

Working Paper 1

**EUROPEANIZING EDUCATION:
FABRICATING A SYSTEM FOR GOVERNING?**

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DRAFT ONLY: NOT FOR QUOTATION WITHOUT PERMISSION

This working paper is focused upon the development of a European policy space for education. It shows how the early concerns for a common cultural identity, involving education, in Europe, and sensitivity towards harmonization of systems have been reshaped by the events of the last ten years, especially the Lisbon process and the integration of data systems.

The working paper records the shifting area of indicators in Europe, their alterations and exclusions over time, the agencies that construct them, and the development and elaboration of the Key Data on Education publication [as data was adjusted to sustain new policy directions].

The working paper concludes with some early comments about education, Europe and data.

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Short History of Europeanizing Education

A constant element of Europeanization, from the 1950s, was the cultural strategy of creating a common identity, fabricated through cultural symbols and exchange, and the education area was enmeshed within this strategy. In particular, cultural cooperation was associated with a new identity, 'a European model of culture correlating with European integration'¹. European identity was treated as fixed, as contained within the histories and spaces of national states; it was described as an 'exceptional source of development, progress and culture [ibid p11]. If culture was contained within the nation state, then a new language of identity, established through education as cultural cooperation, would affirm a common space.

In 1971, the Ministers for Education, following the intentions of the Conference of Heads of State meeting at the Hague [in 1969], decided to create a working party which would devise a European Centre for the Development of Education [CEDEFOP], a way of financing it and a way to establish forms of active cooperation in the field of education. This step was preceded by reliance on the Council for Cultural Cooperation [within the Council of Europe], established in 1962. Again, in 1974, the Ministers of Education re-affirmed their new direction. They began their Resolution by repeating their mantra about Europe as an exceptional source of culture, by confirming that allowance must be made for the 'traditions of each country' and that education cannot be seen merely as 'a component of economic life' [EEPS 1987 p15]. An 'imagined community' of Europeans was coaxed into being by cross-institutional collaborations in education, especially around and through Socrates and Erasmus Programmes. If culture has a place now, it is to protect Europe against globalization. European identity was now to mean having required knowledge and competences, recognizing membership of a common social and cultural area and developing mutual understanding within it. The dominant strand of identity is now more focused on individuated qualities, projected into a new space, than on a located citizen, inquiring into the places of others.

CEDEFOP represented a stage in the sensitive but steady thought applied to the harmonization of qualification systems and the formation of vocational education inside the Community. CEDEFOP's functions, of documenting policy shifts, vocational education and training institutions and field initiatives and then widely disseminating this information, are all aimed to create a 'concerted approach' to vocational education and training across Europe. Documentation processes, just as much as statistical analysis, about national qualifications are part of the continuing 'calculative rationality'² by which the European state laid the foundations for a European Education Area.

The shift towards a 'Europe of Knowledge' in the late 1990s, involved a further intensification of the early work on collaboration, network, symbolic acts and the systematization of the

¹ Council of the EC - General Secretariat
European Education Policy Statements 3rd Edition June 1987
Resolution of the Ministers of Education November 1971 p11
² Bauman, Z [1992] *Intimations of Postmodernity* London: Routledge

vocational and higher education arena. The sensitivity towards national policies and planning and the blockage in the organization of Europe they had caused had to be overcome.

The effects of the fragmentation of Europe into different countries are numerous: the lack of harmonisation of approaches and objectives; the heterogeneity of systems and initiatives; restrictive technical, administrative and regulatory barriers. [Cresson 'Towards a Europe of Knowledge']

The management of combined economic and social policies [especially in the broad area of education and research] had a new strategy. It was now focused on outputs and not on inputs [a cause of endless negotiations], it was to be based on information about systems in Europe, progress towards goals and the focus of the action shifted from the constituent states toward other social actors [cities, companies, public-private partnerships etc] [Thompson et al 1991] and onto the individual. It was argued that only 'the most sustained effort to education and training' would enable the development of a knowledge-based society. Education, in its new transparency as an area of goals and data about progress, and about system and individual 'learning, would move from the shadows of culture and identity through

*'[the] gradual construction of an open and dynamic European educational area'*³

At the same time, the creation of an internal European identity is overshadowed, even replaced, by the need to create an external global identity. The knowledge society or economy is present in many contemporary policy documents in Europe and beyond, and certainly within the policy frameworks of major international agencies, such as the World Bank and OECD. It is not specific to the EU. International comparison as a means of achieving goals is part of the dominant form of governance within individual states within Europe, as they become sites of international capital flows and 'open business' environments.

The 'education policy area' appears to have lifelong learning as a goal for the individual, as it exists as a synonym for 21st C Europeanization. The [Accomplishing Europe] Study Group's vision of constructing Europe, defined as a knowledge society, through learning, could not have been more clearly expressed than in a list of oppositions in which the envisioned future was defined. The future Europe was to be constructed by a shift from objective to constructed knowledge; from an industrial to a learning society; from instruction to personal learning; and from formal educational institutions towards new organizational structures for learning.

a paradigm shift from the dominance of traditional education institutions to a diverse field of traditional and modern learning opportunities that are more process and outcome oriented as well as of a modular structure [EC EuroStat Taskforce 2001 p7]

The new EU outputs of education, as part of an integrated field of action [for example, with employment, economic growth and social exclusion], needed to have its data categories for

³ Towards a Europe of Knowledge - Communication from the Commission COM(97)563
Part 2 -Building a Europe of Knowledge p1

collection and comparison re-standardized. As an example, of the new policy shift, a Task Force on Lifelong learning and statistical data was created

Representatives from different Directorates General (Education and Culture, Employment and Social Affairs, Research, EuroStat), from 5 Members States (Germany, Netherlands, Portugal, Finland, UK), from the European Centre for the Development of Vocational Training (CEDEFOP), the European Unit of the Eurydice network of Ministries of Education, the Advisory Committee on Statistics in the Economic and Social Spheres (CEIES), the Organisation for Economic Cooperation and Development (OECD) and the UNESCO Institute for Statistics (UIS), the International Labour Office (ILO) as well as two experts in the field from Denmark and Switzerland [EC EuroStat Taskforce 2001 p5]

In this way, the new European construction strategy, involving a re-defined education at its core, had to be fabricated by experts drawn from international partners, a range of internal data agencies and several DGs. Education had shifted from being a simple area of identity construction to a complex data driven element of the new governance of Europe.

Indicators and benchmarking in the post-Lisbon era: managing data, policy and education discourses (2000-2005)

Indeed, quality assurance and evaluation (QAE) were soon to become the new dominant discourses in the process of fabricating the space of European education. This section will offer an overview of the main developments in the field of QAE in European education since the Lisbon Council of 2000. In particular, we are going to examine official EU documentation data which has related closely to the rise of indicators and benchmarking as the new tools for measuring European education systems and directing them towards greater convergence. Rather than discuss these developments in depth, the intention here is to follow a chronological account of the main reports and meetings which established the use of indicators and benchmarks as vital ingredients for the governance of the European education space⁴.

Even though an interest in measuring educational performance through numerical data was evident as early as the mid-70s⁵, indicators and benchmarking received the European education ministers' explicit attention for the first time in 1999 in a conference in Prague⁶. The conference theme focused on the quality of school education; the ministers decided to set up a group of national experts who would devise a list of indicators of quality in school education in Europe.

The work of the group was published in 2000 (Commission, 2000). It identified sixteen indicators for quality assurance in school education and was presented in Bucharest, during a conference of the European education ministers there. According to the Commission, 'the objective was not to create new indicators in such a short time but to identify the quality-related problems which were politically most relevant for European countries, and then determine which of the existing indicators —mainly from Eurostat, the OECD, the IEA⁷ and Eurydice— could shed most light on these problems' (2006; 196-7). Thus, the contribution of the different data agencies towards establishing appropriate benchmarks was taken for granted right from the start. Indicators were not devised from scratch, but were constituted on the basis of triangulating existing data that at this point deemed useful; in a sense, most of the work towards establishing the new QAE frameworks for European education was already in place. What was necessary now was to coordinate data, organisations and minds towards the requirements of the new knowledge economy.

Further, other research, such as a pilot project on quality assessment in school education (Commission, 1999), was fed into a Recommendation to the Parliament and the Council, to

⁴ A detailed chronology of the main events can also be found in the Annex- Part 1.

⁵ A European Commission resolution emphasised the significance of information sharing between Member States and the need for education statistics (OJ C 38, 19.2.1976). Eurostat started publishing data from national statistics since 1978, nonetheless it was only after the 1990s that it began producing more statistically comparable data.

⁶ Conference of European education ministers 'Partners in Europe –Learning together; improving education levels as a basis for lifelong learning' (European Commission 2000; 194)

⁷ This is the International Association for the Evaluation of Educational Achievement. Since its inception in 1958, the IEA has conducted more than 23 research studies of cross-national achievement. Examples are the Trends in Mathematics and Science Study (TIMSS 1995, 1999, 2003, 2007) and the Progress in International Reading Literacy Studies (PIRLS 2001, 2006).

be subsequently adopted in 2001⁸. This Recommendation argued for the need to enhance quality in school education, asked from Member States to cooperate in this matter and discussed the need for a balance between schools' self- and external evaluation (Commission, 2006). Indeed, in response to this, the Eurydice network carried out a survey on the evaluation methods of European schools (Eurydice, 2004).

Nonetheless, the turning point towards an increased interest in setting standards for education systems in Europe was the Lisbon Council of 2000. According to the Presidency conclusions, 'the European Union is confronted with a quantum shift resulting from globalisation and the challenges of a new knowledge-driven economy' (Council, 2000). Therefore, and as it was famously stated, in order to 'become the most competitive and dynamic knowledge-based economy in the world', the Lisbon European Council set the following targets in relation to education and training for the Member States:

- Increase in per capita investment in human resources;
- Halve the number of 18-24 year olds with only lower secondary education;
- Create multi-purpose local learning centres;
- Establish a European framework for lifelong learning and introduce new skills —IT, foreign languages, technological culture, entrepreneurship and social skills;
- Foster the mobility of students, teachers, training and research staff and create greater transparency in the recognition of qualifications;
- Establish a common European format for curriculum vitae.

