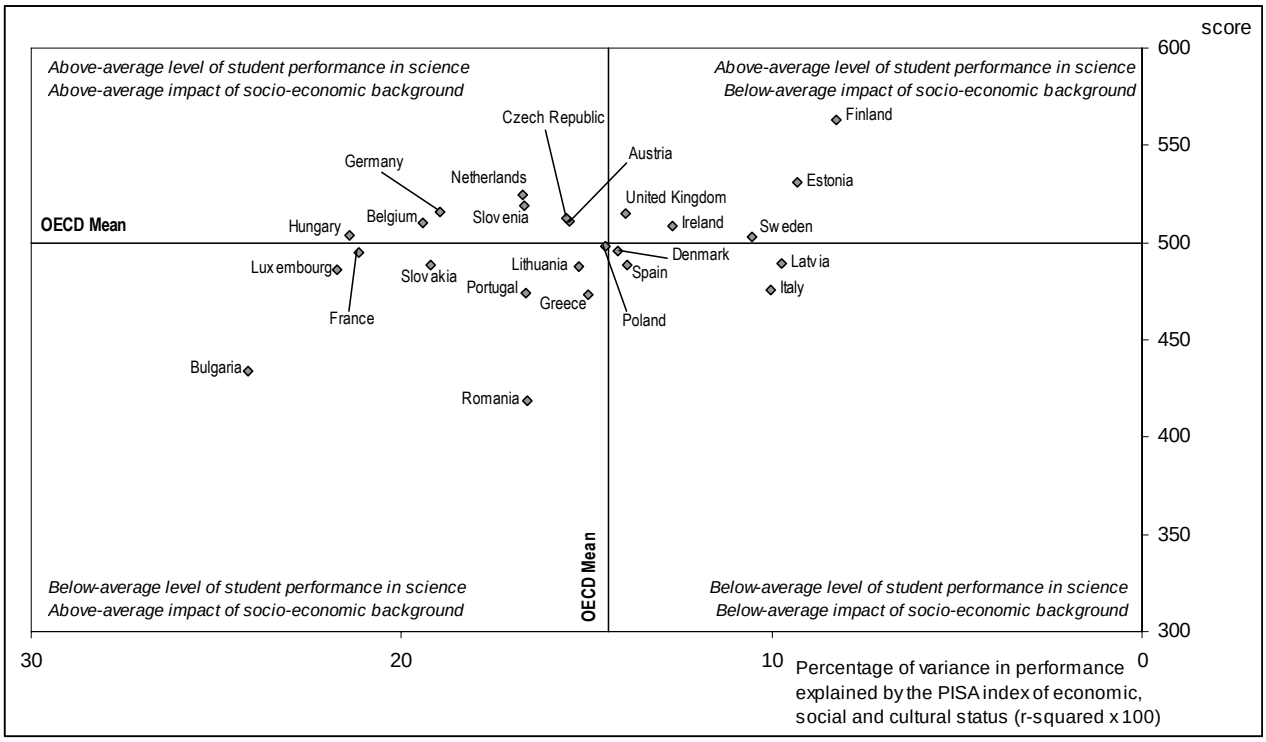
75 See for example *Explaining student performance*, European Commission, (2005), p. 5. http://ec.europa.eu/education/ doc/reports/doc/basicskill.pdf; H. Niemi, 'Equity and good learning outcomes', Paper presented at Finnish EU Presidency Conference (September 2006); S. Field et al, *No more failures. Ten steps to equity in education*, OECD (2007).

76 *PISA 2006: Science Competencies for Tomorrow's World*, OECD (2007) p .4 and p. 171. On unequal access to high-quality provision see also: Communication from the Commission to the Council the European Parliament the European Economic and Social Committee and the Committee of the Regions: Promoting young people's full participation in education, employment and society, COM (2007) 498, point 2 in particular.

77 *PISA 2006*, pp. 172-173.

An analysis of PISA 2006 data (Chart 3.2) shows the range of attainment levels and levels of impact of socio-economic background on student results between countries.

Chart 3.2: Performance in science and the impact of socio-economic background



Adapted from: PISA 2006, figure 4.10, p. 189. *Data Source*: OECD PISA 2006 database, Table 4.4a.

(3.7)

Guidance is an important tool for ensuring that every student can follow a learning pathway that responds to his or her needs. This is especially true at points of transition between stages of education, or between education and vocational training systems. The Council Resolution on strengthening policies, systems and practices in the field of guidance throughout life in Europe stressed the importance of guidance in schools and the role of guidance services in encouraging school completion, empowering individuals to manage their own learning and careers and in re-integrating early school leavers in appropriate education and training programmes[78].

In a lifelong learning framework emphasis upon active employability in the labour market poses new challenges to career guidance. It needs to shift from being largely available to selected groups, at particular points in life, to being much more widely available throughout the lifespan. Instead of helping people to make immediate decisions it has to embrace a broader approach that also encompasses the development of career self-management skills, such as the ability to make and implement effective career decisions[79]. Research has shown

[78] Resolution of the Council and of the representatives of the Member States meeting within the Council on strengthening policies, systems and practices in the field of guidance throughout life in Europe 9286/04 (May 2004).

[79] *Career guidance and public policy: bridging the gap*, OECD (2004), chapter 1.

that early career guidance within compulsory education is beneficial. Students should learn to understand early how their choices, including decisions about their school work, may affect their lives as adults. At later stages in compulsory schooling, career education programmes need to be closely and actively linked to the world of work. There is strong case for more active involvement of parents, employers, former students and other community representatives, along with teachers, in school career guidance programmes[80]. These principles are now being followed up by the Cluster 'Recognition of Learning Outcomes' and a set of detailed European guidelines for validation are currently being developed[81]. These principles and guidelines are linked to a 'European Inventory on validation of non-formal and informal learning', providing technical information intended to support implementation of good practices in this field[82].

Alongside guidance, the validation of non-formal and informal learning is also crucial to the promotion of flexible learning pathways and equity. The Conclusions on the Common European Principles for the identification and validation of non-formal and informal learning emphasise the right of each individual to equal access and fair treatment and the obligation of stakeholders to provide guidance, counselling and information about these validation systems and approaches to individuals. They state that the system of validation must be fair, transparent and underpinned by quality assurance mechanisms, it should respect legitimate interests, ensure the balanced participation of relevant stakeholders, and that mechanisms should be in place to avoid conflict of interest[83].

(3.8)

In relation to the early tracking of school students (differentiating pupils at an early age into separate schools of different types on the basis of ability), the Commission Staff Working Paper on Efficiency and Equity summarised the evidence available up to 2006[84]. It concluded that when undertaken at ages 10 to 12, as is common in several European school systems, tracking may exacerbate differences in educational attainment due to social background, and thereby lead to even more inequitable outcomes in terms of student and school performance. This is partly because it tends to channel the most disadvantaged towards less prestigious forms of education and training, while the more advantaged have access to better opportunities.

This is supported by a more recent study examining the relationship between accountability, autonomy, choice, equity and student performance which shows that, in countries where no selection takes place before age 15, the difference in performance between students with low- and high socio-economic status (SES) is of 65.0 test score points. By contrast in countries

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80 Ibid., chapter 3.

81 DG EAC and CEDEFOP, 'Draft European Guidelines on validation of non-formal and informal learning'. Discussion paper presented to the conference 'Valuing learning' of the Portuguese Presidency, (November 2007).

82 M. S. Otero, J. Hawley, A. M. Nevala (eds.), *European inventory on validation of non-formal and informal learning*, ECOTEC (2007).

