Trends in secondary education
in industrialized countries:
Are they relevant for African countries?

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with the assistance of Candy Lugaz and Barbara Murtin

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Trends in secondary education in industrialized countries: Are they relevant for African countries?
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Foreword to the series

The focus on achieving Education for All after the World Education Forum in Jomtien (1990) and in Dakar (2000) has meant placing a singular emphasis on increasing enrolment in primary schools. But as efforts to increase primary education enrolment are bearing fruit, millions of young adolescents are knocking at the doors of secondary schools asking for more education and training. More and more countries have increased the length of basic education from six to nine years, integrating into it the first years of secondary education. OECD countries, for their part, are aiming at providing 12 years of education for all, so as to prepare their population to live and work in an advanced technological society, otherwise known as a knowledge society. Many countries in Asia and Latin America concerned with increasing the education and skills level of their workforce, so as to be competitive in a globalized economy, are following this trend.

Secondary education is a crucial stage for the education system. This is where most primary-school teachers are trained; it is also where the future students of higher education are selected and taught essential foundation skills. Youngsters enter secondary school as children and leave it as young adults. It is the level at which they consolidate their basic knowledge gained in primary school, but also where they acquire the common culture that will allow them to be useful citizens in a peaceful society, where they build knowledge through experience and experiments, where essential subjects such as science, health education and technology are taught in a formal way for the first time, and the last time for most. Finally, this is where youngsters learn how to think, how to be, how to work, and how to co-operate with others.
Expanding secondary education and making it available to many is not simply a matter of offering more of the same. Secondary education has to be reformed so as to face the challenge of educating adolescents from many different economic, social and cultural backgrounds and having many different interests. The challenges are numerous: how to improve coverage without endangering quality; how to reduce drop-out and failure and prevent any increase in inequalities; how to prepare youngsters to enter the world of work and yet give them a chance of continuing to study throughout their life; how to offer more and better secondary education without overburdening the budget.

Following earlier work on planning science education provision and on financing secondary education, strategies for sustainable growth, the IIEP is now exploring different ways of reforming secondary education and making it relevant for a large number. The approach followed is manifold. The project looks at the many strategies that countries have followed to successfully expand their secondary education and the reforms they have implemented. It looks in particular at the strategies that are being followed to reduce inequalities of access and failure among adolescents from disadvantaged groups. It also investigates the structural reforms which a number of countries have carried out to prepare their youngsters for the world of work, and in particular the place of technical and vocational education within secondary education. Finally, it analyzes alternative strategies of education and training of young adolescents.

The present study presents the organization of secondary education in a number of OECD countries, and identifies the major trends in policy and reforms that have accompanied the expansion of secondary education in the different countries over the past 30 years. These important reforms touch on many different aspects: curricular content; teaching and learning methods; teacher training; assessment mechanisms and standards; management, with emphasis on decentralization and increased accountability; and last, but not least, financing mechanisms. All of these reforms aim at retaining youngsters
in education for as long as possible while increasing the quality of the education provided. The report describes the common trends as well as divergences among the different countries. It also discusses the possible relevance of these trends and reforms for developing countries, African countries in particular. This report was prepared in the framework of the World Bank project on secondary education in Africa.
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<td>EU</td>
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<tr>
<td>GDP</td>
<td>Gross domestic product</td>
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<td>ICT</td>
<td>Information and communication technology</td>
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<td>IEA</td>
<td>International Association for the Evaluation of Educational Achievement</td>
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<tr>
<td>LEA</td>
<td>Local Education Authority</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OFSTED</td>
<td>Office for Standards in Education</td>
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<tr>
<td>PISA</td>
<td>OECD Programme for International Student Assessment</td>
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<td>TIMMS</td>
<td>Third International Mathematics and Science Study</td>
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Executive summary

In most OECD countries faced with the challenge of globalization and increased competition, the innovation, knowledge and skills of the people are recognized as the main forces driving economic growth. Education, which provides such skills, is high on the agenda of most governments. Secondary education in particular has become an integral part of basic education for all.

Dealing with adolescents at a very critical moment of their lives, education has an important mission: to provide youths with the necessary knowledge and skills to live in an advanced technological society; to prepare them for the world of work but also for further learning; and to foster social cohesion and transmit the cultural and ethical values necessary for active participation in a democratic society. An increasing number of pupils today gain access to and complete secondary education. The massification of secondary education has been accompanied by a number of important reforms touching on all aspects of its organization: curricular content; teaching and learning methods; teacher training; assessment mechanisms; management, with an emphasis on decentralization and increased accountability; and, last but not least, school financing. All of these reforms aim to retain youngsters in education for as long as possible, increasing the quality of the education provided and increasing efficiency in education delivery.

The objective of this report is to describe the main features of the organization of secondary education in a number of OECD countries, identify major trends in policies and reforms and discuss their possible relevance for developing countries, African countries in particular.
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The report is based on a review of 12 OECD countries, namely the Netherlands, England, Scotland, France, Germany, Norway, Finland, Ireland, the USA (federal and some state policies), Canada (federal and some provincial policies), New Zealand and Australia (federal and some state policies). These countries have been chosen as they illustrate a variety of structures, pedagogical models, historical trends, administrative traditions and even ideologies.

The report starts with a brief historical review of the development of basic education in France, England and Wales. This review illustrates that while elementary education was free and compulsory in all European countries by the end of the nineteenth century, the expansion of secondary education is a much more recent phenomenon. At secondary level a dual or triple system existed that subsisted until the Second World War and beyond. In this model a first sub-system of upper primary/senior schools focused on the ‘three Rs’ and catered for the majority of the population in the rural areas and unskilled workers in industry. Another more academic sub-system was geared towards the needs of a small elite that would continue on to higher education. For years this system contributed to reproducing and consolidating existing social inequalities and the class structure. It was only after the Second World War that secondary education really began to expand and undergo substantial reforms. A first wave of expansion concerned lower secondary education: This took place in the 1950s in the United Kingdom1 and in the late 1960s and 1970s in France. The second wave of expansion, concerning upper secondary education, occurred only in the 1980s and 1990s. In both cases the government played a major role in the expansion of the system.

1. As in the Netherlands and the Nordic countries.
Context affecting education in OECD countries

Changes in the social and economic context of OECD countries have seriously influenced education policy in the past 30 years and made it necessary to adjust the organization, coverage, content and management of secondary education. The first factor is the growing unemployment that hit all OECD countries, some more seriously than others, in the 1970s and 1980s. Today no young person can expect to enter into full employment straight after school. Most of them must go through a long period of short-term contracts and casual work. The concern for youth unemployment led countries both to expand upper secondary education to keep teenagers in school for as long as possible while strengthening their knowledge and skills and to give priority to vocational education. Another major factor is globalization and the advent of knowledge economies. These led countries to revise their curricula, bringing competencies to the fore and emphasizing learning outcomes. Globalization and increased competition are also forcing countries to rationalize government spending, and this has a number of consequences for education.

Goals, functions and structural organization

There is broad consensus among the OECD countries studied with regard to the goals of secondary education. Secondary education is compulsory for all young people up to the age of 15 or 16, irrespective of background and ability, and is more or less free of charge. Placed in the context of lifelong learning, secondary education should give all young people the opportunity to finish all or parts of upper secondary school, provide basic or general education, promote quality, prepare young people for the world of work and enhance the status of vocational and technical education.

The structural organization of secondary education is particularly complex as each country has a structure that reflects its particular history. There are some common trends, such as the division of secondary education
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into two stages: lower secondary and upper secondary (the latter normally preceding the former with the transition occurring at the age of 15 or 16). Children start school at the age of five or six and complete upper secondary after 12 or 13 years of education.

Some countries combine primary and lower secondary in one continuous cycle of basic education, some merge lower secondary and upper secondary, while yet others offer each cycle in separate schools. There is a slight trend towards emphasizing continuity from grade 1 to grades 12 or 13 rather than maintaining distinctly separate cycles.

Most countries keep all students in comprehensive schools until the end of lower secondary, some also throughout upper secondary. A few countries have some kind of organizational differentiation in schools/departments in lower secondary based on interests or ability. In upper secondary it is more common to find different schools that cater for different interests in an academic or vocational direction. Vocational and technical education and training is a high priority in most of the OECD countries studied. Various models are used: enterprise-based training with apprenticeships; school-based training with or without placements; a combination of school-based and enterprise-based training; or different variations of these three main models. In most countries vocational and technical education is provided in upper secondary institutions and accounts for between 50 and 65 per cent of all enrolments. Another group of countries enrol considerably fewer students in vocational education but include work-oriented options in their general curricula.

Access, retention, flow and transition

Certain principles guide the policies on access, retention, flow and transition in most OECD countries: trying to give as many youngsters as possible some kind of formal qualification before they leave the education system; keeping as many pupils as possible in the system for as long as
possible (preferably all the way through upper secondary); making it compulsory for all pupils to stay in the system for a minimum of nine to ten years; emphasizing counselling and advisory services.

The great majority of countries give young people automatic access to lower secondary without any selection criteria. However, some do have a selection system following primary school for access to the different kinds of schools. This is based on advice from the primary school, school entry tests or internal assessment. The trend has been in the direction of allowing increasingly automatic access.

Some countries also give pupils automatic access to upper secondary, but the majority of countries use a selection procedure based on results from lower secondary. This is not to prevent young people from entering but rather to select for entry into different courses or streams.

A number of measures are employed to keep students in the system for as long as possible: providing motivation; facilitating access from one stage to another; making schooling free of charge; introducing more diversity and subject options; developing schemes to prevent drop-out; introducing new teaching methods; and emphasizing counselling and advisory services. Automatic promotion is also applied in a large number of countries for all children and adolescents, accompanied by a variety of remedial courses. Some countries still enforce repetition, but the main trend is clearly to lessen its importance, at least in lower secondary education.

Access to higher education is currently undergoing a process of change, allowing and stimulating a greater percentage of the age cohorts to enter and expanding admission criteria to also enrol students from vocational education and training. However, most countries are still rather selective and require all students to hold a successfully completed diploma from general/academic upper secondary. A few countries even use special entry tests in addition to the diploma.
Curricula and content

Some common principles underlie the countries’ policies concerning curricula: that they should meet the needs of all students; that they should comply with learning requirements of the future; and that they should contain both knowledge and skills in the more traditional sense combined with targets related to ethical and social skills.

The formal status of curricula differs between countries. Most countries formulate and formally endorse curricula nationally and make it statutory for all schools, often with some ‘open space’ to enable schools to make their own choices. Other countries develop what are labelled ‘guidelines’ nationally but leave it up to the municipalities/districts or the schools to formally decide to what extent they will implement them.

Some countries place considerable emphasis on the basics (literacy, numeracy, scientific literacy and foreign languages) and stress attainment targets and national testing to enforce this policy. Other countries are more ‘traditional’, giving more equal importance to several other subjects in addition to the basics and using more content-based curricula and traditional exams. At present there seems to be some convergence between the two different approaches.

In lower secondary education practically all countries prioritize a fairly broad set of subjects and competencies, although again the emphasis on basics may differ. Little room is generally given to options; however this varies somewhat among countries. Great emphasis is also placed on transversal competencies or general skills such as communication, problem solving, reasoning, ability to learn and motivation, which are not subject-specific but rather can be emphasized while teaching all subjects. The transferability and flexibility of such skills are invaluable in a highly volatile environment. New subject areas are also being developed and stressed in some countries: These include ICT, citizenship, health and healthy living, sustainable development, solidarity with poor countries, tolerance and human rights, among others.
Teaching methods and quality improvement

All countries are concerned with improving the delivery and quality of teaching, if only because it is necessary to make better use of the considerable resources already invested. Some countries emphasize testing and accountability as an essential way of improving quality. However, many emphasize differentiation and adaptation to the needs of individual students within an increasingly heterogeneous student population, breaking away from the dominant ‘lecturing’ method of teaching. In many countries there is a trend towards developing other types of interaction between students and in developing new learning arenas and methods. The following are the most perceptible: the gradually changing roles of teachers and students, giving students more responsibility for their own learning and making the role of teachers more similar to that of a ‘guide’ and a ‘counsellor’; out-of-school learning arenas, which are being used to a greater extent for more real-life learning; and the use of ICT in providing more individualized methodologies.

There are a number of different pedagogical and methodological ideas and innovations used that revolve around the following: giving more time to students for individual learning; placing stronger emphasis on project work; developing team teaching; ICT; and establishing ‘Beacon schools’/‘specialized schools’/‘centres of excellence’ to help other schools with innovations and good practice. There is also a trend in many countries of doing away with unnecessary rules and regulations in order to give schools more freedom and space for pedagogical innovation and practices.

In practically all countries support systems for good pedagogical practice are prioritized: development and distribution of pedagogical support material; developing resource persons at the school level (area co-ordinators, deputy-headteachers, ‘charter teachers’, ‘advanced skilled teachers’, etc.); in-service teacher training for headteachers to improve their pedagogical leadership abilities; and improving and creating a variety of textbooks as well as developing Internet-based alternatives or supplements.
In some countries wider approaches are being employed in the belief that they will lead to better quality education: decentralization from the national level to the municipality or school level; creation of accountability systems and competition at school level; and giving more school choice to parents. While students’ learning achievements have indeed increased in some of the countries concerned (as in England), it is not easy to assess which particular measures are actually responsible for the improvement. Nor is the impact that such measures may have on inequality between social groups fully appreciated.

**Qualifications and training of teachers and headteachers**

All countries give increasing priority to the development of teachers, considering these to be the prime agents in improving the quality of education. There are three general issues currently under deliberation: finding the right balance between mastery of the subject matter and mastery of pedagogy; searching for ways and means of improving the status of teachers (particularly in countries where there are teacher shortages); and finding the balance between on the one hand giving many responsibilities to schools and teachers and making them accountable and on the other hand not distracting them from their main task of teaching.

*The pre-service training* of teachers can vary, but it may be summed up in the following points: the length of pre-service training for lower secondary teaching varies between four and five or six years of post upper secondary education. The number of years for upper secondary teachers would be more or less the same, somewhat longer in some countries. There is a wide variety of practices for vocational teachers, ranging from a long period of education at a university or higher vocational education institution in some countries to a skilled worker’s certificate and a number of years of work experience in others. Practically all countries structure and also demand and encourage *in-service training* of teachers and headteachers. This type of training is dispensed
by a number of different providers, but higher-education institutions usually play an important role, although there is a trend towards making in-service training school-based to help enhance pedagogical change.

*The teaching load* of teachers varies considerably between countries. The average number of teaching hours per year (number of teaching hours per week multiplied by the number of teaching weeks per year) in lower secondary in OECD countries is around 700 hours (varying from 550 to 960) and around 660 in upper secondary general (varying from 460 to 940). In upper secondary vocational it varies from 460 to about 1,000, with an average of 690.

All countries studied have some kind of *recognition of teachers*. An interesting development in some countries is the discussion of bringing teachers other than formally qualified teachers into schools to help formally qualified teachers do their work.

**Examinations, assessment and evaluation**

The systems and practices of examination, assessment and evaluation differ considerably among countries. Different systems include various forms of internal and external assessment of individual students and apprentices; various kinds of school-based evaluation, where the school as a unit is the target; different models of external and system-based evaluation (relying on the inspectorate); different types of ‘polls’ in different ‘client’ groups to gather the opinions of different players (students, parents, social partners); and independent research teams. Another development is the increasing number of international comparisons of learning outcomes.

Examinations, assessment and evaluation have many different purposes: to admit students from one level to the next; to select students for different schools and special courses; to grant diplomas and formal qualifications; to enable authorities to keep track of the quality of the system and the results
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obtained; to ensure that schools respect the requirements set in regulations and curricula; to stimulate and motivate schools/teachers/pupils to work harder and more effectively; to improve teaching and learning; to create competition between schools and among teachers; and to increase accountability.

As far as exams and tests are concerned, most countries have some kind of combination of school-based and external examinations. At the end of lower secondary, countries differ in terms of requirements, the weight of continuous assessment versus external assessment and the number of subjects examined. At the end of upper secondary, most countries impose external (public) examinations. Only in two countries (France and Ireland) is the school-leaving examination entirely external. In most other countries, external evaluation is combined with some elements of school-based examination and teacher-based continuous assessment. The various systems vary in the number of subjects in which the students are externally evaluated and in the format of such external evaluation (essay-type questions are often predominant, but multiple choice questions are also used and oral and practical competencies are also assessed). There are also various kinds of diagnostic tests that are more or less used in all countries to monitor the progress of students and detect any existing learning problems. In some countries, the results of these tests may be used when making various decisions concerning students, schools and teachers. Exam and assessment-related issues currently under lively discussion include equity issues; motivating or demotivating effects; the reliability of exams and tests; and the ‘tilting effect’ (tilting teaching in the direction of what is being tested), among others.

Governance

In practically all the OECD countries in our review governance is a very topical issue. Of greatest importance is the struggle in many countries to find the right balance between centralization and decentralization. The general trend since around the 1980s has definitely been in the direction of
more decentralization from the national governments, but the latter are keeping or regaining power over certain issues (school financing, evaluation).

Decentralization takes two forms. In some countries, power is delegated from the central government level to other government levels, usually regionally. In other countries power is decentralized to politically elected bodies at the regional and local levels or all the way down to the school level. Although many countries have undergone considerable decentralization formally, in practice much power is still retained centrally. The discussion which is currently under way may be described as follows: Those who favour decentralization argue that those who are closest to the field are the best positioned to make important decisions regarding the way education is organized and run locally. The national government, it is said, should concentrate on long-term policies and leave other decisions to the local levels. Those who are more in favour of centralization say that education is so important for a country’s future – culturally, economically, socially and politically – that much of the decision-making power should be retained nationally.

The relationship and division of roles and responsibilities between the government/state, municipalities and schools may be characterized by two different trends. In some countries, power is decentralized from the central government to the local level (municipalities, regions, local authorities), making this politically elected level responsible for the running of the schools (funding, appointments, buildings etc). In relation to the central government level, the municipality is made accountable rather than individual schools. In other countries, power is more decentralized from the central government to the school level, represented by a governing board, making the school accountable for its results. In this model, an element of competition between schools and parental choice has become an important ingredient. It is to be noted that even in countries where power has been decentralized to the municipalities, schools are given increasing autonomy.
In practically all countries parents, students, social partners and other groups interested in their governance structure participate with more or less influence depending on the policies in each country and on the degree of decentralization.

**Educational financing**

Three basic principles guide the policy of financing secondary education in the countries under study: the need to facilitate access to basic and compulsory education; equality of opportunity; and freedom of educational choice. In order to facilitate access to secondary education, no tuition fees are charged in state schools until the end of compulsory education, often not until the end of secondary education. The principle of free education often applies to textbooks and transportation until the end of compulsory education (with some exceptions, for example Spain and Australia). In a few countries school meals are also free. Low-income families generally receive a scholarship (i.e. an overall grant) and/or benefit from a reduction in certain costs (such as meals). To ensure freedom of educational choice, private schools exist in all countries and enrol a varying number of students, which is low in some countries and relatively high in others (for example the Netherlands). In most of the countries private schools are not tuition-free, although most receive significant subsidies that help reduce the level of fees. In fact there are three types of such schools: those which are quasi-public and do not charge fees; those which are highly subsidized but charge some fees; and those which are independent and tend to charge high fees.

The countries dealt with in our study spend between 9 and 16 per cent of their overall budget on education. They also spend a high proportion of their national resources on education: between 4.9 and 7.2 per cent of their GDP. The desire of governments to control their public spending has been such that the share of the GDP that goes towards public education has fallen in certain countries. The largest share of the education budget in EU countries
is allocated to secondary education; this level receives roughly between 40 and 60 per cent of all funds earmarked for educational institutions.

State responsibility for school funding is shared between different levels of government: central (federal or state level), regional and local level (municipalities, school districts). The pattern in this respect varies a great deal between countries. In an effort to contain educational spending in general and unit costs in particular, several countries have decentralized educational financing to municipalities and delegated budget management to schools. The expectation was that municipalities and schools would be more aware of what their requirements were and make more appropriate choices on how to use the resources. Delegating more responsibility to local authorities in school financing appears to have contributed to an increase in the resources available to education in a few countries. At the same time, in countries where local authorities were in charge of financing educational expenditure from local taxes the state has increased its contribution with a view to reducing inequalities. Delegating budget management to schools and allocating resources to each institution on the basis of a formula is part of a similar effort to rationalize resources while making the process of allocation of resources more transparent and equitable.

It is interesting to note that a secondary school student in an OECD country does not mobilize a much greater amount of resources than a primary school pupil. Indeed, on average such a student will mobilize only between 30 and 50 per cent more. It is the rather low level of salaries that contributes to maintaining unit costs within reasonable limits. This in turn allows spending some 20 per cent, sometimes up to 30 per cent, of the secondary education budget on non-salary costs that may include books, scientific equipment and ICT, transport and social expenditures such as school meals for disadvantaged children, among others.
The relevance of such trends for African countries

What lessons can be drawn from the experience of OECD countries that could be relevant for African countries? The situation is evidently very different between the two groups of countries and nothing can be taken directly from an OECD country and applied to an African country. A number of findings emerge from this study that may nevertheless inspire decision-makers in the African region, taking into account of course the differences in contexts and in the level of financial and human resources. These include, among other factors:

- the existence of one basic school which integrates primary and lower secondary education curricula as far as possible, as is found in the Nordic countries. In countries such as Norway the same teacher is asked to teach several subjects (up to three or four) until the end of lower secondary. This practice facilitates a smooth transition from class teaching to subject teaching and increases transversal learning. It also reduces salary costs;
- strategies that have been developed to reduce school failure such as allowing overlapping of curricula, organizing transition years, grouping pupils differently for different subjects, encouraging teacher co-ordination, introducing peer teaching and asking the most able and advanced youngsters to assist those who have difficulties;
- the trend away from repetition, while at the same time organizing remedial courses to provide support for weaker students from teachers, peers or members of the community;
- sensitizing students to and preparing them for entry into the world of work through the creation of different kinds of school-to-work options where students may be partly at work and partly at school. This approach complements curricula reforms which emphasize applied science and technology, ICT and entrepreneurship as a subject area, as well as the
teaching of transversal competencies such as problem solving, reasoning and creativity in all subjects areas;

• the high priority given in a number of countries to basic competencies in lower secondary, including literacy, numeracy, natural science (including health education) and a foreign language, but also the emphasis on skills and competencies that are not directly subject-related (i.e. generic skills);

• emphasizing a school-based support system to provide pedagogical help to teachers. This is being done through mentors within schools and advanced skilled teachers in different subject areas;

• the role of headteachers in the support of quality education delivery;

• placing emphasis on assessment, supervision and accountability. As far as quality is concerned, however, there is a growing realization that accountability per se is not sufficient and that strengthening capacities among actors of the education system is equally crucial;

• deregulation, replacing unnecessary rules by a wider accountability on outcomes. This implies examining whether the present rules and regulations applied at the school level have a constraining effect on the development of innovation and the use of a multiplicity of teaching and learning methodologies;

• limited difference in the cost of a secondary school student compared to that of a primary school pupil and reviewing the present cost structure accordingly; and

• transparent mechanisms of allocation of resources to schools.
Introduction

In most OECD countries the number of years of education has increased inexorably over the last 30 years. While before the Second World War it was considered normal for a youngster to leave school at the age of 14 and enter full-time employment, most young people today remain in school until their early twenties. Nowadays, completing secondary education has become a condition to finding a job. This increase in the number of years of education occurred at the same time that societies and economies were undergoing very rapid and profound technological changes. In advanced technological societies the innovation, knowledge and skills of the people are driving economic growth. Education is therefore high on the agenda in most countries. Secondary education in particular has an important mission: to provide youths with the necessary knowledge and skills to live in an advanced technological society; to prepare them for entry into the world of work and further learning; and to transmit the necessary cultural and ethical values that all citizens should have in order to integrate and actively participate in a democratic society.

The expansion of secondary education has been accompanied by a number of important reforms touching on all aspects of education: curricular content; teaching and learning methods; teacher training; assessment mechanisms and standards; management, with emphasis on decentralization and increased accountability; and, last but not least, financing mechanisms. All of these reforms aim to retain youngsters in education for as long as possible, increase the quality of the education provided, which is measured in terms of learning outcomes, and increase efficiency in education delivery.

The objective of this report is to describe the main features of the organization of secondary education in a number of OECD countries, identify
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major trends in policy and reform – common trends as well as divergences – and discuss their possible relevance for developing countries, African countries in particular.

The first part gives a brief overview of the historical development of lower and upper secondary education in two different OECD countries: England and France. This is meant to serve as a background for the present day description of secondary education organization and functioning, outlining some features which shaped the present systems. It is a reminder of the amount of time it has taken in most European countries to expand lower and upper secondary education and make it available for all.

The second part provides an overview of different aspects of secondary education in a number of OECD countries today. It starts with a description of the general and broad social context that has influenced recent education policies in general and secondary education in particular. The next chapter analyzes the structure and goals of secondary education, access and retention policies, major trends in curricula and content, teaching methods, assessment, government and management, and finally educational financing.

The third part summarizes the main findings of the report and discusses their possible relevance for African countries.

The report is based on the following:

1. a review of 12 OECD countries, namely: the Netherlands, England, Scotland, France, Germany, Norway, Finland, Ireland, the USA (federal and some state policies), Canada (federal and some provincial policies), New Zealand and Australia (federal and some state policies). These countries were chosen as they illustrate a variety of structures, models and even ideologies. For most of these countries data was gathered from literature mainly downloaded from the Internet as official information
from the various ministries. In some cases, ministries have provided written documentation that is not available on the Internet;
2. study visits carried out in the Netherlands, Scotland and England. The main purpose was to get more knowledge about, and therefore a deeper insight into, some of the policies under discussion in these countries;
3. information available from the OECD in various publications dealing with education in OECD countries more generally. Some statistics and other information related to those countries reviewed that are members of the EU were also collected from EU sources.