Apart from setting specific objectives, the Council also suggested a new style of policy formation, the 'Open Method of Coordination' (OMC) (Council, 2000). Again, indicators and benchmarking are at the heart of this new policy tool, since OMC is a new 'soft' form of governance. Rather than hard legislation, it aims at disseminating 'best' practice and coordinating efforts towards — what has been argued as — common objectives for the European education systems. As will be discussed, even though the OMC offered the Council and Member States a new and flexible governing tool for regulating the diverse education systems across Europe, it also received criticism. Indeed, the Kok report (2004) argued against the OMC as ineffective, since, as Kok and his team argued, it did not bring about the necessary results for achieving the challenging goals that Lisbon had set.

Nonetheless, apart from establishing new strategic goals and the policy frameworks to push them, the Lisbon European Council was significant for one more reason: it was the first time that the Council promoted the need for European education systems to converge. As already shown, such discussions, especially in the fields of lifelong learning, vocational training and higher education, had been long under way. However, the coordination of the European education systems at the level of compulsory schooling was a fairly new endeavour. Indeed, apart from focusing on employment and economy (the two more 'traditional' areas for joining

⁸ Recommendation of the European Parliament and of the Council of 12 February 2001 on European cooperation in quality education in school education, OJ L 60, 13.2.2001.

efforts in the past), it was the *education* ministers who were appointed this time with the mission to achieve the Lisbon goals for 2010.

According to the official European Commission overview of the pre- and post-Lisbon developments, the quantification of certain aspects of school life was regarded as a positive step forward: 'While the setting of quantified targets is not unusual in areas such as employment or the economy, it was a very new and bold step at European level in a field like education. Targets have the merit of being explicit and making it easier to assess the progress made' (Commission, 2006; 208). Whilst numbers are fairly easily collected, they do require a firm basis for comparison and cross-systemic analysis of the data; developing the discourses for the justification of measuring specific indicators and benchmarking would soon come to fulfil this need.

Indeed, a year later, the Education Council asked from the Commission to draft a report on 'The concrete future objectives of education systems' (Council, 2001). The report set out 13 objectives by 2010 and according to the Commission, it was 'the first official document sketching a comprehensive and coherent European approach to national education and training policies in the EU' (Commission, 2002). It was signed at the Stockholm European Council by the Commission and was agreed that a detailed work programme on how to achieve the new goals would be planned. The objectives came under three strategic goals: education and training in Europe should by 2010, according to the report, become more effective and with improved quality, more accessible and more open (Commission, 2002). Some of the objectives for the education systems across Europe were: improve the training of teachers and trainers; develop key competencies; ensure access to ICT for everyone; increase numbers in science and technology; make best use of resources; create open learning environments; make education and training more attractive; and develop the spirit of enterprise (Council, 2001).

The 'Education and Training 2010' work programme was adopted jointly by the Council and the Commission in February 2002; since then, the expression 'Education and Training 2010' has been used to refer to the whole process of implementing the Lisbon objectives. A month later, in Barcelona, the Heads of States or governments approved the work programme and committed themselves to the new European vision for the education systems of the Member States: they set out to make education a 'world quality reference' by 2010.

The work programme for 2010 was also the first time when OMC was applied as a governing tool. It involved the measuring of progress against objectives and the exchange of information and good practice. Hence, the added importance which was given to transparency and evaluation would initiate a different kind of coordination of the European education systems; instead of the 1999 'rolling agenda' of reforms (Commission 2006), according to the Commission, the OMC 'has the potential to pave the way for coherent policies in areas such as education where a formal common policy is not appropriate but where enhanced cooperation and mutual learning at European level can add real value' (Commission, 2002b). Peer review was also suggested in the work programme of 2002, but at the discretion of the Member States.

Indeed, the OMC became the stimulus for a series of initiatives to create the basis for the measurement and comparison of the European education systems. One of these first initiatives was to set up nine working groups of national experts and a 'Standing Group on Indicators and Benchmarks'. Information exchange, study visits and shared ideas of good practice would guide the work of the groups for the next three years (Commission, 2003).

The initial work programme of 2002 comprised of a list of 33 indicators, which were reduced by the Standing Group on Indicators and Benchmarks into a list of 29⁹. Some of the indicators related to the age of teachers; the ratio of pupils to teaching staff; the rate or completion of upper secondary education; improvement of attainment for low-performing students in reading literacy; performance in reading, maths and science; the public expenditure on education; participation in lifelong learning; and others¹⁰.

Apart from indicators of measuring performance, the 2002 work programme set also reference criteria (benchmarks) for the education systems across Europe. Even though two benchmarks had already been set in Lisbon, the Commission, through its communication in November 2002, suggested five benchmarks for European education (Commission, 2002c):

- Member States should at least halve the rate of early school leavers, with reference to the rate recorded in the year 2000, in order to achieve an EU-average rate of 10% or less.
- Member States will have at least halved the level of gender imbalance among graduates in mathematics, science, technology whilst securing an overall significant increase of the total number of graduates, compared to the year 2000.
- Member States should ensure that average percentage of 25-64 year olds in the EU with at least upper secondary education reaches 80% or more.
- The percentage of low-achieving 15 year olds in reading, mathematical and scientific literacy will be at least halved in each Member State.
- The EU-average level of participation in lifelong learning should be at least 15% of the adult working age population (25-64 age group) and in no country should it be lower than 10%.

The Commission's recommendations were discussed by the Education Council in May 2003, which finally agreed on a list of five benchmarks for European education to be achieved by 2010:

- an EU average of no more than 10% of early school leavers
- increase of at least 15% in graduates in maths, science and technology and decrease in gender imbalance
- completion rate of upper secondary education of at least 85% of 22 year olds

⁹ For a detailed overview of the 29 indicators set by this report, see Annex- Part 2.

¹⁰ The rapid take-up of the 29 indicators for measuring education in Europe through the 29 indicators outlined by the Commission can be traced at the 'Key data on education in Europe' report, published by Eurydice in 2002; for a discussion of this report, see page 21.

- decrease of at least 20% on the year 2000 in the percentage of low-achieving 15 year olds in reading literacy in the EU
- an EU level of participation in lifelong learning of at least 12.5% of the adult working age population (25-64 age group)

Point 26 from the Lisbon presidency conclusions had suggested a substantial increase in human resources investment, a benchmark that was repeated by the Commission recommendation, which however was not taken up by the Education Council. Instead, it 'merely mentioned that investment in education and training is a long-term investment, which has positive effects on social cohesion and sustainable growth' (Commission, 2006; 217).

Nevertheless, due to the acceleration of Asian economies (mainly China and India), in combination with the enlargement of the European Union in 2004 and the ever-dominant pressures for securing social cohesion and promoting European citizenship, the objectives set in 2002 became harder and harder to achieve. A first review of the progress towards the agenda of 'Education and Training 2010', was delivered by the Commission in 2003 (Commission, 2003b). The report was to be consequently re-drafted as a joint report of the Commission with the Council. It was finally submitted to the spring European Council in 2004. The report emphasised the urgency of the need to implement the Lisbon goals and stressed that data was presenting an alarming picture in regard to a number of indicators for European education systems. For example, the rates of school leavers were still relatively high; too many young people were not found to have an adequate literacy level; a shortage of qualified teachers and trainers in some countries was identified; and investment in education still lagged way behind United States, where 'the involvement of the private sector is five times higher than in the EU' (Commission, 2003b). In order to set developments back on course for 2010, the Commission proposed to concentrate reforms and investment towards the goals of the knowledge-driven society. It suggested increased professional development for teachers and trainers, and stressed the significance of establishing 'a Europe of education and training' through setting a European qualifications and competences framework (Commission, 2003b).

The Commission communication from 2003 set the tone for the next year's (2004) joint interim report by the Council and the Commission in relation to the Lisbon goals. This Communication was initially adopted by the Education Council in February 2004 and subsequently submitted at the next Brussels spring European Council meeting in March 2004 (Council, 2004). The Communication discussed the frequent discrepancy between the EU indicators and the slow reforms in national policies. In the report placed for the spring European Council, it stressed the need for the Member States to 'commit more firmly to pursuing the reforms defined since the Lisbon European Council' (Commission, 2004).

The spring European Council in Brussels (2004), in order to deal with what was beginning to seem as an increasingly worrying —if not failing— situation, set up a group of international experts, the 'Kok group' (named after Wim Kok, the former premier of Netherlands). The task for this group was to assist the Commission in delivering the mid-term review of the Lisbon strategy in 2005. The 'Kok report' (2004) emphasised the challenges of globalisation and the ageing population. It stressed that the achievements of Member States since 2000 were very

modest and that more and urgent reforms were necessary. In particular, in relation to the OMC, the Kok report claimed that its leniency had led to a loose understanding of the significance of the indicators and benchmarking set in Lisbon and argued for peer pressure and the planning of national action programmes by 2005.