83 Conclusions of the Council and of the representatives of the Governments of the Member States meeting within the Council on the Common European Principles for the identification and validation of non-formal and informal learning 9600/04 (May 2004).

84 SEC (2006)1096, pp. 19-20.

where tracking takes place five years before the PISA testing age of 15, the difference between children of high and low SES can be up to 107.7 test score points.[85]

There is, however, other recent evidence that the effects of tracking may not all be detrimental. A study of the relationship between the length of time spent in a tracked system and young adults' performance in standardized cognitive test scores found evidence of a positive performance effect of tracking[86]. A second study based on cross-country analysis, produced mixed findings. On the one hand, it found that in countries in which tracking is undertaken later, the difference between the children of poorly and better educated parents in dropout rates and college enrolment or completion is smaller than in countries in which tracking takes place early. On the other hand, it found that early school tracking reduces the impact of family background on the level and on the coefficient of variation of literacy[87].

(3.9)

In many countries, pupils who are deemed not to have acquired an adequate mastery of the curriculum at the end of a school year may, at the discretion of the school, be required to repeat the year. In Germany and Belgium, for example, repeating a year is frequent: between 20 and 50% of pupils repeat at some time during compulsory education; in other countries pupils normally progress automatically from one year to the next throughout compulsory education (see Chart 3.3).

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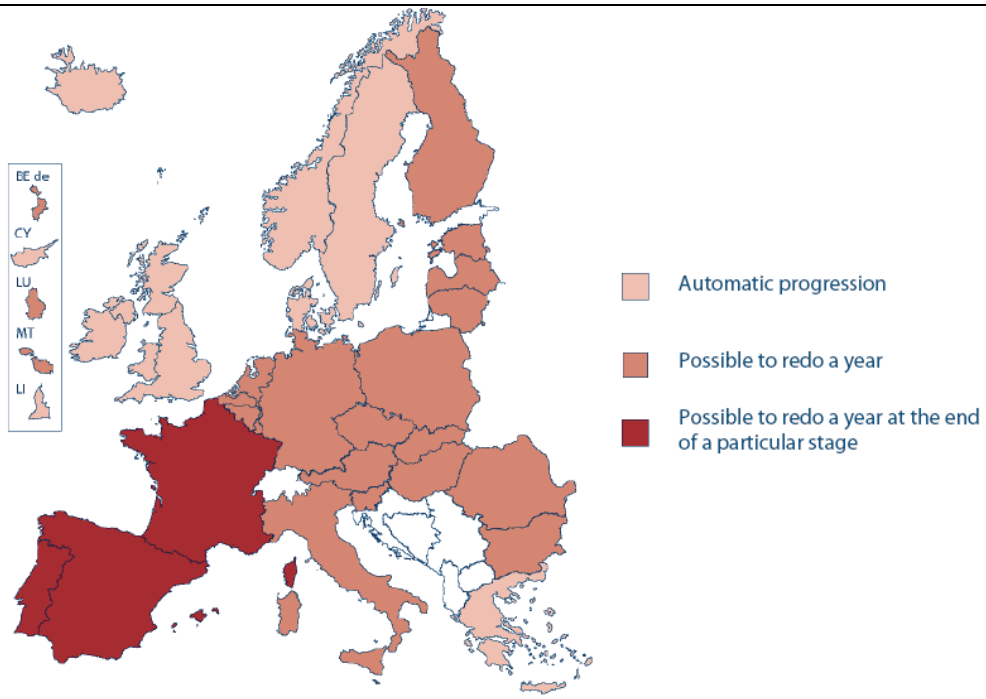
85 G. Schütz, M. R. West and L. Wöβmann, 'School accountability, autonomy, choice, and the equity of student achievement from PISA 2003', OECD Working papers, EDU/WKP 9 (2007), pp. 32-33.

86 K. Ariga, G. Brunello, 'Does secondary school tracking influence performance; Evidence from IALS' Discussion paper series No. 2643, Forschungsinstitut zur Zukunft der Arbeit (2007), pp.1-16.

87 G. Brunello, D. Checchi, 'Does school tracking affect equality of opportunity? New international evidence', *Economic Policy* (October 2007), pp. 781-861.

Chart 3.3: Main official recommendation for the progression to the next year during mainstream primary education (ISCED1) 2002/03



Source: Eurydice (2005): *Key Data on education in Europe*.
Note: For detailed country regulations on progression see publication, p. 296.

Research shows that the decision to make a student repeat a grade is not always based upon explicit and transparent criteria; thus, students with the same level of performance may be required to repeat in one school or with one teacher and not in another school or with another teacher[88]. In its 2007 report on primary education, the French High Council for Education points out that repetition rates are significantly higher for pupils of lower SES than for pupils with higher SES, and that teachers' children are required to repeat a year significantly less frequently than others. The Council concludes that 'precocious grade repeating is ineffective and contrary to the principle of equal opportunities'[89].

Grade repetition is often considered by teachers as a compensatory measure: giving pupils a second chance or more time to 'catch up'. There is evidence to contradict this view. Hutmacher finds that while some repeaters catch up, the vast majority does well in the first quarter of the repeated year only and then falls back. The long term achievements of students who have repeated tend to be lower than for weak students who did not repeat. The effect of being labelled a 'repeater' can also have important negative consequences for the student's future school career[90].

One of the most comprehensive meta-analyses on this topic remains the work of Thomas Holmes, who in 1990 analysed 63 investigations comparing two groups of students: a control

88 G. Bless, P. Bonvin, M. Schüpbach : *Le redoublement scolaire. Ses déterminants, son efficacité, ses conséquences* (2005), p.134.

89 Haut Conseil de l'Education : *L'école primaire. Bilan des résultats de l'école* (2007), p.16.

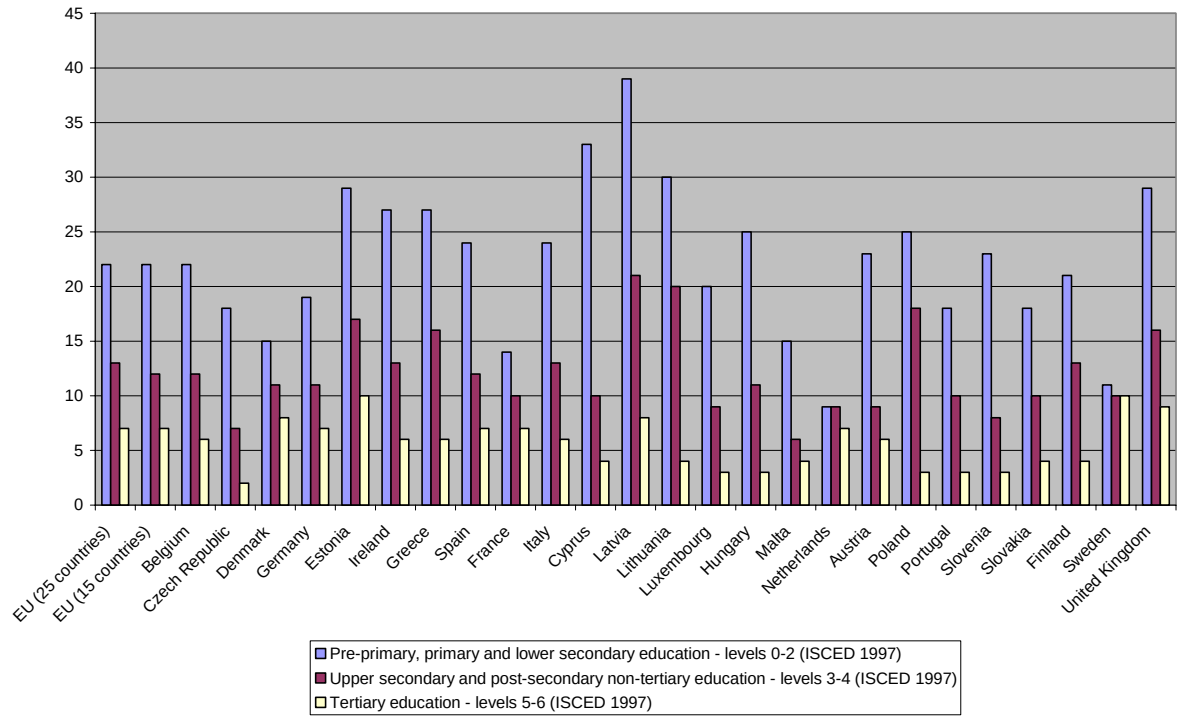
90 W. Hutmacher : 'Quand la réalité résiste à la lutte contre l'échec scolaire', *Cahiers du service de la recherche sociologique*, 36, (1993), pp. 37-38 and pp. 145-161.