The information collected concerning the 12 countries showed a very complex picture in terms of structure, curriculum and evaluation mechanisms etc. in the different countries. For this reason a decision regarding how such complexity should be presented had to be made:

1. *either* to present the diversity of the situation with all its nuances in the various countries under each of the points. This would have provided a detailed and, from one point of view, ‘rich’ picture of the 12 countries reviewed. However, it would have been of relatively little value to the overview and the identification of main models and general policy trends;
2. *or* to give a broad overview of the main trends, policies and models within each of the different points in terms of objectives. This would give less richness of detail and less differentiation and nuance, but would, however, provide an overview for discussion on a more aggregated policy level concerning secondary education.

As the main purpose and intention of this report is related to policy discussion and the main target groups are policy-makers in sub-Saharan Africa, it was deemed more appropriate and useful to give a more general picture of the situation, omitting the details and the more specific situations in each country. This will provide better input to high-level policy discussions and avoid unnecessary complexity. A number of boxes that illustrate the policies of some countries in more detail are nevertheless provided.
It was similarly decided not to list the names of all the countries ‘belonging to’ the different models and categories presented, the reason being again that there are not always clear-cut boundaries between the different models in the various countries. For example one country would have one solution as their main model, with ‘minority’ variations of other categories and models. To put each individual country into the broad categories and models in the presentation would therefore not do full justice to the complexity within each country. Instead, examples are given of one or more countries where the model or category presented in the text may be considered relatively dominant. These examples have been included in the presentation for further reference for those who would like more information about how the model is practised in a specific country context.

Ideally the presentation of each model, reform or trend should be accompanied by comments on their performance and effectiveness. However, this would have meant reviewing the whole literature in order to determine the results of the latest evaluations. This was obviously beyond the scope of such a review. First, most existing educational research concerns OECD countries: Given the wide scope of our review this would have meant analyzing masses of research reports. Second, many of the reforms are ongoing and are continuously adjusted as they are being implemented or as changes in governments occur. It was deemed more relevant to identify strong trends or to stress differences in the policies adopted by different countries, relating them to their context.
Part one

Historical overview

In several European countries ‘elementary education’ was made compulsory towards the end of the nineteenth century. It was not until half a century later that compulsory education was extended to 16 or 18 year olds and lower secondary became a part of basic compulsory education. The basic organizational features of secondary education were put in place during the first part of the twentieth century and remained largely unchanged until the Second World War. Many of these original features still influence the present structure of secondary education in the different countries.

This study of secondary education in selected OECD countries will therefore start with a brief historical review of the development of basic education in some of these countries. This historical overview will highlight when secondary education expansion took place and under what circumstances. It will also help explain the diversity in structure, organization and management of secondary education between countries. We shall briefly review the cases of France and England and Wales, whose education systems contributed to the shaping of those of many African countries. We shall then take a more general look at the whole of Europe.

1. Historical development of secondary education in France

Full attendance at primary school was a reality in France well before laws were passed at the end of the nineteenth century (in 1881 and 1882)
making primary education free and compulsory. Secondary education, accessible at the time to a small minority only, dates back to Napoleonic times. It was dispensed in lycées that prepared students for entry to university. The baccalaureate, which certified what had been learnt at the secondary level, was created in 1808 and was in fact (and still is) the first examination set by the university.

Throughout the nineteenth century much of the debate focused on the freedom of education and the role of private education (Catholic schools in particular). Under the principles of the revolution, which separated Church and State, state schools were to be secular and non-denominational. In 1850 a law was passed that acknowledged the existence of private schools and defined the conditions under which they could operate.

Another debate focused on content: the role to be given to science when content was traditionally centred on the humanities – French and Latin, but also mathematics. A modern stream running parallel to an academic one was then created with the aim of educating the middle management and human resources that were required by the economy, which was undergoing rapid technical change. At the same time post-primary studies were offered to a small minority among those who did not have access to secondary education.

From the beginning of the twentieth century up until the 1960s the structure of primary and secondary education remained very much the same. Indeed, rather than consisting of a single education system it comprised two sub-systems operating in parallel:

- a primary sub-system for the vast majority of students. Many of these students upon finishing primary school at the age of 14 either entered the world of work or undertook an apprenticeship. A minority – those who passed the primary education certificate with flying colours – were allowed to continue to upper primary schools or to vocational schools.
Upper primary schools prepared pupils for entry to primary teacher training and to vocational schools. They did not prepare pupils for the baccalaureate or entry to university. The upper primary schools were subsequently merged with the modern stream in *cours complémentaires*: These schools prepared pupils for the *Brevet d'études primaires complémentaires* (BEPC).

- a secondary track attended by children from the upper middle class and aristocracy. This dispensed mainly academic education. In 1902 a reform gave secondary education a structure that was to remain largely unchanged until after the Second World War. Secondary education was divided into two cycles and streams were introduced in upper secondary education, which would lead to the different baccalaureates in arts and science.

Each sub-system had its own primary schools and its own secondary schools: *lycées* had their own primary schools (prep schools) although they later recruited pupils from other primary schools through a selective entrance examination (*examen d'entrée en sixième*). Each sub-system had its own buildings, its own teachers, its own way of recruiting pupils; each had its own curriculum, which emphasized the teaching of the basics in the former and higher academic education in the latter and was directed towards different goals.

Attempts by the Front Populaire in 1936 to eliminate these differences, which were the source of many social inequalities, failed due to strong opposition from various groups including the unionized primary and secondary school teachers. Each group wanted to keep its own schools, teachers and pattern of teacher training. Beyond this issue of the influence of two major groups, the debate was really on what youngsters should be taught: modern education and life skills in what would become part of basic education or the humanities and specialized subjects as a preparation for

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2. This was the case from 1919 onwards.
upper secondary education. Curricula were nevertheless harmonized in the different types of lower secondary schools. Private education subsisted alongside public education. Free schooling in state secondary schools was introduced in the 1930s.

At the end of the Second World War the debate on the democratization of education became much more intense. In 1946 an article was inserted into the Constitution stipulating that “it is the State’s obligation to organize free, public, non-denominational education at all levels”. An important commission that met in 1945-1947 clearly defined the educational goals: to promote equal educational opportunities, provide the skilled personnel required by the economy and develop the personality of the child. The recommendations of the commission were not immediately followed by the passing of a law; however they strongly influenced all subsequent political debate. Yet lower secondary education continued to be provided in different types of schools, enrolling essentially different social groups. In the early 1960s a study showed that 89 per cent of children of professionals attended a lycée while the percentage of children from working-class families was only 42 per cent.

In 1959 compulsory education was prolonged from the age of 14 to the age of 16. This measure did not become fully effective until 1967, but gradually the primary schools attached to the lycées were closed down. Upper primary schools and ‘complementary schools’ were transformed into ‘general secondary schools’ (CEG) and a large number of lower secondary schools (CES) were opened. In ten years the enrolment rate of 15 year olds increased from around 50 per cent in 1958 to 80 per cent in 1969. This considerable expansion of enrolment was made possible thanks to the conjunction of a commitment of the central government to expand the provision of schools and strong social demand (Prost, 1968 and 1998):

• **On the supply side** the government launched a major construction programme: Between 1966 and 1975 nearly one lower secondary school was opened per day. The government also increased considerably its financial commitment to education: The share of the education budget in the overall budget increased from 7 per cent to nearly 20 per cent.

• **On the demand side** income differentials in the labour market encouraged students to pursue their studies beyond primary education. Families also enjoyed a higher standard of living and were ready to forgo the potential income of their children in order to give them an opportunity to study longer and reach a social position higher than their own (Prost, 1998).

In 1975 it was decided that all lower secondary education classes should be offered in one building: the secondary education college (CES).

The implementation of the collège unique (comprehensive school) led to a profound transformation of the school system: The former division in sub-systems (primary and secondary) was then replaced by a new division based on stages. Each stage was (and still is) delivered in different buildings: the primary school, the lower secondary collège and the upper secondary lycée.

Quantitatively, secondary education then went through a period of relative stagnation for another ten years. At the end of lower secondary there was still a selection procedure: Although all pupils were entitled to continue in the system, students were ‘guided’ towards different tracks and streams. Students with the highest marks in academic subjects were allowed to continue their studies in general and technological education while others were guided towards vocational studies, either school-based or through an apprenticeship. The latter prepared young people for direct entry into the labour market; they did not prepare for the baccalaureate and thus did not allow for pursuing studies at post-secondary level.

In 1985, in view of the important changes that were taking place in the labour market and the development of what is called the knowledge-based
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economy the government decided to try to have every student complete upper secondary education. A law was passed to that effect; the structure remained unchanged but a vocational baccalaureate was instituted allowing vocational students to continue their studies at the higher education level if they so desired. The watchword ‘80 per cent at baccalaureate level’ became popular. This led to a second wave of rapid expansion of enrolment, this time at the upper-secondary level: Enrolment in lycées – both general and vocational – increased by 30 per cent between 1985 and 1990.

Financially, secondary education has always been – unlike primary education – a central government affair. A law was passed in 1959, according to which private schools that agreed to comply with certain state requirements would be brought in line with state schools in terms of financing. In 1981 the law of decentralization devolved responsibility for construction and maintenance of lower secondary school buildings to the départements and of upper secondary school buildings to the newly created regions.

Following a long period of development, lower and upper secondary education is now available for some 75 per cent of youngsters falling into that age group. The Education Act of 1989 reaffirms that the aim is to give all individuals the opportunity to develop their personality, raise their educational level, take part in social and professional life and enjoy full citizenship. Every individual should reach a recognized level of qualification, and four-fifths should reach baccalaureate level, opening the way to higher education. The challenge now, as we shall see in the following chapters, is to increase the learning achievements of all pupils to motivate and interest all youngsters, including those from disadvantaged backgrounds, and to keep them in the system.
2. Historical development of secondary education in England and Wales

The history of secondary education in England and Wales has a number of points in common with that of France, but also displays interesting differences.

*Universal elementary education was introduced as early as 1870; however, secondary education for all was not instituted prior to the proclamation of the 1944 Education Act. Until then, as in France, parallel sub-systems of primary and secondary education co-existed, each catering for children from different social groups.*

Elementary schools emphasized the ‘three Rs’ (reading, writing and numeracy) and included several disciplinary objectives such as acceptance of teachers’ authority, punctuality and obedience. They catered for children up to the age of 14. In 1926 elementary schools were divided into two stages: junior and senior, with a break at the age of 11 known as the ‘eleven+ examination’. A small proportion of junior school pupils were selected at this age to enter secondary schools (10 per cent until after the Second World War) while the majority either remained in the ‘all-age’ school until the age of 14 or went on to senior schools. Most pupils were, in fact, expected to enter the world of work at the age of 14.

*State participation in education was minimal. There was no ministry of education prior to 1944. Local Education Authorities (LEAs) were mainly responsible for educational provision. Public expenditure on education was low. Access to secondary, and later to higher education, was essentially available only to those who could afford to pay the fees of LEA secondary schools or private schools. Scholarships were very limited.*
The 1944 Education Act instituted the principle of secondary education for all. This was based on the idea that children should have equal opportunities to enrol in secondary education and that the education they receive should be suited to their age, aptitude and ability. The Act instituted an education that was meant to foster the spiritual, mental and physical well-being of the community and of every individual member of that community. It introduced a tripartite system following primary education. Secondary schools became ‘grammar schools’, senior schools became ‘secondary modern schools’ and a few ‘secondary technical schools’ were opened for children with scientific and technical aptitude.

A selection process was implemented on the basis of results of the eleven+ examination, an examination that was under local control. Most youngsters (75 per cent) were sent to secondary modern schools while the most able were guided towards grammar schools.

- In secondary modern schools pupils normally attended a four-year course leading to the School Leaving Certificate. Instruction was offered in some ten subjects including English, mathematics, science and vocational subjects (manual instruction). This certificate was expected to be the final step prior to completion of secondary school and originally there was no external examination at the end of the course. However, in the 1950s a fifth year was introduced and those who did continue could sit the General Certificate of Education (GCE) examination. As more and more adolescents continued to this stage, a new type of external examination was introduced for fifth-year pupils: the Certificate of Secondary Education (CSE).
- Secondary technical schools were meant to provide the technical education that citizens in a modern society would need. They catered for those students who failed the eleven+ examination, enrolled in modern schools and then gained access to technical studies. It never became a popular option.
Historical overview

- Grammar schools, on the other hand, catered for those pupils who were selected and who intended to pursue studies beyond the O-level GCE. They enrolled the most academically gifted students between the ages of 12 and 19 years old.

Fee paying in local authority schools was made illegal and the school-leaving age gradually increased from 14 to 16 years. All-age schools catering for children between 5 and 15 years old were abolished. In order to raise the parity of esteem between different types of schools, a large amount of resources was poured into secondary modern schools. Teachers’ salaries were also restructured to reduce the premium enjoyed by graduate teachers who were characteristically found in grammar schools (Kogan, 1978: 30). However, the system remained meritocratic and largely unequal: Children from the working class were very much under-represented in grammar schools.

In the 1960s the concept of equity began to dominate the education debate. The eleven+ secondary entrance examination was then phased out and comprehensive schools – amalgamating grammar and modern schools – were gradually introduced. These schools accept all pupils regardless of ability and there is no selection process for entry.4

Since then secondary education has consisted of a minimum of five years’ education, although an additional two-year course is offered to those who wish to continue in secondary education. Education of the 16 to 19 age group takes place either in secondary school, in sixth-form colleges or in further education colleges. This cycle lies between secondary (upper secondary) and higher education.

Throughout the whole period described above and until now, independent (private) schools have existed, which prepare the country’s elite. These

4. Yet although mixed ability teaching has been promoted, banding and setting according to learning ability still exists.
used to be single-sex schools but are nowadays increasingly becoming co-educational. Entrance to these schools was (and still is) prepared in primary prep schools.

The 1944 Act determined the way in which the national education service was to be locally administered: LEAs were to build and maintain the county schools and one third of the schools provided by voluntary (usually religious) bodies. The latter were to appoint and pay teachers as well as allocate resources to the schools. They were given the responsibility of providing sufficient places for 5 to 16 year olds. It was up to them to decide how many of each kind of school they would provide and the weight they would put on different parts of the eleven+ test. Although they set the length of the school day and terms, they had no control over the curriculum, which was decided upon by each school head in consultation with the governors.

In the 1970s the debate concerning the quality of education and the teaching process, which did not sufficiently emphasize basic skills, became more intense. There was a growing feeling that the education system was out of touch with the needs of Britain to survive in a highly competitive world.

In the 1980s the central government took several measures to increase quality. A series of education acts were passed that introduced the National Curriculum, fixed standards (‘National Targets for Education and Training’), set up arrangements for testing and league tables and strengthened the inspection service (OFSTED). Just as France started decentralizing to territorial bodies, the trend in the United Kingdom was to increase central control, diminish the importance of local authorities and give more management responsibilities to schools. Partnerships with parents were established and parents’ roles in governing bodies strengthened at the same time as their right to choose schools was instituted. All of these trends will be discussed further below.
3. Evolution of secondary school enrolment in European countries

Although different European countries have different characteristics, multiplying the examples would be iterative. In spite of all their differences in culture, religion, and political and administrative systems, Western European countries have a number of common features in the respective histories of their education systems.

In almost all countries elementary education was free and compulsory by the end of the nineteenth century. This measure was first introduced in the protestant countries of Northern Europe, then in the countries of Southern Europe.

A willingness to expand secondary education was also expressed by public authorities in many countries; however this level remained accessible to the limited number of young people who would form the intellectual elite.

In many countries a dual or triple system was created, which subsisted until the Second World War and beyond. One system of upper primary/senior schools that focused on the ‘three Rs’ catered for the majority of the population in rural areas and unskilled workers in industry. Another system, which in some countries eventually merged with the first one, provided modern secondary education that led to entry into the world of work or vocational education after three to four years. This system trained the skilled workers and employees required by the European economies, which were undergoing industrialization and rapid technical change. The last, more academic sub-system was geared towards the needs of a small elite that would continue on to higher education.

Generalized primary education helped consolidate the emergence of democratic governments; it trained the necessary labour force for agricultural
development, and later on for industrialization. However, in itself it did not affect the class system and it was rarely a means of emancipation for individuals. Secondary education, which was selective and organized in dual or triple tack, recruiting children from different social backgrounds, largely contributed to reproducing and consolidating existing social inequalities and the class structure (Sauvy, 1973).

It was only after the Second World War that secondary education really began to expand and undergo substantial reform. A first wave of expansion concerned lower secondary education: This took place in the 1950s in the United Kingdom, in the late 1960s and 1970s in France, and even later in some other countries. The second wave of expansion concerning upper secondary education occurred only in the 1980s and 1990s.

Expansion took place thanks to a combination of several factors. First, due to economic factors: Economies were in need of a better-educated labour force at the same time as they were in a position to finance such an expansion. Second, political factors intervened: Equity in access to secondary schooling became a serious issue and forced governments to expand school provision. Last but not least, a growing demand for more education was observed among families. This demand was fuelled by the large differences in income earned by university and secondary school graduates and primary school leavers. Later on it was the high level of unemployment among lower secondary school leavers that encouraged attendance at upper secondary schools.

The case of the United States, which will not be discussed in this chapter, is slightly different, however, as access to secondary education there was opened up much earlier. The objectives were essentially political: to favour the successful integration of numerous migrants into American society, develop a feeling of American citizenship and ensure the success of a democratic society.

5. It also occurred in the Netherlands and Nordic countries.
6. These include, for example, Spain.
Historical overview

Figure 1.1 Gross enrolment ratios in secondary education (1950-1995)


Data not available for Finland and Norway for the years 1950 and 1955 or for the Netherlands for the year 1950.
Data for the United Kingdom in 1950 and 1955 apply to England and Wales.
Part two
Trends in lower and upper secondary education in OECD countries

In this part we shall review the organizational patterns as well as the major trends that have affected different aspects of secondary education over the past years. These include: goals and structures; access, flow and retention; curricula and content; teaching and learning methods; training of teachers; examination, assessment and evaluation; governance, management and accountability; and educational financing. Before we discuss these issues, it is useful to describe briefly the context in which such trends and reforms have emerged and the changes that brought them about.

1. Context and general trends affecting secondary education in OECD countries

Several elements in the social and economic environment have seriously influenced education policy over the past 30 years, making it necessary to adjust the organization, coverage, content and management of secondary education. Among these factors the following deserve a particular mention: the economic crisis of the 1970s and 1980s, which was followed by the rise in youth unemployment; technical change and its impact on occupational structure and employment; the emergence of a knowledge-based society and globalization; and the increasingly multi-ethnic and multicultural character of society.
1.1 The economic crisis and rise of youth unemployment

The economic recession in the 1970s and 1980s that followed the 1973 oil crisis forced countries to restructure their economies. Faced with huge deficits, several countries were forced to reduce the growth of their government spending and thus undertook a series of reforms associated with deregulation and privatization. Reducing government spending inevitably led to efforts to rationalize educational spending. Several measures aiming to increase cost effectiveness in educational expenditures have been introduced, such as decentralization, school autonomy and privatization.

On the other side, the economic slowdown along with the continued development of automation and industrial delocalization led to a serious rise in unemployment, which particularly affected young people and women. In many countries cyclical unemployment was transformed into long-term structural joblessness. Even after the return of economic growth, full employment as it existed in the 1960s did not make a comeback. In 1996 unemployment rates among 15 to 19 year olds reached 41 per cent in Spain, 24 per cent in France, 16 per cent in the United Kingdom and 8 per cent in Germany. Furthermore, young people entering the labour market, and particularly secondary school leavers, went through long periods of working part time, doing casual work and undergoing short-term employment before finding a regular full-time job. At the same time the wages of the least qualified white-collar workers declined sharply as demand from firms for staff in this category fell by some 20 per cent between 1960 and 1990.

High and lasting levels of unemployment among young people and secondary school leavers, while the demand for high-level skills was on the increase, prompted governments to increase opportunities for youngsters to complete upper secondary education. Different strategies aiming to better prepare young people for entering the world of work were explored. In most countries emphasis was placed on vocational education at upper secondary
level. Apprenticeship schemes and other schemes alternating education or training with work were developed. Several decision-makers announced that no person should leave the education system without having acquired a vocational qualification. Another consequence of this development is that an increasing proportion of young people now combine work and study while in secondary or post secondary education.

1.2 Globalization and the knowledge economy

The last 30 years have been marked by radical social and economic change in OECD countries. Most of these changes were driven by technological change and globalization; that is to say the worldwide re-organization of economic activity following deregulation of financial markets and the integration of world markets made possible by the new information technology. Globalization has had a tremendous impact on work organization and occupational structure.

1) *Globalization has a real impact on the types of jobs offered, work organization and the skills required.*

Most countries have witnessed very rapid changes in their occupational structure. The number of people working in agriculture and industry has declined sharply in the last 30 years while the proportion of people working in services has increased, reaching 71 per cent in France and the United Kingdom in 1998. This of course has had a tremendous influence on the kind of education offered. At the end of the twentieth century, western economies rely more on the flow of information and on new knowledge than on industrial production for their growth. They are said to be ‘knowledge’ or ‘post-industrial’ economies.

Globalization creates an enormous challenge for education systems and learning institutions. In modern globalized economies, production is increasingly
focused on highly knowledge-intensive products and processes. More flexibility is required on the part of employees who are asked to carry out multiple tasks and may have to change occupations several times in their lifetime. The higher the quality of education and the broader it is, the easier it will be for workers and employees to acquire the skills and knowledge required in the different posts they will be asked to occupy. Secondary education is thus required to provide young people with a basic academic foundation that is sufficiently broad and lasting so as to form the basis for future mobility and learning.

At the same time, better incomes for people with the highest qualifications fuel the demand for more advanced education and training; more and more people continue some kind of studies after secondary education.

2) *The more educated a country's population is, the more likely it is to attract global financial capital.*

Globalization has also sharpened competition between countries and among firms. Most governments attach a great deal of importance to education and to the skills of its labour force, regarding these as key to competitiveness in a globalized world. The neo-liberal ideology and competition associated with globalization encourage governments to cut back on public expenditure and this policy somewhat affects expenditures for education. There has been a shift from a policy centred on resources and inputs to policies concerned with outcomes. Public policies in OECD countries are geared towards ensuring and enhancing quality in state-financed education systems as human capital is considered a crucial factor for economic growth.

An organized and efficient state system that oversees the rules of the game and applies a consistent economic and social policy is seen as contributing to an increasingly competent population and qualified workforce. A weak and inefficient state system would have the opposite effect. A pattern that is emerging is that governments are playing a regulatory role, promoting through

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proper financing mechanisms quality and equality of opportunities and reducing hierarchically managed administration. Decentralization is occurring in an increasing number of countries, combined with more power given to the central authorities to fix standards and evaluate institutions. OECD countries are increasingly monitoring the quality of their education systems and promoting regular assessment of pupils’ and students’ knowledge and competencies.

International evaluation mechanisms have also been developed that allow comparisons to be made regarding the competence levels of young people in different countries at a given age. These surveys make it possible to evaluate various aspects of education systems in accordance with international standards: The results of these surveys represent an effective form of pressure on countries to increase the quality of their education.

3) Two key words: flexibility and employability.

As discussed above, the labour market and job patterns have changed substantially; young people must be prepared to change jobs and sectors of activity several times during their lifetime. Employability is becoming a key word. Equally as important as subject knowledge is the capacity to act efficiently in a number of situations, a capacity that builds on knowledge – both general and specific – but is not limited to this: It also builds on a series of transversal skills such as creativity and problem-solving skills.

Statistics demonstrate that those who are the least educated are also those who will make the least effort to educate themselves during their working lives. In a situation in which education must reconcile two different aims and prepare people both for existing jobs and jobs not yet created, continuous training of the workforce is brought forward to sustain a competitive spirit (Delors, 1996). Secondary education is increasingly seen in a lifelong learning perspective. Young people must be given the foundation skills on which to build further learning. They must be trained so as to be able to face uncertainty, assume self-responsibility and solve problems that are not yet known.
1.3 The role of education in multicultural societies

Populations in OECD countries are becoming increasingly multicultural. This is not new for the many among them that are traditionally immigrant-inhabited countries (such as the USA, Canada or Australia) or for those that have retained links with their former colonies. More recently, even countries that used to be relatively culturally homogeneous (such as the Nordic countries) are becoming multicultural. Migrations are the result of the globalization process but more importantly stem from increased disparities in the wealth of different countries and regions in the world as well as from political instability. This has consequences for education systems. Secondary education prepares individuals for their social and political role (involvement in political life). This leads to even greater emphasis being placed on social values.

According to the Delors Report, primary and secondary education must be supported by four pillars: learning to know, learning to do, learning to be and learning to live together (Maclean, 2001). Besides focusing on the accumulation of knowledge for economic purposes, education systems must also focus on values and standards to enable young people to find their bearings more easily in a world undergoing constant and rapid change. The study entitled Defining and selecting key competencies (Rychen and Salganik, 2001), conducted by the OECD and the Federal Department of Swiss Statistics, suggests that skills acquired throughout life which are geared towards a harmonious private and professional existence should target three areas:

1. the ability to act independently and thoughtfully;
2. the ability to demonstrate initiative, assess oneself, make decisions, possess a certain degree of mental complexity consistent with abstract thinking; and
3. the ability to appropriate social values and standards and join and be able to live in mixed social groups.
1.4 The demographic challenge

Western education systems simultaneously face two major demographic challenges: One is the decline in the proportion of the school-age population; the other, more troublesome reality is the ageing of the population. On one hand, the stabilization of the school-age population facilitated in the short term the financing of both secondary schools and the expansion of higher education. On the other hand, this means that today’s youth will be required to work much longer than their parents. As technological change leads to subject knowledge becoming rapidly obsolete, the importance of lifelong education and the need to educate people in how to continue learning is once again emphasized. The ageing of the working population is another challenge. Indeed, the teaching profession is being particularly affected by this change: In European countries two thirds of the teachers are over 40 years old. One third of French lower secondary school teachers are aged 50 or over, while in Germany and Italy the corresponding proportion is as high as 40 per cent. Recruiting new teachers will soon be an issue as many teachers are expected to retire soon. The ageing of the population is often accompanied by a lack of enthusiasm for the teaching profession among younger generations. Specific measures will have to be taken to raise the prestige of the teaching profession.