Therefore, in the light of this report, the Commission adopted a reformed strategy towards 'Education and Training 2010'. Instead of the broader objectives set in 2002, the focus returned once again to stricter growth and employment objectives. In the Staff Working Paper of 2004 (Commission, 2004), new indicators were identified with a focus on:

- Key competencies, and particularly learning-to-learn
- Investment efficiency
- Information and Communication Technology (ICT)
- Mobility
- Adult education
- Vocational education and training
- Languages (requested by the Barcelona Council in 2002)
- Professional development of teachers and trainers
- Social inclusion and active citizenship

Indeed, these indicators were submitted to the European Council in 2005 and were approved as the new strategy towards an effective implementation of the benchmarks for 2010. In the Commission's communication to the spring European Council, apart from the macro- and micro-economic 'integrated' —as they were called— guidelines, the Commission suggests, according to Guidelines no. 23 and 24, to:

- 'Expand and improve investment in human capital, through:
 - inclusive education and training policies and action to facilitate significantly access to initial vocational, secondary and higher education, including apprenticeships and entrepreneurship training;
 - significantly reduce the number of early school leavers;
 - efficient lifelong learning strategies open to all in schools, businesses, public authorities and households according to European agreements, including appropriate incentives and cost-sharing mechanisms, with a view to enhancing participation in continuous and workplace training throughout the life cycle, especially for the low-skilled and older workers.
- Adapt education and training systems in response to new competence requirements, by:
 - raising and ensuring the attractiveness, openness and quality standards of education and training, broadening the supply of education and training opportunities and ensuring flexible learning pathways, and enlarging possibilities for mobility for students and trainees;
 - easing and diversifying access for all to education and training and to knowledge by means of working time organisation, family support services, vocational guidance and, if appropriate, new forms of cost-sharing;

— responding to new occupational needs, key competences and future skill requirements by improving the definition and transparency of qualifications, their effective recognition and the validation of non-formal and informal learning’ (Commission, 2005; 33-4).

Thus, in June 2005, the European Council adopted a much closer focus on education in relation to employment. According to the Kok report’s recommendations, a *simplified* version of the OMC was required from now on from Member States; they were asked to produce single annual reports on the delivery of the reforms in their countries, the now known as ‘Lisbon National Reforms Programmes for Growth and Jobs 2005-08’ (Online material, National Reform Programmes, 2006). A first assessment of the National Reform initiatives was delivered by the Commission’s annual progress report on growth and jobs to the spring European Council (Commission, 2006b).

At a first glance, one could argue for a double retreat from the project of the convergence of compulsory schooling in European education. First, the open method of coordination was to be left aside in the face of the need for urgent reforms that it apparently was too ‘soft’ to deliver. In addition, as in the pre-Lisbon era, vocational training and lifelong learning were to receive greater emphasis than schooling. The indicators which continue to carry equal weight are those more closely related to employment outcomes. Such a simplified and more focused approach might mean that some indicators have been silenced in this last report; however, the project of convergence seems to have become much tighter for the remaining ones.

Comparable data regarding the education systems in Europe continues to be gathered in ways that often reflect the shifts of discourses and governing processes described above. In the next section, we are going to give some background on the most significant data collection agencies which have been the main carriers of the Europeanization of education systems in Europe. The section after next examines three major reports which reflect the continuing and changing face of measuring quality assurance, namely the ‘Key data on education in Europe’ (2000, 2002, 2005), all published by Eurydice.

Constructing Data: European Agencies

There are two key agencies involved in producing research data for the European Union, EuroStat and Eurydice, and in recent years, EuroStat has worked with additional partners to extend and deepen the range of its educational statistics, for example, the OECD¹¹ and the IEA, and other international organizations [such as the UN, the International Monetary Fund and the World Bank]. Statistics in education across Europe have not flowed through one agency, but increasingly, they are managed by a coalition of agencies, particularly UNESCO, OECD and the EU [through Eurostat]; the merging of their statistical work means that it is difficult to separate these agencies. Categories through which quantitative data are collected have had to be integrated and agreements reached about their scope and meaning, in other words, standards have to be agreed. As the EU has harmonized its data across different fields of work, accession and candidate countries, and through new intensive and detailed indicators, data management and distribution has become more and more important.

There are several sources of comparative information which are increasingly combined and which depend on each other. Firstly, the necessary standardization tasks, necessary for comparison, were produced over time within EuroStat [for quantitative information] and by Eurydice [system comparative information and the European Education Thesaurus]. Secondly, the categories or indicators alter over time as systems and areas for comparison alter [for policy reasons]. Thirdly, categories or indicators become wider in scope and standardized internationally as they become used in global comparison [viz OECD, UNESCO and EuroStat collaborations and standards]

Eurostat

The Statistical Office of the European Communities [EuroStat], tasked with providing high-quality statistical information service at European level that enables comparisons between countries and regions, and which uses a common statistical 'language' [embracing concepts, methods, structures and technical standards] developed over time. Founded in 1953, by 2005, Eurostat had around 800 posts, a mixture of its own officials and seconded national experts. The growth and development of the EU has increased the demand for European statistics,

Democratic societies do not function properly without a solid basis of reliable and objective statistics.

A significant event in the development of this service occurred in June 1997 when Article 285 was inserted in the Amsterdam Treaty, providing Community statistics with a constitutional basis for the first time.

..the Council .. shall adopt measures for the production of statistics where necessary for the performance of the activities of the Community.

¹¹ The indicators used for the OECD Programme for International Student Assessment (PISA) reports of 2000 and 2003 can be found in Appendix 3.

Previously, statistics were made available between members on the basis of agreement. So the European Statistical System (ESS) was built up gradually with the objective of providing comparable statistics at EU level. The ESS comprises Eurostat and the statistical offices, ministries, agencies and central banks that collect official statistics in EU Member States. It functions as a network in which Eurostat's role is to lead the way in the harmonization of statistics in close cooperation with the national statistical authorities. It then processes, analyses and publishes that data at a European level, following common statistical concepts, methods, and standards. Eurostat defines common methodologies together with the Member States, consolidates the data collected in each country, ensures that it is harmonised and as comparable as possible, and then creates European aggregates for the 25 Member States and the euro area. It then publishes most of these data and analyses on its website and in many cases also in the form of paper publications. ESS work concentrates mainly on EU policy areas - but, with the extension of EU policies, harmonization has been extended to nearly all statistical fields.

Throughout the late 20thC, the development of projects for comparison, data collection and harmonization, was being sustained by projects on cross-institutional collaboration, documentation and statistics, recognition of qualifications and key organizations, like EuroStat, EuroBarometer or the European Education Thesaurus. Since 1998, UNESCO/ OECD/ EuroStat have collected data jointly on education statistics to develop international comparable information on education. The International Standard Classification of Education (ISCED)¹² was revised in 1997 to facilitate international compilation and comparison of education statistics so as to take into account changes in education and anticipates future trends. This was to enable common definitions and criteria for quality control to be used during the collection of the data in the different states. Common definitions and categories also may exclude past categories used in managing national educational systems, as they discard them to move to common classifications which enable better international comparisons to be made. In international comparison, an emphasis is placed on recent performance due to the lack of comparable data over time that would allow for comparisons of progress toward objectives yet to monitor the development of certain indicators it is necessary to have comparable data over time. This also means that new indicators reflect current policy interests and that national governing systems often know more about the past, something which is now unusable for them! This connection between the OECD, EuroStat and UNESCO means that the problems of diverse international classification systems,

¹² Within ISCED the term education is taken to

“...comprise all deliberate and systematic activities designed to meet learning needs.” And “Education is understood to involve organised and sustained communication designed to bring about learning.”

The crucial elements of this definition should be understood as follows:

- Communication refers to the relationship between two or more persons involving the transfer of information. Communication may be verbal or non-verbal, direct/face-to-face or indirect/remote and it may involve a variety of channels and media;
- Learning is understood as any improvement in behaviour, information, knowledge, understanding, values or skills;
- Organised refers to a planned pattern or sequence with explicit or implicit aims, with one or more providing bodies or media and a method of teaching;
- Sustained means that the learning result has elements of a certain duration and continuity (this will be elaborated in the ISCED 1997-manual).

necessary to judge competitiveness and improvement [and to 'govern'] are gradually being overcome through collaboration.

As an example of the depth and width of harmonization, underpinned by statistical data, the field of lifelong learning is a recent example. The ESS created a special task force on lifelong learning and statistical data (EC and 2001 Feb) to bring together all the current demands for numerical information and indicators from within European programmes, and those demanded by new intentions for social and economic development (EC 2001). As the EuroStat Taskforce on lifelong learning pointed out,

At the same time, responsibility for education and learning shifts from the public (state) to non-governmental organisations as well as to the individuals themselves....While traditional educational institutions have been (and still are) primarily concerned with transmitting knowledge, modern learning opportunities and the LLL approach put the emphasis on the development of individual capabilities and the capacity of the person to learn. At the heart of the LLL concept lies the idea of enabling and encouraging people "to learn how to learn". (Eurostat 2001)

Lifelong learning will reconstitute education, widening the field, integrating its functions, centring the individual learner, and stressing performance and comparing. Comparison will be easier after the landscape has been reordered and made transparent (EC 2001; EC 2001).

Another example is the dependence of classifications upon the traditional areas of education such as education programmes in formal education systems. The problem comes when new education policies in Europe, especially the integrated knowledge economy approach, needed data on continuing vocational training, for example, but could only provide simple data on providers and so new categories and collection processes had to be created.

When producing a report on education, for example, 'Education across Europe 2003', Eurostat sources go beyond the standard education data and include data drawn from Demographic statistics, the Labour Force Survey (LFS), the 2000 LFS ad hoc module on Transition from school to working life, the European Community Household Panel (ECHP), Research and Development statistics, Health Statistics and Economic Statistics.

OECD¹³

As the work of the OECD begins to influence and 'merge' with European Union work, it is necessary to point out some aspects of OECD's interest and strength in the area of indicators and data. From its earliest days in 1964, the OECD had to assist countries to compile comparable data for their educational planning and so, needed to devise reliable techniques for forecasting the size and patterns of enrolment across educational systems to enable efficient planning of education growth. The OECD handbook, the Green Book, related effective educational planning to the question of statistical infrastructure. It mainly concentrated on "primary" statistics [pupils, teachers, buildings, expenditures etc], which

¹³ Papadopoulos, GS [1994] Education 1960-1990 – the OECD Perspective Paris;OECD

would enable further secondary analysis but economic, demographic and social data were included if they were found to be useful. This Handbook remained a basic source of reference and inspiration in the development of national systems of educational data collection and classification.

