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Indicators on the quality of school education

This report's main objective is to agree on a series of indicators on the quality of school education in order to facilitate the evaluation of education systems at national level. The indicators can be used to identify issues which should be examined in greater detail, and they give Member States the opportunity to learn from one another by comparing the results achieved.

ACT

European Report of May 2000 on the Quality of School Education: Sixteen Quality Indicators. Report based on the work of the Working Committee on Quality Indicators [Not published in the Official Journal].

SUMMARY

This report on the quality of school education was drawn up by experts from the Education Ministries of the 26 countries that took part in the Working Committee on Quality Indicators.

Challenges to the quality of education in Europe

The indicators and benchmarks used in the report have identified the five challenges below:

- the knowledge challenge;
- the challenge of decentralisation;
- the resource challenge;
- the challenge of social inclusion;
- the challenge of data and comparability.

In the European Union as a whole, the principal challenge continues to be that of providing all Europeans with a high level of school education.

The four major areas under evaluation

The Working Committee proposes limiting the number of indicators to sixteen, relating to the following four areas:

- attainment in the areas of mathematics, reading, science, information and communication technologies (ICT), foreign languages, learning to learn, and civics;
- success and transition: this indicator identifies pupils' ability to complete their studies by examining dropout rates, completion of upper secondary education and participation in higher education;
- monitoring of school education: this indicator determines the level of participation of the various stakeholders in school systems through evaluation and steering of school education and evaluation of parental participation;
- resources and structures: this indicator focuses on educational expenditure per student, education and training of teachers, rate of participation in pre-primary education and the number of students per computer.

This report analyses the data available for each indicator (represented by graphs and tables) and identifies the aspects common to the various Member States, opens the debate by asking fundamental questions and lists examples of best practice.

THE 16 INDICATORS IN DETAIL

Mathematics

A solid grounding in mathematics, which helps provide analytical skills, logic skills and numerical reasoning, is at the core of any curriculum. However, according to the data available, considerable differences remain in terms of the priorities given in school curricula to geometry rather than algebra, for example.

The principal challenges in relation to mathematics are to develop a teaching method which ensures that pupils have a positive attitude towards mathematics, encourage pupils to develop and maintain their knowledge in this area, and define, if possible, the common skills and competences which European citizens should possess.

Examples of best practice include initiatives in: Cyprus, which has introduced mathematics competitions for pupils of all ages; France, which has set up a national 'observatory' for mathematics teaching; and Germany, which has developed materials for mathematics teachers.

Reading

The ability to read and understand texts is a basic requirement for learning and for individuals' personal development and social integration. The report shows that the home environment and some individual students' characteristics, such as gender, are important factors.

No conclusions have been reached concerning how to improve access to books in secondary schools, libraries and bookshops, how to encourage parents to participate in their children's learning process, and how to make reading more attractive to young people (advertising, television, CD-ROMs, for example).

Examples of national initiatives include Germany, where national daily newspapers were delivered to pupils for free and the content systematically dealt with by teachers in class; also interesting is a Swedish initiative which encouraged parents of children aged 10 to 12 to spend half an hour per day reading a good book with them.

Science

Science gives pupils the tools to analyse, to investigate their environment and to experiment, skills that are essential for technological progress. The report highlights significant differences between countries in terms of scientific knowledge and the importance of factors such as motivation, gender, methodological practices, the status of scientific studies and jobs.

The report calls for debate on how all students can be encouraged to develop sufficient interest in science and how to promote learning via more efficient methods related to practical experiments.

Examples of best practice highlighted by the report include the initiative "Schola ludus" from the Slovak Republic, which aims to promote science education by means of interactive exhibitions touring the country, and the European initiative entitled "Women in Science", which illustrates the history of science through the achievements of women.

Information and communication technologies (ICT)

The role of information and communication technologies in everyday life is becoming increasingly important, as they allow us to develop new approaches to learning, life, work, consumption and leisure.

Despite the disparities in the role of ICT in school curricula (in some countries they are regarded as tools and in others as separate subjects), most countries plan to increase the use of ICT.

No conclusions have been reached in terms of how to encourage the use of ICT by all, including the most disadvantaged and vulnerable sections of the population, and how to encourage the training of teachers from all subject areas in the necessary skills.