group of non-repeating weak students and a group of repeaters at different levels of primary school. His conclusion is unequivocal: 'Those who continue to retain pupils at grade level do so despite cumulative research evidence showing that the potential for negative effects consistently outweighs positive outcomes'[91]. The OECD states that year repetition is often popular with teachers but that there is little evidence that it is beneficial for students. Repetition is expensive – 'the full economic cost is up to 20 000 $US equivalent for each student who repeats a year'[92].

(3.10)

Chart 3.4 shows the correlations between child poverty and attainment.

Chart 3.4: At-risk-of-poverty-rate, by highest level of education attained 2006 (%)



Source: Eurostat (2007)

Note: This indicator is defined as the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers).

91 C. T. Holmes, 'Grade level retention effects: A Meta-analysis of research studies' in: L. A. Shepard, M. L. Smith (eds.), *Flunking Grades. Research and policies on retention* (1990), pp. 16-33. Cited in J. J. Paul, Th. Troncin, 'Les apports de la recherche sur l'impact du redoublement comme moyen de traiter les difficultés scolaires au cours de la scolarité obligatoire' in: *Haut Conseil de l'évaluation de l'école*, N° 14 (2004). See also M. Crahay, 'Peut-on conclure à propos des effets du redoublement', *Revue Française de Pédagogie*, 148 (2005), p.14 ; and M. Crahay, *Peut-on lutter contre l'échec scolaire?* (2007).

92 S. Field et al, *No more failure. Ten steps to equity in education*, OECD (2007), Chapter 4, pp. 91-92.

The Commission's Bureau of European Policy Advisors (BEPA) recently reported that poor children experience a disproportionate share of deprivation, disadvantage, bad health and bad school outcomes. When they grow up, they are more likely to become unemployed, to get low paid jobs, to live in social housing, to get in trouble with the police, and are at a greater risk of alcohol and drug abuse as young adults. Moreover, in most countries, they are likely to transfer their poverty of opportunities to their own children. This has an economic, social and political cost which should be set against the public expenditure costs of early interventions (assuming such interventions can be made effective) to reduce the risks of future negative outcomes and social exclusion[93].

A recent report by BEPA on empowering youth highlights the following main areas in which action is required across the European Union: invest early; combine social and economic goals; co-ordinate investment across policy areas and layers; and improve information gathering and dissemination to facilitate decision-making[94].

(3.11 - 3.12)

The Cluster 'Social Inclusion' has emphasised the importance of mapping and improving preventive measures to combat disadvantage, the need to avoid a very high turnover of teachers, and to ensure that well-trained and experienced teachers are attracted to work in 'disadvantaged' schools[95].

Nevertheless schools cannot bring about change without change in the wider society. Shavit and Blossfeld showed that, in the 13 countries they studied, no attempts to redress educational inequalities solely through education policy had succeeded, and that the only two countries that had reduced inequalities had done so through the medium of wider social policies[96]. Anyon, in the USA, argues that while rules and regulations regarding teaching, curriculum, and assessment are clearly important, they cannot be effective without policies to eliminate poverty-wage work and housing segregation (for example) whose consequences for urban education are at least as profound as curriculum, pedagogy, and testing[97].

Early School Leaving

(3.13 - 3.14)

Early school leaving is defined as persons aged between 16 and 24 leaving education with no more than lower secondary education, and currently participating in no form of education and training. The Commission's Staff Working Paper on efficiency and equity in European education and training systems gave an overview of literature on the costs of inequity and

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93 R. Liddle, F. Delais, *Europe's social reality*. A consultation paper from BEPA (2006); See also: *A thematic study to identify what policy responses are successful in preventing child poverty,* European Commission, (2006); *Study on access to education and training, basic skills and early school leavers,* European Commission, (2005) p. 9. http://ec.europa.eu/education/doc/reports/doc/earlyleave.pdf; Cluster on Access and Social Inclusion;, *Joint Report on Social Protection and Social Inclusion*, European Council 7274/08 (2008), ; http://register.consilium.europa.eu/pdf/en/08/st07/st07274.en08.pdf

94 *Investing in youth: an empowerment strategy*, BEPA (April 2007).

95 Discussed at the Education Council meeting of 14.02.2008: http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/educ/98734.pdf.

96 Y. Shavit, H. P. Blossfeld, *Persistent inequality. Changing educational attainment in thirteen countries* (1993).

97 J. Anyon, *Radical possibilities: public policy, urban education, and a new social movement* (2006).

early school leaving in Europe[98]. The above-mentioned BEPA study on youth empowerment provided further evidence about the costs of early school leaving[99]. Comprehensive comparative data for the EU are however still lacking.

Reducing the rate of early school leaving to no more than 10% in 2010 is one of the five benchmarks for monitoring the progress of European education and training systems established by the European Council in 2002. In most Member States the percentage of early school leavers decreased between 2000 and 2006, but progress is not sufficient to reach the benchmark[100]. The latest (2007) average figure for early school leavers in the EU (14.8%) is still far in excess of the benchmark (see Chart 3.5).