Within the OECD problems of harmonization of educational statistics were closely monitored through regular meetings of a special *Working Party on Educational Statistics*, composed of the chief statisticians in national ministries of education. International comparisons could not be undertaken without first developing a classification system and set of definitions applicable to all Member countries, and by which published national data could be readily converted on the basis of the standardized systems. Work, therefore, was undertaken leading to the preparation of a "conversion key" by which each type of education or institution in the various Member countries was reclassified under the OECD system. On the basis of this standardized clarification, and drawing on published national data, it was thus possible to prepare a first compendium of comparable basic educational statistics in OECD countries, in essence the precursor of subsequent work on International Educational Indicators

Following the adoption by UNESCO in 1978 of the *International Standard Classification of Education Systems* (ISCED), the OECD adopted the ISCED system. Its work on international comparisons then depended on UNESCO's annual surveys on school education, educational expenditure and financing, and higher education. This was further revised by negotiation between the OECD and UNESCO, and by the Statistical Office of the European Communities (SOEC, the pre -1972 EuroStat). Following an OECD meeting in 1970, there was significant work undertaken on educational outcomes [rather than the earlier input model] and measuring the impact of education on society. A number of output indicators - about 150 – were produced by OECD.

By the late 1980s, OECD was able to use this earlier work, mainly following US pressure, to enable a process of international comparison and to underpin the shift toward the quality and accountability movement. A series of negotiations tried to resolve differences about the assessment of quality in different countries which eventually resulted in CERI producing a first set of OECD educational indicators. The categories of indicators so far worked out cover the demographic, economic and social context within which education systems operate; costs, resources and school processes; and outcomes of education. Under each of these categories, specific indicators were inevitably determined by the availability of country data and the feasibility of converting these into internationally comparable data. Equally inevitably, the indicators lean heavily on input data and process data, but organized under policy-related clusters.

Eurydice

Eurydice is a cross European institutional network for gathering, monitoring, processing and circulating reliable and readily comparable information on education systems and policies throughout Europe. The Network is described as 'boosting' European cooperation in education by developing exchanges of information about systems and policies and

producing studies on common issues. It works mainly for those involved in educational policy-making nationally and in the European Union institutions, as well as at regional and local levels. Within the ministries, information from Eurydice is intended primarily for:

- ministerial secretariats and advisory staff;
- policy implementation staff
- European and international relations divisions;
- research and forward planning departments.

And

- senior European Commission staff responsible for devising and implementing educational policies and programmes

Eurydice appears to be steered by regular contact with the Education Committee, which is constituted by representatives of the ministries of education and the European Commission; the EC's main task is to prepare the business of the Council and Education Ministers and to ensure that their decisions are implemented. Eurydice alters its foci to meet new policy directions; for example, lifelong learning. It is cooperating with other partners in this area to mobilise all relevant expertise to produce an overall analysis of the area.

Its publications are divided into descriptions of national education systems, comparative studies devoted to specific topics, and indicators and statistics. First launched by the European Community in 1980, the Eurydice Network consists of a European Unit in Brussels and National Units established by education ministries in all countries taking part in Socrates, the EU education action programme. The European unit is funded under Socrates Action 6, Action 6: Observation and Innovation with the aim of 'improving the quality and transparency of education systems'.

The European Unit coordinates the activity of the Network, drafts and distributes most of its publications, and designs and administers Eurydice databases and the central website. National Units provide and are involved in processing the data on which this activity relies and ensure that the output of the Network reaches target groups within their countries. In most countries, Units are situated within the education ministry or in resource and research centres.

Eurydice has been cooperating with Eurostat to update and regularly renew this broad spectrum of indicators since 1995, especially in the *Key Data* reports, and with CEDEFOP. Since 2001, given the common objectives that education systems have set themselves in the period up to 2010, the role and contribution of Eurydice are seen as crucial. It has to

- prepare indicators and monitor changes in them;
- contribute to forward-looking and strategic analysis;
- collect and consolidate research findings;
- identify available information resources.

[COM(2001) 59 final - not published in the Official Journal].

Eurydice produces system information, often drawn from official sources [privileged access to official sources], which it characterises as a ‘comparative education’ approach.

In drawing attention both to similarities and differences, comparative education aims to improve insight into the special features of systems and the interdependent relations between the factors that give rise to them. Its ultimate aim is to enlighten policy-making in the interests of better education.

Its reports are described as a ‘special kind of knowledge whose authority is based on academic principles’, and produces ‘high quality reliable studies’ for policy makers and those responsible for the management and administration of education. It is viewed as an authoritative reference source as a result of its working methodology. All its comparative studies are subjected to this initial process on which the validity of subsequent comparisons largely depends.

‘The knowledge accumulated in this way cannot be fully identified with academic learning in the normal sense. The information sources used are generally more limited than those on which the academic world relies for its output. For example, Eurydice does not carry out field surveys. On the other hand, the discipline and principles underlying the production of these special studies, which have to cover all aspects of issues confronting policy-makers, are those from which academic research derives its authority’.

‘Key data on education in Europe’

An overview of the Eurydice reports of 2000, 2002, 2005

This section provides an overview of three reports with the ‘Key data’ on education in Europe, published by Eurydice, Eurostat and the European Commission¹⁴. It attempts to make some comparisons between the three reports and show how indicators of the quality of the European education system have changed over the period 2000-2005. It should be read in conjunction with the Annex- Part 4, where more detailed indication of the different headings of each indicator is given.

‘The quality of education and lifelong learning are at the heart of debate in the Community and constitute one of the priorities for action by the European Union on behalf of European citizens. At the outset of the third millennium, education and training are destined to become an essential investment for the future of societies and a key area of cooperation between European countries. The European Commission firmly believes that, if this cooperation is to be intensified and enriched, the availability of a basic set of different kinds of reliable, readily comparable indicators on education systems is an important requirement’ (Eurydice 2000; 1)

The ‘Key data’ reports have been published by the Eurydice network since 1994. They are a valuable source of information regarding developments across the European education systems. The indicators measured are chosen by the Eurydice Network and the Eurostat national partners. Both quantitative and qualitative information is gathered for the reports; Eurostat is in charge of the statistical information. The qualitative part comprises of descriptive indicators, a responsibility of Eurydice.

In particular, statistical data is gathered through what is called the UOE data collection: this is an established cooperation amongst Unesco/ OECD/ Eurostat:

The UOE data collection is an instrument through which these three organisations jointly collect internationally comparable data on key aspects of educational systems on an annual basis using administrative sources (Eurydice, 2000; 26).

The data collected covers information regarding enrolments, new entrants, graduates, public expenditure and other, and includes level of education, sex, age, type of curriculum, institution, field of study and nationality. This was structured by educational level in accordance with the Unesco International Standard Classification for Education (ISCED - 1976 edition). An additional source of data for the 2000 report was the Community Labour Force Survey (LFS); carried out since 1983, it provides annual reports on statistics of the employment and unemployment in the European Union. Regarding the 2005 report, findings

¹⁴ We took the view that a cross-examination of the official Commission/ Council recommendations with the shifts of indicators in the ‘Key data’ reports over time could become an interesting task. The 29 indicators of the ‘The Concrete Future Objectives’ report of 2002 could be an example; many of the indicators suggested there are taken up by the ‘Key data’ Eurydice report of 2002. We would like to examine this in more depth and in relation to the ‘16 Quality indicators’ report of the Council in 2000 (to be compared with the Key data 2000 report) and the new indicators on growth and employment of 2005 (to be compared with the Eurydice Key data report of 2005).

from the PISA (2000 and 2003) and PIRLS¹⁵ (2001) empirical surveys carried out by OECD and IEA respectively, were also used.

The 2000 Key data report (Eurydice, 2000) groups indicators under 10 categories: 'Context'; 'Structures and Schools'; 'Pre-primary education'; 'Primary education'; 'Secondary education'; 'Tertiary education'; 'Teachers'; 'Special education'; 'Foreign languages'; and 'Information and communication technology'. In the 2002 report, the chapters on special education and information and communications technology were withdrawn, since data on these fields was produced in separate publications. On the other hand, a new chapter on the 'Financing of education' was added.

Nonetheless, it is in the 2005 report where most of the changes in terms of the structure of the separate thematic categories of indicators can be found. Thus, apart from giving data in relation to 'Context, the rest of the indicators are grouped under the new sections 'Organisation', 'Participation', 'Resources', 'Educational processes' and 'Graduates and Qualification levels'. Indeed, new indicator groupings appear in this report in the format of sub-sections: hence, 'Organisation' is now examined not only through looking at 'structures' (as in the reports of 2000 and 2002), but also examining 'Objectives and Evaluation', as well as 'Decision-making levels and processes'. The first provided with the following findings:

'Objectives and Evaluation'

- Over half of all European countries identify skills that children should possess on completion of pre-primary education
- The evaluation of schools providing compulsory education is very widespread
- Internal evaluation is sometimes based on the standard criteria of external evaluation
- The findings of internal evaluation are generally used to carry out external evaluation
- Publication of school evaluation practice is not common practice
- Pupil assessment data are often used for school self-evaluation
- A variety of information sources are used to monitor education systems
- External tests designed specifically for monitoring the education system are becoming increasingly widespread

Further, there is no division of the different school levels as they were divided in the previous two reports. Therefore, instead of examining pre-primary, primary, secondary and tertiary education, the 2005 report looks at all stages under the general term 'Participation'. Hence, many of the previous indicators have either been moved to new categories, such as 'teaching time', 'grouping and assessment of pupils' (under the section 'Educational Processes') or have disappeared completely. In terms of 'Resources', apart from examining the sub-section 'Investment and Equipment' and 'Teachers', the new sub-section

¹⁵ PIRLS (Progress in International Reading Literacy Study) was conducted in 2001 by the International Association for the Evaluation of Educational Achievement (IEA) and aimed to measure the performance levels of pupils in reading comprehension in the fourth year of primary education. A second round of data collection is scheduled for 2006.