2. Goals, functions and structural organization of secondary education

2.1 Goals and functions

In addition to the more overarching, contextual and social goals outlined in Section 1 above, there seems to be a fairly broad consensus in the OECD countries studied concerning certain goals related more specifically to secondary education. The most important of these are the following:
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1. Secondary education should be an integral part of the whole education system seen in a lifelong learning perspective. This implies that access, admission criteria, content, organization, methods and delivery must increasingly be placed within this context. For this reason, particular importance is given to achieving a smooth transition from pre-school to primary, from primary to secondary and from secondary to the world of work or to higher education, such that the whole education system provides a good basis for lifelong education and training.

2. Every child and young person should have the right and the obligation to complete at least nine or 10 years of compulsory schooling, and as many as possible should have the right to continue as far as 12 or 13 years without making the final two or three years compulsory. There is growing recognition that a completed upper secondary education, with either a vocational or a general emphasis, is a prerequisite in the present labour market and in the context of a complex and demanding future.

3. Secondary education should be accessible to all regardless of socio-economic background, ethnicity, sex or learning ability. The principle of equity, with particular emphasis on catering especially well for disadvantaged groups to counteract their disadvantages, is high on the agenda in all countries.

4. Secondary education should build on primary education and enhance learning in relation to three main objectives:
   (i) to provide basic and general education for further learning;
   (ii) to start preparing young people for the world of work; and
   (iii) to continue inculcating cultural and ethical values to prepare them both for active participation in a democratic society and for a meaningful life.

5. The delivery of secondary education should be adapted as far as possible to the needs of the individual in order to develop each student’s potential.

6. Emphasis should be put on developing basic skills such as reading and the mathematical and scientific literacy of students. However, this should not be to the detriment of other types of knowledge, skills and values.
that are also considered important for adult life and work in the home and in society.

7. Greater emphasis should be placed on vocational and technical education and training – primarily in upper secondary education – and the status of vocational education in relation to general academic secondary education should be enhanced.

8. Contents and outcomes, delivery, organization, assessment and use of resources should be continuously evaluated to ensure that the best possible learning quality is offered to all.

9. Compulsory secondary education, when provided by the public authorities, should as far as possible be free of charge.

10. Securing good and sufficient provision of secondary education should be the responsibility of the public authorities. However, room should also be given for the establishment of private secondary provision, with or without the support of the public authorities.

The goals outlined above apply more or less to both lower and upper secondary education. The greater emphasis in lower secondary education is on providing basic and general education rather than on preparing students for the world of work. The emphasis in upper secondary would be more directed towards preparation for higher education and for securing skilled workers for the workforce. For these reasons lower secondary education generally tends to be comprehensive, whereas upper secondary tends to be more diverse and offer more options.

All countries studied consider providing qualitatively good lower and upper secondary education for the great majority of young people to be a prerequisite for the economic, democratic and social progress of the country. There is also great emphasis on having adults who do not have these qualifications to complete lower and upper secondary education (or the equivalent). This is considered necessary for a flexible and dynamic labour market.
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2.2 Structural organization

The organizational structure of the education system in OECD countries, including secondary school, contains a number of differences but also some commonalities. Some of the most apparent similarities are:

1. Practically all countries divide basic education into three stages: primary education, lower secondary education and upper secondary education;
2. A vast majority of countries impose compulsory education from the age of five or six (although in some countries the starting age is four or seven), often preceded by a non-compulsory pre-school phase that in some countries is considered more or less part of the formal education system;
3. Practically all countries/states impose compulsory education of at least nine or ten years’ duration. A few provide additional full or part-time compulsory schooling for another one to three years;
4. Most countries allow 12 or 13 years to complete upper secondary education, at the end of which students may receive a skilled worker’s certificate that qualifies them for professions in the world of work (in some countries this certificate also gives access to higher education) or a general education diploma that gives access to higher education.

There is a trend towards placing greater emphasis on continuity within the whole basic education system rather than on division into different levels and categories.

Some countries, such as the Nordic countries, have a single curriculum from grade 1 through to grade 9 and try to keep the students in the same schools. Others develop one continuous curriculum from pre-school through to the end of upper secondary (e.g. different states in the USA). Yet others, like France, may provide primary and secondary courses in different schools but create curricula at primary and lower secondary levels that overlap in
order to ease the transition from one stage to the next. Some countries automatically promote all students all the way from pre-school to upper secondary. Quite a few countries also spend a lot of time and effort helping and supporting students – and their parents – as they move from one level to the next and experience the shock of having to deal with several subject teachers instead of with just one class teacher or must adapt to curricula and teaching methods that are very different from those to which they were exposed in primary.

This trend towards linking the different levels appears to be accelerating, mainly due to the fact that practically all countries want to see whole age groups move through the system from pre-school to the end of upper secondary as smoothly as possible. A divided system, which still exists in many countries, seems to be perceived more as an impediment than as a practical tool in aiding age cohorts to efficiently complete the system.

In spite of the similarities outlined above, the numerous differences outweigh them. There are in fact many different structures; however, four main models of secondary school organization can be identified:

1. Some countries emphasize the connection between primary and lower secondary (e.g. Nordic countries such as Norway and Sweden) and combine these two levels with a common curriculum, sometimes keeping students in the same schools so as to minimize the number of decisive choices that students must make until they have finished lower secondary. In this model, little emphasis is put on exams for selection purposes and little or no selection is practised. Some kind of an exam is sometimes, but not always, given at the end of lower secondary, partly as a means of national control to ensure that schools comply with curriculum requirements and partly for the selection procedure and requirements for upper secondary education.
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2. In other countries, such as England and Scotland, priority is given to connection and continuity within secondary education. In this model curricula and structure are developed for both lower and upper secondary, with the same schools, teachers, administrative staff and governance. Although continuity throughout the whole of secondary education is emphasized in this model, this does not mean that all students continue to the end of upper secondary. Some students may leave after completing lower secondary, which is normally the end of compulsory education. There may be exams and other types of assessment after lower secondary leading to the award of diplomas or other types of certification; however, the transition from lower secondary to upper secondary is easier than in the model described above.

3. The third model, common in some states in the USA, organizes primary (often including pre-school) and all of secondary into one continuous and well-connected sequence with one curriculum. There may be a formal division in primary, lower secondary and upper secondary; however, the emphasis is more on continuity in the complete system, good and efficient flow and smooth transitions than on formal divisions. Such a system does not preclude testing, exams and admission requirements throughout the sequence, but the whole concept is based on considered and planned continuity in content, methods, counselling, organization, testing, evaluation and governance.

4. In the fourth model, implemented in Germany and the Netherlands, students are guided towards different types of courses at the end of primary education. The core curriculum is generally the same in the different types of lower secondary courses; however, students who have followed one type of course are more likely to be guided towards vocational education at upper secondary level, while others who attended another type of course are more likely to continue in general education studies. Courses are often provided in separate schools, but in some cases (increasingly so in the Netherlands) they have been merged and are now provided in broad-based combined schools.
The objectives of both enrolling the whole age cohort in lower secondary – preferably also in upper secondary – and enhancing the learning achievements of youngsters who have a great variety of abilities and interests is an immense challenge. In fact, it is one of the most difficult challenges that countries and states must confront. Facing the same challenge of providing the necessary adaptability and diversity, countries have developed a multitude of organizational solutions.

This issue of organizational differentiation is also related to relatively strong political and ideological debate, which influences the choice between one of two main models. These two main alternatives can be labelled the ‘school-comprehensive model’ and the ‘school-diversification model’.

2.2.1 The school-comprehensive model

In some countries the principal emphasis is on having a mainly comprehensive system of education throughout lower and upper secondary. This means that all students stay in the same school for as long as possible (for example in provinces and states in Canada and the USA and in Norway).

There are different reasons for choosing such a comprehensive approach, one of which is the desire to reduce costs, particularly in countries that have a dispersed population. More importantly, proponents of this model believe that students from all socio-economic backgrounds, different ethnic groups and religions and who have different abilities should live and learn together for as long as possible. It is considered important that pupils with different backgrounds, abilities and interests learn to know and respect each other by studying in the same schools. It is also argued that this provides a good pedagogical setting to keep the whole age group together as it provides a ‘miniature society’ for the teaching and learning of life skills and democratic competencies. It also provides good opportunities to learn from each other; for the less able to learn from the more able and for those from one religious background to learn from those from another, etc.
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In quite a few countries this also involves integration and mainstreaming of pupils with different kinds of disabilities.

This comprehensive and integrated model (which is most common in lower secondary) creates a pedagogical challenge related to differentiation and adaptation to individual students’ pedagogical needs. This is the subject of much debate within and between countries. There are also variations in the way in which the model is applied, some versions placing greater emphasis on students’ integration and social mixing than others. These variations may be summed up as follows:

1. In some countries, such as Norway, the main rule is to keep all pupils together for as long as possible; not only in the same school but also in the same class. In this model the principle is to differentiate and adapt to individual students’ needs within the framework of an integrated class, more or less in the same way as is practised in primary education in most countries. This leads to considerable heterogeneity within the class. Some countries tackle this challenge by having two teachers in the same class (e.g. Norway), by introducing limited options (e.g. France at lower secondary level), by grouping pupils in different ways within the class (in some cases in groups that may be reminiscent of ability streaming), by letting the more able pupils help the less able, or by using ICT or other types of material or technology in their differentiation.

2. An alternative used in some countries is what may be labelled ‘school-based’ organized diversification. In this alternative pupils are kept together in the same school but are put in different classes or groups according to ability, aptitude or interest (for example in some provinces and states in Canada, the USA and Australia). Ability streaming – or banding as it is called in Scotland – may be exercised in some subjects – often in mathematics, literacy, natural science and foreign languages – but students stay together in integrated classes for the remaining subjects.
3. In some countries, such as Ireland or states and provinces in the USA and Canada, the school-comprehensive model is compatible with a large number of options left to individual choice following considerable counselling and advice. The number of such options available at lower and upper secondary school level (but primarily in upper secondary) can be high. Options are divided into small modules or into larger subject areas so that students can create their own combination of academic, practical or vocational subjects. Modules or subjects may cover a wide range of areas, some developed and decided upon nationally or at state level whereas others are developed and decided upon at municipal/district or school level. Modules or subjects are often divided according to levels of difficulty.

4. In other countries, like the Netherlands, pupils are placed in different streams according to ability or interests after primary or after a transition period of a couple of years, or into different departments within the same school (‘school within the school’) to cater for different interests, aptitudes or orientations in a more academic or vocational direction. Some countries also have separate departments for disabled students. (Read more about organization for the disabled in Section 3 below.) There are also countries or states/provinces that hold special classes – enrichment programmes or ‘accelerated programmes’ for talented pupils, for example – during the summer holidays. This version of the comprehensive model is fairly close to that of school diversification.

2.2.2 The school-diversification model

In lower secondary education the comprehensive model described above is definitely the most widespread in the 12 countries reviewed in this study. However, there are countries such as Germany where the dominant model in lower secondary education is a diversification into different schools for pupils after primary depending on the pupils’ interests, abilities and aptitudes. Schools are divided into two main categories: those preparing students for an academic career and those preparing students for a vocational
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career. There are also schools that combine these two options in one way or another. Sometimes admission depends on the advice given by the primary school combined with the choice of the parents/students; sometimes it is based on the results of exams or tests after primary school, although this is relatively rare.

**Box 1. How do the streaming and tracking practices of OECD countries affect the performance of 15 year olds?**

The results of the Programme for International Student Assessment (PISA) 2000 show wide differences between countries in the knowledge and skills of 15 year olds in reading literacy. “But the difference in the performance within countries is on average about ten times as great as the variation between country means. Catering for such a diverse client base and narrowing the gaps in student performance represent formidable challenges for all countries.” The approaches chosen by different countries to address this challenge varies a great deal. “Some countries have non-selective school systems that seek to provide all students with the same opportunities for learning and require each school to cater for the full range of student performance. Other countries respond to diversity by forming groups of students of similar performance … How do such policies and practices affect actual student performance? It is hard to give a clear answer, since such policies and practices are often applied informally within schools, and difficult to compare internationally. Nonetheless, the data form PISA 2000 suggest that both overall variation in student performance and the proportion of variation that is found between schools tend to be greater in those countries with explicit differentiation at an early age between type of programme and school. The data suggest that the effects of social clustering are larger in school systems with differentiated types of schools than in systems in which the curriculum does not vary significantly between schools.”

*Source: OECD, 2001a: 66-67.*
Tracking, streaming and school diversification are much more common in upper secondary education. Although pupils in some countries are required to remain in comprehensive schools until completion of upper secondary, most countries have several different types of upper secondary schools. The organization of upper secondary education may in some instances be quite complex, yet the most prevalent types of schools are the following:

1. **Vocational schools or colleges.** Pupils who want to/have to go into vocational education enter full time vocational schools or colleges (lycées d’enseignement professionnel in France, further education colleges in England) or enrol in an apprenticeship system with a combination of school-based education in vocational schools and enterprise-based training (as in Germany). Some countries have different types of vocational and technical schools that offer some or all courses, including both full time and part time courses, on the same premises;

2. **General secondary schools.** Pupils who want to continue general education move into (or stay in) academically oriented schools (for example the gymnasium in Germany, the Netherlands and Finland or the lycée d’enseignement général in France);

3. **Combined schools.** In several countries students go to the same school whether they want an academic/general or a vocational career (as, for example, in Norway). However, as not all schools can supply all the options – particularly in vocational fields – students choose a school where the option/stream they wish to opt for is provided. In this case the same school would normally contain the academic courses relevant for higher education and at the same time provide training in one or several vocational fields.

The school-comprehensive model and the school-diversification model presented above attempt to summarize what may be characterized as a complex pattern of organizational set-ups at lower and, above all, at upper secondary education level in the OECD countries studied. There is no unified structure...
or rule that applies to all, and different historical and cultural traditions seem to be an important reason behind the variations.

The picture is even more complex than the summary above. In some countries (e.g. England) so-called ‘specialist schools’ have developed for particular subjects like foreign languages, technology, mathematics and ICT. In other countries certain schools are managed by different ministries, such as the ministry of agriculture (as in France). There is also a whole variety of schools – often in a co-operative model between education and social/health ministries – which cater for socially disadvantaged students, pupils with major behavioural problems or young people in hospital or in jail. Similar co-operation is also common between education ministries and labour ministries to find suitable models for a combination of school and work options, particularly for dropouts or students on the verge of dropping out.

However, although the structural picture is complex certain general trends emerge:

1. More and more countries are going in a comprehensive direction, particularly in lower secondary education. Most countries find it opportune, for different reasons, to have the whole age group together in the same schools throughout lower secondary. There is much variation in the comprehensive school models that they apply (as shown above) and different countries have found different solutions within schools to cater for differences in their students. Yet more and more countries seem reluctant to stream according to ability and segregate students at this level. There are examples of the contrary, but even countries that enrol lower secondary school pupils in different schools emphasize the need to offer to the whole age group the same core curriculum. Much research measuring learning achievements has indeed shown that streaming and tracking do not result in better performance of pupils (see Box 1 on the 2000 PISA results).
2. Many of the countries that previously separated pupils into different tracks in a vocational or academic direction at the age of 11 to 13 (after primary) try to postpone guiding pupils towards a vocational stream until the very end of lower secondary. Others keep more or less all options open until the end of upper secondary, sometimes with the possibility of obtaining two diplomas – one for vocational qualifications and one for admission to higher education.

The main reason for these developments is probably due to the emphasis that practically all OECD countries now place on getting more or less the whole age cohort all the way through upper secondary education. As a result of this emphasis, they are concerned with developing a structure that is as coherent and continuous as possible while at the same time providing the necessary structural and pedagogical differentiation and adaptation to the diverse needs of all students.

2.3 Vocational and technical education and training

Promoting, expanding, improving and diversifying vocational and technical education and training are high priorities in most of the OECD countries studied. There are four main reasons for this:

1. It is essential for the economy and the labour market that more youngsters obtain a skilled worker’s certificate in some form or other as the need for unskilled labour in most sectors is decreasing.
2. A number of countries are concerned that a decrease in the status and standing of vocational education among parents and young people may have an adverse effect on enrolment in this type of education.
3. Countries who do not have a strong tradition of school-based or enterprise-based vocational education and training are trying to find ways and means of changing this situation, with the double objective of facilitating the insertion of young people into the labour market and
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providing more diversified options than mere general/academic education at upper secondary.

4. Technical and vocational education uses pedagogy different from that of general education, which is considered more suited to the needs and interests of certain groups of students.

Exact figures for the number of students choosing vocational or general/academic education are difficult to obtain and interpret, mainly owing to the variety and complexity and not least the many combinations of general/academic and vocational/technical education that exist in many countries, some of which are full-time, some part-time. OECD statistics indicate that the proportion of vocational and technical education varies considerably (see Table 2b, in the Appendix). In most countries half or more (between 50 per cent and 65 per cent of all students in Finland, France, Germany, the Netherlands, Norway and the United Kingdom) of all upper secondary students are enrolled in vocational/technical courses. Nevertheless, one country (Canada) has only around 10 per cent of its students enrolled in this stream, and another (Ireland) around 20 per cent.

There is a wide variety of school-based education, enterprise-based education or a combination of both in the countries reviewed. Most of the variations could be summed up in four main models. Certain countries identify more with one model than with another, but in fact not one single country relies on only one model.

1. A primarily enterprise-based model with an apprenticeship

Some countries have a strong tradition of the dominant model being the apprenticeship model (as in Germany and many other German-speaking countries). These countries may have up to two thirds of the age cohort in vocational education at upper secondary level, mainly in some form of apprenticeship combined with school education for the theoretical part.
Normally apprenticeship contracts are signed after completion of compulsory education/lower secondary; however, some countries also have some school-based preparatory vocational education at lower secondary level. As pointed out earlier in this report, choices related to a mainly vocational or general/academic educational future are made in some countries after primary or during the first half of lower secondary school.

The most traditional form of apprenticeship is that in which a young person signs a contract with an enterprise that takes educational responsibility for the practical training of the apprentice. Roughly around 50-70 per cent of the apprentice’s time is spent in the enterprise doing work and training activities, the rest of the time being devoted to theoretical education in basic subjects (national language, mathematics, sciences, social studies or foreign languages, depending somewhat on the field of vocational study) and theory related to the vocational field in question.

2. A primarily school-based model, often combined with placements (but not ordinary apprenticeship contracts)

In a number of countries this vocational education is provided in separate schools or colleges, usually starting after lower secondary. Schools provide workshops for practical training, and instead of alternating between school and enterprise theoretical and practical training is provided separately and/or is integrated in the same school. In order to get more ‘real-life’ experience, placements in enterprises for longer or shorter periods are often arranged, but usually the school remains wholly responsible for the formal education of the young person, including during placements (e.g. ‘sandwich courses’ education in France).
3. A diversified school-based programme

In other countries such as Scotland, Ireland, Australia and in certain states and provinces in the USA and Canada, vocational courses are offered as full-time or part-time courses (in the form of vocational options combined with mainly general/academic subjects) in comprehensive schools attended both by students wishing to enter university and those wanting a skilled worker’s certificate to enter the world of work (although in some countries these students may also continue in higher education). Vocational ‘subjects’ may either be divided into a large number of modules for the students to choose from or into larger vocational fields.

4. A model combining school-based vocational education with ordinary apprenticeship contracts

In this model, used for example in Norway, the first one or two years of upper secondary vocational education are full-time and school-based. During this time broad-based practical and theoretical education is provided within wide educational fields (for example the mechanics field, the technological field, social/health/nursing, trade and commerce, ICT and media). Theory related to each vocational field and general/academic subjects are either integrated in the practical part and/or segregated depending on the various circumstances in the different schools. Following this broad-based non-specialized education students sign apprenticeship contracts with enterprises, normally for a period of around two to three years, for specialized training. This ‘division of labour’ between school and enterprise is established for three main reasons:

1. Schools are normally the most proficient to provide broad and basic theoretical and practical education, laying the foundation for more specialized training and lifelong learning.
2. Enterprises are better equipped to provide the specialized aspect of training as they normally have at their disposal updated equipment and skilled people to provide quality specialized training.
3. With rapid changes in technology and the labour market, public upper secondary schools have serious problems, for economic reasons, in keeping up to date with specialized equipment and human training competencies.

These four models do not capture all of the structural nuances related to vocational education and training found in the different countries, and variations of several of the above models can be represented in any one country. In spite of this diversity a number of common features emerge. Thus, there is a tendency to increase the age at which students specialize and to maintain a common core of subjects in all programmes, whether vocational or general, so that clear and distinct boundaries between the two areas become increasingly blurred. Another trend is to develop within the same schools technical courses of longer duration that overlap with higher education; the boundaries between levels then become more blurred. A third trend is the willingness to expose students to some kind of work-based or hands-on experience before they complete their secondary education.

### 2.4 Private education

All countries included in the review have a greater or smaller number of private secondary schools. The percentage ranges from around 75 per cent in one country (the Netherlands) to 4 to 6 per cent for a group of countries (for example Finland and New Zealand).

The great majority of private schools are religious schools or schools with an alternative pedagogical philosophy. In some countries a large number of special schools for the disabled are private. In one country (Finland) few general or academic schools in lower and upper secondary are private; however, a fairly large share of vocational education at upper secondary level (between 15 and 20 per cent) is managed by the private sector. Some other countries, such as England, also have a tradition of independent elite schools, quite
often boarding schools without any religious affiliation, which charge very high fees that few can afford to pay.

The private school situation is also quite complex when all the reviewed countries are observed together:

1. In most countries there seems to be a positive and relaxed attitude towards private schools, although some countries appear much more open than others.
2. In the great majority of countries included in this review, the motivation for having private schools seems not to be the public authorities’ interest in saving public money, but rather the desire to allow different parent groups to have a democratic right to choose the school they want for their children, for religious or other reasons.
3. Countries that are more hesitant to allow too strong a growth of private schools are concerned about equity and equality; however, these are important issues in practically all countries.
4. In most countries public authorities set quite strict standards that private schools must attain before they can be formally recognized. These include using the same (or slightly adapted) curricula as public schools, having qualified and recognized teachers, participating in the same exams and assessments, submission to official inspection by inspectorates or by municipalities, and abiding by the same legal framework as public schools.
5. Government policies concerning the financing of private schools vary significantly from country to country, from full financing of private schools by the government once they are recognized and comply with the requirements set, to no subsidies whatsoever (see Section 9 below).
6. In most countries the percentage of private schools seems to be either relatively stable or on the increase. In one country (New Zealand), the number of private schools is decreasing as more and more existing private schools are becoming public.
In the OECD countries reviewed there is solid commitment from public authorities to take responsibility for providing a strong, qualitatively good and efficient secondary education for all pupils. Countries appear to consider secondary education – both lower and upper – very important both for each and every individual and for the country’s well-being and prosperity. In such a context private schools are asked to play an important role, provided they comply with the required quality demands.

3. Access, retention, flow and transition

3.1 Common principles

Although the various countries practise different models in relation to access, retention and continuity (which will be outlined below), certain common principles seem to guide more or less all countries in their deliberations:

1. There is strong emphasis on keeping all children and young people in the education system for as long as possible, preferably all the way through completed (but not necessarily “successfully completed”) upper secondary education.
2. When young people leave the education system they should have gained a formal qualification that can provide a good and easy transition into further education at universities or colleges and/or some kind of a skills certificate for the world of work.
3. All countries enforce a statutory obligation to retain every child and young person up to the age of 15 or 16 (in some cases up to completed upper secondary) in the education system on a more or less full-time basis. Those who do not comply with this requirement are liable to incur sanctions from the public authorities.
4. The emphasis in all countries is much more on keeping young people IN the system than on using different methods of selecting them OUT.
5. Much effort is put into providing counselling and guidance systems and into methods and means of preventing dropout and promoting good and efficient flow through the system for every pupil.

We shall review policies and practices regarding access to lower secondary, upper secondary, higher education and ways to facilitate transition to working life. We shall also discuss measures to improve retention and the case of students with special needs.

3.2 Access to lower secondary

Access from primary to lower secondary education can be summarized by the three different models used in the countries reviewed:

1. The great majority of countries offer *automatic access to lower secondary education* in the sense that all are admitted normally without any tests or other kind of admission requirements whatsoever. In many countries children may change schools; however, admission to the new school is not dependent on their performance in primary. Usually children go to the school that is located nearest to where they live.

2. In a few countries, such as Germany, there is some kind of *selection system* for access into different schools or courses in lower secondary. At the age of 11-13, children (and their parents) must make certain important choices, either because they are being selected for a differentiated range of schools leading to different educational futures or because they are being admitted to a comprehensive school with different courses depending on ability or interests. The methods used for selection may be ‘advice’ from the child’s primary school, which must more or less be followed, school entry tests or internal assessment in the last year of primary. Some countries also use psychological services to secure the best possible placement in accordance with each student’s abilities and aptitudes.
3. The third alternative is a modification of the second model above: Children are selected for a special school or course in lower secondary; however, the first one or two years of lower secondary are considered a transition or guidance phase (as in the Netherlands). This means that there is still a possibility of change or a ‘second chance’ if the evaluation or advice from the primary school turns out to have been inaccurate. In this model, as well as in the one above, parents are usually quite heavily involved in the selection process before final decisions are made.

The trend is that more and more countries are offering direct and automatic access to lower secondary education to the whole age cohort without any admission requirements.

3.3 Access to upper secondary

When it comes to access from lower to upper secondary, more or less the same models can be found as for transition from primary to lower secondary. However, automatic promotion to upper secondary is not as common as from primary to lower secondary.