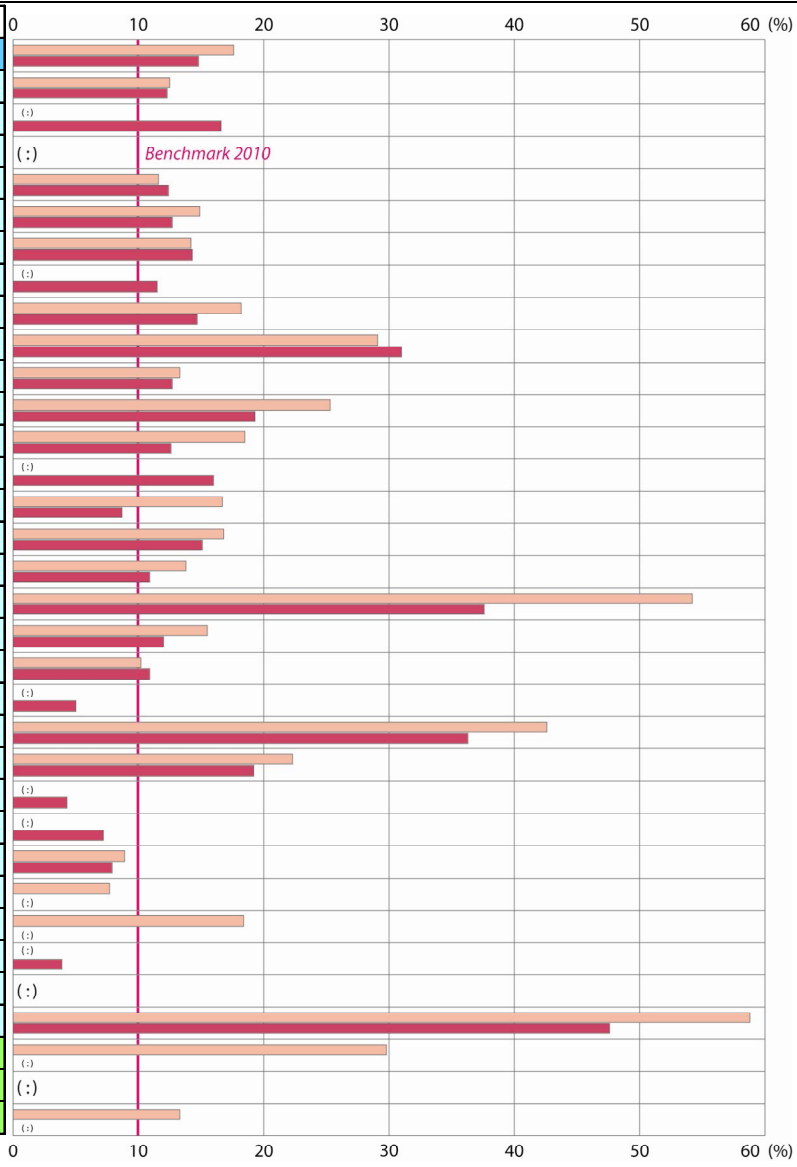
98 SEC (2006) 1096, pp.12-13.

99 *Investing in youth: an empowerment strategy*, BEPA (2007), pp. 31-32.

100 SEC(2007)1284, pp. 29-35.

Chart 3.5: Early School Leavers, 2000 and 2007
(Percentage of the population aged 18-24 with only lower secondary education and not in education or training, 2000 and 2007)

2000	2007	Country
17.6	14.8	EU-27
12.5	12.3	Belgium
:	16.6	Bulgaria
:	:	Czech Republic
11.6	12.4	Denmark
14.9	12.7	Germany
14.2	14.3	Estonia
:	11.5	Ireland
18.2	14.7	Greece
29.1	31.0	Spain
13.3	12.7	France
25.3	19.3	Italy
18.5	12.6	Cyprus
:	16.0	Latvia
16.7	8.7	Lithuania
16.8	15.1	Luxembourg
13.8	10.9	Hungary
54.2	37.6	Malta
15.5	12.0	Netherlands
10.2	10.9	Austria
:	5.0	Poland
42.6	36.3	Portugal
22.3	19.2	Romania
:	4.3	Slovenia
:	7.2	Slovakia
8.9	7.9	Finland
7.7	:	Sweden
18.4	:	United Kingdom
:	3.9	Croatia
:	:	FYR Macedonia
58.8	47.6	Turkey
29.8	:	Iceland
:	:	Liechtenstein
13.3	:	Norway



Data Source: Eurostat (EU-Labour Force Survey 2008)

Additional Notes:
Provisional 2007 data for Latvia, Portugal and Finland.
Unreliable data for Slovenia and Croatia because of the small sample size.
Break in series for Finland (2000) and Denmark (2007).
Cyprus: pupils studying abroad are not covered by the survey; this indicator is therefore overestimated.

Most research identifies a combination of several reasons, ranging from individual characteristics, education and job related reasons, family and peer relations to community and environmental reasons for early school leaving. An extensive study for the European

Commission in 2005 made clear that overall socio-economic background is one of the main determinants of early school leaving[101].

A Commission study on policy measures concerning disadvantaged youth also examined good practice to combat early school leaving[102]. General measures, such as extending the age of compulsory education, removing mechanisms of selection or curricular reforms were examined, as well as school-related measures such as counselling, support teaching or the combination of non-formal learning. The study made the distinction between preventative and compensatory measures such as second chance schools. While both have a role to play, attention is increasingly shifting towards how to prevent early school leaving.

Eight Member States (Belgium, Estonia, Greece, Lithuania, Malta, the Netherlands, Portugal and Spain) set national targets for reducing early school leaving in their 2005 Lisbon National Reform Programmes. The accompanying initiatives are not focused only on curricula, but also on extracurricular activities such as sport. The countries taking action in this field are not only those with a high proportion of early school leavers but also those which have been successful in the past in reducing or limiting the phenomenon[103].

Special Educational Needs (SEN)

(3.18)

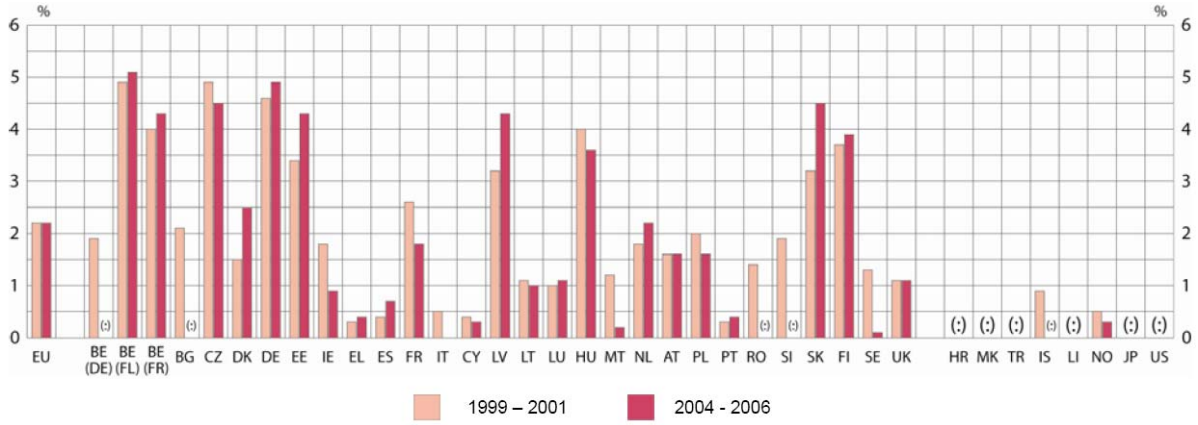
The concept of special educational needs is broad and varies from country to country. It extends beyond those who may be included in 'handicapped' categories to cover those who have many other kinds of special need. The amount and type of additional support for these groups also varies greatly from country to country. Given that the way in which SEN are defined, and consequently the types of provision available differ by country, direct comparisons between countries of the percentages of pupils in separate provision are not appropriate. However, trends in the proportion of pupils educated separately are a useful indication of developments towards inclusion for SEN pupils (see Chart 3.6).

101 *Study on access to education and training, basic skills and early school leavers: Early school leavers*, European Commission (2005) http://ec.europa.eu/education/doc/reports/doc/earlyleave.pdf

102 *Thematic study on policy measures concerning disadvantaged youth*, European Commission (2005) http://ec.europa.eu/employment_social/social_inclusion/docs/youth_study_en.pdf

103 SEC(2007)1284, p. 33.

Chart 3.6: Percentage of pupils in compulsory education with special needs in segregated settings, 1999/2001 – 2004/2006



Data source: European Agency for Development in Special Needs Education and Eurydice for 1999-2001; European Agency for Development in Special Needs Education for 2004-2006.