'Management staff' has been added. Finally, in terms of 'Educational processes', new data on 'Graduates and qualification levels' has been entered in this report.

In terms of further changes or absences, the number of indicators examining data in relation to teachers seems to have doubled over the course of two years: in the 2000 report, some of the findings relate to the duration and training of pre-primary teachers, the percentage of teachers working part-time, their age of retirement or their minimum and maximum salaries. In terms of the 2002 report, emphasis is given on the teachers' professional training in university education, the ratio of pupils to teaching staff, the percentage of women teachers, whereas the indicator regarding teachers' salaries has been withdrawn. In the 2005 report, two new indicators have been added which relate to the frequency of teachers meeting and sharing information regarding materials and approaches. Also, under the sub-section 'Management staff', indicators such as 'training of school heads in internal evaluation' have been added.

Examining the evolution of indicators and benchmarking in European education through the Commission's/ Eurydice/ Eurostat key data reports, was a fairly brief and sketchy exercise in order to gain a first picture of the kinds of data on European education that have been officially considered worth collecting. We intend to extend the comparisons by looking at indicators in greater depth and by examining the three first 'Key data' Eurydice reports (1995, 1996, 1997) which have not been discussed here. We believe that a comparison between the 1995 and 2005 report will give us a deeper understanding of the increased significance of the processes of QAE in European education.

Concluding comments

As with this paper, the project of setting indicators and benchmarks for European education is a work in progress. This paper has described some of the more recent developments towards establishing common frameworks for measuring and coordinating the European space of education. A number of issues emerged from this exercise, such as:

- Indicators and benchmarks do not have a fixed identity. Terminology often changes, an example of which is the Commission's report 'The Concrete future objectives', 2002. What is the difference between benchmarks and objectives? Or benchmarks and reference criteria (Commission 2002c)?
- Indicators and benchmarks are also not static in terms of content; particularly in the post-Lisbon era, we identified a constant re-working, re-drafting, sometimes elaborating and often reducing work on indicators and always in relation to the most pertinent political and economic issues that the EU has been dealing with.
- If there is a tendency to constantly change education indicators according to dominant trends or political issues, on what basis are comparisons made? Comparisons seem to work on examining educational systems alongside and at the present, nevertheless can comparisons be established with categories of the past? In other words, are we experiencing a slow shift from comparing quantitative data to examine its findings through *time*, in using it to compare data mainly through (the European education) *space*? What are the implications of this?
- Education in Europe is seen as an active process; structures, such as buildings and classes, or traditional categories such as teachers' salaries are withdrawn and new categories arise: teachers' teamwork or their part-time contributions. Even the traditional categories of examining educational systems through distinguishing between levels of education have been removed; the new overall indicator is 'participation'. However, participation is a term which has traditionally been used in lifelong learning discourses. It does not stress education as a human right and public good, but as a matter of *choice*.
- Further, the use of the term 'participation' signals the dominance of the need for flexible and continuous re-training throughout life: 'learning to learn' is one of the new indicators examined and has to be taught (and evaluated!) from the first school days of every European child.
- How has the use of OMC changed during the last five years? Why did it have to change and what does its simplified version imply for the governance of European education?
- What are the implications of integrating education indicators with those of employment and growth? Has by now the quality assurance discourse in European education acquired a life of its own, so that it does not need to be an explicit part of the Lisbon strategy of the future? What about the concept of the 'knowledge economy'? Is it still as valid and persuasive as six years ago or not? Or is it considered a *sine qua non*, not necessary to be stressed anymore?
- Finally, what does the discourse of quality assurance and evaluation imply for the autonomy and convergence of educational systems in Europe? If the project of setting

indicators and benchmarks is indeed in constant flux and change, what is the future of education *systems* in the way we know them? What is the future of traditional static categories such as primary and secondary education, when these are now used interchangeably with the term participation? How are these shifts received at the national and local level?

Appendix 1

Indicators and benchmarking for education systems in the EU: A chronology of events

1999

June (Prague): conference of the European Education Ministers. Launching a project on quality indicators

19 June: (Budapest) conference of European education ministers on 'Education and economy – a new partnership'. Presentation of a first report on quality indicators.

2000

24 March: the European summit in Lisbon defines a new economic, social environmental strategy for the Union. The aim is to strengthen employment, economic reform, and social cohesion in a learning economy. Education and training are major items in this new strategy.

23-24 March: (Lisbon) the European Council asks the Council ('Education') to undertake a general reflection on the concrete future objectives of education systems, with a view to contributing to the Luxembourg and Cardiff processes and presenting a full report to the European Council in spring 2001.

18-20 June: (Bucharest) conference of European education ministers ('Social cohesion and quality – a challenge for education'). European report on the quality of school education.

2001

31 January Commission report on the concrete future objectives of education and training systems (follow-up to Lisbon)

12 February recommendation on European cooperation in quality evaluation in school education

12 February the Education Council adopts a report on the concrete future objectives of education systems (follow-up to Lisbon), which is approved by the European Council (Stockholm) on 23-24 March 2001. The European Council calls for a work programme to be drawn up on the basis of the report.

13 July resolutions of the Education council on 1) the role of education and training in employment-related policies, 2) e-learning; and 3) follow-up to the report on the concrete future objectives of education and training systems

2002

14 February Conclusions on the follow-up to the report on the concrete future objectives of education and training systems, with a view to the preparation of a joint Council/ Commission report to be presented to the European Council in spring 2002 (follow-up Lisbon)

14 February	the work programme on the future objectives of education and training systems is adopted jointly by the Council and the Commission
15-16 March	The European Council (Barcelona) approves the work programme in response to the report on the concrete future objectives of education and training systems; it sets the objective of making European education and training systems a world quality reference by 2010.
17-18 June	informal meeting of the education ministers of the EU and candidate countries in Bratislava on the subject of 'Education for the new millenium'. Decision allowing candidate countries to participate in the work programme on the future objectives of education and training systems.
20 November	the Commission adopts a communication on 'European benchmarks in education and training: follow-up to the Lisbon European Council'.
2003	
5 May	Council conclusions on reference levels of European average performance in education and training (benchmarks); five quantified objectives are set, to be achieved by 2010.
11 November	Commission's communication on the implementation of the work programme 'Education and training 2010: the success of the Lisbon strategy hinges on urgent reforms' (draft Council/ Commission joint interim report)
2004	
21 January	the Commission publishes its 2004 report on 'Progress towards the common objectives in education and training (indicators and benchmarks)'.
26 February	adoption of the Council of the joint Council and Commission report on 'Education and training 2010: the success of Lisbon hinges on urgent reforms'.
18 May	Council conclusions on quality assurance in education and vocational training
29 November	the Commission adopts a communication on new education and training indicators (as part of the implementation of the Lisbon process)
2005	
21 February	conclusions of the Council on education and training in the framework of the mid-term review of the Lisbon strategy.
22 March	Commission report 2005 on 'Progress towards the Lisbon objectives in education and training (indicators and benchmarks)'.
10 November	Commission's communication 'Modernising education and training: a vital contribution to prosperity and social cohesion in Europe' -2006 draft joint Council/ Commission progress report on the implementation of the Education and training 2010 work programme.

2006

23 February

adoption of the Education Council of the 2006 joint Council/Commission Report on the implementation of the 'Education and training 2010' work programme. (Title: 'Modernising education and training: a vital contribution to prosperity and social cohesion in Europe').

Appendix 2

The concrete future objectives of education systems report – Brussels 2001

Education Council and Commission detailed work programme

Strategic and associated objectives	Key issues	Indicators for measuring progress
Improving education and training for teachers and trainers Starting period: during 2002	<ul style="list-style-type: none"> - Identifying the skills that teachers and trainers should have, given their changing roles in the knowledge society; - Creating the conditions which adequately support teachers and trainers as they tackle the challenges of the knowledge society, from the point of view of lifelong learning; - Ensuring that a sufficient number of people enter the teaching profession, across all subjects and at all levels, as well as providing for the long-term needs of the profession by making it more attractive; - Attracting recruits to teaching and training who have professional experience in other fields. 	<ul style="list-style-type: none"> - Shortage/surplus of qualified teachers and trainers on the labour market, - progression in number of applicants for training programmes (teachers and trainers), - percentage of teachers and trainers who follow continuous professional training.
Developing the skills needed for a knowledge society Starting period: second half of 2001	<ul style="list-style-type: none"> - Identifying new basic skills and ways of integrating them into the curricula, alongside the traditional basic skills; - Making attainment of basic skills genuinely available to everyone, including those who are less advantaged or have special needs, school drop-outs and adult learners; - Promoting official validation of basic skills, in order to facilitate ongoing education and training, as well as employability. 	<ul style="list-style-type: none"> - People completing secondary education, - continuous training of teachers, - literacy and numeracy "learning to learn" attainment levels, - percentage of adults failing to complete upper secondary education who have participated in any form of education or training, by age group.
Ensuring access to ICT for everyone Starting period: second half of 2001	<ul style="list-style-type: none"> - Providing adequate equipment and educational software; - Encouraging the best use of teaching and learning techniques based on ICT (information and communication technologies). 	<ul style="list-style-type: none"> - Percentage of teachers that have been trained in ICT use in schools, - percentage of pupils and students using ICT in their studies, - percentage of learning sessions in teaching and training institutions during which ICT are used.
Increasing recruitment to	- Boosting interest in	- Increase in number of entries

Strategic and associated objectives	Key issues	Indicators for measuring progress
scientific and technical studies Starting period: second half of 2001	mathematics, science and technology from an early age; - Motivating more young people to choose studies and careers in the fields of mathematics, science and technology; - Improving the gender balance in these subjects; - Securing a sufficient number of qualified teachers.	into mathematics, science and technology courses (upper secondary advanced levels and tertiary levels, by gender), - increase in number of graduates in mathematics, science and technology, by gender, - increase in number of scientists and engineers in society, by gender, - increase in number of qualified teachers in the fields of mathematics, science and technology (secondary level).
Making the best use of resources Starting period: during 2002	- Increasing investment in human resources while ensuring an equitable and effective distribution of available means in order to facilitate general access to, and enhance the quality of, education and training; - Supporting the development of compatible quality assurance systems respecting diversity across Europe; - Developing the potential of public-private partnerships.	- Increase in per capita investment in human resources (structural indicator).