Some countries, such as Scotland and Ireland and certain states in the USA, however, do allow more or less automatic progression from one level to the next. The emphasis in these countries on keeping students for as long as possible and developing them as far as possible within the given time scale is stronger than simply ensuring that they have reached certain preset attainment targets before allowing them to move on. Countries like Norway have given students an individual statutory right to progress to upper secondary education after having completed compulsory education, regardless of the results obtained in lower secondary. Other countries do not necessarily stipulate an individual right or obligation but do not demand any admission requirements other than completed lower secondary education, irrespective of the results obtained. In these countries, all options of further studies would usually be open to all
following completion of lower secondary, be it academic, vocational or a combination of the two.

A number of other countries have some kind of a selection procedure for admission to different types of upper secondary options based on results obtained at the end of lower secondary (such as in France). Moreover, in countries where automatic promotion is practised and where there are no specific or formal requirements for entry into any academic or vocational course at upper secondary level, admission can depend on results from lower secondary if there is competition to enrol in certain popular courses, be they academic or vocational. In other countries there are set requirements that require certain results in exams, tests and/or internal assessment to enter into special – particularly academic – courses in upper secondary school.

Finally, those countries who practise a selection procedure after primary or in the first two years of lower secondary school have, to a large extent, already decided which kind of course the student will pursue at upper secondary level. A sort of automatic promotion to upper secondary is applied in the sense that all students may continue and are even strongly encouraged to do so. However, several roads are blocked, partly because of choices made after primary school and partly due to assessment results and/or exams after lower secondary.

Even if upper secondary is not compulsory in most countries/states, the great majority of young people in the countries reviewed continue their studies at this level. In some countries (Finland, Germany, Norway and the Netherlands) more than 90 per cent of the age cohort continues after completing compulsory/lower secondary education. In other countries enrolment rates start to decrease at the age of 17 and fall more dramatically at the age of 18 (Table 2a, Appendix). The average enrolment rate of 15 to 19 year olds in full-time or part-time education in OECD countries varied between
70 and 90 per cent of the total age group in 1999, with an average for all countries of 76.9 per cent.

In brief, the main trend in relation to access to upper secondary education is in the direction of providing more automatic access. There is, however, a problem of dropout after compulsory education and some countries find it difficult to retain students until the end of upper secondary.

3.4 Promotion and retention in primary and lower secondary education

This section will deal with promotion by describing what practices different countries employ with regard to repetition if students do not achieve the standards expected.

The different practices of the countries reviewed can be summed up as follows:

1. A large number of countries do not practice repetition; that is, students do not repeat a grade in compulsory education if they achieve poor results (for example Finland, Norway and some states in Australia). The main rule is automatic promotion (which in some countries is labelled ‘social promotion’). Students follow the same year-group throughout. This also applies to students with different kinds of disabilities. The philosophy behind this practice is that:
   1) it is important for an age group to stay together for social reasons;
   2) repeating might be a waste of time and money for the individual and for the society in which he or she lives; and
   3) obliging children and young people to suffer the ‘defeat’ of repetition might lower their motivation and self-confidence and thereby be counterproductive to further learning.
Instead of trying to solve the problem of slow learners by allowing them to repeat the previous grade, these countries emphasize continuous pedagogical or organizational differentiation within the age group, and often within the class, to cater for individual needs. Some also give students extra time and/or extra help with homework, among other strategies, to alleviate the problems.

2. Some countries/states do have a system of repetition, such as France, some US states and Germany. Generally speaking, Southern European countries tend to practice repetition much more than Northern European countries. The extent of this practice varies considerably from one country/state to another, ranging from 4 to 20 per cent of pupils in a class. In some cases low-achieving students are given a ‘second chance' by being offered classes during the summer holidays, requiring them to sit a test when they return at the beginning of the new school year. If this test is not passed, repetition is compulsory. Some also provide summer courses to help students during the holidays.

The arguments vis-à-vis this practice are that:

1) It is important for pupils to acquire the knowledge and skills they need in order to be able to benefit from what is taught in the upper grades;
2) If some students start falling behind it may be difficult for them to catch up, thus creating a vicious circle which hinders students’ learning.

In some countries the cumulated effect of grade repetition has resulted in a substantial proportion of students being over-age at the end of lower secondary.

The trend is, if not to reject the practice of repetition, at least to reduce it and limit it to certain years such as the end of a school cycle or post-compulsory education. This indicates growing uncertainty as to the overall effectiveness of repetition as an educational approach in view of the
objective of stimulating and motivating as many students as possible to continue for as long as possible. Consequently the emphasis on new pedagogical methods seems to some extent to substitute or reduce the practice of repetition.

3.5 Transition to higher education

When it comes to the transition to higher education, four interesting developments in OECD countries must be noted:

1. Most countries encourage a greater percentage of the age cohort to continue into higher education. Over the last decades in many countries there has been a considerable increase in the proportion of students who continue their studies. A large percentage of the age cohort in higher education is seen as a very positive indicator, as a knowledge-based society requires a population which is as highly educated as possible.

2. There has been considerable differentiation of higher education as a result of the development of a whole range of more short-term studies (usually around two years) with a combined vocational and academic character. In some countries the boundaries between this part of the tertiary level and upper secondary education, particularly the vocational part of it, have become blurred and studies at both levels sometimes overlap each other. Another development is the fact that the dividing lines between these institutions of higher education and universities are also becoming less defined with greater possibilities of transition between the two.

3. In many countries – but not all – there is increasing pressure from students and families to gain access to higher education, particularly from lower middle-class families who realize that employment opportunities and salaries are greater for those who have a higher education diploma.

4. Partly as a result of the above points the admission criteria from upper secondary education to higher education are changing gradually. In
more and more countries access to higher education is being opened up for students with a mainly vocationally oriented upper secondary education. This is a consequence of the policy to enhance the status of vocational education, which is considered important for the work force and for a country’s economy, as well as the need to cater for the requirements of certain groups. Broadening the base of recruitment into higher education and recruiting a greater percentage of the age cohort at that level is also considered a priority.

Where this ‘opening-up’ of access to higher education for students from vocational fields has taken or is taking place, it is often combined with an increase in the amount of time allotted to more general subjects such as mathematics, literacy, social studies, science and foreign languages as part of vocational education and training.

There is also increasing recognition that vocational education and training per se is an important and valuable basis for higher education studies. In the spirit of lifelong learning, some countries are now further expanding on this idea by admitting students without a formal diploma or certificate from upper secondary education into higher education, on the condition that they possess recognized competencies from the world of work.

Notwithstanding the above, the majority of OECD countries still follow a rather selective admission system to higher education, particularly in regard to admission to universities. Usually admission is granted following acquisition of a diploma from upper secondary education, more often than not in full-time general or academic training.

- In some countries (such as the USA) admission is based on a credit system and how well the pupil scores in a combination of subjects. This system awards a certain number of credits in predefined subjects (whereas
the remainder may be various optional subjects, also including vocational and technical subjects).

- In other countries (like New Zealand) all or some universities require candidates to sit special entrance tests in addition to having an upper secondary diploma.
- However, the most common practice is to accept a recognized upper secondary diploma without imposing specific higher education tests.

As discussed above, the 1960s and 1970s saw an extension of the number of compulsory years of schooling from six to seven years to nine to ten years in most OECD countries. In the 1980s and 1990s many countries which had not taken this measure earlier saw a strong increase in the percentage of the age cohort enrolling in upper secondary, leading to the current situation in which the aim in more and more countries is to establish 12-13 years of continuous education for all children and young people. The growing emphasis today is on developing a more differentiated system of higher education with greater flexibility in admission criteria, possibly also making some years of higher education part of continuous education for all from pre-school to higher studies. This indicates that the ‘blurring’ of boundaries between primary, lower secondary and higher secondary pointed out earlier in this report is starting to or will soon occur between upper secondary and higher education. This will undoubtedly affect higher education, but also secondary education, particularly in regard to its goals, curricula, evaluation and assessment procedures and differentiation between general education and vocational education and training, among other aspects.

### 3.6 Entry into working life

Many OECD countries are concerned with the transition from school/education/training to working life, partly due to the worrying number of unemployed young people. This has also been part of an extensive project carried out by the OECD in many of its member countries. In the context of this report the following observations may be of greatest interest:
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1. Many countries, such as Germany, England, Finland, France, Norway and the Netherlands, pay a great deal of attention to vocational education and training and particularly to different models of apprenticeship training, as this form of training seems to provide easier entry and integration into working life for those who do not want to go on to higher education or for those who complete education after lower secondary or after one or two years of upper secondary.

2. Most countries are eager to make sure that all young people have a recognized qualification (for example England, France, Germany, Scotland and Norway) of some kind before they leave school – at least a recognized diploma for completed compulsory/lower secondary education.

3. All countries place considerable and increasing emphasis on providing systems for counselling and guidance on career options, further education, subject options in lower and upper secondary, etc. as an integral part of both lower and upper secondary education.

4. Some or all of the following measures for counselling and advice are used in the countries studied in the review: (a) appointing counsellors in the different lower and upper secondary schools (who only provide career guidance or a combination of career guidance and social/pedagogical/psychological assistance to students); (b) setting aside special periods in the timetable and curriculum for career guidance and learning; (c) offering career guidance as an integral part of curricula in different subjects; (d) allocating special days or weeks to placements in a work environment; (e) creating special departments in some schools dedicated to offering counselling and advice; (e) developing special software (often in collaboration with labour market authorities) for students to search for career options or further studies; (f) co-operating with social partners and/or different agencies to develop relevant material and arrange visits to the schools; (g) support agencies at municipal or regional level to assist schools in this important work.

5. In most cases there is close co-operation between the lower and upper secondary levels. This is particularly the case in countries where students
must make important decisions in the transition from one level to the next. More and more countries are developing a close link between secondary schools and working life. This may be done by creating different kinds of school-to-work options where students may be partly in school and partly in work (as part of the differentiation scheme and to ease transition), by introducing ‘entrepreneurship’ into the curriculum or ‘running your own enterprise’ as a subject option, or by establishing ‘contracts’ with individual enterprises or the social partners’ co-operative bodies for different co-operation projects (as for example in Norway).

The desire to ease the transition from school to working life has led most of the countries studied to emphasize the interaction between schools and the world of work. The time when secondary schools – in particular those providing only general/academic courses – lived more or less in ‘splendid isolation’ from contact with the world of work is, to some extent, over.

3.7 Admission and organization of education for students with special needs

All the countries reviewed have strong policies related to pupils with special needs, in particular those with physical or mental disabilities. The following principles are applied:

1. Disabled pupils or other students with special needs have the same rights to education and the same obligations as any other child or young person.
2. Practically all countries spend more resources on pupils with special needs – some countries considerably more – to provide them with education adapted as far as possible to their individual needs.
3. All countries put in considerable effort and a lot of good work to develop different types of visual and audio support material to help schools and teachers to properly adapt their teaching to these groups. In the last couple of decades ICT has been developed quite constructively in this respect as a useful means of providing teaching and learning support.
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Although the countries agree on the above principles there are quite a few differences in how and where education for pupils with special needs is organized and provided. The following points summarize the situation:

1. Some countries (such as Norway, Spain and some states in Australia) are moving towards a more or less completely integrated model in both lower and upper secondary education in the sense that disabled pupils and other pupils with special needs are integrated into ordinary mainstream schools rather than being placed in special institutions for one or more categories of disabilities. In these countries this type of mainstreaming is more or less dominant in primary, lower secondary and upper secondary. In some instances pupils with special needs are not only enrolled in the same schools as others of the same age-group: They also attend the same classes and are therefore taught by the same teacher, who may be assisted by an additional teacher who is specially educated for this role.

2. Some countries, such as Sweden, have taken measures to give these students access to mainstream schools, but to a lesser degree to mainstream classes. Instead, special classes are established or there may be special departments designed and equipped for this purpose. In this way it is possible for these pupils to mix with their friends who are in the same school, although not necessarily in the same class. In some cases there is mainstreaming of some pupils depending on their disability, while in others there may be separate classes or departments.

3. In a few countries there is a drive towards mainstreaming as many students with special needs as possible, and consequently towards moving these pupils out of special schools and into ordinary schools. Instead of getting rid of the earlier special schools, including their equipment and trained staff, these are converted into what may be labelled ‘resource centres’ and used to help mainstream schools to teach and cater for the special needs of these pupils. This may entail in-service teacher training, developing new pedagogical material for the schools, visiting schools to help with especially demanding pupils, helping and
training teachers in the use of special equipment and, for limited periods, taking pupils with very special needs for training in the earlier special schools.

4. Quite a number of countries still have a considerable number of special schools to accommodate disabled pupils (such as the Netherlands and Germany). A number of these special schools may be owned and run by private owners, yet wholly or partially funded by the public authorities in one way or another.

What has been described above concerning admission and organization of pupils with special needs is a somewhat simplified picture of what is in reality a much more complex system, depending on the type and degree of disability. There is a tendency to integrate more pupils with special needs into ordinary mainstream schools, be they public or private, giving them the same rights to education and training as others, allowing them more time if necessary, and adapting the delivery and resources to their needs in accordance with the principle of equity. In most countries parents would have a rather strong say in where and how their disabled son or daughter should be educated.

It must be added, however, that this policy requires additional resources and the challenges related to the mainstreaming of students with serious behavioural problems are genuine. Some countries are hesitant vis-à-vis mainstreaming such students due to the difficulties they may cause others.

3.8 Measures to improve retention

In line with the principle of keeping the age cohort in the education and training system for as long as possible, considerable effort is being put into measures to retain pupils in the system. Some of these measures have already been indirectly mentioned in this report and some will be dealt with in more detail later on under the sections discussing curriculum, assessment and teaching methods. Only an overview of the main philosophy and measures applied to reach that goal will be provided here.
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Lower secondary education

In primary and lower secondary education all the OECD countries studied apply one major measure: compulsory education. Parents and municipalities (or school owners in the case of private schools) are responsible for pupils’ enrolment and for ensuring that they receive education for as long as it is compulsory. The government is obliged to offer a place in school independently of where pupils live or their school records. Parents are also held responsible and liable to punishment, being brought to court or having any social benefits withdrawn if there is a breach of the statutory obligation. As a consequence most OECD countries have more or less 100 per cent attendance all the way up to 15 or 16 years of age.

However, in spite of a rigid principle of compulsory attendance getting pupils to attend school is not an easy task when it comes to unmotivated young people, particularly adolescents who would prefer to do something other than go to school. For this reason considerable effort is being made in lower secondary education to improve teaching methods, diversify content, use remedial teaching and generally make teaching and learning more interesting and appealing for everyone.

Some countries do, however, allow a few pupils in the last part of compulsory schooling to leave school either partly or completely on the condition that they be placed in a work environment, for which a contract and agreement must be signed confirming that this may replace ordinary schoolwork.

Most countries allow children of compulsory school age to receive home schooling. However, this is usually granted on the condition that the education that they receive is controlled and inspected by responsible authorities to ensure that the parents or guardians abide by their obligations pertaining to curricula and quality.
Upper secondary education

Very few countries/states have made upper secondary education obligatory. Nonetheless, as most of the countries have a rather strong political will and commitment to keeping as many students as possible in upper secondary education, emphasis must be put on measures other than the obligation to achieve this.

1. Considerable work is carried out to motivate and stimulate young people to continue from lower secondary to upper secondary school, preferably exhorting them to stay on until completion of upper secondary in either vocational or general education or in a combination of the two. Underlining the importance of having an upper secondary diploma or certificate to obtain an interesting and reasonably well-paid job helps achieve this. Some measures aim to encourage young people to select vocational and technical education (informing and motivating parents who believe that general and academic education is the only possible educational route to happiness in working life). This information and motivation process is often a co-operative effort involving school counsellors, various public authorities including labour market authorities, social partners and the media, and may be carried out through holding special orientation days, exhibitions, etc.

2. In most countries public upper secondary education is tuition free. There are examples of countries, such as the Netherlands, who charge fees in public education for upper secondary, but this is quite exceptional. In other countries students may have to pay for textbooks, other types of material like notebooks, and transportation costs. Special outings or excursions also have to be paid by the students. Although the amount of money paid by students for upper secondary amounts to only a small percentage of the total cost of education, the cost to individual families is not negligible and this may be an impediment to reaching the political aim of providing complete upper secondary
education for all. Thus some countries are in the process of suppressing all costs for young people going into upper secondary. Several countries provide scholarships to children from the poorest families to cover the cost of books and other expenses. In some cases scholarships are provided to cover room and boarding fees for students who must move far from their homes to receive upper secondary education. Public authorities may also meet transport expenses for pupils in upper secondary when needed.

3. As indicated above, more and more countries are trying to facilitate access to upper secondary education and ensure a smooth flow throughout by making access automatic or even a statutory right as well as by, in some rare cases, imposing obligatory schooling (for example part-time in the Netherlands and full-time in some states in the USA). They may also minimize formal admission criteria to facilitate transfer and stimulate further learning.

4. Several countries are diversifying the options and courses offered, which may include vocational, general, theoretical, practical, different combinations of vocational and general or combinations of school and work experience. The aim is to offer a variety that will satisfy on the one hand the requirements for working life and higher education and on the other the various interests and abilities of the individual learner. Many countries consider it important to let students decide whether to pursue a mainly theoretical/academic or a mainly practical/vocational course or a combination of both. Furthermore, innovations are introduced at upper secondary level in many countries to improve pedagogical practice so that this may be better adapted to each student’s needs and possibilities.

5. Some countries (Norway, Finland) allow extra time for pupils who require an additional year or more to successfully complete the course. Others allow students to make new choices if they are not satisfied with their chosen course.
6. In addition to what has been outlined above, some countries pay special
attention to adolescents who have dropped out of upper secondary and
provide them with alternative choices. Norway has introduced a statutory
follow-up service in all municipalities responsible for upper secondary,
with the mandate of following up each student who has dropped out of
school. The aim is to try to reintegrate them into the education system or
make sure that they get a paid job or a combination of school and work.
Similarly, the Netherlands has created separate dropout centres in each
region. Various co-operative programmes have also been established
between labour market authorities, social and health authorities and the
education system to provide adapted options for young people who have
dropped out or are in danger of dropping out.

In brief, retaining as large a proportion as possible of the age cohort up
until the end of upper secondary education is an increasingly important priority
in the majority of the countries studied. Most countries offer direct and
automatic access to lower secondary education to the whole age cohort and
facilitate access to upper secondary. Several measures are implemented to
solve the problem of dropout that occurs after compulsory education. These
extend from reducing the costs born by families to diversifying content using
new teaching methods, providing remedial courses, offering general, technical
and vocational education and emphasizing the interaction between the school
and the world of work. Providing a meaningful, relevant, interesting and adapted
education for the individual student appears to be the most promising strategy.
Whether the final result of this will be making upper secondary education
compulsory in all countries remains to be seen. Presently very few countries/
states have taken this step. Although the majority of OECD countries still
follow a rather selective admission system to higher education, the admission
criteria from upper secondary education into higher education are changing
gradually. A ‘blurring’ of boundaries will soon occur between upper secondary
and higher education, and this is bound to have an impact on the content of
both secondary and higher education.
4. Curricula and content

What should the content of lower and upper secondary education be? By whom and in what way should it be formulated? What balance should exist between traditional knowledge in traditional subjects, general and transversal skills, and social skills and values, which all countries also consider important? How should all this be assessed and evaluated? These are some of the questions that all the countries studied are grappling with.

There appear to be some common principles underlying reflections in the different countries:

1. Curricula should be made to meet the needs of the future, not of the past. In times of great and rapid change this is a difficult task. In the OECD work is being done to try to identify the basic competencies that all children and young people need for their personal and professional future. This is put in a lifelong learning perspective, in which basic education (from pre-school/primary to upper secondary education) should try to formulate the bedrock of knowledge, competencies and skills, and the rest should be left to learning and re-learning throughout life.

2. Curricula should be designed to cater for all students and not only a limited few. This is in accordance with the priority of keeping all pupils in basic education for as long as possible, with emphasis being put more on keeping students in than on selecting them out if they do not comply with the standards set. The challenge is therefore to find ways and means of formulating curricula in such a way that they act as guidelines for the teaching of all pupils, from the most able students to those with great learning difficulties.

3. All countries studied have a triple objective when content and curricula are discussed and defined:
i) Curricula should contain knowledge and skills in the more or less *traditional subject areas* of the national language, mathematics, natural and social sciences and foreign languages, among others;

ii) Curricula should contain guidelines for the teaching and learning of *social and personal skills*. Education is, and should be, an important arena for the socialization of all children and young people;

iii) Curricula should contain guidelines for the teaching and learning of *ethical values* (and in some countries religion).

Although all countries seem to agree on these three main objectives there are some differences in the weight that is put on each one of them in practice, not least how and to what extent each one of the three components should be assessed.

### 4.1 The formal status of curricula

All countries have some kind of curriculum for primary and lower secondary education that is formulated at the national level (or at the state or provincial level in a federation). Most countries also have curricula set and endorsed in the same way for upper secondary; however, curricula for vocational education and training may, in some countries, be developed more locally.

Some countries design curricula for the whole sequence, from pre-school till the end of upper secondary, to enhance continuity and good connections from one level to the next. Others elaborate one curriculum for primary, one for lower secondary and one for upper secondary. Another group of countries combines primary and lower secondary (sometimes including pre-school) with a separate curriculum for upper secondary, and a final group combines all of secondary.
When it comes to the formal status of these curricula, countries fall into three main groups:

1. A first group of countries (which includes France, Finland and Norway) *formulates and formally endorses curricula nationally* (usually by the ministry or by a national government institute of some kind) and makes them mandatory for all schools (including in most cases private schools, with some adaptations if necessary). This does not necessarily mean, however, that no decisions are left to the schools. Some countries leave some ‘open space’ for schools or teachers, which is either set as a percentage of teaching time or by having a framework design of the curricula that gives room for some local variation. Usually, but not always, these countries decide nationally the number of teaching periods to be allotted to each subject or to each part of the curriculum.

2. Other countries, such as Scotland or England, develop *core curricula at the national level but do not impose them on schools*. They are labelled ‘guidelines’, ‘advisory’ or ‘essential learning areas’. This implies that formal responsibility for finally deciding what is to be taught at what stage and how much time should be devoted to it is left to the municipalities/districts or to the governing bodies of the different schools. Although it is not mandatory in the formal sense, the inspectorates (in countries where these exist) normally ‘check’ whether the schools or municipalities ‘comply’ with the guidelines given by government. Exams and assessment systems are also based on these curriculum guidelines. This means in practice that what is given by way of freedom to the schools and municipalities or districts with one hand is, to some extent, taken back by the other.

3. A third group of countries (for example Canada, Australia and the USA) includes those that are organized in some kind of federation comprised of states or provinces, or those where there is a regional political level. In these countries national governments normally formulate some general national policies, but the formulation and final decision on the formal
status of curricula is left to the states, provinces or regions who either make them mandatory or advisory (see the two different models above).

4.2 Basics and other competencies

In most countries there is debate underway on what, generally speaking, should be emphasized in curricula. It is difficult to group countries into very distinct categories as the boundaries are not very clear, but below is an overview of those which are the most important:

1. A first group of countries, which includes England, New Zealand and some provinces and states in Canada, Australia and the USA, gives high priority to ‘the basics’, usually defined as numeracy and literacy. Most of these countries also include science and a foreign language among the basic subjects. In some countries this particular emphasis has been on the political agenda for some time. However, in others it is a more recent phenomenon; a shift which to some extent was caused by the results of different international studies on learning achievement (such as TIMMS and PISA) where competencies in these areas are compared and where there is a desire to appear as the best in a competition situation. The stress laid on the basics is apparent from the time devoted to these subjects (or competencies) but also from the way in which curricula are constructed. Instead of describing what students should learn about in the different subjects (content-based curricula), rather precise and measurable output-based ‘attainment targets’ or ‘standards’ are set. It is usually left to the schools to define the content and methods of delivery to reach these attainment targets. Instead of detailing the contents of what is to be taught and what teaching methods are to be used, the central, state or provincial authority develops systems of assessment to measure to what extent attainment targets have been reached. In their endeavour to reach attainment targets in the defined basics, the countries identified above do not neglect other important subject areas.
or types of skills and competencies. However, with so much priority
given to the first group of subject areas, and with students, schools,
teachers and also municipalities often being defined as successful (or
the contrary) according to the extent to which they succeed in these
basics, it is natural that more attention be given to these subjects than to
other fields of learning.

2. Another group of countries (which includes France and Germany) is
more ‘traditional’ in its approach to curricula compared to the group
above in two different ways:

i) These countries give more equal importance to the various subject
areas defined in the curricula. The emphasis here is more on
developing the ‘integrated human being’ than on concentrating on
a few defined basics. This means that the subjects and subject
areas offered can normally be broader and more numerous and
that much attention is also given to ‘soft’ knowledge such as values
and developing democratic and citizenship competencies. Time,
attention and assessment are more evenly distributed over a wider
range than what is described under point 1 above. This does not
mean that the defined basics under point 1 are not considered
important; in all countries these basic subject areas are given
considerable weight and attention. However, the degree of attention
and priority, not least in the signals from central authorities, may
be different.

ii) Usually curricula are more content-based with broader objectives
that may not be as easily assessable and comparable over time as
the attainment targets described above.

The differences underlined above are, however, progressively
diminishing. In some of the countries/states which were for some time very
basics-oriented, criticism has arisen over the fact that other competencies
and subject areas have been underestimated and not given enough priority.
This has led to a broadening of perspective: Attainment targets, and to some
extent also assessment priorities, have been developed in a broader range of subject areas, and a number of transversal skills and competencies not directly related to the basics have been introduced.

There is also a movement in some of the more ‘traditional’ countries in the direction of placing stronger emphasis on the basics and on the use of attainment targets instead of more content-based curricula. Indeed, it is recognized that low reading ability, for example, is not only a problem in itself, it also makes other subjects much more difficult to learn and understand. Greater emphasis is placed on the basics without losing the broad-based perspective described above.