The example set by Iceland, where all senior pupils are provided with their own laptops, is an objective that all European countries should achieve. At European level, the [eEurope](#) and [eLearning](#) initiatives support the use of ICT.

Foreign languages

Proficiency in several Community languages has become a prerequisite if citizens of the European Union are to benefit from the professional and personal opportunities open to them in the single market.

According to the data available, there seems to be a relationship between a country's official language and the ability of its young people to speak another language: in countries which do not have a dominant language (such as Denmark or Sweden), people are more highly motivated to learn another language than in countries which have a dominant language (such as France or Spain). Social and cultural factors

are also important.

The key issues continue to be to promote young people's interest in language learning and to develop methods to help increase students' self-confidence when speaking a language other than their mother tongue. In Belgium, the Ministry of Education offers courses in eighteen languages, both European and non-European. At EU level, the aim of the [European Label](#) is to stimulate interest in language learning by highlighting innovative projects.

Learning to learn

The skill of lifelong learning guarantees success in the world of work and in society. Effective learners know how to learn and have a repertoire of tools and strategies to serve that purpose.

As yet there are no data available for the whole of Europe, although some Member States have already developed methods to help understand success and failure in school. The challenge is to ensure that skills in learning to learn become a policy priority, with a view to adapting school curricula and promoting in-service training for teachers.

Civics

Preparing young people for citizenship also involves giving them a civil culture based not only on the principles of democracy, equality and freedom but also on the recognition of rights and duties. The report has in particular identified the difficulty of promoting social and cultural diversity and the need to make teachers more aware of the importance of their role in students' development as citizens.

In Greece, elected senior pupils from secondary schools meet every year in the House of Parliament and discuss matters of current importance. In Italy, all secondary schools have a Statute of students' rights and duties.

School dropout rates

Those who drop out of the school system often have neither basic skills nor vocational training and will face problems in finding a job. Reluctance to embark on a strategy of lifelong learning puts these people at risk of long-term unemployment.

The report emphasises that the significant differences between countries are related not only to differences between education systems but also to socio-economic disparities. In Germany, for example, a dual system whereby pupils undertake an apprenticeship within an enterprise as well as part-time vocational training allows them to obtain a vocational qualification. On the other hand, dropout rates might be linked to economic factors such as high unemployment rates, or disparities between urban and rural economies.

In March 2000, the Lisbon European Council set a target to halve by 2010 the number of 18 to 24 year olds with only lower-secondary level education. In the Netherlands, early school-leaving is curbed by cooperation between schools at regional level; in Germany, placements are offered by industry partners.

Completion of upper secondary education

Rates of completion of upper secondary education are important indications of successful education systems. The report highlights the fact that a pupil's success cannot be considered in isolation from the rest of the young person's school career nor from the country's economic situation.

The principal challenges are to increase young people's motivation and give them a better understanding of the connection between theoretical learning and practical activity, and to encourage pupils to take a greater interest in lifelong learning.

Participation in higher education

The opportunities offered by higher education are constantly growing. It is essential, however, to predict trends in demand in the light of the development of new technologies, employment trends, etc.

The report indicates the differences between education systems, particularly in relation to curricula (some subjects are taught at secondary level in certain countries and at tertiary level in others) and the existence of vocational training (young people go into higher education because of a lack of opportunities to take up vocational training). A saturated labour market often encourages those who are having problems finding work to go into higher education. A high rate of enrolment will lead to a highly-qualified workforce, which will make it even more difficult for those without a higher education qualification to find work in certain sectors.

High enrolment rates spread across a wide age range will also have a significant impact on the proportion

of the population that is unavailable for work at any one time. The report also notes that the rate of participation in higher education is generally higher among girls than among boys.

According to the report, the aspects to be examined include: the male/female ratio in certain subject areas, the extent to which the choice of higher education is a response to the labour market, the relationship between participation rates among older age groups and the productivity of the labour market, etc.

Evaluation and steering of school education

Through evaluation and steering, schools can measure themselves against other comparable institutions. All countries are seeking the best way in which to report school performance, and to this end they are using internal or external evaluation or a system which combines both.