Facilitating the access of all to education and training

Strategic and associated objectives	Key issues	Indicators for measuring progress
Creating an environment conducive to learning Starting period: between the second half of 2002 and the end of 2003	- Broadening access to lifelong learning by providing information, advice and guidance on the full range of education and training opportunities available; - Organising education and training in a way that allows adults to effectively participate and combine this participation with other activities and responsibilities; - Ensuring that education and training are accessible to all; - Promoting flexible learning paths for all; - Promoting networks of education and training institutions at various levels in the context of lifelong learning.	- Percentage of the population aged between 25 and 64 participating in education and training (structural indicator).
Making learning more attractive Starting period: between the	- Encouraging young people to remain in education or training after the end of compulsory	- Percentage of working time spent by employees on training, by age group,

Strategic and associated objectives	Key issues	Indicators for measuring progress
second half of 2002 and the end of 2003	schooling, and motivating and enabling adults to participate in learning throughout life; - Developing methods for the official validation of non-formal learning experiences; - Finding ways of making learning more attractive, both within the formal education and training systems and outside them; - Fostering a culture of learning.	- participation in higher education, - proportion of the population aged 18-24 with only lower secondary education achievement and not pursuing education or training (structural indicator).
Supporting active citizenship, equal opportunities and social cohesion Starting period: during 2002	- Ensuring that the learning of democratic values and democratic participation in schools is effectively promoted in order to prepare people for active citizenship; - Fully integrating the equal opportunities dimension into the objectives and functioning of education and training; - Ensuring fair access to the acquisition of skills.	- Proportion of the population aged 18-24 with only lower secondary education achievement and not pursuing education or training (structural indicator).

Opening up education and training systems to the wider world

Strategic and associated objectives	Key issues	Indicators for measuring progress
Strengthening links with the world of work, research and society as a whole Starting period: between the second half of 2002 and the end of 2003	- Promoting close cooperation between education and training systems and society generally; - Establishing partnerships between all types of education and training institutions, businesses and research centres, for their mutual benefit; - Promoting the role of stakeholders in the development of training, including initial training, and learning at the workplace.	- Percentage of students and persons in initial training who benefit from work-linked placements.
Developing the spirit of enterprise Starting period: between the second half of 2002 and the end of 2003	- Promoting a sense of initiative and creativity throughout the education and training system in order to develop the spirit of enterprise ("entrepreneurship"); - Facilitating the acquisition of skills needed to set up and run a business.	- Proportion of self-employed workers in various sectors of the knowledge economy (particularly the 25-35 age group), - percentage of education and training institutions providing advice and guidance for setting up businesses.
Improving foreign language learning Starting period: between the second half of 2002 and the	- Encouraging everyone to learn two or, where appropriate, more languages in addition to their mother tongue, and increasing	- Percentage of pupils and students attaining a certain level of proficiency in two foreign languages,

Strategic and associated objectives	Key issues	Indicators for measuring progress
end of 2003	<p>awareness of the importance of foreign language learning at all ages;</p> <ul style="list-style-type: none"> - Encouraging schools and training institutions to use effective teaching and training methods, and motivating continuation of language learning at a later stage of life. 	<ul style="list-style-type: none"> - percentage of language teachers having participated in initial training or in-service training courses with a mobility element providing direct contact with the language/culture they teach.
<p>Increasing mobility and exchanges</p> <p>Starting period: during 2002</p>	<ul style="list-style-type: none"> - Providing the widest possible access to mobility for individuals and education and training organisations, including those serving a less privileged public, and reducing the remaining obstacles to mobility; - Monitoring the volume, destinations, participation rates and qualitative aspects of mobility flows across Europe; - Facilitating the validation and recognition of skills acquired in the context of mobility; - Promoting the presence and recognition of European education and training in the world as well as their attractiveness to students, academics and researchers from other world regions. 	<ul style="list-style-type: none"> - Proportion of students and trainees from one country carrying out part of their studies in another EU or third country, - proportion of teachers, researchers and academics from other EU countries employed at different levels of the education system, - number and distribution of EU and non-EU students and trainees participating in an education or training programme.
<p>Strengthening European cooperation</p> <p>Starting period: during 2002</p>	<ul style="list-style-type: none"> - Enhancing the effectiveness and timeliness of recognition procedures for the purposes of further study, training or employment throughout Europe; - Promoting cooperation between responsible organisations and authorities from the point of view of more compatibility in quality assurance and validation; - Promoting transparency of information on education and training opportunities and structures with a view to the creation of an open European area for education; - Promoting the European dimension of teaching and training. 	<ul style="list-style-type: none"> - Proportion of undergraduate and postgraduate students and researchers continuing their studies in another EU or third country, - percentage of graduates obtaining joint degrees in Europe, - percentage of students and trainees within <u>ECTS</u> or <u>Europass</u> and/or obtaining a Diploma/Certificate Supplement.

Appendix 3

The Programme for International Student Assessment (indicators from the 2000 and 2003 reports)

PISA 2000 : Knowledge and skills for life
Indicators
<p>(15 year olds)</p> <p>Reading literacy: Retrieving information Interpreting texts Reflection and evaluation (5 levels)</p> <p>Mathematical and Scientific literacy: 1. Number and complexity of processing or computational steps involved in the tasks 2. The requirement to connect and integrate material 3. The requirement to represent and interpret material and reflect on situations and methods (3 levels) -- Scale 700 Around 690: complex conceptual skills Around 550: sound scientific thinking Around 400: recall and use of simple scientific knowledge</p> <p>General outcomes of learning: 1. Index of interest in reading and mathematics 2. Performance on the reading and mathematical literacy scale. 3. Time spent reading for enjoyment and student performance 4. Memorisation and elaboration strategies and student performance 5. Cooperative and competitive learning</p> <p>Gender differences (reading, maths, science) Gender differences in learning strategies and self-concept</p> <p>Family background and student performance 1. Occupational status of parents and student performance 2. Family wealth 3. Possessions and activities related to 'classical' culture 4. Communication (with parents) on social issues and aspects of culture 5. Parental education 6. Place of birth and language spoken at home.</p> <p>The learning environment and the organisation of schooling 1. Teacher support 2. Student-related factors affecting the school climate 3. Teacher-related factors affecting the school climate 4. Learning outside school (homework) 5. Teacher shortage 6. Infrastructure and educational resources 7. School autonomy and teacher participation 8. Public and private stakeholders</p>

PISA 2003 : Learning from Tomorrow's World**Indicators****Mathematics**

Mathematical content: space and shape, change and relationships, Quantity, Uncertainty (statistics)

Mathematical process : reproduction, connections, reflection

Situations: personal, occupational...

(6 scales)

Student learning: attitudes, engagement and strategies

in connection to mathematics:

motivational factors, general attitudes, self-related beliefs (self-efficacy, self-concept), emotional factors (anxiety), learning strategies (memorisation, rehearsal, elaboration, control strategies)

Variations of student performance and the role that socio-economic background plays in this

Variance of student performance within and between schools in relation to mathematics

Place of birth and student performance

Home language and student performance

Student performance differences and socio-economic background differences by students' immigrant background

Effects of student-level factors (highest socio-economic index, highest level of education between both parents, possessions related to 'classical' culture, single-parent families, immigrant background, language spoken at home...) on student performance in mathematics

Performance in mathematics and the impact of socio-economic background

The learning environment and the organisation of schooling

Teacher support

Student-related factors affecting the school climate

Teacher-related factors affecting the school climate

Teachers' morale and commitment

Students' morale and commitment

Impact of school climate on performance of mathematics

School admittance policies

Methods of assessment and mathematics performance

Involvement of schools in decision-making

Involvement of stakeholders in decision making at school

Impact of school policies and practices on school performance in mathematics

Student learning time (general learning)

Pre-school attendance and school success

Teacher shortage

Infrastructure and educational resources

Monitoring practices of mathematics teachers

Performance differences between private and public schools

Structural features of school systems across the OECD countries

A profile of student performance in reading and science

Retrieving information

Interpreting texts

Reflection and evaluation

(5 levels)

Scale 700

Around 690: complex conceptual skills

Around 550: sound scientific thinking

Around 400: recall and use of simple scientific knowledge

Appendix 4

1. Eurydice

KEY DATA ON EDUCATION IN EUROPE 1999-2000

Luxembourg: European Commission

(titles of headings and figures)

A. Context

- Change in the numbers of young people in the 0-9, 10-19 and 20-29 age groups in the EU, 1975 and 1997
- Regional variations of young people
- Increasing numbers of qualified young people
- Percentage of people in education or training among young people aged 15 to 24, 1987 and 1997
- More than 83 million pupils and students in the EU
- Change in the unemployment rates by age groups in the EU, 1987-1997
- Young people are more affected by unemployment: unemployment rates in the 15-24 age group who have left school and in the 25-59 population, 1997
- Insecure jobs: a characteristic of youth unemployment. Percentage of employees with insecure jobs by age groups, 1997
- Chances of having a job generally increase with level of education...: Unemployment rates in the 25-59 age band by level of education, 1997
- ...but also with age: Unemployment rates among higher education graduates by age group, 1997
- With the same level of education more women than men are unemployed: Unemployment rates of the 25-29 year old population by education level and sex, 1997
- Recognition of skills: occupations of people with higher education qualifications by age groups 1997
- Qualifications reduce insecurity in employment: percentage of employee aged 25-29 with insecure jobs by education level, 1997
- Educational level has effects on wages: average gross monthly earnings, by education level, in euros, 1995