4.3 Subjects and skills

Lower secondary education

Practically all countries prioritize a fairly broad set of subjects and competencies for all pupils in primary and lower secondary education. Generally speaking, relatively little room is given to options, although this varies somewhat between countries depending on their general policy towards diversification and specialization in lower secondary. The subjects that practically all countries make compulsory in their lower secondary curricula include the national language, mathematics, natural sciences (either segregated into physics, chemistry and biology or integrated into one or two subjects), social sciences (either segregated into history, geography, civics etc. or dealt with as one integrated subject), physical education and creative/aesthetic subject areas. In addition, some countries include a foreign language, religion, technology, health and home making as separate and obligatory subjects. The number of compulsory subjects varies from seven or eight in some countries (New Zealand and Ireland) to 16-17 in the USA and the Netherlands, with most countries having around 10-15 (see Appendix). An effort has been made in some countries to integrate compulsory subjects into discipline areas. How this is implemented in practice, however, is not known.
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Most countries offer some optional subjects in lower secondary. This may range from a few very restricted and in one sense ‘obligatory’ options such as choosing a foreign language (as for example in France) to a fairly long list of electives ranging from traditional academic subjects to practical, aesthetic or sports-related offerings (as in several states in the USA, Canada, England and Ireland). In some countries all students are expected to participate in sports activities offered in schools. Some countries also provide opportunities for students with a special interest in subjects, such as music, that are not offered at their school to go to another school or institute to attend these classes. Some countries also have various kinds of vocational options in lower secondary school, although most countries postpone this until upper secondary.

It is to be noted that the combined number of compulsory and optional subjects adds up to a fairly high number of subjects, which can be disadvantageous in two ways. First, there is a danger that pupils will be given a fairly fragmented vision of the world. Second, transition between primary and secondary education is made somewhat difficult for slow learners. In most countries each subject is taught by a separate teacher, thus each pupil must deal with a high number of teachers, and each teacher with a very high number of pupils (sometimes over 500 pupils), making it difficult to establish a good contact between pupils and teachers. Several pedagogical approaches have been developed that try to overcome this issue. These approaches will be further explored in the next section.

A development in many of the countries under review is the emphasis on skills and competencies that are not directly subject-related but rather subject-transversal. Most countries have a combination of both traditional subject divisions and transversal competencies, expecting the latter to be taught and practised by teachers in all subjects. Such transversal competencies might include critical thinking skills, democratic skills, ethical skills, learning skills, entrepreneurial skills, social skills, decision-making skills and others. Countries emphasizing these skills in addition to ‘ordinary’ subject areas seem to
experience difficulties in developing satisfactory methods for assessing such competencies.

**Upper secondary education**

At upper secondary level the curriculum is much more diverse from one country to another, from one stream to another (general versus vocational), and from one school to another. Some countries still have a national/state curriculum; others do not. Some have preset ‘menus’ of compulsory subjects that educate students in different courses or streams (such as in France) while others do not. Some countries encourage early specialization, where students take only a few subjects in preparation for the secondary leaving examination (Germany and England); others maintain a fairly wide and broad education with a good number of compulsory subjects in spite of specialization. Some countries prepare for a national public examination, in which case the authority responsible for examining and certifying pretty much defines the curriculum, and in other countries the school itself is the certifying authority and universities define their own entrance requirements. In almost all countries students have much more scope to specialize and a larger range of electives is usually provided.

The following gives an illustration of the variety of cases:

- In countries such as France, the central authority for different streams and specializations defines the curriculum. The central government specifies the number of subjects in each ‘stream’ (type of baccalaureate). Students must still study between 9 and 12 compulsory subjects as well as taking optional subjects whose number is much higher than at lower secondary level.
- In countries such as England and Wales or Australia, there is no national curriculum at upper secondary level. The curriculum is therefore likely to be specified by the authority responsible for examining and certifying
the students. Each school offers certain courses, and students choose subjects in relation to the qualification they wish to obtain and the university they wish to apply to. In England there were roughly 3,000 subjects in which pupils could gain a certificate in 2001, corresponding to four types of qualifications, among which was the GCE advanced subsidiary qualification. To prepare for A-levels a student chooses to study and specialize in only three or four subjects.

- In Finland completion of the upper secondary school syllabus requires the completion of 75 courses (each one of 38 hours on average). The syllabus contains a certain number of compulsory courses (more than half the above number) and a series of partially or entirely optional or elective courses. Schools function without forms, which means that students are not bound to year classes. Students may take courses provided by the school that they choose within a four-year period. It is the school that certifies completion of upper secondary education.

- In federal states like Canada, curricula are set at the level of each province. In general the number of compulsory subjects is reduced, allowing students to spend more time on specialized programmes that will prepare them for the world of work or help them to fulfil the entrance requirements of the college or university of their choice.

4.4 New subject areas

As a result of recent social developments more and more countries have built and/or are developing new subject areas, which they either make compulsory in some way or encourage schools to allot time to. In some countries there appears to be a kind of conflict between these new ‘subjects’ and the aforementioned weight accorded to the basics. The most important of these new ‘subjects’ are:
1. Information and communication technologies (ICT)

In all countries this is an issue that is very high on the agenda. Some countries consider ICT a separate subject and impose a set number of hours of education in this area on all students in primary and/or lower secondary school. Others integrate ICT into other subjects or consider it both a separate ‘subject’ and one to be integrated into other subjects. In vocational education and training ICT is normally heavily integrated into the subject matter of most courses. The aspiration in practically all countries is for all teachers to master ICT and be competent in using it as a methodological and pedagogical tool for teaching their own subject. Consequently, effort and resources are often put into providing in-service training for teachers in ICT. Countries also invest considerable resources in developing pedagogical software and providing convenient and sufficient hardware and Internet connections for all schools: primary, lower secondary and upper secondary. Some countries, such as Finland, have come a long way in this respect. What appears to be the most challenging task at present is to introduce all teachers to and familiarize them with the pedagogical use of modern technology.

In upper secondary – both general and vocational – ICT subjects are developed for different purposes. Some may be theoretically oriented, providing a basis for further studies in higher education. Others may be more practical, directed towards educating support people for public or private enterprises.

2. Citizenship

In a number of the OECD countries reviewed there is growing concern over the lack of interest, and consequently lack of participation, in the democratic life of many citizens, particularly young people. In many countries attendance at elections is decreasing and it is more and more
difficult to recruit young people to join political parties or to encourage them to take on elected responsibilities. For this and other reasons, many countries are developing more and better citizenship education and training. This is mainly achieved in two ways:

(i) *By including more citizenship education in the curricula*, either in the form of transversal competencies or by emphasizing it more in social studies programmes. England has developed a national programme for citizenship education that is attached to the regular curricula and in which all schools are expected to participate.

(ii) *By practising citizenship through allowing and stimulating student participation* in school governance through student councils, class representatives, participation on governing boards, etc. (as, for example, in France and the USA). Some countries have developed materials to assist schools in training and encouraging students to participate actively in the schools’ democratic decision-making. Some also have special teachers to help and support pupils in their democratic work at school. The philosophy behind this ‘practice-oriented approach’ seems to be twofold:

- on the one hand, the belief that ‘learning by doing’ rather than merely ‘learning about’, as is the common practice in subjects such as history or social studies, has a better and more permanent effect;
- on the other hand, the belief that such active participation from students will *improve the school*, whose students are the most important ‘inhabitants’. In Norway student representatives, mainly from upper secondary education, are invited, sometimes as speakers, to the most important conferences and seminars arranged by central and local authorities; this demonstrates a will to take students seriously and listen to their viewpoints. The same country also arranges ‘school elections’ in upper
secondary schools in connection with local or national political elections. In these ‘school elections’ the different political parties represented in the local and national political elections are invited to participate in panel discussions at the schools. The results of the school elections, which take place more or less in the same way as normal elections, are aggregated for the whole country and have become an important indicator of the results of the real elections.

3. Health and healthy living

Traditionally, all countries have content related to health and healthy living included in different subject curricula – in natural sciences, physical education and other relevant subjects. However, there is now a tendency in quite a few countries to place greater emphasis on this subject, particularly in relation to the use of drugs, alcohol, tobacco, sexual education and HIV/AIDS prevention as well as healthy eating habits to avoid obesity or other kinds of malnutrition. This is due to grave concern in many countries over recent negative developments in these areas among young people.

Countries are also increasingly concerned about violence in schools. Some countries have recognized the importance of regular physical activity to a greater extent and made sports and outdoor life an integrated part of school life in addition to physical education, either as obligatory activities or as optional and extracurricular activities, but still as part of the school context.

There seems to be a growing trend in a considerable number of the countries reviewed to give greater priority to this issue, and some countries are arranging campaigns or developing programmes in addition to the curricula and helping schools with teaching materials and didactic methods to be used in the teaching of these subjects.
4. Sustainable development

In view of the increased threat to ‘our common future’ due to human destruction of the natural environment, most countries have included the environment as a subject in their curricula. Some countries have substituted the subject name ‘natural sciences’ or ‘science’ for ‘environment’ to indicate both the importance and the broad and transversal character of this subject. There is also considerable co-operation between students in different countries on this topic. The Internet is an excellent channel of communication for students who measure and compare water quality and air pollution across countries: Such co-operation teaches students that this is not a country-specific problem but to a very large extent a global problem and challenge.

5. Other themes

In addition to the points specifically mentioned above, some countries also mention solidarity with poor countries and people, tolerance, human rights and learning about different ethnical minorities who live in their countries as increasingly important topics. Norway has introduced an obligatory subject of religion and ethics in compulsory education for all students, independent of religious background. The main objective is that all students learn about each other’s religions and values to promote respect and understanding.

5. Teaching methods and quality improvement

5.1 General introduction

Improving the quality and delivery of teaching is a primary concern for more or less all countries for four main reasons:
1. Most governments have invested considerable resources in expanding lower and upper secondary education during the last decades to make room for all young people (as well as adults who have not acquired the basic competencies necessary for life and work in a modern labour market), including the provision of buildings and equipment and educating new teachers. Many countries are now looking for ways and means to improve the quality of teaching and learning processes within the existing framework of expenditure.

2. Having the entire population of young people within a region or country attending school puts strong demands on the whole school community, including teachers, headteachers, counsellors and other support staff, to provide the necessary differentiation and adapt content and delivery to the needs of students with diverse abilities, interests, aptitudes and plans for the future. This challenge is all the more demanding as more countries appear to be opting for a comprehensive and integrated approach, with more or less the whole age cohort being grouped in the same schools independently of abilities and interests. As has been pointed out earlier in this report, this also involves channelling more and more students with different kinds of physical and mental disabilities, learning and behavioural problems into ordinary schools.

3. There is increasing awareness in many countries that the ‘lecturing method’, in which the teacher gives lectures before a classroom full of students sitting in rows who listen and reproduce the lessons in tests or exams, is a highly inadequate way of teaching and learning if it is not employed in conjunction with a number of other teaching methods and ways of organizing students. This is because the lecturing method takes little or no account of the great variety of abilities that are present in more or less every class. Furthermore, if such a teaching method is the dominant one it does not develop all the different competencies and skills which modern curricula now demand.

4. In modern society in general and in the world of work, demands for a high level of competencies and skills are increasing for the whole
population. *Research has also indicated that adding more resources – for example reducing class size – is neither the only nor the most effective way of improving quality (Hanushek, 1998).* Ministries and pedagogues are looking for other strategies to enhance quality, not least when it comes to variation in the delivery of teaching.

### 5.2 Teacher-student interaction, other learning arenas and methods

There is growing recognition that interaction between teacher(s) and pupils and the way in which this interaction is organized and responsibilities and duties shared is of fundamental importance to the quality of learning, whether this learning involves traditional cognitive skills or all the other skills and competencies that are included in the curricula. New learning arenas and methods are being investigated, among which four are of particular interest in this respect:

1. *First, teachers and students are to some extent changing roles.* In his/her traditional role, the teacher is the one who transmits knowledge and skills to the students, usually in a compartmentalized classroom. To a large extent this is still the case. However, as time goes by and as more and more schools are becoming equipped with modern technology and have access to the Internet, knowledge and competencies are becoming much more a shared resource between pupils and teachers. This influences teaching methods that cannot remain limited to the traditional classroom scenario described above. For this reason concepts of ‘student-centred learning’ and ‘students taking more responsibility for their own learning’ appear on the pedagogical agenda and are becoming a greater reality in an increasing number of countries. The teacher is perceived more as the ‘guide’, ‘counsellor’, ‘planner’ and ‘organizer’ than as the person who has all the knowledge and whose job is to impart this knowledge to students.
This change of roles does not imply that the traditional role of the teacher is altogether out of date. It is generally recognized that traditional pedagogy and the traditional role of the teacher have definite advantages in different subject areas and contexts. However, it is also acknowledged that this cannot be the only pedagogy or way of sharing responsibilities in the learning process, be it in primary, lower secondary or upper secondary education, general or vocational.

2. The second change is that it is increasingly recognized that the classroom, laboratory, gymnasium or workshop are not the only places that generate good learning. Outside school boundaries there exists a multitude of real life situations that in many cases serve as more efficient arenas than textbooks, laboratory equipment, or even excellent software and computers for learning and applying knowledge and skills. These are the places where skills and competencies that cannot be enhanced as easily in a traditional school or classroom setting can be developed. The idea of using the school environment in the broadest sense of the term is by no means new; it has been, and still is being, employed by most schools to a certain extent. What is new is the realization that if the school environment is to be exploited properly for learning, changes must be made in the organization of the school day, traditional timetables and many other written or unwritten rules and regulations that make it difficult to make proper use of these opportunities. Traditional school buildings are also seen as a hindrance in many ways.

3. The third development related to the organization and delivery of quality teaching is the importance that many countries attach to finding appropriate methods of differentiation to better cater for different students’ abilities and interests. The more organizational aspects of this change related to ability streaming/subject options/diversification of schools and courses have been dealt with above and will not be repeated here. Remedial teaching for students who have learning problems is
another widely used approach. What is particularly promising is the way in which the different schools and teachers are able to use a variety of methods and tools, including ICT, within the integrated setting of a class or group to differentiate their teaching and attend to the needs of individual pupils.

4. One point that is of special interest, although it is not an obvious trend in the differentiation strategies in most countries, is the role that students can play in teaching one another. Teachers matter, but students helping each other is also important in the learning and development process. This scenario of students helping each other is by no means new; it occurs among all students in all schools and within different contexts. In multi-age, multi-grade educational settings – particularly in primary schools in sparsely populated areas, but also in lower secondary schools in some countries – older or more able students are being called upon to help younger or lower achievers. However, in ‘ordinary’ educational settings there appears to be fairly little systematic and planned methodology and pedagogical organization based around student co-operation in such a way that both older or more advanced or able pupils and younger or less advanced and less able pupils can benefit from the process. There seems to be an educational potential in this way of thinking and working, which only a few OECD countries are exploiting to any deliberate extent.

The above developments and ideas are discussed in many areas in the world; however, the various countries and different schools are at quite different stages in practice.

5.3 Pedagogical practice and innovations

In order to enhance the new pedagogical and methodological ideas and possibilities, countries are emphasizing various means, such as:

1. Providing more time for teaching in small groups, individual learning and helping students (as, for example in France, England, the
Netherlands and Germany). This may take several forms: organizing tutorials for small groups of students in one subject or adopting a multidisciplinary approach; offering students systematic education and training in individual learning skills; homework supervision; study support; tutoring individual students; more time given during the school day to work independently using the library and ICT; or developing a project in the school or in the community around the school;

2. *Putting more emphasis on project work* (as for example in Norway, France, Scotland and Ireland) for pupils to work either individually or in groups on a certain project. This approach is developed in both lower and upper secondary education to obtain cross-curricular effects where the curriculum is organized subject-wise and where there are also transversal objectives to be met. In some countries project work is compulsory for all students and all teachers, not only as it may be a good learning method of the subject matter in question, but also as it is an important way of organizing work and activities in the world of work. It is necessary to train teachers in project methodology to better equip them in this kind of teaching;

3. *Team teaching*, which is also developing in many countries such as New Zealand, Finland, Ireland and some provinces in Canada. In primary education pupils are used to having class teachers in more or less all the countries studied. In both lower and upper secondary, however, subject teachers – i.e. teachers who teach each class in only one or two subjects – is the norm, to which there are only a few exceptions. Several countries struggle methodically with the problem of curriculum fragmentation that derives from such a practice. On the one hand many pupils, particularly at lower secondary level, find it difficult to deal with so many different teachers. On the other hand it is difficult to meet the curriculum objectives of having the same information taught in different ways and in different subjects in order to present the complex world ‘more as a whole’. It is also difficult to develop transversal skills and competencies across different subjects.
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The solution to this predicament, which is applied in quite a few countries at lower secondary level essentially, is to appoint one teacher to be the principal teacher who will co-ordinate all the other teachers of the class and establish a link with the students and their families. Another approach is to organize teachers into teams in order to exploit different teachers’ thorough knowledge of one subject on the one hand and to obtain cross curricular and pedagogical/social benefits in relation to the students on the other.

The Netherlands, New Zealand and some states in Australia seem to be moving in the direction of hiring teachers to teach more than one subject to a greater extent in lower secondary in order to counteract some of the negative effects of the subject teacher system. Norway, on the other hand, which had a strong tradition of having a class teacher system – even in lower secondary – is progressively moving in the opposite direction;

4. **ICT**, which in practically all countries is about to become a very important pedagogical tool for learning and differentiation purposes. Most of the OECD countries reviewed are quite advanced when it comes to the number of computers they have in both lower and upper secondary schools, including vocational education and training. The number of pupils per computer in lower secondary education varies from nine in Canada and New Zealand to around 14 in Finland and Norway. The proportion of secondary schools connected to the Internet for pedagogical purposes approaches 70 per cent in several countries and 90 per cent in a smaller number of countries (Finland and New Zealand). In addition, good pedagogical software has been and is constantly being developed to improve use of this methodological potential.

In a number of countries the main challenge still lies in making teachers familiar and comfortable with the pedagogical possibilities of ICT. Much work is also being done to create ‘market places’ and networks for schools and teachers, where they can find examples of good pedagogical practice or other information necessary to support their teaching practice.
In most countries which participated in the 1998/1999 IEA/TIMSS study, more than 50 per cent of teachers had access to some training in ICT, either in or outside of their school.

New technology opens up a number of pedagogical options for differentiation between slow and fast learners. Some countries have also come a long way in using new technology to alleviate learning problems for students with different types of disabilities.

Although the pedagogical possibilities of ICT are numerous, countries have begun to realize that ICT is not problem-free if it is not used with care and consideration. The social learning of students is not necessarily best developed ‘alone with a computer’, be it at school or at home. The ability to make use of and sort the immense amount of information on the Internet is also an enormous challenge for many students if they are not assisted in applying the information they find within the proper context. Another problem arises when students use the Internet for purposes other than serious learning related to the curriculum. This is where teachers’ overview and guidance of pupils will probably be the key to fruitful and efficient use of the Internet by students;

5. The establishment in some countries, such as England, the USA and Norway, of different types of ‘specialized schools’, ‘centres of excellence’ or ‘Beacon schools’. These are selected according to certain criteria, either because they perform well, because they have some interesting pedagogical innovations that may be of interest to others, or because they specialize in certain subject areas such as foreign languages, technology, mathematics, ICT, sports and physical education or other subjects. Other schools may make use of these ‘Beacon schools’ as a source of new ideas, or they may be used for in-service training purposes (see Box 2);

6. New pedagogical practices are often hindered by rules, regulations, organizational structures and physical limitations in traditional buildings etc. These obstacles may be real or imaginary, often more related to a
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...traditional way of thinking – “we have always done it this way” – than to real limitations. Several countries are currently reviewing their set of rules and regulations concerning timetables, the number of pupils per class, teacher workloads, use of teachers and organizational set-ups, generally looking critically at ‘unnecessary’ regulations that may prevent rather than improve good pedagogical practice. The objective is to give individual schools more room for pedagogical change and innovation and to ‘professionalize’ teachers and encourage them to innovate.

Several of the pedagogical innovations mentioned above have positive effects and improve students’ learning when properly implemented. Introducing project work or encouraging students to take more responsibility in their own learning does not at all mean that students should be left on their own. Indeed, teachers must direct and monitor students’ work closely. Much research has shown that when such methods are not properly implemented they favour the most able students while the weakest or less motivated students struggle and lag behind. Teachers must be properly trained in using these new teaching methods.

Box 2. Beacon schools

The Beacon Schools Programme in the United Kingdom, created in 1998, applies to nursery, primary, secondary and special schools. Its aim is to build partnerships and co-operation between high performing schools and others through the sharing and diffusion of good practice. Such advice is offered to schools facing specific problems or to any school interested in developing good practice. The programme is therefore aimed at raising educational standards.

The advice given by Beacon schools covers a wide range of areas such as specific curriculum subjects, pupil monitoring or school management.
5.4 Support systems for good pedagogical practice and development

A number of countries put considerable effort into supporting schools and teachers in developing good pedagogical practice. The following may be of particular interest in this context:

1. Many countries have one or more institutions at national or regional level that develop and distribute to municipalities and schools pedagogical material and other support material to help improve teaching. Some of these institutions have both a role to play in curriculum development – providing support material for schools as well as planning and/or supporting the in-service training of teachers and headteachers in collaboration with municipalities and schools – and responsibility for planning and implementation of national exams and tests.

2. Countries like England, Scotland, the Netherlands, Ireland and France have an inspection system (inspectorates) that controls and/or supports
schools in their endeavour to provide good quality education. Some countries do not have a tradition of having such inspectorates. Where inspectorates place more emphasis on the provision of aid and support to good pedagogical practice than on control and traditional inspection, and where they are staffed with people who may help and give good advice in teaching, they seem to be well recognized and welcomed by the schools.

3. Countries such as England or Norway also have a school-based support system to provide pedagogical help for teachers and improve their effectiveness. This may be a separate department within the school, separate subject teachers who help other teachers in their work, special area co-ordinators, for example in special education/ICT/literacy, or a system of deputy headteachers whose responsibility lies more in planning and supporting pedagogical work than in administrative tasks. Scotland has a system of ‘charter teachers’ and England has ‘advanced skilled teachers’. The idea is to create promotion and higher salary possibilities for excellent practising teachers who, in addition to their daily teaching tasks, help and support their colleagues.

Some countries that have decentralized many responsibilities to the school level, such as England, are becoming concerned with the increased administrative burden on teachers, which results from increased demands on assessment, accountability and reports. England has plans to create support staff of different kinds that could relieve teachers and headteachers of some of these administrative burdens.

4. There is increasing awareness in a number of countries of the important role of headteachers in motivating and supporting teachers to perform well in their profession. Most countries recruit headteachers from among teachers, with no particular formal requirements other than having received a recognized teacher education and on-the-job teaching experience. Thus many countries offer in-service training programmes to their headteachers where the role of providing pedagogical support is emphasized.
It is also a point of discussion in some countries as to whether and in what ways headteachers could be relieved of some or all of their administrative and budgetary duties, transferring them to a person especially educated and equipped in these matters and thus making the headteacher’s prime responsibility to develop his/her staff in providing quality teaching.

5. **Textbooks** have traditionally played an important role in the teaching and learning process in practically all countries. For this reason textbooks in many countries must be formally approved by the authorities before being used in public schools.

Change appears to be occurring in this respect. This is partly due to the appearance and increased usage of ICT in most schools, making traditional textbook teaching to some extent obsolete. It is also due to the fact that more and more countries leave the choice of pedagogical delivery (including considerations about textbooks, equipment, etc.) totally up to the schools themselves and/or to the municipalities as long as they comply with the statutory or advisory curricula/standards/attainment targets developed at some higher political or administrative level.

This has opened up the possibility of using a much wider scope of textbooks rather than being limited to using only those which are recognized. Norway, for example, is in the process of developing, in co-operation with textbook publishing companies, interactive net-based ‘textbooks’ in various subjects to replace or supplement traditional paper versions.

### 5.5 Other strategies for quality improvement

In addition to the strategies and measures outlined above, some countries have adopted, or are about to adopt, wider strategies concerning the management of schools that are expected to lead to quality improvement. The three most important of these developments are:
1. **decentralization of responsibilities from national government or state level to municipal and/or school level.** This may involve school financing, appointment of teachers and headteachers, determination of teacher salaries and workload, class size, equipment, textbooks, etc., depending on the policy of the different countries. The philosophy behind such a development from the point of view of education quality is that the closer those taking the decisions are placed to the field, the more likely it is that educational institutions will adapt teaching to the particular and local circumstances and the greater the chances that the quality of teaching will be good and that learning will be enhanced;

2. **decentralization combined with accountability and competition.** Implied in this ideology is a confidence that the positive effects of market mechanisms will produce high-quality outcomes in education. In addition to being given administrative means, schools and their governing boards (often bypassing the municipalities) receive public funds on the basis of the number of pupils enrolled in their establishment. At the same time attainment targets or standards are set and individual schools made accountable to parents and to national or state/regional authorities for their results. These results concerning the schools’ attainment targets are published and parents have the freedom to choose the schools that their children will attend. Arguably, if a school does not demonstrate good results parents will be inclined to select another school for their children. The idea is that this market competition approach will motivate and stimulate schools to put more time and effort into providing better quality services in order to ‘stay in business’;

3. **school choice for parents.** As mentioned in point 2 above, this is part of the package of market thinking. However, school choice for parents may also be practised in countries that are neither particularly decentralized nor very market oriented. Most countries do allow parents/students some choice as to which school the child will attend, either by allowing them to select a private school or by allowing some choice between various public schools.
However, although countries allow or even encourage school choice, in practice the impact of this option may be quite limited. On the one hand most parents want their children to go to school together with their friends from the same neighbourhood; on the other hand most countries, although allowing free choice in principle, still operate with such concepts as ‘catchment areas’ or ‘municipal responsibility’. This means that students are normally expected to attend the school in their catchment area, while some may select another school outside this area if there is a place available. At the same time every school must provide a certain number of places for students from the catchment area. If there is competition for such places, specific criteria may be developed by the school board or district; for example priority may be given to brothers and sisters of those already enrolled in the school. Criteria and practice vary among countries.