In Austria, a website has been set up for schools to allow them to access information, ideas and procedural proposals for the development of curricula. This report is in turn an important contribution at European level to improving evaluation systems in Europe.

Parental participation

The participation of parents in their children's education plays an important part in improving the running of the school and in the quality of the children's education. The report stresses that parents may participate on a voluntary basis through direct involvement in educational activities or via advisory bodies, voluntary associations or after-school clubs.

This indicator raises important fundamental questions concerning the role and influence of parents in terms of the added-value they can bring to the process and in what respects parents' contributions are most relevant and useful.

Of the many examples of best practice, it is in particular worth noting that of Germany, where seminars are organised for parents in order to inform them of new developments in learning and teaching.

Education and training of teachers

Teachers are experiencing an unprecedented transition in their role and status: they require further training in the use of new technological tools in ICT and must deal with ever-changing needs and expectations. In European countries, there is an urgent need for high-quality initial training, supported by good induction and continuing professional development.

The report underlines the fact that, although data are available on initial teacher training (see the [EURYDICE](#) network), it is more difficult to locate data on in-service training. This indicator distinguishes between general or subject-based education and training, which is geared towards the teaching of subjects, and pedagogical and practical training, which are related to the teaching profession.

Although significant differences exist, the report opens a discussion on measures to be taken to ensure that teachers update their knowledge and on how to reward and retain particularly effective teachers.

Participation in pre-primary education

Pre-primary education plays an important part in children's emotional and cognitive development, facilitates the transition from playful learning to formal learning and contributes to children's success at school.

Pre-primary education, which concerns children of at least three years of age, must be provided by adequately trained staff.

Number of students per computer

Everyone needs to be able to learn to use computers effectively, and schools must be able to provide a sufficient number of computers. On the other hand, as technology changes rapidly, it is sometimes preferable to provide schools with fewer computers but to provide replacements as these models become obsolete. Faced with the necessity of providing expensive equipment to a large number of schools, some education systems turn to partnerships with the private sector. The main challenge is to ensure that the schools' and partners' investment in providing computers is economically viable.

Educational expenditure per student

The share of total financial resources devoted to education is a key decision for national governments. It is an investment with long-term returns and makes a significant impact on key sectors such as social cohesion, international competition and sustainable growth.

The report underlines the fact that differences in economic prosperity are an important factor. In Scotland, local authorities fund school rebuilding programmes through public-private partnerships. The challenges that education systems in Europe will have to face include effective distribution of the budget among the different local and regional levels, and facilitating private-sector participation in education without jeopardising the integrity of the education system.

Background

At the conference held in Prague in June 1998, the Education Ministers of the European Union and the candidate countries proposed setting up a working group made up of national experts, with the aim of identifying a series of indicators or benchmarks to facilitate the evaluation of education systems at national level.

The experts submitted their report to the Education Ministers of the European Union and the candidate countries at a meeting held in Bucharest in June 2000.

Based on a Commission proposal and on contributions from the Member States, on 12 February 2001 the Council adopted the report on the [concrete future objectives of education and training systems](#). This was the first document outlining a comprehensive and consistent approach to national policies on education, based on three objectives:

- improving the quality and effectiveness of education and training systems in the EU;
- facilitating the access of all to "lifelong" education and training;
- opening up education and training systems to the wider world.

Following the approval of the report on the concrete future objectives of education and training systems, the Commission prepared a [work programme](#) including some 29 indicators for the field of education and training in general.

RELATED ACTS

[Detailed work programme](#) on the follow-up of the objectives of Education and training systems in Europe [Official Journal C 142 of 14.06.2002].

Council conclusions of 14 February 2002 on the follow-up to the Report on the concrete future objectives of education and training systems in view of the preparation of a joint Council/Commission report to be presented to the Spring 2002 European Council [EN] [Official Journal C 58 of 05.03.2002].

[Recommendation](#) of the European Parliament and of the Council of 12 February 2001 on European cooperation in quality evaluation in school education [Official Journal L 60 of 01.03.2001].

Council Recommendation (EC) No 561/98 of 24 September 1998 on European cooperation in [quality assurance in higher education](#) [Official Journal L 270 of 07.10.1998].

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