B. Structures and schools

- Proportionally more enrollees are found at primary level: distribution of pupils and students by level of education, as a percentage 1996/1997
- More students attend public sector schools: Distribution of primary and secondary students according to the type of school they attend, as a percentage, 1996/1997
- Public sector schools: from considerable autonomy to very limited decision making powers
- Management of school time: more autonomy to arrange timetables than to determine the amount of time allocated to teaching
- Schools have little autonomy when it comes to administering large budgets
- Management of teaching staff seldom in the hands of schools
- Schools enjoy total decision-making power in pedagogical matters: choice of textbooks and teaching methods
- School holidays
- The role of parents in consultative councils and decisions taken by the council: role of national-level bodies which include representatives of parents. 1997/8
- All countries have set up some form of monitoring of the education system
- School plans: compulsory in more than half the countries
- Results of external certificated examinations often being used as a performance indicator of the education system: Monitoring the education systems at the primary and/ or secondary level. Publication of the overall results of the external tests, 1997/8

C. Pre-primary education

- Participation rates
- wide-range of provision
- Pre-primary attendance increases with the age of children
- Most provision in schools rather than in other types of institution
- Regional variations in attendance of 3 year olds at education-oriented pre-primary institutions
- No direct connection between attendance of education oriented pre-primary institutions by 3 year old children and the employment status of mothers
- The average duration of attendance in pre-primary education is often shorter than the duration of provision
- Maximum children per adult
- Fee-paying
- Pre-primary curricula: all countries define objectives, broad spheres of activity,
- Recommendations for pupil evaluation in the official guidelines , schools and other education-oriented pre-primary institutions 1997/8
- The most frequent recommended approach: adapt to the needs of the child
- Age is the principle criterion for access to compulsory primary education

D. Primary education

- A separate level of education or part of a continuous strand
- Class size norms: a maximum of 25 to 35 pupils
- One teacher per class, but often replaced for some specialised subjects
- Total annual taught hours at around age 7, 1997/8
- Compulsory subjects: a common basis but differences in emphasis
- Progression to the next year
- Conditions of admission to lower secondary education

E. Secondary education

- Organisation
- Distribution of students in general and vocational upper secondary education, as a percentage 1996/7
- Distribution of students in general and vocational upper secondary education by gender, as a percentage 1996/7
- Annual number of taught hours
- At around the age of 13, the same compulsory subjects but different timetable loads
- Almost three quarters of young people have successfully completed the upper secondary level of education
- More girls qualify from general upper secondary education
- Certification at the end of either general lower secondary education or compulsory full-time education
- Participation rates decline gradually at the end of compulsory education

F. Tertiary education

G. Teachers

- Duration and level of the initial education and training of pre-primary teachers, 1997/8
- Teachers as a percentage of the total active population
- Percentage of teachers working part-time
- Distribution of teachers by age band: nearly half of them are over 40
- Age of retirement
- More female teachers especially in primary education
- Minimum and maximum salaries of primary teachers relative to per capita GDP, 1997/8.

G. Special education

I. Foreign languages

J. Information and communication technology

- Implementation schedule for typical ICT projects
- Expenditure

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2. Eurydice

KEY DATA ON EDUCATION IN EUROPE 2002

Luxembourg: European Commission

A. CONTEXT

- Change in the numbers of young people in the 0-9, 10-19 and 20-29 age groups in the European Union, from 1975 to 2000
- Regional variation in the proportion of young people
- Increasing numbers of qualified young people: percentage of people who do not have an upper secondary qualification, by age group, 2000
- Percentage of people in education or training among young people aged 15 to 24, 1990 and 2000
- Almost a quarter of the population in Europe is in school or studying
- Change in the unemployment rates by age groups in the EU, 1990-2000
- Young people are more affected by unemployment: unemployment rates in the 15-24 age group who have left school and in the 25-64 population, 2000
- Temporary jobs: a characteristic of youth unemployment. Percentage of employees with temporary jobs by age groups, 2000
- Chances of having a job generally increase with level of education...: Unemployment rates in the 25-64 age band by level of education, 2000
- but also with age: Unemployment rates among tertiary education graduates by age group, 2000
- With the same level of education more women than men are unemployed: Unemployment rates of the 25-64 year old population by education level and sex, 2000
- Recognition of skills: occupations of people with tertiary education qualifications by age groups 2000
- Qualifications reduce temporary employment: percentage of employees aged 25-64 with temporary jobs by education level, 2000

B. Structures and schools

- School expectancy of pupils and students (ISCED 0-6) AGED 5 TO 65, 1999/2000
- More students attend public sector schools: Distribution of primary, secondary students and post-secondary according to the type of school they attend, as a percentage, 1996/1997
- Patterns of provision for children with special needs
- Public sector schools: from considerable autonomy to very limited decision making powers
- Management of school time: more autonomy to arrange timetables than to determine the amount of time allocated to teaching
- In several countries, schools are involved in the recruitment of teaching staff
- Schools enjoy total decision-making power in teaching matters
- At national level, parents are often members of advisory bodies: role of central bodies that include parental representatives. Compulsory education 2000/2001
- The results of external qualifying examinations are the most commonly used performance indicators of education systems: Monitoring the education systems at the primary and/ or secondary level. Publication of the overall results of the external tests, 1997/8

C. Pre-primary education

- Participation of 4 year olds in pre-primary education has risen dramatically in most EU countries
- Wide-range of provision
- Pre-primary attendance increases with the age of children
- The average duration of attendance in pre-primary education is often shorter than the duration of provision
- Maximum children per adult
- Fee-paying
- Pre-primary curricula: all countries define educational objectives
- Age is the principle criterion for access to compulsory primary education

D. Primary education

- A separate level of education or part of a continuous structure
- Class size norms: a maximum of 25 to 36 pupils
- One teacher per class, but often replaced for some specialised subjects
- During primary education, the average amount of teaching may range from 478 to 980 hours, or over twice as much
- Compulsory subjects: a common basis but differences in emphasis
- The most common approach in ICT in primary education is to use it as a tool
- Progression to the next year
- Conditions of admission to lower secondary education

E. Secondary education

- Educational pathways in different countries: from a common curriculum to specialised branches
- Organisation of the final years of full-time compulsory education varies from country to country
- The scale of provision in full-time compulsory education varies from country to the next
- Countries devote a similar amount of time to teaching mathematics in compulsory education considered as a whole
- Participation rates in most countries decline, especially for boys, at the end of compulsory education
- A higher proportion of girls than boys in upper secondary education are enrolled in general education: Distribution of students in general and vocational upper secondary education, as a percentage 1996/7
- ICT is taught as a separate subject in almost all countries in general upper secondary education
- Certifies assessment at the end of general lower secondary education or compulsory full-time education 2000-2001
- At upper secondary level, there are more students in vocational education than in general education
- Distribution of students in general and vocational upper secondary education by gender, as a percentage 2000
- More girls qualify from general upper secondary education
- Over three-quarters of young people (79%) have successfully completed upper secondary education

F. Tertiary education

G. Teachers

- The training of teachers in compulsory education is often provided in accordance with the concurrent model: the structure for teacher training for general lower secondary education (ISCED 2) 2000-1
- Training institutions do not often decide how much time should be devoted to the professional training of teachers for pre-primary education

- In university teacher training for primary education, a lesser share of time is devoted to specifically professional training
- Less time is devoted to the professional training of teachers for secondary education
- Over 6 million teachers in 29 European countries
- The ratio of pupils to teaching staff in primary and secondary education varies widely –it ranges from 10:1 in some countries to 18:1 in others
- Almost two thirds of teachers (primary and secondary) are 40 years of age and older
- The official age of retirement is often 65
- A majority of teachers retire as early as possible
- More female teachers especially in primary education
- Length of service, rather than the level at which teaching is provided, remains the main source of differences in teacher salaries
- Professional experience and initial training required to become a school head
- The percentage of women among management staff in primary and secondary education varies widely; it ranges from 14% to 70%
- At any level of education, the salaries of school heads are higher than those of teachers

H. Foreign languages

I. Financing of education

- Education budgets amount to 11% of total expenditure on average, with most EU countries in the narrow 9-13% range
- The percentage of public expenditure going to education has remained stable or even tended to increase, despite reduction in that expenditure as a share of GDP
- Total education budget as a percentage of GDP, 1999 : National expenditure on education amounts to 5.5% of GDP on average, but the proportion is almost twice as much in some countries as in others
- The evolution of public expenditure on education as a proportion of GDP over time since 1995: most countries show decrease in percentage of GDP spent on education since 1995, with very substantial reduction in some countries
- Larger share of GDP allocated to primary and secondary levels
- In compulsory education, the overall level of expenditure on teaching staff tends to be centrally determined
- The distribution of resources among schools is slightly more decentralised
- The vast majority of public expenditure corresponds to current costs, around three quarters of which are earmarked for staff remuneration
- Schools can act more freely in acquiring operational resources than in the case of staff resources or immovables
- On average, secondary educational institutions account for nearly half of all direct public expenditure on education
- Public expenditure on education as a percentage of GDP varies by country and level of education, in part reflecting difference in the number of students involved
- The extent to which public-sector or equivalent schools providing compulsory education are free to raise funds from private sources 2000-2001
- The kinds of resources which public sector or equivalent schools for compulsory education may procure from private funding 2000-2001
- Variations in the financing of government-dependent private education
- Costs per pupil/ student generally increase with level of education, with candidate countries reporting markedly lower costs at all levels
- Varied public-sector support for students in tertiary education
- Financial support for compulsory education: family allowances in all countries