Additional note: EU average calculated as arithmetic average of EU Member States for which data are available.

With very few exceptions, these trends show only very moderate change and no clear pattern emerges in Europe. The number of countries showing an increase in the proportion of SEN pupils in separate provision is similar to those showing a decrease, with several countries showing no changes, or almost none, in these proportions over this time period[104].

Several political documents have argued in the last decade for the benefits of inclusive education for children with special educational needs. The Salamanca Statement in 1994 (signed by 92 governments and 25 organisations), inter alia, called upon all governments to 'adopt as a matter of law or policy the principle of inclusive education, enrolling all children in regular schools, unless there are compelling reasons for doing otherwise'[105].

In September 2007 a European Hearing attended by young people with special educational needs from 29 countries, from secondary, vocational and higher education, in the framework of the Portuguese Presidency of the Council, resulted in a declaration stating 'it is very important to give everyone the freedom to choose where they want to be educated; inclusive education is best if the conditions are right for us; we see a lot of benefits in inclusive education: we acquire more social skills; we live wider experiences; we learn about how to manage in the real world; we need to have and interact with friends with and without special needs; inclusive education with individualised, specialised support is the best preparation for higher education; specialised centres would be of help to support us and to inform universities properly about the help we require; inclusive education is mutually beneficial to us and to everyone'[106].

The United Nations Convention on the Rights of Persons with Disabilities was adopted on 13 December 2006 and declares that 'persons with disabilities can access an inclusive, quality

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104 Ibid.: Between 1999 and 2006, no overall progress was made towards greater inclusion of pupils with special needs; the proportion of such pupils educated in special settings decreased in 11, but increased in 12 out of 25 countries.

105 Salamanca statement and framework for action on special needs education (1994), p. ix.

106 Lisbon Declaration: Young People's Views on Inclusive Education, (2007), p.1.

and free primary education and secondary education on an equal basis with others in the communities in which they live.'

In 2007 a Declaration of the European Parliament called for a charter on 'dys' children (defined as children with disability such as dysphasia, dyspraxia, dyslexia, dyscalculia or attention deficit disorder, etc.). The purpose of such charter would be to: promote best practice in making information accessible for people with disabilities, promote the use of effective pedagogies and early intervention strategies; and promote the integration of such children into the world of work[107].

A literature review by the European Agency for Development in Special Needs Education has sought to map good classroom practices on inclusive education in primary and secondary settings by collecting existing practices and analysing their impact. The practices it investigated were: cooperative teaching, peer tutoring and cooperative learning, curriculum-based measurement, collaborative problem solving and mixed designs[108].

To date, quantitative information about the benefits of inclusive education for all is scarce. Further analysis is needed. In a recent publication on SEN students the OECD pointed out that so far the work on SEN students has been determined by the availability of data[109]. However, for future comparative work it is crucial to collect systematically economic data and data on outcomes for SEN students. The publication also calls for the need to include SEN students in the future rounds of PISA. OECD has recently started a new study that aims to examine issues of transition of SEN students into further and higher education and the labour market. Within the context of transitions OECD is also planning to focus in the future on the question of how enabling or disabling schools are in securing the continuity of the education of SEN students.

School development

(3.19 - 3.21)

Effective school improvement is high on most countries' educational agenda[110].

A recent European research project conducted an extensive analysis of some 30 school improvement projects in eight countries (The Netherlands, Finland, United Kingdom, Belgium-French Community, Greece, Italy, Spain, and Portugal)[111]. The research showed that the accent is often on teacher quality, which is certainly an important factor; but individual teachers cannot in isolation produce high levels of performance for all students of a school nor promote lasting changes within their schools. It is essential to consider the school as a whole, i.e. as an organisation. The organisation may add or subtract value to that of its individual members. The study claims that outside pressure is needed for schools to change. It distinguished four main types: market mechanism, external evaluation and accountability,

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107 Written declaration of the European Parliament on "dys" crimination and social exclusion affecting children with "dys" abilities, (0064/2007).

108 C.J.W Meier, *Inclusive education and effective classroom practices*, EADSNE (2001), pp. 31-32.

109 *Students with disabilities, learning difficulties and disadvantages. Policies, statistics and indicators*, OECD (2007), pp. 215-224.

110 Also at the level of the European Schools, reform of their governance arrangements is currently underway and access to the European Baccalaureat is being widened to other school types.

111 See project within the fourth EU framework programme for research: 'Capacity for change and adaptation of schools in the case of effective school improvement' (July 2001). http://www.pjb.co.uk/npl/bp27.htm

external agents, such as inspectors, and participation of society in education and societal changes. Schools – and indeed school education systems - are often not organised appropriately to respond to a fast-changing environment**.** The study identified three material and non-material kinds of support that might contribute to school improvement: granting a certain level of autonomy to schools, financial resources and working conditions and local support from parents, district officials, school administrators and school boards.

Increasingly, the evidence points to the potential of 'learning communities' to generate the capacity for school improvement. Such communities offer opportunities for teachers to work together without being dependent upon external initiatives or interventions[112]. However, much depends upon a school's internal capacity to become a learning community in the first place. It is clear that not all schools have this capacity, suggesting that those schools which would benefit most from teachers working together may be those least able to make this happen.

Recent studies therefore emphasise that school improvement programmes have to be related to capacity building; thus there should be more emphasis on sophisticated training, coaching and development programmes for practitioners and the use of external support agencies[113]. They emphasise that schools and school systems facing organisational challenges emphasise in one way or another that real change in schools requires the development of strong professional communities[114]. Two ways of building capacity are through internal collaboration or school-to-school collaboration[115].

Several European research projects on school effectiveness suggest that a combination of external mechanisms and institutional autonomy is most effective in bringing about improvements in local contexts[116]. The importance of local and national contexts is such that there is unlikely to be a single recipe for change. Moreover, even with the appropriate framework of external mechanisms, improvement takes time[117]. These conclusions are confirmed by the results of the ESI (Effective School Improvement) survey[118].

Much research emphasises the important role of parents and the wider social community in school improvement[119].

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112 See report of the Cluster 'Teachers and Trainers': 'Schools as learning communities for their teachers.' http://ec.europa.eu/education/policies/2010/doc/reportpeer2_en.pdf

113 A. Harris, C. Chapman, *Effective leadership in schools facing challenging circumstances* (2002); L. Stool, D. Fink, *Changing our schools: linking school effectiveness and school improvement* (1996).

114 See the policy conclusions of the Cluster 'Teachers and Trainers' http://ec.europa.eu/education/policies/2010/doc/reportpeer5_en.pdf; see also K. S. Louis –S. Kruse (eds.): *Professionalism and community : Perspectives on reforming urban schools* (1995); L Stoll, K. Seashore Louis, *Professional learning communities* (2007), and R. Bolam et al (eds.), *Creating and sustaining professional learning communities,* Research Report (2005); J. Cibulka, S. Coursey, M. Nakayama, J. Price, S. Stewart, *Schools as learning organisations: A review of the literature*, NCSL, UK, (2003).

115 See A. Bolivar, 'Capacity-building as a means to empower schools', Paper presented at the EU presidency conference on 'Schools facing up to new challenges' (November 2007) P. M. Senge, *The fifth discipline. The art and practice of the learning organisation* (1990); R. Glatter, 'Schools and school systems facing complexity: organisational challenges', Paper presented at the EU presidency conference in Lisbon on 'Schools facing up to new challenges in the 21st century' (November 2007).