Some countries are ideologically reluctant to apply the market approach that school choice implies. In these countries children and young people wishing to attend a state primary and lower secondary school are therefore normally obliged to go to the closest public school (e.g. in France). This is meant to encourage mixing of pupils from different social backgrounds as well as facilitating planning of school provision. Yet in some urban or suburban areas characterized by a concentration of migrant or multi-ethnic groups, some parents manage to avoid sending their children to local schools by enrolling them in private schools. The end result in terms of concentration of certain social groups within the same school may not be as different as one might expect between the two systems.

Whether the strategies outlined above actually have any effect on the quality of the outcome – seen in the context of all the knowledge, competencies and skills expected from the schools – has been neither confirmed nor infirmed. Nor are the effects on fundamental goals such as equity and other social objectives clear (Belfield and Levin, 2003).
6. Qualifications and training of teachers and headteachers

Teachers and headteachers are so much a part and parcel of education that it is not easy to treat this broad theme in one section. For this reason a number of aspects related to teachers and headteachers are discussed also in other sections of this report, with the risk of overlapping and repetition.

This section will only summarize, in a fairly condensed way, the main points related to qualifications, training and workload. First, some general remarks will be made.

6.1 General points

1. Teachers and headteachers matter. It is widely recognized that although curriculum content, textbooks, buildings, equipment, laboratories, exams and testing systems are all important factors, learning results would be fairly meagre if teachers did not know how to use these tools and, more generally, if the quality of teachers and leaders who provide assistance and support with regard to the implementation and use of these elements were poor. This rather evident observation has been confirmed by various studies. Despite conventional recognition that school inputs make little difference in student learning (differences in learning achievements being essentially related to differences in the personal backgrounds of students), a growing body of research does suggest that schools make a difference to students’ achievements, and a considerable portion of that difference is attributable to teachers and their effectiveness (Darling-Hammond, 2000).

For this reason the initial and in-service training of teachers and headteachers and efforts to constantly support, monitor, motivate and help them improve their work is at the top of the agenda in practically all the countries studied. Committed and competent teachers and headteachers who are able to relate to and teach various kinds of
youngsters are considered essential in order to obtain good results in relation to all the different objectives of knowledge, skills, values and socialization expected from the education system.

2. There is a consensus that teachers must *master the subject matter that they are to teach*, be it in lower secondary or upper secondary. However equally as important is the *mastery of pedagogy* and the knowledge of how to teach a subject to different kinds of students; this involves being knowledgeable in a variety of methodological approaches and teaching strategies that allow the teacher to differentiate and relate to different students in different ways and in different contexts.

The balance between these two components differs between countries. Some emphasize depth in subject matter and teachers spend most of their time in pre-service and in-service training on deepening their knowledge, usually emphasizing training in just one subject to make sure that the depth is satisfactory. This is the dominant practice in most countries. Other countries, such as Norway, place more emphasis when providing pre- and in-service training on pedagogical and methodological aspects and ‘sacrifice’ some of the subject depth. They also ask secondary teachers to teach more than just one or two subjects in order to reap pedagogical advantages.

3. Most countries appear interested *in raising the status of teachers*. Lack of interest of young people in the teaching profession has become a matter of concern and a number of countries are beginning to experience a shortage of teachers. The problem is expected to worsen in the coming years when a large number of teachers will retire. The shortage is general, however it is more acute in certain subjects such as mathematics and sciences, where the public service competes with the private sector for recruitment of young graduates. It is increasingly recognized that teaching is a very complex and difficult task, particularly when faced with what seems to be a deterioration in behaviour in a large part of the student group in lower and upper secondary. In order to raise the number of applicants for the teaching profession, several
measures are under consideration. These measures aim to increase the status of teachers and address issues such as teachers’ salaries, workload, professional and career development and working conditions.

**Box 3. Teachers in the Netherlands**

A teacher shortage is threatening several education systems in Europe. This is the result of several factors: the ageing of teachers, the negative image of the teaching profession, the reduction of class sizes and social pressure for more schooling.

To counter this phenomenon the Dutch Government is currently adopting several measures to render the teaching profession more attractive. These measures include a rise in teachers’ salaries to bring them in line with other salaries in the private sector and appeals to former staff to return to teaching and to people having acquired experience outside the education system to become teachers. The government is also considering ways of combining work and family responsibilities.

4. The ‘accountability – assessment – comparison – competition – decentralization’ philosophy, which some countries/states (for example the state of Victoria in Australia, New Zealand and England) have applied for some years and which several other countries are considering adopting, meets two somewhat opposing reactions from teachers and headteachers. On the one hand they approve of being allowed more professional freedom and responsibility for quality improvement. On the other hand teachers criticize the increasing amount of administrative tasks that they are facing due to accountability requirements in terms of assessments, school self-evaluations, reports and participatory decision-making. These are time-consuming and distract teachers and headteachers from their primary objective: having enough time and energy to provide good and efficient teaching.
6.2 Pre-service teacher training

It is difficult to summarize the qualifications structure and training of teachers in lower and upper secondary without oversimplifying the facts. There are considerable nuances; however, the following summary gives a general picture:

1. Countries seem to differ with regard to the model of pre-service training of secondary school teachers they choose to follow, whether this training is concurrent or consecutive, or a combination of the two. ‘Concurrent’ means that both subject matter and pedagogy are being taught together. This is the most common model for pre-service training of primary school teachers. ‘Consecutive’ means that pedagogy is taught separately after potential teachers have been granted a degree for a (or several) specific subject(s), usually at university.

2. For pre-service training of lower secondary teachers, one group among the countries studied uses the concurrent model and another group uses the consecutive model. Some countries combine the two, which allows teachers to be recruited into lower secondary education whether they have received their education at a university according to a consecutive model or at a teacher training institution following the concurrent model.

3. The duration of pre-service training for lower secondary teachers varies somewhat between countries, from four to four-and-a-half years of post-secondary education in most countries to five or six years in others (Finland, France and Germany). It is slightly longer than that of primary teachers in France, Finland, Germany, New Zealand and Ireland, but is the same in the other countries. The importance of practical teacher training during the period of teacher education, counted in days spent on placements in schools, varies from as much as 400 or more in one country to as few as 50 in another.

7. It involves one more year of study at post-secondary level.
4. Pre-service training of general upper secondary teachers follows more or less the same pattern as that of lower secondary teachers, with the exception that in some countries (the Netherlands, Norway and Germany) the number of years of training required is somewhat superior and the consecutive model is more frequently followed than the concurrent. In Australia, the USA and the United Kingdom the duration of pre-service training is the same for primary, lower and upper secondary school teachers (three-and-a-half to four-and-a-half years of tertiary education).

5. For vocational education, which takes place mostly at upper secondary level in the great majority of countries, the picture is more complicated. Normally teachers teaching general/academic subjects in vocational and technical education have the same training qualifications as those outlined above for lower and upper secondary education.

For vocational subjects a number of variations exist: In some countries a fairly long education at a university or higher vocational education institution, comprising or followed by pedagogical training, is the main model, while a skilled worker’s certificate with some additional theory and pedagogical training is the norm in others. All countries appear to demand a varying amount of work experience in the relevant field as a prerequisite for recognition.

Instructors who train apprentices in enterprises as part of an apprenticeship scheme must normally hold a skilled worker’s certificate as a minimum, with an additional number of weeks of in-service training – mainly in teaching methodology.

6. In almost all countries and in all kinds of pre-service teacher training ICT is included as an optional or compulsory subject, either separate from other classes or integrated with them, or both. In most countries it is made compulsory and integrated into all initial teacher training.
6.3 Qualification of the existing teaching force

Current pre-service training requirements are not necessarily the best indicators of the qualifications held by the existing teaching force. Secondary school teachers have been trained at universities for a long time; however, pre-service training requirements for lower secondary teachers have changed somewhat over the years. When rapidly expanding its lower secondary education, a country such as France, for example, relied on teachers with qualifications lower than those currently required: two years at post secondary level only. The training and recruitment of such teachers, who were expected to teach two subjects, stopped in 1987. However, they still constitute some 8 per cent of the teaching force.

The need for teachers at secondary level to have professional and practical training is a relatively recent phenomenon in some countries (France and the Netherlands). The increasing heterogeneity of pupils that teachers must cope with at secondary level explains why a wide range of pedagogical skills has been included in their university training. Educated but uncertified teachers may have been recruited in the 1970s when there was a shortage of qualified teachers. Most of these experienced teachers have been upgraded and certified since then.

6.4 In-service teacher training

As this topic has also been integrated into the discussion on teaching methods earlier in this report, only the following points will be described briefly in this section:

1. Practically all countries structure, encourage or demand in-service training to an increasing extent as this is seen as vital to keeping teachers updated with regard to their subject matter and new teaching practices. Some countries have made in-service training compulsory by allotting a
certain number of days in teachers’ yearly workload to in-service training (Finland and Scotland). Others have not made it compulsory in the legal sense but expect schools and regions/municipalities/inspectors to plan and implement in-service training and teachers to take part.

2. **In-service training is delivered in many ways and by many contributors.** Usually universities and other higher education institutions participate actively. For vocational education the different occupational branches and their organizations may play an active role. Some countries also place teachers in a work environment outside the education system for a certain period of time.

The most obvious development, however, is the trend towards providing **school-based in-service training** to a larger extent; partly because it is cheaper, but also as it makes a greater contribution to bringing about the necessary pedagogical changes. Changes are seldom brought about in a vacuum by one or two teachers having been ‘converted’ at an external course. Rather, such changes are effected by addressing the whole interrelated context at school level, where the headteacher is also involved and can be responsible for the follow-up. Experience seems to show that the support and commitment of the school’s leader for continuous and systematic staff development at school level cannot be overestimated.

3. **It is difficult to obtain reliable figures for the resources spent in the different countries** on the in-service training of teachers and headteachers, mainly as responsibility is normally divided between different levels of the system: national, regional, municipal and school level. The main responsibility in most countries appears to be left to the municipalities/regions as far as distribution of resources is concerned, with ‘earmarked’ funding from the national or state authorities, particularly in connection with reforms that are to be implemented or for other specific purposes.

8. In Scotland teachers are given 50 hours of training during the school year as well as five days outside the school year. In Finland teachers have three days per year of in-service training.
6.5 Recognition of teachers

All the countries studied have some kind of mechanism for recognizing teachers, often using separate bodies who make sure that all the requirements are met for teaching either in primary, lower secondary, upper secondary or vocational education and training. In some countries teachers may be authorized to teach general subjects in all of secondary, while in others only in primary and lower secondary. In one country (Finland) there is a policy that requires that teachers be mobile throughout all stages of the system to promote continuity and smooth transition from primary to completed upper secondary.

An interesting initiative taken in the Netherlands has made possible the introduction of outsiders other than formally qualified teachers into the system (see Box 2.3), partly to alleviate the problem of teacher shortage, but also to introduce new experiences and backgrounds into schools. Whether this will be extended to other countries remains to be seen.

6.6 Teachers’ gender

While in primary education most teachers are women, this is not the case at secondary level. The higher the education level, the lower the proportion of women teachers. In lower secondary education the proportion of female teachers is still high, varying between 55 per cent in the United Kingdom and 70 per cent in Finland and Norway. At upper secondary level the proportion of men and women is almost equal: The proportion of women varies from 40 per cent in Germany and the Netherlands to 56 per cent in the United Kingdom and 66 per cent in Canada.

6.7 Teaching load

The teaching load, meaning the number of hours dedicated by a teacher to his/her work throughout the year, varies considerably between countries.
There are countries that do not have a nationally fixed requirement as to how many hours a full-time teacher should work and leave it to the schools to decide, taking several factors into consideration. There are also differences as to the teachers’ working week as well as in the number of working weeks per year. Below is a summary of the main trends and categories in OECD countries in general (OECD/UNESCO Institution for Statistics, 2001):

1. The average number of teaching hours per year (net contact time) in OECD countries in lower secondary is around 710 hours (number of teaching hours per week multiplied by the number of teaching weeks). This figure is lower than in primary education (where it stands at around 800) and varies between countries from a low of around 550 (about 600 in France, Finland and Norway) to a high of about 960 (in the USA, Australia and New Zealand).

2. The average number of teaching hours per year in general upper secondary education is around 660, varying from around 460 in one country (Denmark) to around 940 in the United States and Australia. This means that the average number of teaching hours is a little lower in general upper secondary education than in lower secondary.

3. In vocational upper secondary education the number of teaching hours per year is higher than in general upper secondary, with an average of about 690 (not much different from lower secondary). The number varies from a low of around 460 hours to a high of about 1,000.

4. There are also differences between countries regarding the number of minutes per teaching lesson, normally varying from 40 to 60 minutes. In the figures given above for teaching hours the different minutes are all converted into hours per year for comparison.

There are considerable differences in OECD countries as regards teachers’ statutory working time. In some countries teachers are only required to be at school when they have timetabled teaching periods (as for example in France, Ireland and Germany). This means that no requirements are set to determine how much time they must spend on non-teaching activities. This
also means that outside teaching hours teachers are not easily available for teamwork or to offer advice to students. Other countries, such as Australia, the Netherlands, the United Kingdom and New Zealand, require that their full-time teachers in lower and upper secondary be present at school for a great part of the school day, for both teaching and non-teaching activities (including time for collaborating with other teachers and in-service training). The longest working hours are found in countries where the load of formal non-teaching working time is heaviest. Several countries, such as Norway, have introduced more flexibility in the working hours of teachers so as to allow more flexibility in the organization of teaching and to facilitate pedagogical innovations (see Box 4). The impact of such innovations, and more generally the effect of teachers spending more time in schools, on the relationships between teachers and between teachers and students, and subsequently on the quality of education merits further investigation.

Box 4. Norway experiments with the Working Hour Agreement

“The Working Hour Agreement between the teachers’ unions and the State – to be transferred to the municipalities by May 2004 – regulates in detail how teachers are to manage their time. Stereotyped, the agreement is constructed around one school day where the teaching goes on in one class, in one classroom, by one teacher and in one subject. Today’s curriculum, however, prepares for project and teamwork, and gives the student extensive responsibility for their own learning. The students work in projects which may include several subjects at the same time … The teaching load constitutes 58.5 per cent of the man-labour-year in primary school and on average 52.5 per cent in lower secondary school. In upper secondary education it varies from 36.9 per cent to 52.9 per cent between subjects. The rest of the time is the teacher’s untied time for preliminary and touching-up work, planning and continuing education and a 150-hour frame for so-called organised tasks. The headteachers’ right to control is limited to these 150 hours. Through renegotiations, the schools have got larger space for action … There is now an
Teachers’ status and effectiveness is linked to several factors such as their working conditions, which include the workload discussed above, the number of pupils per class and the school environment, as well as the possibilities for teacher development and promotion, the support teachers receive in schools, their degree of autonomy and, naturally, their salaries. These will be discussed below in other sections.

7. Examinations, assessment and evaluation

When considering the various systems of examination, assessment and evaluation in the 12 countries studied, two remarks can be made:

1. The complexity of systems and the variations within this field are, without exaggeration, considerable.
2. The emphasis that countries place on student assessment and examinations currently seems to be heading in two different directions.
   - One group of countries has to a large extent during the last few years increased the amount of formal assessment of pupils at different stages, hoping in this way to achieve a higher quality output (for example the USA, Australia, Canada, New Zealand and England). This movement is largely in support of implementation of standard-based reform.
Another group of countries has moved in the opposite direction and reduced the amount of formal assessment and exams imposed on students (such as, for example, Norway). This is partly because efforts to maintain a continuous flow of the whole age cohort through both lower and upper secondary education have to some extent rendered this device a superfluous selection mechanism. This does not mean that these countries do not assess students’ learning, but rather that they have shifted from the formal method of assessment to a more continuous process of monitoring students’ performance in order to assist them in their daily learning.

7.1 Complexity

There is a whole range of assessment and evaluation approaches adopted in the different countries. The variety can be summed up as follows, with the risk of omitting a number of nuances:

1. various forms of internal and external assessment of individual students and apprentices, formal or informal (see below);
2. different models of evaluation of schools and providers. These include various forms of school self-evaluation, where the school itself carries out regular internal evaluations of how it operates in a way that is more or less imposed by the hierarchal superior. Other models rely more on external evaluation of schools and training centres, including the enterprises where apprentices are being trained. This may involve regular visits from inspectorates or other kinds of external teams to the schools and enterprises. The external evaluation approach is in some cases combined with a school self-evaluation. In some countries the district/municipalities responsible for organizing education are also evaluated. External teams evaluate according to different criteria set at the national or state levels;
3. various kinds of ‘polls’ in different ‘client groups’ are conducted to obtain an opinion from these groups on the quality of one or more aspects of the school. Client groups include students (in Norway for example the Ministry has posted a questionnaire on the Internet for students in lower and upper secondary to fill in at regular intervals inviting them to evaluate different aspects of the school), parents, working members of society, etc;
4. system evaluations, where the government usually employs an independent research team either to evaluate the operation of the education system as such or to follow the implementation and possible effects of different reforms implemented;
5. finally, there is an increasing number of international comparisons by way of achievement tests in different subjects (reading or literacy, numeracy or mathematics, science, and recently civics) that can be compared also within a longitudinal perspective. Such comparative tests are also being used to compare states in countries that have a federal structure.

7.2 Purposes of assessment and evaluation

There are a number of purposes for which assessments and evaluations are used. It is sometimes difficult to see clearly for which purpose a specific approach has been chosen in a certain country. Often assessment and evaluation systems employed in the different countries are a mixture of historical traditions and innovations. Established traditions concerning external (public) examination systems appear quite difficult to change, particularly when established practices relate to the more academic and university-oriented courses. For this reason countries tend to combine old and new methods of evaluation.

The most common purposes for assessments and evaluations are:

1. to admit students from one level to the next: from primary to lower secondary, from lower secondary to upper secondary and essentially
from upper secondary to higher education or to the world of work. As pointed out earlier in this report, assessment and exams may be used less and less frequently for this purpose in the countries under review. This is partly due to the growing political ambition of successfully shepherding entire age cohorts all the way through upper secondary education. It is also due to the fact that more and more governments want to make higher education available to a wider population of secondary school leavers, including those who have received vocational education and training in secondary education;

2. to select students for different types of courses and schools, often separating those who will go to higher education from those who will take a more rapid path leading to the world of work. As mentioned earlier in this report, some countries still implement such a selection procedure after primary education or following a transition period of one or two years in lower secondary. A similar selection takes place at the end of lower secondary in many other countries. However, as more and more countries ‘remain comprehensive’ and keep students in the same schools and in the same classes throughout lower secondary – and upper secondary in some cases – this practice may become less common. Nonetheless, in countries where there is a tradition of having such a selection/guidance process at different stages, including to identify those who are more likely to specialize in science or any other subjects at upper and post-secondary level, and where there is still some kind of selection at the end of secondary, this motivation for different types of assessment remains important;

3. to certify what students have learnt by awarding diplomas and formal qualifications. All countries use assessments and examinations for this purpose.

It is common practice in the different countries to award students leaving compulsory education (usually after lower secondary) with a school leaving diploma of some kind. In most countries this is based on a combination of results of exams at the end of lower secondary and
results from the internal continuous assessment concretized in marks, be this in letters or in figures on an elaborate scale (for example 1-20) or a less elaborate one (A-F).

Upon completion of upper secondary education, be it mainly vocational or mainly general/academic, most countries award a diploma or a skilled worker’s certificate. It is also common to organize an external exam or assessment test (theoretical and/or practical) at that level and the requirements set to obtain a diploma or a certificate must usually be met by all who receive a ‘pass’ diploma or certificate.

In some countries those who leave the system before having completed upper secondary or without having met the necessary requirements are given a certificate specifying what they have achieved to enable them to make a decision as to whether to continue or to repeat at a later stage.

Some countries like Scotland, England and Australia have developed a qualifications system on different levels and for different purposes to make sure that all students have a better chance of obtaining a formally recognized qualification before leaving basic education. This makes it easier for them to either continue studying later or enter the world of work;

4. to enable the authorities to monitor the quality of the system and the results obtained. Unsatisfactory results in examinations and assessments can provide an empirical basis for questioning the existing policy and reconsidering the actual distribution of resources and can lead to a decision to acquire more resources, more efficient monitoring of the system, possible systemic changes, etc.

Some countries seem to use external examination results in lower or upper secondary for this purpose, although these exams would not normally satisfy the requirements of validity and reliability to allow for valid conclusions to be drawn on progress or lack of progress in a longitudinal perspective.

Other countries have developed standardized tests (for example England and provinces and states in Canada, the USA and Australia) to be used
nationally or state-wise to enable monitoring of the output in some selected subjects at regular intervals (for example in grades 1, 3, 5, 8, 10 and 11) as well as longitudinally to measure possible progress in the different age cohorts over time.

Most countries normally use a combination of evaluation and assessment approaches for the purpose of governance;

5. to control and motivate schools/teachers/pupils. In several countries national examination and test systems are a means both to ensure that schools, school boards, municipalities and regional authorities comply with the expectations and regulations set and to make sure that similar content is taught in order to help reach the desired attainment targets (for example in England, France, Norway and the USA). Although traditional exams do not satisfy requirements for validity and reliability, when important consequences are attached to performance they are powerful instruments to motivate schools and teachers to adhere to curricula. Exams and tests, particularly if they occur in a context of selection or diplomas/certificates, are believed by many to effectively serve as incentives to spur both pupils and teachers to work. For this reason it is not necessary to actually impose exams in all subjects: The certainty that pupils will be obliged to sit an exam in one or a few random subjects (as in Norway) is sufficient.

7.3 Examinations and tests

As mentioned earlier many countries have examinations at the end of lower secondary and most have one at the end of upper secondary. Most countries normally have school-based examinations (where exams or tests are set and corrected at school level) or external (public) examinations (where exam papers or tests are set and corrected externally) or a combination of school-based and external exams (where exams or tests are developed and set externally but corrected locally, either at the school level or in co-operation with neighbouring schools).
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At the end of lower secondary countries differ in terms of requirements, the weight of continuous assessment versus external assessment and on the number of subjects examined:

1. Some countries, such as the Netherlands and states in the USA, use a ‘pass’ or ‘fail’ system where students who fail a year must repeat or alternatively acquire the knowledge and skills required for a pass. Others use school-based assessment to decide who will be promoted to upper secondary but grant the certificate only to those who obtain a pass in the combined external test and internal assessment (e.g. France). Others only use a pass procedure, meaning that every student receives a pass diploma following completion of compulsory/lower secondary education irrespective of performance. This diploma may be used by all for access to upper secondary education (e.g. Finland).

2. The number of subjects externally examined (or assessed) at this stage varies: Some countries have a wide range of formal examinations (often external or a combination of external and school-based) often in obligatory subjects (e.g. England and Scotland); others have external examinations in only two or three basic subjects (e.g. France); some other countries have as few as one single exam in a compulsory subject that is selected but concealed from students and teachers until a couple of days before the exam (Norway).

At the end of upper secondary most countries have external (public) examinations. The school-leaving examination is entirely external in only two countries (France and Ireland). In most other countries external evaluation is combined with some elements of school-based examination and teacher-based continuous assessment. The various systems differ in the number of subjects in which students are externally evaluated and in the format of such external evaluation (essay-type questions are often predominant but multiple choice questions are used and oral and practical competencies are also assessed).
• For many years the USA was one of the few industrialized countries that did not have a national examination system. Many people argued that this was one of the reasons why they did not perform so well in international surveys. Most states have now introduced statewide assessments, the results of which may be used when making decisions concerning students, schools and teachers as discussed below. These are very similar to traditional external examinations, although there are important differences (Kellaghan and Madaus, 2003).

• In vocational education and training practical tests usually complement theoretical tests. Practical tests are often taken on the site of the enterprise with or without external examiners, while theoretical tests or exams are managed in a combination of internal/external exams. The main differences as far as testing and exams are concerned between vocational and general/academic courses is that the number of exams will normally be fewer and the emphasis on externally set and corrected tests and exams weaker in vocational than in general/academic.

• Various countries use different kinds of diagnostic tests. Their purpose is usually to find out where the different students are in terms of progress and to detect problems that they may be experiencing, etc. in order to help teachers, schools and/or local and central authorities to plan and implement remedial measures to alleviate these problems. Some of these tests may be developed at the school level as simple mechanisms to monitor day-to-day teaching. In other cases these diagnostic tests are developed nationally or state-wise and applied to all students in certain grades and/or to a sample of students every year. Schools and teachers may then use the set tests in their day-to-day work to find out the level of their students or to enable as many students as possible to reach the preset targets (Kellaghan and Madaus, 2003).

In a number of countries/states (England, provinces/states in Canada, Australia, the USA and New Zealand) attainment target tests developed by the central/state authorities are not only conceived to help teachers and schools in their daily monitoring and teaching work. They have an
additional function of creating competition between schools by making the results public on a school basis for parents and members of the public and by combining this with school choice for parents. There are countries/states that also have a system of ‘league tables’ to compare the performance of pupils in different schools.

4.4 Ongoing debate concerning assessments, tests and exams

In all countries exam and assessment systems appear to be quite a sensitive political issue causing continuous discussions over the pros and cons of different approaches in this field. These discussions may concern equity issues, motivation and/or the demotivating effects of marks and exams, the reliability of exam results and school-based marks, etc. The most topical issue at present in the different countries studied is probably the possible ‘tilting effect’ of tests and exams, where some parts of the learning objectives may receive more attention to the detriment of others.

Most tests and exams naturally evaluate skills that can be relatively easily measured. Other targets and objectives in curricula and syllabi are easily left out; partly because it involves a lot of time and bureaucracy to do it properly and partly because methods have not yet been developed by which to test the progress related to these objectives: critical thinking, creativity, co-operative skills, entrepreneurial skills, consideration and respect for others, solidarity, learning-to-learn skills, ability to apply knowledge in real life situations, social skills, etc. Such skills are also part of practically all countries’ curricula and objectives; however, only a few countries emphasize or put any significant weight on measuring progress in these and other skills of a similar nature. This can easily lead to the existence of some ‘dormant objectives or targets’ in the curricula that have little or no influence on day-to-day teaching or any other priorities at the school, municipal, regional or national/state level.
For these reasons efforts are being made to try to develop tests, exams and other evaluation methods in such a way that a broader spectrum of learning objectives can be included. Furthermore, international comparisons are trying to move in this general direction, for example in the comparative OECD study on democratic competencies. Some countries also try to develop school-based methods for measuring ‘softer’ learning objectives and targets. One country (Scotland) has developed a wide range of objectives for the inspectorate to ‘check on’ and report, including a range of objectives that are difficult to measure in the classical way.