3. European Commission/ Eurydice/ Eurostat Key data on education in Europe 2005

A. CONTEXT

- Change in the numbers of young people in the 0-9, 10-19 and 20-29 age groups in the EU-15 and the new Member states, from 1975 to 2000
- Regional variation in the proportion of young people: the regional distribution of those aged under 30 is uneven. More young people are aged 20-29 than those aged younger still
- The new Member states will be especially affected by the decrease in the number of young people of compulsory school age by 2015
- The proportion of foreigners in the under 15-year old age group exceeds 10% in a small number of countries
- Young people aged 15-24 who have left education system are particularly affected by unemployment
- The chances of securing employment increase with age and level of studies
- The unemployment rate among young people aged 15-24 remains a cause for concern in many European countries
- Graduate unemployment rates remain low throughout Europe
- Young graduates also experience difficulty in securing their first job
- With the same level of education more women than men are unemployed
- Young graduates often accept jobs for which they are over-qualified
- Trends in levels of temporary employment are similar at all levels of qualification
- More women have temporary jobs than men with the same level of qualification
- On average in 2002, the least qualified people had more temporary jobs

B. Organisation

Section 1: Structures

- A wide variety of structural arrangements for pre- and post-compulsory education
- Three main patterns of pre-primary provision
- On average, the actual duration of pre-primary education is shorter than the potential duration
- Age is the main criterion for access to compulsory primary education
- The freedom to choose a school within the public sector is limited in most countries
- Criteria for pupil enrolment in secondary schools are geographical, academic or philosophical
- Enrolment in independent private institutions is rare in both primary and secondary education
- Boys and girls are nearly always taught together in primary education
- Single sex secondary schools exist in just a few countries
- In primary education, pupils attend schools with average enrolments of between 200 and 400
- In secondary education schools are generally larger than in primary education
- Before or after school, child care is made available for the majority of pupils in primary schools
- The end of lower secondary education often coincides with the end of full-time compulsory education
- Limiting the number of places in tertiary education: open access or centralised selection

Section 2: Objectives and Evaluation

- Over half of all European countries identify skills that children should possess on completion of pre-primary education
- The evaluation of schools providing compulsory education is very widespread
- Internal evaluation is sometimes based on the standard criteria of external evaluation: use of standard lists of criteria
- The findings of internal evaluation are generally used to carry out external evaluation

- Publication of school evaluation practice is not common practice
- Pupil assessment data are often used for school self-evaluation
- A variety of information sources are used to monitor education systems
- External tests designed specifically for monitoring the education system are becoming increasingly widespread

Section 3: Decision-making levels and processes

- All areas of decision-making show varied levels of autonomy for schools
- School heads report broad decision making powers at school level
- School level bodies with parent representatives are not often involved in decision making
- Parent consultation via participatory bodies at central level is fairly widespread
- Teachers' employers tend to be the same at primary and secondary levels of education
- In compulsory education, the overall level of expenditure on teaching staff tends to be centrally determined
- Decisions on determining amounts and distributing resources tend to be taken at the same level

C. Participation

- Almost a quarter of the population in Europe are in school or studying
- Participation rates drop considerably after the age of 19
- Trends in the proportion of pupils with special needs educated separately show no clear pattern
- The percentage of pupils with an immigrant background in the total 15 year old school population is more than 15% in some countries
- The participation of 4 year olds in pre-primary education is increasing but is still subject to some variation
- Pre-primary enrolment increases with the age of children
- Most young people are enrolled in upper secondary education by the age of 16
- Enrolment in general education is comparable level at regional level for most countries
- At the end of compulsory education, male participation rates decline faster in most countries
- Over half of 15-24 year olds are enrolled in some form of education or training
- On average school expectancy is 17 years
- In the EU, over 15% of those enrolled in education systems are students in tertiary education
- The number of students in tertiary education is continuing to grow
- The density of the student population in some regions is striking
- An uneven regional breakdown of students
- The tertiary education participation rate for either sex is highest in the 20-24 age group
- Women outnumber men in tertiary education in almost all countries
- The breakdown of the student population by age varies very widely throughout Europe
- Women students easily outnumber men in 'education', 'humanities and arts' and 'health and welfare'.
- A quarter of all students are aiming for a career in science and technology
- The percentage of students in tertiary education who study in another European country remains limited

D. Resources

Section 1: Investment and Equipment

- Public expenditure on education represents 5-6% of GDP in almost half of European countries

- The percentage of GDP earmarked for education has undergone substantial annual variations in most European countries
- Total public expenditure on education was sustained overall in the period from 1995-2001
- On average, 10% of total public expenditure is earmarked for education
- Over a third of total public expenditure on education is earmarked for secondary education
- Unit cost per pupil is lower in the new EU member states than in the other European countries
- Unit costs per pupil increase with the level of education
- A student in tertiary education costs each country far more than a pupil in primary education
- The share of per capita GDP earmarked for education rises with educational level
- Expenditure in public sector institutions per pupil/ student represents over 20% of GDP per capita in almost all European countries
- Private funding on education occurs on just a marginal scale
- Institutions of pre-primary education often receive contributions from private sources
- In some countries private education is funded to the same level as public education
- Regions play only a limited role in funding education
- Staff costs represent the largest single item in the budget
- Computer facilities in private schools are better in countries where these schools are largely funded by tuition fees
- The numbers of computers with internet connections is increasing
- Most primary schools have libraries
- A wide range of teaching materials for teaching reading
- Financial support for students constitutes a significant share of total public expenditure in tertiary education
- Public financial support for pupils and students is a major component of public educational expenditure
- Financial support for the parents of children in compulsory education is available everywhere in Europe
- Students in tertiary education everywhere get grants or loans to cover the cost of living
- In a third of all countries, students in tertiary education pay no registration or tuition fees
- High tuition fees for those who prolong their studies

Section 2: Teachers

- Teacher education for compulsory education is often provided in accordance with the concurrent model
- The professional element component in teacher education for pre-primary provision is generally substantial
- University-led education for primary teachers includes less professional training than non-university courses
- Induction periods are more frequent in teacher education for work at secondary level
- Initial teacher education for the upper secondary level is always provided at university level
- In half of all European Countries, continuing professional development is part of teachers; professional duties
- The minimum compulsory training does not exceed five days a year
- Teachers spend some time on in-service training for teaching reading
- Teachers are career civil servants in only a minority of European countries
- Support measures for new teachers are still not very widespread
- Support for teachers is not universally regulated
- Specialist support for teachers of students who have difficulty with reading
- In the majority of countries the employment contract of teachers includes commitments other than time spent teaching

- The contractual workload of teachers varies very widely depending on the country concerned
- Primary schools often plan more time for teachers to share or develop teaching materials and approaches
- In primary education, teachers meet regularly to discuss and plan the teaching of reading
- The salaries of teachers depend more on their length of service than the educational level at which they teach.
- Teachers represent over 2% of the active population in each European country
- Women teachers outnumber men in both primary and secondary education
- In most European countries, a substantial proportion of primary school teachers are in the 40-49 age group.
- Teachers in secondary education are older than those in primary education
- Part-time work in the teaching profession is becoming more widespread
- Most teachers in primary education have a tertiary level of education
- Official retirement age at 65
- Retirement is sought as early as possible by a majority of teachers

Section 3: Management staff

- Professional experience and special initial training often required to become a school head
- Generally between three and five years of professional experience are required to become a school head
- Training of school heads in internal evaluation is compulsory in few countries
- School heads have higher salaries than teachers at all levels of education

E. Educational processes

Section 1: Teaching time

- Recommended annual teaching time in compulsory education averages 170 hours more than in primary education
- In primary education, the same subjects are compulsory everywhere but time allocation is often flexible
- In compulsory general education, recommended time allocations are shared fairly evenly between the language of instruction, foreign languages, mathematics and the sciences
- In primary education, time spent teaching the language of instruction generally exceeds the minimum recommendations
- In primary education, children's books are used more than computer software to teach reading
- School libraries are regularly visited by over half of pupils aged 9
- In primary education, pupils get homework on the language of instruction between one and four times a week
- For pupils aged 15, the average time spent on homework and study varies from 4 to 10 hours a week
- Decisions about school holiday periods are decentralised in around 10 countries

Section 2: Grouping of pupils

- Grouping of children by age is a relatively common practice in pre-primary education
- Upper limits of 20 and 25 children per adult are a common requirement in pre-primary education
- Pupils aged 7 are often taught all subjects by the same teacher
- Subjects may be divided among teachers in the fourth year of primary education
- Upper limits of 22-36 pupils per class are recommended or prescribed in primary education
- Between 10-20 pupils per teacher in primary education
- Big variations in class sizes in primary education
- Whole class teaching is the most common approach used to teach reading

- Differentiated instruction in reading, particularly in northern Europe
- Integration of immigrant pupils: from individual support to separate classes
- Between 10-15 pupils per teacher in secondary education
- Mathematics classes for 15 year olds range in size from 10 to 40
- Use made of pupil assessment when forming teaching groups in secondary education

Section 3: Assessment of pupils

- Progression from one year to next: the possibility of repeating a year mainly exists in central and eastern European countries
- Parents are generally kept informed about their children's progress in the language of instruction
- Only in a few countries is a primary school certificate required for admission to secondary education
- In most countries, progress to the next year of secondary education depends on attainment
- Certified assessment at the end of full-time compulsory education is generally partly based on an external final examination
- At the end of general upper secondary education, the examination for certified assessment is often external

F. Graduates and qualification levels

- A greater proportion of young people have at least an upper secondary education qualification compared to older generations
- More young women than men are qualifying from general upper secondary education
- Young women have caught up with men in terms of their educational qualifications
- Over a third of young people in Europe do not have the level of qualification required for access to tertiary education
- The proportion of those who hold tertiary education qualifications is rising from one generation to the next
- In most countries there are more graduates in social sciences, business and law than in any other subject field
- More science and technology graduates

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