116 S. Power, *Education. Policy Synthesis of EU research results*. Series N° 4 (2007), p. 24.

117 Ibid.

118 Survey conducted across three countries: UK, Spain, Netherlands.

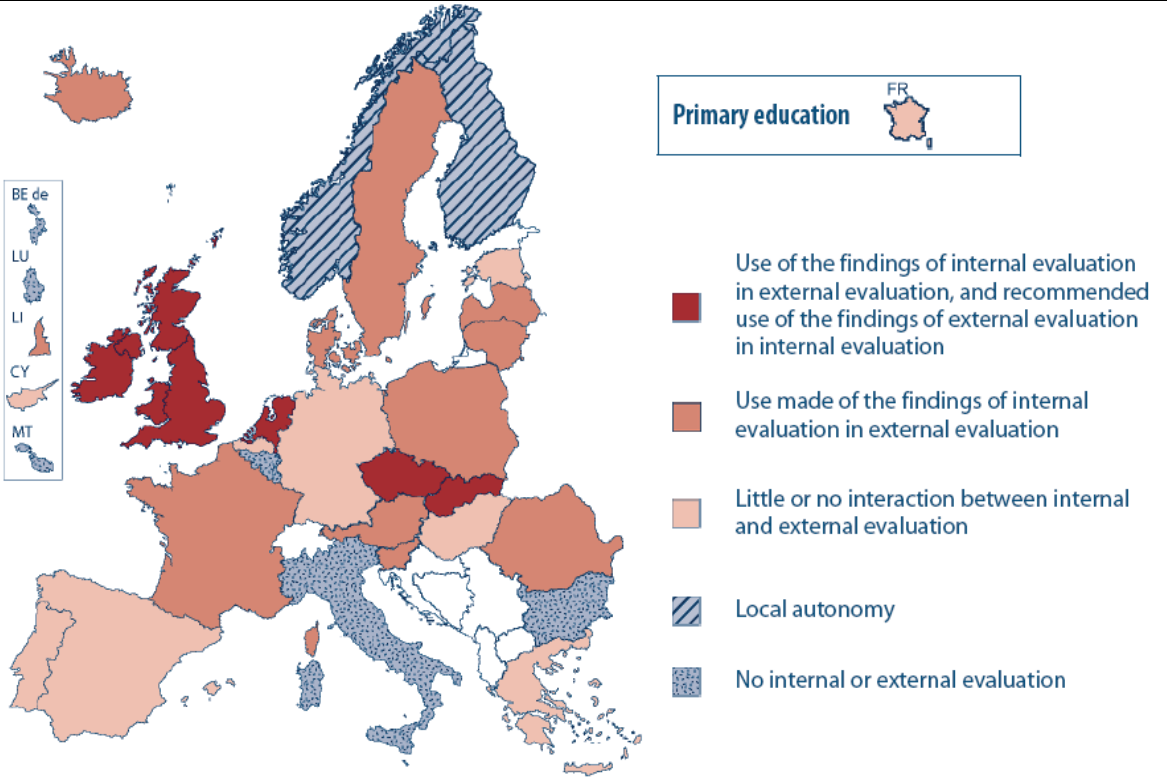
119 J. S. Coleman, 'Social capital in the creation of human capital', *American Journal of Sociology Supplement* 94 (1988); R. D. Putman, 'Education, diversity, social cohesion and 'social capital' – note

The project 'Legal Framework for New Governance and Modern Policy Education throughout Europe' sought to identify the impact of new accountability mechanism on schools through a comparative study of 26 national systems based on expert accounts, analysis of legal frameworks and questionnaire survey. It found that systemic and cyclical self evaluation appears to be an effective tool for providing schools with the means of identifying areas of improvement and directions for change[120].

(3.22)

The complementary nature of external and internal evaluation raises important questions about who the players are, who sets the standards for the procedures and what happens to the findings (see Chart 3.7). The general tendency is to introduce external evaluation involving judgements about performance and means, and internal evaluation for developing strategies to improve the current situation, while either approach may identify precisely those aspects that require improvement.

Chart 3.7: Relations between the internal and external evaluation of schools as entities, compulsory general education, 2002/03



Source: Eurydice (2005): *Key Data on Education in Europe.*
Note: for details on evaluation approaches in different countries see publication.

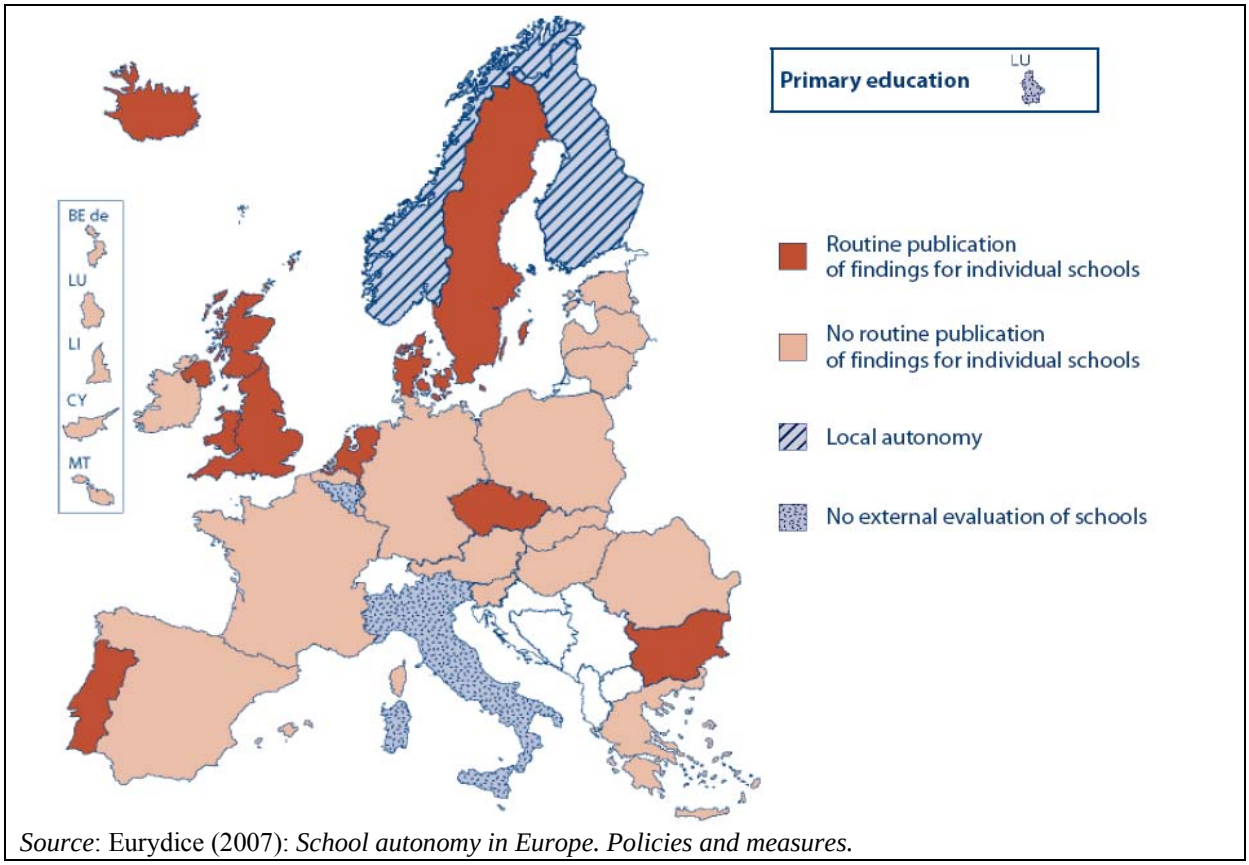
A recent Eurydice study on school autonomy attempted to make correlations between autonomy and accountability (see Chart 3.8). It notes that from the middle of the 1990s the concept of accountability became increasingly important and assumed different forms in different countries. These new models of accountability usually represent an adjustment of

for discussion', OECD Education Ministers meeting Dublin 'Raising the quality of learning for all' (March 18-19, 2004).