However, the strong emphasis which has been placed on testing the basics during the past few years, both nationally or state-wise and internationally, seems to have led to greater priority being given to these subjects/skills and less to other subjects and the ‘softer’ competencies and skills in a number of countries. Whether this is an intended and desired development which will also expand to countries that until now have prioritized finding a better balance between the different learning objectives remains to be seen. Discussion is growing in various countries on this issue.

### 7.5 School evaluation in quality assurance systems

Some countries use several methods to monitor the quality of their education system: examination and assessment tests as discussed above, but also inspection, school self-evaluation and research. Countries that have inspectorates (e.g. England, Scotland, New Zealand and France) draw valuable input from the reports that these inspectorates make – usually once a year – based on their field observations combined with different types of statistics (also from exams and tests). Other countries rely more on evaluation research combined with a collection of quantitative and qualitative data from the education system, often in addition to results of tests and exams. In most countries where schools are given increasing autonomy, developing a proper system of quality assurance is considered essential. School evaluation is an
important part of such a system. Existing systems of school evaluation vary in two aspects:

– Who carries out the evaluation: the school itself (self-evaluation) or a central body (such as an external inspection service)?
– What is the purpose of this evaluation: ‘improving’ the school or ‘accountability’?

The cases of England and Finland illustrate an interesting contrast in this respect (see Box 5). The system in England relies on an external inspection body, OFSTED, whose main preoccupation is accountability. Finland has a system that emphasizes self-evaluation, allowing local actors (municipalities and schools) much greater leeway; evaluation aims more clearly at encouraging a school improvement process. The two systems are considered effective, at least as judged by these two countries’ results in PISA. In certain countries however external inspection is combined with schools’ self-evaluation.

In brief, most OECD countries are now concerned with setting up an appropriate system of quality assurance. Systems that are currently in place are quite complex and rely on a number of approaches and instruments such as examinations, achievement tests, inspection and school evaluation, each with different objectives and purposes. Examinations are being reformed in several countries; on the whole increasing importance is attached to continuous assessment. While examinations are questioned and losing importance in some countries, they are still considered very important in others and contribute to certifying individuals’ competences, sometimes linked with a qualifications framework. Assessment and achievement tests are given increasing importance in most countries as a way of monitoring quality, sometimes linked to specific targets and quality standards. However, what should be tested is currently being debated. School evaluation and inspection also play an important role in quality assurance mechanisms and present systems are also being reformed.
Box 5. School evaluation/inspection systems

In England evaluation of schools is carried out externally by the Office for Standards in Education (OFSTED) and by means of inspection. Created in 1992, OFSTED (Office of Her Majesty’s Inspector of Schools) is a non-ministerial government agency independent of the Department of Education and Skills. Its aim is to improve standards of achievement and the quality of education mainly through regular inspection of the system (schools are inspected at least once every six years). OFSTED also ensures the recruitment and training of inspectors and provides information and advice through inspection reports and publications which are available on its web site.

Inspections and reports focus on the quality of the education provided by schools, the educational standards achieved, the efficiency with which financial resources are managed and the spiritual, moral, social and cultural development of pupils. Inspection teams act within a framework set by OFSTED. At the end of an inspection they provide feedback with initial conclusions to the headteacher and senior management. This document constitutes a basis upon which to begin post-inspection action planning. A report and its summary are then issued and transmitted to the governing body who must provide a copy to all parents and anyone else who may request it. The governing body must then elaborate an action plan, setting out the action to be taken on each of the key issues mentioned in the inspection report, with a target date for completion. A copy must be sent to all stakeholders (OFSTED, the LEA, parents of all pupils at the school, school employees, etc.). In this way the transparency of the education system is guaranteed.

Schools that consistently under-perform may enter the category of failing schools. If the governing body fails to take action the government has the power to intervene directly, taking over management or even closing it down completely.

OFSTED has expanded its role over the years: In addition to school inspections it undertakes reviews of LEAs, inspects initial teacher training courses and independent schools, etc.
In Finland evaluation is done at both national and local level. As a result of the decentralization of the education system, increasing decision-making powers and responsibilities have been devolved to municipalities. In this context evaluation of the system became very important and municipalities were granted the power of self-evaluation under the new education legislation of 1998. Within this new framework two types of evaluation are carried out:

- A national external evaluation is performed by the National Board of Education according to the guidelines, principles and targets set by the Ministry of Education. This external study aims to evaluate the realization of the education policy by measuring educational outcomes, identifying the strengths and weaknesses of the system and serving national education policy decision-making;
- evaluation made by education providers at the local level. Education providers are obliged to carry out this evaluation but are free to decide how they will undertake it. This self-evaluation mainly aims to provide information on the way schools achieve national objectives. Education providers must also participate in the external evaluation.

The whole evaluation system was elaborated to ensure transparency and improvement of quality. It is not coupled with inspection or sanctions; there is no inspection department or inspection system in Finland.

8. Government, management and accountability

8.1 General introduction

Governance in the education system is at present a ‘heated subject’ in a number of the countries studied. During the last couple of decades there has been a trend towards decentralization, diverting powers from the national/state governments to lower administrative levels. In some countries this decentralization has been taken far, leaving a lot of decision-making power to
the schools and/or to local municipalities. Other countries have re-centralized certain decisions or regulation mechanisms in an attempt to find a right balance between centralization and decentralization. However, the dominant trend has been one of decentralization in more or less all countries. Currently this trend appears to be continuing.

Some of the countries studied have, and have always had, a decentralized structure due to their being federations in which most of the decision-making powers have been the prerogative of individual states and not of the national government. In these countries there has been a further trend towards decentralization to lower levels to a greater or lesser extent in the different states during the last couple of decades.

Other countries historically have a strong tradition of being quite centralized with much power remaining in the hands of national authorities, not least in the domain of education, which has been considered extremely important as a measure to create national identity as well as for economic, social and cultural development and coherence within the country.

It is also important to note that decentralization in a number of countries takes two different forms:

1. Power may be delegated from the national government ministerial level to national government institutions other than the ministry and/or to national government bodies at lower administrative levels, at regional level or at school level. Such delegation – or de-concentration – has taken place in some countries. This is partly because national ministries wish to relieve themselves of administrative tasks that other state institutions or lower state levels can do on behalf of the ministry and, although they often have considerable independence to do so, power must always be delegated by the ministry. This gives ministries more time and power for proactive and long-term policy development, which
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is seen as being more and more pressing in view of the great challenges of a rapidly changing technological and globalized society.

2. Power may also be decentralized in the sense that the government ministry hands over power to other political decision-making bodies on lower levels and makes it their complete responsibility to discharge decentralized duties without interference from national government. Some decentralization of this kind in one or more areas has taken place in practically all the countries studied. In this case the municipality or governing body at a school is not accountable to the national authorities (as long as they stay within the other legal or economic frameworks prescribed) but rather to the people of the municipality or, for example, to parents in the case of a school governing board. It is this type of decentralization that has been the most prominent in many countries, and many others are moving in that direction with regard to educational governance.

This trend towards decentralization may to some extent be viewed within the context of private schools. On the one hand, private schools in most countries have considerable freedom at school level. In addition, much power that normally would be placed at municipal level is transferred to the various organizations, foundations or charities that own the schools. On the other hand, most countries require control, inspection, quality standards and national evaluation to secure quality for all students.

Although it is important to distinguish between the two types of decentralization outlined above, they may sometimes be difficult to discern as they may merge in different ways and the division of roles decided upon is not always respected in a consistent manner. It is also interesting to observe that in some countries there is considerable decentralization to municipal or school levels from the central government, but various control mechanisms or other measures from the national and state ministries have made it possible to retain nationally much of the power in practice.
8.2 The various philosophies and discussions

As government/management/accountability/centralization/decentralization is quite complex in different OECD countries, it may be useful to describe briefly the different philosophies, principles and premises that underlie the different approaches in relation to governance. There appear to be three main approaches or discussions:

1. One approach is the belief that those who are best situated to make the decisions are those who are closest to them. By leaving as many decisions as possible as close as possible to those directly affected or involved, the commitment to finding the best solution and also to following it up effectively afterwards is believed to be enhanced. It is also argued that in times of great and rapid change it is impossible for central governments to make the necessary locally adapted changes quickly enough. Furthermore, it is held that the national government should concentrate on what is the national government’s primary obligation, which is to formulate long-term policies and broad frameworks and leave all other decisions to lower levels, preferably all the way down to the schools. This reasoning appears to be behind many of the decentralization efforts that have been and are still being undertaken in many OECD countries.

2. Another approach, rather contradictory to the one described under point 1 above, is that education is so important for a country’s cultural, economic, social and political future that much of the decision-making power should be retained centrally. It is argued that leaving too much power to local levels wrongly ‘relieves’ central authorities of the obligations and duties which should normally fall under their responsibility: safeguarding equal rights to education for all, securing a common basis of knowledge and values for the entire population of the country and using the education system to promote social cohesion and avoid ethnic or other social conflicts that may disrupt a country’s positive progression into the future. The more the world evolves and the
faster these changes occur, the more important it is for central education authorities to take responsibility for most aspects of education, not only the broad political principles and perspectives. These seem to be the main reasons why some countries appear to be more hesitant than others in their decentralization efforts.

3. The third approach, or rather discussion, which is in some ways related to the two points above, has to do with innovations. All countries seem to think that continuous innovation in the education system is important, whether it touches on curricula and contents, methodological practices, assessment and evaluation measures, governance and organization at school level and in the rest of the system, etc. Differences of opinion arise when the question is raised as to whether innovations should follow a ‘bottom-up strategy’ or a ‘top-down strategy’. Some argue that the only strategy possible for sustainable change at school level is to give individual schools (or in co-operation with the municipalities) the widest possible framework, room for manoeuvre and responsibility to conceive and implement necessary innovations. Only in this way, it is argued, is it possible to keep schools updated and compatible with the many changes that occur at the local, national and global levels. Furthermore, only in this way is it possible to create ownership for innovations and thus make them sustainable and efficient. Contrary to this is another view that maintains that even if responsibility is left to the local level for the necessary innovations, it is not in any way certain that innovations will take place. It is argued that ‘schools and teachers have always been conservative and unwilling to change’ and that ‘widening the framework and granting schools greater autonomy is no guarantee that change will occur’. The biggest impediment to change is not the lack of room and manoeuvre at the school level but rather the attachment of teachers, instructors, parents, headteachers, local social partners and local politicians to traditional methods. It is feared also that school autonomy will increase disparities: Not all schools will grasp the opportunities offered to them; innovations may be introduced in some
schools – generally the best ones – but not in all, and inequalities will increase. Furthermore, it is the obligation of the national authorities both to keep themselves up to date with important national and international developments that necessitate change and innovation at the classroom level and to make sure that such changes are implemented in all schools. The national authorities cannot expect schools to be responsible for this and the government must exert pressure on schools for them to change, albeit unwillingly.

The various approaches and discussions presented above seem to be at the heart of the debates going on in the different countries, particularly as far as interaction between central government and the local or school levels are concerned.

The various countries give different levels of priority to the considerations outlined above, which may partly explain why the picture is so complex and varied in spite of the general trend towards decentralization.

It is also fair to say that most countries do not entirely opt for the centralized or decentralized method, preferring hybrid solutions. Various factors must be taken into consideration, often connected with the country’s historical traditions. Some aspects of the present structure may also be related to political orientations of governments to some extent swinging back and forth. There are examples of countries decentralizing considerable decision-making powers to local levels in some fields (teachers’ recruitment or budget management) but centralizing others (for example in curricula or attainment targets).

This is a background to the more specific description of management and governance presented below.
8.3 Structure and organization of government/state responsibilities

Most countries have three or four levels of governance: the central government (ministry of education); the state or some other kind of regional level; the municipal level; and the schools.

In most of the countries that are federations (Australia, Germany, the USA, Canada), the various states more or less play the same role as national ministries in other countries. In the federate countries studied there is also a good deal of co-ordination and co-operation between states and the federal government. In spite of the interesting differences between states there is little doubt that this co-operation and the ways in which the federal government wields influence on education policies has a considerable effect on what the states legislate and decide upon in practice.

Some countries have a mixture of politically elected bodies and bodies representing the central government at the regional level. In some countries government representatives at decentralized levels play a considerable role in the governance of schools (such as the role played by the representative of the Minister of Education in France). In other countries, such as Finland and Norway, these governmental bodies play a less dominant role, being mainly required to ensure that national laws are respected and to report back to the national government on different issues. These bodies also have a role to play in conveying and explaining national policies to lower levels in the political and administrative system. Some countries do not have a tradition of strong government representation at regional or local level.

 Practically all countries/states at the national or state levels also have separate bodies outside the national or state ministries that perform different duties on behalf of the government (sometimes with a relatively free and independent status, in other countries with a very clear mandate from the ministry). In some instances there is a variety of such bodies: one for vocational education, one for lower secondary, one for upper secondary, etc. Other
countries choose a more comprehensive solution that reflects an interest in seeing greater parts of the education system as a whole.

These institutions are often engaged in curriculum development, assessment and exams, inspection, the in-service training of teachers, and development of support material/textbooks/software, etc. for use by the lower administrative levels and the schools. Such institutions may also plan and implement innovations and national reforms on behalf of the ministry, and in some cases they are responsible for providing quantitative and qualitative statistics and information for the ministry’s policy-making, governance and monitoring of the education system.

A balance must be found between what should be done in the ministry itself and what should be delegated to such external governmental bodies. This differs between countries. Some have rather large ministries that perform much of this work. Others have chosen to have very few people in the ministry and large national bodies more or less closely related to the ministry.

There are also differences in the way ministries organize their work. Some emphasize continuity throughout basic education, including vocational and technical education and training, and have one department in the ministry for this. Others may have one for primary/lower secondary and another for upper secondary or other variations.

8.4 Relationship and division of roles and responsibilities between government/state, municipalities and schools

The most striking feature in the present day governance of primary, lower secondary and upper secondary schools in the countries studied is the balance of powers distributed among the national/state governments on the one hand and local or municipal bodies (often politically elected) on the other. The main issue in question is who should govern the schools: the national/state authority, the locally elected municipal bodies or the school boards? In
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other words, who should be accountable to whom? And to what extent should elected municipal bodies with a decentralized responsibility and a clearly defined set of duties be accountable to national authorities when they are elected by the people locally to perform these duties?

The variations and nuances are considerable; however, the following categories are apparent:

1. Decentralization from the government to local education authorities (as, for example, in many Nordic countries such as Finland and Norway and in Scotland), making these bodies responsible for running schools with little interference from national authorities as long as they operate within the framework of their decentralized responsibilities. LEAs are then accountable to the local population for their performance in undertaking these duties during local elections. The government has a general and systemic responsibility throughout but not the power to interfere in the running of schools in areas formally decentralized to the locally elected municipal bodies, unless these decisions are formally reversed.

A number of countries follow this model of decentralization. The trend in many countries during the last 10 to 20 years has been to decentralize more and more powers to the LEAs, although the extent to which duties and responsibilities have been deferred varies considerably. Most national/state governments take responsibility for the development and formal endorsement of curricula. This is regarded as being so important for the country/state as a whole that it is usually not left to local authorities. As has been pointed out earlier in this report, some countries label their national curricula ‘guidelines’ or ‘advice’ to make it clear that it is formally left to the municipal bodies to decide how to use them. In practice, however, exams and tests related to the nationally developed ‘guidelines’ and the use of the inspectorate leave relatively limited room for a completely different curriculum to that of the country/state.
In many countries funding for primary and secondary education is left to the municipalities and often comes from a combination of block grants from the national/state government and tax revenue collected at the municipal level. The grant from the government may either be sector specific (i.e. one for education, one for health, one for culture, etc.) or a block grant allotted on the basis of objective criteria for the political authorities locally to allocate to the different sectors, education being one of them.

There are differences as to the real degree of independence that municipal authorities have in their allocation of resources to schools. In quite a few countries the national/state authorities have regulated nationally a number of factors such as maximum class sizes for the different levels, teachers’ salary scales and scales for teaching loads, initial education and recognition/certification of teachers and headteachers.

In most of these countries the hiring of teachers at upper and lower secondary and also of headteachers is left to the municipalities. Some municipalities, however, choose to delegate their authority to hire teachers to the schools, who remain accountable to the municipal authorities for their decisions. When it comes to salary scales for headteachers and teachers, most of the time these are set following national negotiations at the national/state level with some room for adaptation in the municipalities or at school level on the basis of certain criteria (such as, for example, teachers having received in-service training).

In this ‘municipal model’ local authorities are quite often responsible for school buildings, transportation of students, equipment, provision of textbooks and other learning materials, the in-service training of teachers, internal organization and the running of schools, and ensuring that schools respect national/state laws and regulations, etc.

While headteachers have the authority to act on behalf of the municipality, in most countries there is some kind of representative body at school level that gives advice or is directly involved in decision-making at school level in close co-operation with the headteacher.
An interesting observation made in this model is how many countries formally leave a number of decisions and a significant amount of responsibility to the municipal level, while at the same time retaining much real power nationally through central collective bargaining procedures and laws and regulations which in practice limit the room for manoeuvre for municipal politicians to a considerable extent. This is an indication that countries which officially support decentralization, often all the way down to the school level, also feel at the same time great responsibility for securing a sufficient quality of educational provision throughout the whole country in accordance with principles of equity and equality.

2. The other main means of regulating responsibilities between the national/state level and the local level is to give more power and responsibility and consequently accountability to the school level rather than to the municipal level (for example states in Australia, New Zealand, England and the Netherlands).

This does not necessarily mean that the municipal level is excluded from the picture, but rather that schools are much more the subject of the central authorities’ attention, the idea being that quality education is produced at school level and not at municipal level. This is why individual schools must be given the freedom and means to act but also be held accountable for the quality of the output.

This means that much of the decision-making power decentralized in model 1 described above to municipal authorities is allocated nationally/state-wise for schools to decide in this model. This may involve the right to appoint teachers, the freedom to use allocated funds quite freely, considerable freedom to organize timetables, teaching loads, class sizes, the number of periods allotted to each subject, staff development, rules for behaviour, etc.

In this model the schools’ governing boards or boards of trustees are given considerably more decision-making power and responsibility than in model 1 described above. The obligations and rights of school boards...
are generally prescribed in national/state legislation, outlining in considerable detail not only the duties and scope of their decision-making power and responsibilities but also who can be elected to these boards and how. Usually the municipality is given the responsibility of ensuring that the governing board fulfils to a satisfactory degree the duties prescribed nationally/state-wise. Governors or the entire board may be re-elected if the school does not perform satisfactorily over time. Some countries emphasize parent representation on the school boards. Others are more focused on having a good representation of the local community more generally, including parents. Often a representative of the municipal authorities is represented as well as a representative of the world of work. The practice is different as to whether the headteacher is a board member or not.

This type of governance is quite often combined with school choice, with an obligation for schools to present school plans and prospectuses to parents and the community. It is often combined with a system of regular national/state tests (often multiple choice) and exams related to attainment targets set nationally or by the state. Results are published by the school, which is responsible for making these results known to parents and other ‘client’ groups in order to help guide parents in their choice of schools. The objective is to introduce some level of competition between schools so as to put pressure on the schools/boards that do not perform well to make the necessary changes in order to obtain better results. If more satisfactory results are not obtained, sanctions may be introduced (for example retaining funding, replacing the headteacher or closing the school).

In this model schools receive most of their funds from the central level, as in New Zealand and the Netherlands, or they continue to receive them through the LEA as in England (except for grant-maintained schools who also receive funds directly from the state).
Box 6. Two models of governance

In Scotland the administration of the education system has been devolved from national to local authorities. The Minister of Education and Young People and the Ministry for Enterprise, Transport and Lifelong Learning remain responsible to the Scottish Parliament for the supervision and development of the overall system and for legislation in education and training. The Scottish Executive Education Department (SEED) administers the policy in co-operation with LEAs.

LEAs have strong educational powers. They are responsible for provision of education, implementation of government policy, appointment of staff and provision and financing of most educational services. They act through a committee that may or may not be especially dedicated to educational matters (as it is no longer compulsory to establish an education committee). Such committees are composed of local councillors and representatives of local churches.

School boards were then created to involve parents in school education at the individual school level. They provide an official forum for the expression of parental views and give parents the opportunity to ask for information about their school. School boards are composed of elected parents, staff members and members co-opted from the local community.

In New Zealand the education system changed from being a centralized structure to being a devolved one, in which many powers were transferred at the local level to School Boards of Trustees and there is no longer an intermediate level between them.

Within this framework the Ministry of Education remains responsible for defining education policy, allocating funds and resources to educational institutions, supervising implementation of policies, managing special educational services, collecting and processing educational data and statistics and monitoring the effectiveness of the education system.
Boards of Trustees are responsible for local school management. They are locally elected bodies that govern each state and state-integrated school. Each Board acts through its charter, which sets goals and objectives for the school in line with the legislation. The charter must include the ‘National Education Guidelines’ (which contain a statement of educational goals as well as curriculum and administrative requirements). Boards must present an annual report to the local community and to the Ministry of Education to testify to the achievement of these goals. A board is composed of the school principal, a staff representative, elected parents, a student representative (in secondary schools only) and four proprietors’ representatives (in integrated schools only).

The Board of Trustees appoints headteachers and teachers. To achieve school charter goals and ensure the running of the school, it receives quarterly operational funding that it may spend however it deems appropriate, within the framework of the National Education and Administration guidelines. As of 2001 all schools are centrally resourced for their teacher salaries; they pay teachers’ salaries directly in accordance with their staffing entitlement and Collective and Individual Employment Contract salary and payment conditions. Schools may recruit additional staff on their operational funds.

In summary, the main core of the model described above is that central/state authorities set the direction and explicit targets to be achieved and that the school level, with or without the municipality as a ‘support and controlling agency’, produces satisfactory results in relation to the attainment targets set. This is all put in a context of transparency of results, competition between schools, school accountability and the possibility of sanctions.

3. Some countries do not quite fit into any of the above models as they apply a hybrid model of decentralization and involve more or less levels of administration. In France, for example, a number of important decisions remain centralized, such as the curriculum, appointment of teachers and examinations. Some decisions have been delegated to local
representatives of the Ministry and are negotiated with the schools (the number of posts and teaching hours to which each school is entitled). Other decisions are the responsibility of elected bodies at the regional level (funding of operational costs and capital expenditures). Schools and their governing boards have quite a lot of autonomy in the use of resources that they receive in kind (number of teaching hours) or otherwise. Last, but not least, teachers are fairly autonomous in their classrooms. In Germany many decisions remain centralized at the level of the Länder, however certain Länder are starting to experiment with granting more autonomy to schools.

Table 2.1 below illustrates differences in relation to centralization/decentralization of decisions taken at lower secondary level in France, Germany, the Netherlands, England and Norway. In most countries there is a trend towards management decentralization. The objective is to increase quality as well as effectiveness and efficiency in the use of resources. This is accompanied by another trend to reinforce monitoring and accountability. There is still quite a lot of variation in the way this accountability operates.

8.4 Participation

In all the countries studied there are systems of participation of teachers, parents, social partners and other groups at different stages in the governance of secondary education.

Most countries have a rather substantial level of involvement from social partners in their governance of vocational education and training. This may be in the form of national agencies providing advice to the ministry and/or in helping/taking responsibility for the development of curricula and tests. However, it may also be in the form of regional/local/school bodies that give support in providing apprenticeship places, student placements and advice about vocational education and training to local or regional authorities.
Particularly in primary education, but also to a large extent in lower and upper secondary schools, parental participation is important. This is the case in the regular contact between the teachers and parents of every child in the class and in their presence and activity on various school boards or parent-school councils. Some countries also have national parent councils that help the government by giving advice on governance, curricula and teaching materials, etc.

There are differences as to the weight put on student participation in the various countries. In some countries student participation, particularly students in upper, and also to some extent in lower, secondary schools in the national and regional/local governance of education is quite important. The motivation for this emphasis is the need to take students, who are considered to be the most important group in all schools, and their opinions seriously in all educational planning and decision-making.

8.5 Concluding remark on governance

Whether the tendency towards decentralization will continue or not is an open question at present. Most countries seem to be in a position in which they are striving to find the right balance between national responsibilities and local freedom. Research does not allow a conclusion to be drawn on whether one model of decentralization is more effective than another. This depends on the context and the criteria chosen. In international surveys of learning achievements, for example Finland and Scotland, which have decentralized to municipalities, turn out higher average levels of achievement and lower standard deviations indicating lower levels of inequality than countries relying essentially on school autonomy and competition between schools such as Australia, England or New Zealand. The latter countries nevertheless exhibit high average performance, and in spite of large disparities the achievement of their lowest twenty-fifth percentile are reasonable by international comparative standards, higher than that achieved by the same groups in more
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<th>Mission and curriculum</th>
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<td>Criteria for grouping students</td>
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* In consultation or within a framework.
** Depending on the municipality.

Sources: Eurydice, 2000; OECD, 2000b.
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centralized countries such as France and Germany (see Figure 2.2). Decentralization is also a fairly political issue and decisions will depend on the type of objectives a country wishes to favour: efficiency in the use of resources, social and cultural integration, higher standards, etc. What an ideal governance model should be in relation to the aggregated sum of ideals, objectives, attainment targets and social functions sought after for the education system in a globalized society is arguable.
Figure 2.1 Percentage of students performing at each of the proficiency levels on the combined reading literacy scale

Sources: OECD/UNESCO Institute for Statistics, 2003: Figure 2.3.
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Figure 2.2 Differences in scores at 25th and 75th percentiles on the combined literacy scale

Performance on the combined reading literacy scale

Sources: OECD/UNESCO Institute of Statistics, 2003: Figure 2.9 (see also Table 2.3a in the same report).