120 S. Power, *Education*, *Policy Synthesis of EU research results*. Series N° 4 (2007), p. 23.

evaluation instruments that were either already in place (school inspectorates, for example) or were developed to meet broader objectives, such as standardized assessment of pupil attainment.

Chart 3.8: Publication of findings from the external evaluation of schools, compulsory general education 2006/07



Source: Eurydice (2007): *School autonomy in Europe. Policies and measures.*

The study concludes that, 'supervision by inspectorates or organising bodies (including local authorities) or the monitoring of results (in particular the results of pupils in standardised tests) do not equate to a particular degree of autonomy. Countries with a high level of autonomy (Belgium, Czech Republic, Denmark, Sweden, etc.) draw on all these different types of control. This diversity is explained by the fact that traditional methods of supervision (inspection of teachers for example) have been adapted to accommodate the new responsibilities delegated to schools'[121].

It is rare for countries to have developed, as in the United Kingdom (England), accountability measures in tandem with school autonomy policies and in relation to the degree of freedom granted. However, all countries where there is a high level of autonomy have developed forms of accountability which vary considerably in their level of control. Conversely, the countries which do not have a structured model of school evaluation are those where school autonomy reforms have been developed fairly recently, only partially or are weak (Bulgaria, Greece, France, Italy, etc.). However, this approach to accountability has begun to emerge in a few of

[121] *School autonomy in Europe. Policies and measures*, Eurydice (2008), p. 46.

these countries. Italy, for example, has recently decided to develop evaluation instruments to measure the value added by each school in terms of pupil attainment'[122].

Recent studies on the relationship between school accountability, autonomy, choice, equity, and student achievements, suggest that school autonomy may be more beneficial in systems where external exams introduce accountability and external exams change the behaviour not only of students, but also of teachers and school[123]. The analysis of the 2006 PISA results seems to corroborate this result. Further research is needed to determine the precise mechanisms at work.

4. TEACHERS AND SCHOOL STAFF

Teacher Competences and Qualifications

(4.1 – 4.2)

Within the Education and Training 2010 work programme, a group of national experts on teacher and trainer education prepared 'Common European Principles for Teacher Competences and Qualifications', a statement of basic principles on the competences and qualifications required by teachers and trainers. This was validated by a Stakeholder conference in July 2005[124].

Following on from this work, the European Commission in August 2007 published a Communication 'Improving the Quality of Teacher Education'[125]. This identified the quality of teaching and Teacher Education as key factors in securing the quality of education and improving the educational attainment of young people.

The Commission's proposals were based upon research showing, inter alia, that: teacher quality is the most important within-school factor affecting student performance[126]; there are positive relationships between in-service training and student achievement[127]; the amount of in-service training available to practising teachers in the EU is very limited, generally amounting to less than 20 hours per year; only half of Member States offer new teachers any systematic kind of support in their first years of teaching; and that explicit frameworks to

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122 Ibid.

123 L. Wöβmann, 'The complementarity of central exams and school autonomy: economic theory and international evidence', in: J. de Groof, C. Glenn, E. Gori, D. Vidoni (eds.), 'Quality control, accountability and liability in education' (2005); idem, 'Contribution of Education and Training to innovation and growth', Paper presented at the Symposium on the future perspectives of Education and Training for growth, jobs and social cohesion (June 2007); G. Schütz, M. R. West, L. Wöβmann, 'School accountability, autonomy, choice, and the equity of student achievement from PISA 2003', OECD Working papers, EDU/WKP 9 (2007).

124 Common European Principles for Teacher Competences and Qualifications http://ec.europa.eu/education/policies/2010/doc/principles_en.pdf

125 COM(2007)392 final.

126 S. G. Rivkin, E. A. Hanushek, J. F. Kain, 'Teachers, schools and academic achievement', *National Bureau of Economic Research* (2000); E. A. Hanushek, J. F. Kain, S. G. Rivkin , 'Teachers, schools, and academic achievement', *Econometrica*, 73/ 2 (March, 2005), pp. 417–458

127 J. D. Angrist, V. Lavy, 'Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem public schools?', *Journal of Labor Economics*, 19/ 2 (Apr., 2001), pp. 343-369.

assist teachers who experience difficulties in performing their duties adequately exist in only one third of countries[128].

The Communication made proposals to: ensure that provision for teachers' education and professional development is coordinated, coherent, and adequately resourced; ensure that all teachers possess the knowledge, attitudes and pedagogic skills that they require to be effective; support the professionalisation of teaching; promote a culture of reflective practice and research within the teaching profession; and promote the status and recognition of the profession. The Communication was the basis for the subsequent Council Conclusions on the same topic[129].

Within the Education and Training 2010 programme, work on Teacher Education is being carried forward by the Cluster 'Teachers and Trainers', who publish detailed reports of their peer-learning activities, and conclusions about policies for improving Teacher Education[130].

The Commission Staff Working Document 'Towards more knowledge-based policy and practice in education and training' emphasised teachers' roles in the creation and application of knowledge[131]. It advocated that teachers should receive adequate training in research methods, and incentives to undertake research and action research throughout their careers, seeing this as part of professional good practice.

The Commission in 2006 commissioned a study on the mobility of teachers and trainers in the European Union[132]. The study identifies, for each country, the number of teaching posts (FTE) in 2004[133] and the age and gender profile of the teaching profession is analysed[134]. The study also identifies the trends in teacher numbers based upon a number of factors. It predicts the likely effects of different policy scenarios on those numbers[135]. Data on the age profile of the teaching profession in each country are provided by Eurostat. On average in EU Member States, 30% of teachers are in the over-50 age group. This equates to some 1,972,271 teachers who can be expected to need to be replaced over the next 10 to 15 years.

(4.4)

A recent study by McKinsey & Co. on the common characteristics of most successful school systems highlights the central role of teachers, asserting that 'the quality of an education system cannot exceed the quality of its teachers' and that 'the only way to improve outcomes is to improve instruction'[136]. The OECD's thematic review on the teaching profession emphasised the importance of the quality of teaching, the need to align teacher development and performance better with school needs, and the need to transform teaching into a

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128 *Key data on Education in Europe*, Eurydice (2005), pp. 185-232.

129 OJ C 300/07 of 15.11.2007.

130 Teacher and Trainer Education: Policy conclusions and recommendations from peer learning activities 2005 – 2007; http://ec.europa.eu/education/policies/2010/objectives_en.html

131 SEC(2007)1098, p. 55.

132 *Mobility of teachers and trainers*. A report submitted by GHK to the European Commission (2006) http://ec.europa.eu/education/doc/reports/doc/mobility.pdf.

133 Ibid., Table 3.2, p. 21.

134 Ibid., Section 3.4, from p. 25 onwards and annexes.

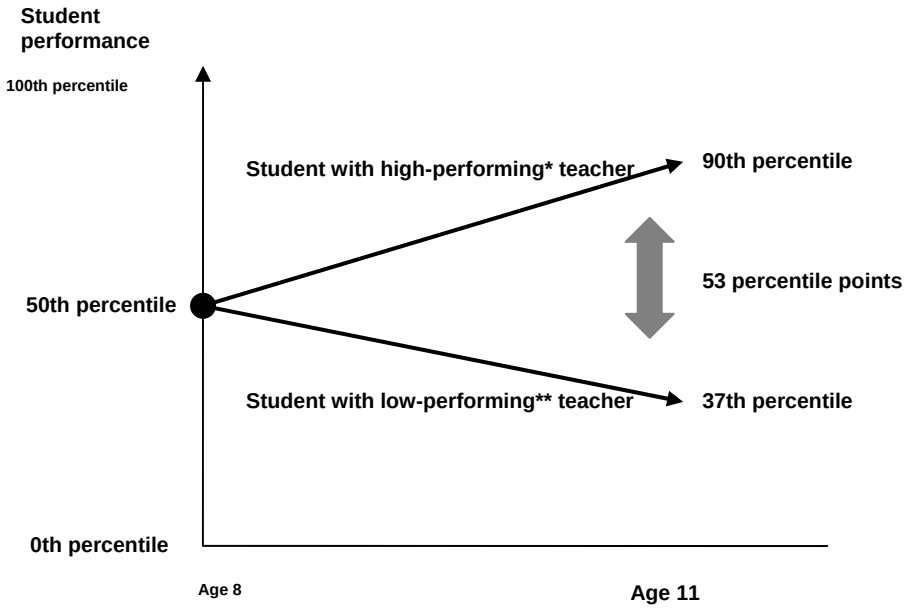
135 Ibid., Section 8, from p. 156 onwards.

136 M. Barber, M. Mourshed, *How the world's best-performing school systems come out on top*, McKinsey & Co. (Sept. 2007).

knowledge-rich profession. It also underlined that it is crucial that schools have genuine responsibility for teacher personal management in which leadership plays a crucial role[137].

Chart 4.1 shows that teacher quality has a significant effect on student performance, more than any other variable. On average, the performance of two students of average performance (50^{th} percentile) diverged by more than 50 percentile points over a three year period depending on the teacher they were assigned.

Chart 4.1: The effect of teacher quality



*Among the top 20% of teachers. **Among the bottom 20% of teachers

Source: Sanders and Rivers (2007), Cumulative and Residual Effects on Future Student Academic Achievement, cited in M. Barber, M. Mourshed, *How the world's best-performing school systems come out on top*, McKinsey & Co. (Sept. 2007), p. 11.

As far as the quality of teachers and teaching are concerned, the study notes that in the top performing systems: there are multiple pathways into the teaching profession; low performing teachers are removed from the classroom; there are effective mechanisms for allocating places on teacher training programmes to well-motivated high achievers with good communication skills; starting remuneration is in line with other graduates' starting salaries; the status of the profession is carefully managed. Effective and successful systems promote good interaction between teachers and students by: coaching classroom practice, developing strong school leaders and enabling teachers to learn from each other[138].

137 *Teachers matter: attracting, developing and retaining effective teachers*, OECD (2005).

138 M. Barber, M. Mourshed, *How the world's best-performing school systems come out on top*, McKinsey & Co. (Sept. 2007), p. 38.

School Leadership

(4.5 - 4.6)

Several studies on school improvement point to the fact that effective leadership is central in implementing and sustaining school improvement[139]. Those studies that see a close relationship between effective school leadership and student outcomes advocate the need for developing shared vision, distributing leadership and building the school culture necessary to current restructuring efforts in schools[140].

The recent OECD study *Improving School Leadership: Policy and Practice* identifies four core functions for leadership: supporting, evaluating and developing teacher quality; goal setting, assessment and accountability; strategic resource management; leadership beyond school borders[141].

Leadership in this context is primarily about managing the conditions under which people learn new practices; creating organisations that are supportive, coherent environments for successful practice; and developing leadership skills of others. Elmore explains how leadership might be defined more clearly as a collective good; it should be treated as a human investment enterprise, which has three important characteristics: it focuses on the practice of improving the quality of instruction and the performance of students; it treats leadership as a distributed function rather than a role based activity, and it requires more or less continuous investment in knowledge and skills[142].

Senge views leadership and leaders at the centre of the learning organisation where they are designers, stewards and teachers[143].

For Hopkins, 'system leaders' are those head-teachers who are willing to shoulder system leadership roles: who care about and work for the success of other schools as well as their own[144].

The OECD concludes that 'evidence shows that principals have *a measurable, mostly indirect influence* on learning outcomes'[145]. This implies that the impact of school leaders on student

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139 D. Vidoni, L. Grassetti, C. Bezzina, D. Gattelli (eds.), *The role of school leadership on student achievement: evidence from TIMSS 2003*, unpublished (2007), pp. 33-39. It gives an overview of the literature on the subject since the 1960s.

140 K. Leithwood, D. Jantzi, R. Steinbech, *Changing leadership for changing times* (1999)

141 *Improving school leadership*, OECD (2008), pp. 32-48.

142 R. F. Elmore, 'Leadership as the practice of improvement' Paper presented at the International Conference of OECD, 'International perspectives on school leadership for systemic improvement' (July 2006).

143 P. Senge, *The fifth discipline. The art and practice of the learning organisation* (1990), p. 340.

144 D. Hopkins, 'Short primer on system leadership', Paper presented at the International Conference of OECD, 'International perspectives on school leadership for systemic improvement' (July 2006), p.8.; Ibid., p. 13. see D. Hopkins (ed.), *Innovative approaches to contemporary school leadership* , OECD,(forthcoming), and the system leadership series led by Professor Hopkins on http://www.ssatinet.net/events/futureevents/systemleadershipseries.aspx

145 *Improving school leadership*, OECD (2008), p. 8. and P. Hallinger, R. Heck, 'Exploring the principal's contribution to school effectiveness: 1980- 1995', *School Effectiveness and School Improvement*, 9 (1998), pp. 157-191.

learning is generally mediated by other people, events and organisational factors such as teachers, classroom practices and school climate.

According to Spillane et al. distributed leadership incorporates the activities of multiple groups of individuals in a school guiding and mobilising staff in the instructional change process through inter-dependency rather than dependency[146].

Silins and Mulford conclude that student outcomes are more likely to improve where leadership sources are distributed throughout the school community and where teachers are empowered in areas of importance to them. They argue that teachers cannot create and sustain the conditions for the productive development of children if those conditions do not exist for teachers. If schools are to become better at providing learning for students, they must also become better at providing opportunities for teachers to innovate, develop and learn together[147].

Timperley and Spillane have investigated links between distributed leadership and school success[148]. They suggest that while traditional approaches to leadership recommend that organisational and instructional coherence can be established by creating a strong vision for a school that pervades the organisational culture, distributed leadership focuses on the things people do to enact those visions and create coherence.

146 J. Spillane, R. Halverson, J. Diamond, 'Towards a theory of school leadership practice: implications of distributed perspective', *Journal of Curriculum Studies* 36/1 (2004), pp. 3-34.

147 H. Silins, B. Mulford, 'Leadership and schools results', in: K. Leithwood, P. Hallinger (eds.) , *Second international handbook of educational leadership and administration* (2002), pp. 561-612.

148 J. Spillane, *Distributed leadership* (2006); H. S. Timperly, 'Distributed leadership: developing theory from practice', *Journal of Curriculum Studies* 37/4,(2005), pp. 395-420; H. Timperley, A. Wilson, H. Barrar, I. Fung, *Teacher professional learning and development: best evidence synthesis iteration* (2007).