9. Educational financing

The basic principles that guide the policy of financing secondary education in most of the OECD countries under study are related to: 1) the need to facilitate access to basic and compulsory education; 2) equality of opportunity; and 3) freedom of educational choice.
Most countries spend a large proportion of their national budget and GDP on education. This is justified by the strong belief that education contributes to development. However, in the 1980s and 1990s when economic growth started slowing down following the oil crisis, several countries tried to rationalize their public spending and looked for more efficient ways of distributing their resources between as well as within sectors. This has led to a number of reforms such as decentralization of the financing and management of public services including education, new ways of allocating resources, and a certain amount of deregulation and privatization. These trends have affected education differently in different countries. We shall review in this chapter the basic principles, amount of resources spent on education, funding sources and mechanisms of allocation of resources, and finally the unit costs of secondary education and the different factors that explain them.

9.1 Basic principles

In order to facilitate access to secondary education, no tuition fees are charged in state schools until the end of compulsory education and often not until the end of secondary education.

A tuition fee-free school (a state or grant-aided school) is to be accessible to every young person wherever he or she lives. The principle of free education often applies to textbooks and transportation until the end of compulsory education (with some exceptions, as is the case in Spain and Australia). In a few countries school meals are also free (Finland) or subsidized depending on the resources of the families (France, some US states). The principle of free education extends in most countries beyond compulsory education and concerns upper secondary education as well. This does not mean that secondary education is entirely free, even at lower secondary level: In most countries families must pay for meals, school supplies, extra-curricular activities and uniforms (where necessary) at both levels, as well as transportation and textbooks at upper secondary level. Families who cannot afford these costs
generally receive a scholarship (i.e. an overall grant) and/or benefit from a reduction in costs. Families with children in school benefit from a tax credit or rebate in many countries.

Another guiding principle is that of freedom in the choice of education. As a result private schools exist in all countries and enrol a varying number of students, which is low in some countries (such as Finland and Norway) and relatively high in others (for example the Netherlands, the UK, Ireland and Spain). The popularity of private education reflects the history of each country in terms of the role of the church(es) in society and in education, the curriculum (whether religion is taught in state schools or not), the tradition concerning the education of the elite (for example private independent schools in the UK) and the country’s financing policy. Most private schools have a religious affiliation; often, but not exclusively, with the Catholic Church. They are therefore complementary to the public school scheme in offering an alternative to public education. As many private schools are subsidized and receive public funds, the issue of competition between public and private schools arises.
The question of free choice of schools within the public sector has also become an issue in recent years. Traditionally students were assigned to the school situated closest to their home. In several countries the possibilities for parents to choose the school to which they wish to send their children has been introduced as a fundamental right to choose the best education for one’s children. At the same time this principle introduces some competition between schools and inasmuch as the money follows the pupils, popular schools receive more resources; according to economic theory this should encourage schools that are losing pupils to improve the quality of their teaching and use...
resources more efficiently. Free choice in public schools exists now in most countries, with a few exceptions such as France or Norway. The principle of free choice does not apply without limitations, however. In most countries parents can choose to send their children to a school outside their community or sector, provided that there is a place available for them and that popular schools can still guarantee places to children from their own sector. Transport is also free only inasmuch as students remain within the same district or municipality. In England, however, the money follows the student even if he or she attends a school outside the limits of the local education authority. The issue of free choice is thus related to mechanisms of allocation of resources.

A third guiding principle is that of equality of opportunity. In all countries financial assistance is available to low-income families who cannot meet voluntary fees, meal or transportation costs. Attendance at private schools is not restricted to well-off families as in many European countries there are highly subsidized private schools. The principle of equality of opportunity also influences the way in which different schools that cater for different groups of people – particularly disadvantaged groups – are financed.

9.2 Overall level of funding

The countries dealt with in our study spend between 9 and 16 per cent of their overall budget on education and most of them spend between 11 per cent and 13 per cent. They also spend a high proportion of their national resources on education: The countries included in our study spend between 4.92 per cent (United Kingdom) and 7.2 per cent (New Zealand) of their GDP on education, while the average for all OECD countries is 5.66 per

9. This proportion may not appear very high compared to the share of the budget that some developing countries and more specifically African countries spend on their own education systems. In most industrialized countries, however, public expenditure represents a large but varying proportion of the GDP (between 35 and 55 per cent). This proportion has declined in recent years as several governments try to reduce public spending.
In several OECD countries the proportion of the budget or GDP devoted
to education went through a period of decline and/or stabilization in the 1970s
and 1980s as a result of the economic difficulties and the desire of governments
to control their public spending. In the 1990s educational expenditures in the
overall budget increased – sometimes only slightly – but the share of total
public expenditures in the GDP continued to fall. As a result, after an increase
in the early 1990s a small downward trend in public education expenditure as
a proportion of GDP was observed in several countries in the second half of
the 1990s (Eurydice, 2000; OECD, 2001b).

There is no information available on the proportion of the GDP spent on
secondary education. However, there is some information available on the
proportion spent on primary and secondary education combined. Interestingly,
the variation is not as great as for the whole education system: In total, countries
spend between 3.06 and 4.42 per cent of their GDP (3.06 per cent in the
Netherlands, 4.35 per cent in France and 4.42 per cent in Norway or Sweden)
on their primary and secondary schools.
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Figure 2.4 Expenditure on primary and secondary education as a percentage of GDP

Note: Data not available for expenditure on educational institutions from private sources as a percentage of GDP for New Zealand and the UK.

Source: OECD, 2001b.

Interestingly, the largest share of public funding in EU countries is allocated to secondary education: This level receives roughly between 40 and 60 per cent of all funds earmarked for educational institutions. The largest share of public spending on secondary education is observed in countries such as France, the United Kingdom and Germany where secondary education is relatively long and costly.
9.3 Funding sources

State responsibility for school funding is shared between different levels of the government, namely the central (federal or state), regional and local levels (municipalities or school districts). The pattern in this respect varies a great deal between countries.

While in some countries, such as the USA and Canada, financing of education has always been very decentralized, this has not been the case in several European countries where the central state was – and still is – carrying the burden of most educational financing. Over the last 20 years several European countries have decentralized financing of certain educational expenditures to regions or municipalities. Regional and municipal authorities use grants they receive from the central government (from the ministry of education and/or from the ministries of local governments) for that purpose as well as their own resources. While some observers were afraid that this would lead to lower levels of resources being devoted to education (indeed, containing the costs was one of the objectives of the reform), this prediction has not been confirmed. Municipalities and regions spend more on operational expenditures in Norway or on capital expenditures in France than did the central government. No striking disparities seem to have appeared; however, this remains subject to more detailed evaluation (Eurydice, 2000).

Private funding exists mostly in the form of tuition fees paid to private schools, but also in the form of contributions from businesses, which are most common in vocational education.
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Figure 2.5 Relative proportions of private funds for educational institutions in primary and secondary education

*Data not available.
Source: OECD, 2001b.

The share of private sources in the financing of primary and secondary education varies a great deal from country to country: from a very low level in Nordic countries (e.g. 0.9 per cent in Norway) to 15.9 per cent in Australia. The share of private resources is higher in countries that tend to have a higher proportion of students enrolled in independent schools (such as Australia and the USA).

10. Twenty-four per cent in Germany due to the role of enterprises in the financing of the dual system of vocational education. Figures are not available for secondary education in isolation (OECD, 2001b: Table B3.2).
9.4 Funding models and allocation of resources to public schools

As we have seen above, different models exist concerning financing responsibilities for different types of expenditures and the degree of autonomy of secondary schools in the management of funds (Section 8). Public authorities apply different methods and criteria to determine the level of resources to be allocated to each school.

1. Criteria for allocating funds to public schools

Public authorities must generally determine how they will allocate resources to schools according to their needs and at the same time share resources among all schools in the most efficient and fair way. Funds or resources in kind can be allocated on the basis of a school’s requests; funds can be allocated on a per capita basis or on the basis of a formula that takes into account the specific characteristics of each school.

- The first approach (real cost approach) is still applied in a number of countries. The advantage of this approach is that it takes into account the specific requirements of each school and region. The disadvantage is that it is not transparent and can contribute to maintaining longstanding disparities between regions and schools if allocations are simply extrapolated from one year to the next.
- The second approach uses very simple indicators to define the resources that each school is entitled to: the number of pupils (per capita grant), the number of classes or the number of lessons to be taught. The method is simple and transparent, however it does not take into account the fact that per pupil expenditure can be higher in certain schools for very good reasons.
- A third approach is based on a mathematical formula that broadens – sometimes considerably – the range of indicators employed to determine the financial allocation (the type of programme taught, the characteristics of the school; i.e. whether it is urban or rural, the socio-economic profile of the student body ...).
Most countries apply a method based on a rather simple indicator (per pupil or per class) and adjust the allocation made to take into account certain features such as the type of school, its size, the options offered, the number of non-national language speakers, etc.

Taking into account the abovementioned factors, the following models for allocating funds to secondary schools are observed:

- In some countries (the Nordic countries and Scotland) funding for primary and secondary education is devolved to locally elected bodies through a combination of block grants from the national/state government and their own tax revenue. Mechanisms to allocate funds to individual schools very much depend on the municipality.

- In a number of countries the bulk of educational resources now go directly from the central level to the schools (as in the Netherlands, New Zealand, England, some states in the USA and Australia and some provinces in Canada). This has generated tremendous impetus for school systems to improve the set of criteria that forms the basis for allocation of resources to different schools. The types of formula funding that are being developed to define the level of grants increasingly take into account such factors as the type of curriculum offered, the age of pupils, the obstacles to learning associated with students’ profiles (social and ethnic background) and the demographic density and subsequent size of schools (Ross and Levačič, 1999).

- In other countries the central government delegates responsibility for the allocation of certain resources (e.g. number of teaching hours and staff requirements in France) to lower levels of education administration on the basis of certain criteria such as projected enrolment and other indicators. The decentralized education authorities in turn allocate

11. With the exception of grant-maintained schools, funds still go through the LEAs. However, the central government fixes the formula: 80 to 85 per cent of the LEA’s aggregated school budget goes to schools on the basis of age-weighted pupil numbers.
resources to the different schools – determining the number of teacher posts, the number of supplementary teaching hours and other funds – based very much on the same criteria.

Box 7. Allocation of resources to schools in selected countries

In the Netherlands roughly 70 per cent of the country’s schools are administered by private school boards, but public and private schools are paid by the central government on an equal footing. Most schools have religious affiliations. However, they increasingly recruit students from different religious backgrounds.

The central government pays for salaries and other operational expenses. Each school board receives a lump sum that it may use as it sees fit, provided it applies certain norms and standards in terms of teacher qualifications and salary scales. A formula determines the basic staff that a school – be it public or private – is entitled to; however, extra staff is also paid if many children from underprivileged families attend the school. The formula takes into account the type of school, category of staff and possibilities of replacement of absent staff. Operating costs depend on the number and type of pupils. A weighted formula is used to deal with disadvantaged children: schools receive for a student of a minority group 1.29 times as much as they receive for a regular student.

Municipalities pay the building costs of public and private schools. Compulsory education is free. Parents pay for textbooks, pens and pencils. Private schools are allowed to raise some fees, but within strict limits.

All schools are inspected, and schools that do not perform well are given a warning. Inspectorate reports are made available to the public. An annual statement of accounts is required.
Lump sum funding on a per capita basis favours large schools. In order to benefit from economies of scale a good number of schools have been closed or merged with other schools.

In **New Zealand** educational resources are provided directly by the central government to the schools. They include staff salary funding, direct funding such as operating grants and capital expenditure, in-kind resources such as special needs support, curriculum resources and professional development expenditures. Operational funding is administered by the Boards of Trustees. Staff costs are managed either centrally by the Ministry of Education (Centrally Resourced Schools) or by the Board of Trustees through a pool of resources allocated to the school (Directly Resourced School).

The school funding formula has several components: basic student allocation (which includes staffing entitlement and operational funds), curriculum enhancement, student supplementary educational needs (on the basis of the number of special needs students and indicators of socio-economic disadvantage) and school sites needs. Staffing entitlement is based on the student:teacher ratio and the different grade level weights.

Sound accountability and reporting procedures have been ensured.

In **France** the central government finances the cost of staff salaries (teaching and non-teaching). Teachers are recruited nationally but managed at the regional level by representatives of the Ministry of Education. Each year schools ask for a certain number of teaching hours on the basis of their expected enrolment by grade and options they offer. The Ministry of Education allocates to every educational region a certain number of teaching hours (ordinary and supplementary) on the basis of a certain number of criteria; these in turn are allocated by the region to the different schools that transform them into a number of posts plus supplementary hours which the headteacher can use as he or she wishes. Operational funds and capital expenditures are the responsibility of local authorities that receive funds from the central government and collect their own taxes (régions for upper secondary schools and départements for lower secondary schools). Operational funds are then transferred to schools on the basis of criteria fixed by each local authority.
2. **Compensatory programmes**

Independently of the model used above, which may or may not take into account the need to give more resources to certain schools that enrol students at risk, several OECD countries have introduced programmes that try to compensate for the socio-economic and cultural disadvantages of students, fight against school failure and promote social integration by allocating additional funds to specific schools. These programmes provide additional funds to individual schools which enrol large numbers of students from disadvantaged backgrounds or to all schools within certain areas characterized by a large concentration of migrant populations or minority groups. Among such programmes the ‘Educational Priority Areas’ in the United Kingdom, now replaced by ‘Education Action Zones’, the ‘Zones d’Éducation Prioritaire’ (ZEP) in France and the ‘Disadvantaged Schools Programmes’ in Australia are worth mentioning. Such funds are meant to allow schools to improve the quality of teaching and learning using new combinations of teaching and non-teaching staff, adopting new methods of grouping students, favouring team teaching, rewarding teachers and leaders for success in raising the achievements of students from disadvantaged groups, and supporting families and students.

The results of such programmes are the subject of much inconclusive research and debate. The difference in learning achievements between students enrolled in these programmes and those who are not has not been significantly reduced. As a result, some people argue that the efficiency of such programmes is questionable and that funds could have been used more efficiently if spent in a different way. Others argue that although disparities in learning achievements have not been reduced, they have not increased either despite the fact that on the whole social inequalities in the countries concerned have widened.

There is, however, a consensus that in many countries disparities in education provision between schools has increased and that additional resources
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are required to support schools that enrol a large proportion of youths from disadvantaged backgrounds. More important than the simple provision of additional funds is the way in which these resources are used and the educational processes which are implemented (Hatcher and Leblond, 2000). In other words, if additional funds are used to reduce the average class size, this is costly but not very effective; the results may be different if resources are used to introduce a new teaching and learning process better adapted to the needs of young people.

Finally, some argue that the identification of ‘disadvantaged schools’ or ‘schools in disadvantaged areas’ leads to stigmatization of certain schools and areas and encourages middle-class families to enrol their children elsewhere. The solution may then be to fight against such a concentration of students at risk in the same institutions through bussing or vouchers.

3. Financing of private schools

Financing of private schools varies significantly from one country to another. In the United States most private schools do not receive any public funding. A debate has emerged recently as to whether or not private schools should be financed through, for example, a voucher system. In most European countries private schools are not tuition fee-free; however, most receive significant subsidies that help reduce the level of fees. There are in fact several types of private schools: those which are quasi-public and do not charge fees, those which are highly subsidized but charge some fees, and those which are independent and thus charge high fees.

1. A first group includes the voluntary schools in England and Wales and private schools in the Netherlands. These receive the same level of financing as government schools and are not allowed to charge fees. Their teachers may even be considered civil servants (such is the case in the Netherlands).
2. The second group of private schools includes the voluntary schools in Ireland, schools under contract in France and integrated schools in New Zealand. The governments pay for salaries and most of their operational expenses but not for their capital expenses; they charge fees to supplement the income they receive.

3. The last group encompasses all independent schools that do not receive any or hardly any subsidies (this is the case, for example, of independent schools known as ‘public schools’ in England and schools without contracts in France). They enrol a rather limited number of students in all countries (except in Australia, Spain and some American states). Totally independent schools follow the curriculum they choose and recruit the teachers they want; however, variations tend to be limited when they prepare for the same external examinations.

In general the higher the subsidy, the greater the state’s control. This generally concerns the physical and security conditions, teacher qualifications and their salary scales, the curriculum taught and the schools’ results. Accounts are also under strict control.

Financing private education has traditionally been a sensitive issue in several European countries. The debate on this issue has become quite intense lately in the United States, where the state did not normally finance private – essentially religious – schools. Within the framework of the debate on free choice, voucher schemes have been initiated in which students receive an annual amount of funding that they can use to enrol in any eligible school, be it public or private. The questions posed by such financing include whether it is legitimate for the state to finance private religious schools, whether or not it contributes to higher learning achievements and/or whether or not it leads to greater inequalities and social fragmentation. Much research has been conducted to assess the impact of such schemes. Summarizing their findings and drawing lessons is not easy as there are many different schemes operating in different contexts, with different objectives and arrangements (Levin, 2002; Belfield...
In the Netherlands the majority of schools are private but financed by the state in the same manner as any public school. The country performed rather well in the TIMMS surveys as well as in PISA. There is some evidence of higher quality in private schools, particularly in Catholic schools. The latter tend to raise the achievement of disadvantaged children more than public schools do. Most schools practice an open enrolment policy and inequalities have not increased. The funding formula encouraged the merging of schools and the rationalization of schools’ costs.

In France teacher salaries and operational costs of private schools under contract are financed by the state. These private schools raise fees to finance capital and equipment costs. Over the years the share of private school enrolment has declined. However, such schools tend to recruit students from more diverse social backgrounds. Children from middle-class families (employees) and the upper middle class continue to be over-represented in their enrolment, but so too are the children of farmers and petty tradespeople. Private schools tend to reduce inequalities in students’ achievement and raise the achievement of children from disadvantaged groups more than state schools do.

In the US two small-scale voucher programmes have been implemented for low-income families (in Milwaukee and Cleveland). Public authorities paid the expenses of such students and schools did not have the option of rejecting students. The schemes succeeded in enrolling low-income students and in raising their test scores. It is not entirely certain however that they did not cream off the most able students among the disadvantaged, thus contributing to transforming local public schools into real ghetto schools.
Another form of privatization occurs when competition between schools – public or private – is encouraged. When parents have a choice regarding which school their youngsters attend and where the money follows the student – as in England, the Netherlands, New Zealand or in the voucher schemes – competition exists. In theory parents who are unhappy with the quality of their neighbourhood school or the programme it offers will choose another school. Unpopular schools will see their funds decrease to such an extent that they may be in danger of having to close; this should encourage them to increase the quality of the education delivered and to better attend to the needs of students and their families. In such schemes regulation is no longer carried out by the state but rather by parents who exercise their power as consumers. The effectiveness of such a policy can again be assessed on the basis of its impact on learning achievements, on inequalities and on social cohesion. Research is, however, on the whole fairly inconclusive.

Much research has been conducted, showing that parents do not necessarily choose schools on the basis of academic criteria. They often base their decisions on the teaching style and the profile of peer students. England, which has adopted such a policy, has witnessed a significant improvement in students’ learning achievements, but it is very difficult to say whether this is the result of that particular policy or of the many other measures taken at the same time such as setting school targets, tests and assessments, close supervision, etc. In terms of the impact on inequalities, the results of the research carried out are unclear. Inequalities, which have always been great in England, have not really increased.

Last but not least, other countries that have not introduced competition between schools and have maintained state regulation are performing equally as well or even better in international surveys. Supporting teachers and schools in difficult circumstances rather than causing them stress might be just as productive.
9.5 Average expenditure for one secondary school student

The countries in our study spend between 3,934 and 7,764 United States dollars (US$) on each of their secondary school students, while on average OECD countries spend US$5,625. The variation in the amount spent in each country is quite considerable; richer countries, i.e. those with the highest GDP per capita (e.g. the United States and Norway), obviously spend more than others. To take into account this difference in wealth, the average unit cost can be expressed in terms of GDP per capita. Countries therefore spend on each secondary school student an amount equivalent to anything from between 21 per cent of their GDP per capita (in the Netherlands) to 31 per cent (in France). Most of them spend 23-24 per cent.

There appears to be no clear relation between the amount that each country spends on each student and learning achievements. This is a matter of concern for the countries under consideration. Another matter of concern is that over time increases in unit costs have not been accompanied by similar increases in achievements. As discussed above, several governments who are committed to reducing public spending have been trying to reduce or slow down the increase in unit costs through decentralization and increased accountability. Unit costs did decline in the late 1990s in certain countries (the United Kingdom and Germany) and stabilized in others (Finland and Canada); however, in other countries they continued to increase.

Several factors influence the unit costs:

1. Student:teacher ratios. In a large number of countries these have declined as a result of both the declining – or stabilizing – school-age population in recent years and pressure from trade unions to reduce the number of pupils per class. Teachers have also been asked to undertake a number

12. US dollars have been converted using PPP (Purchasing Power Parities): US$3,934 in Ireland, US$7,764 in the US.
of extra-curricular activities, such as the co-ordination of teaching at
the level of each class and organization of remedial courses, etc. Some
countries did, however, increase their student:teacher ratio (the United
Kingdom, Canada and Germany). At present the student:teacher ratio at
secondary level ranges from between 12.7:1 in Australia to 19.3:1 in
Canada. The average for OECD countries is 14.6:1. In some countries
the student:teacher ratio differs between lower and upper secondary,
being lower in the latter than in the former, but this is not always the
case;
2. Salary levels. These are not high: After 15 years of experience secondary
school teachers receive a salary which is in some cases not very much
higher than the GDP per capita. The ratio of salaries over the GDP per
capita varies in fact from 0.9 (in Norway\textsuperscript{13}) to 1.8 (in New Zealand) in
the countries reviewed, with most falling between 1.2 and 1.5. These
relatively low salaries explain the overwhelming proportion of female
teachers in western countries. It explains also why some countries face
difficulties in recruiting new teachers. There has, however, been an
increase in average salaries as the teaching force grows older;
3. Non-salary costs. These represent on average 20 per cent of all recurrent
costs in primary and secondary education in OECD countries. Certain
countries spend a much higher proportion on non-salary costs (30 per
cent in Finland and the United Kingdom). The installation of ICT
equipment in all secondary schools has increased unit costs. Furthermore,
a typical vocational school student costs far more than a student in a
general secondary school.

\textsuperscript{13} These data relate to 2000. Since then teachers in Norway have been given a substantial
increase in salary in the hope that this will increase recruitment to the profession.
9.6 Comparing the unit costs of primary and secondary schools

It is interesting to compare how much each country spends on its secondary school students with the amount it spends on its primary school pupils.\textsuperscript{14} Schooling is normally more expensive at the secondary level: Teachers are paid more; they are specialized per subject and teach fewer hours; and costs for science and technology equipment are higher, as are costs for non-teaching staff. There are variations; however, it is interesting to note that on the whole OECD countries do not spend much more on a secondary school student than on a primary school pupil. Some countries, such as Finland and Norway, spend only very little more on their secondary school students than on primary school pupils. At the other end countries like Germany and France spend on average 76 per cent more on a secondary school student than on a primary school pupil. Most countries, however, spend between 30 and 50 per cent more. Information on unit costs is not available separately for lower and upper secondary in every country, but where it is available it appears that lower secondary is barely more expensive than primary (except in France, where the unit costs are increased by a factor of no more than 1.3).

This limited difference in the cost of a secondary and a primary school place means that for all the countries concerned:

1. performing to standard at primary level requires \textit{per capita} funding that is not much lower than at secondary; and
2. there is fundamentally no reason to assume that much more needs to be spent on a secondary school student than on a primary school pupil. This is coherent with the continuity being stressed in schooling and curricula from primary to the end of secondary.

\textsuperscript{14} Information is not available for lower and upper secondary independently.
Three other factors contribute to the limited difference in unit costs:

1. Secondary school teachers receive a salary that is either equivalent to what a primary school teacher receives (as in the United Kingdom, New Zealand or Norway) or in any case not more than 15 per cent higher. Furthermore, there is no significant difference in salaries received by upper secondary school teachers compared to lower secondary teachers. *All teachers now have a post-secondary school degree and their level of responsibility is similar, regardless of the level they may teach.*

2. Pupil:teacher ratios tend to be lower, but not very much lower, at secondary level than at primary level: 14.6:1 on average in secondary education compared to 18.0:1 in primary for all OECD countries. Furthermore it is not always the case that the ratio in secondary education is lower.

3. At secondary level equipment for science, ICT etc. is more expensive. However, particularly at upper secondary level, families are expected to contribute more to educational expenditures such as textbooks, school supplies and transport, etc.

**In conclusion,** OECD countries spend a great deal of resources on their secondary education. Indeed, secondary education is the level that employs the largest proportion of their educational budget. On average a secondary school student costs an amount roughly equivalent to 24 per cent of the GDP *per capita*. In view of the multiple missions assigned to this level of education – educating all adolescents and young people at a very critical moment of their existence, preparing them for active participation in a democratic society and for a meaningful life, preparing them for the world of work and for further studies as well as inculcating cultural and ethical values – this amount can hardly be considered extravagant. In an effort to contain educational spending in general and unit costs in particular, several countries have decentralized educational financing to municipalities and delegated budgets to schools. The expectation was that municipalities and schools would...
know better what their requirements are and make more appropriate choices on how to use resources. Emphasizing formula funding while keeping the process transparent and equitable is part of this same effort of rationalization. There are several lessons to be drawn from such experiences. Some countries have also relied on competition between schools and privatized accountability to increase school effectiveness. These measures are debated to great lengths, however their impact on unit cost has not been studied in great depth.

For an African decision-maker it is interesting to note that a secondary school student does not mobilize a much greater amount of resources than a primary school pupil. It is the rather low level of salaries that contributes to maintaining salary costs within reasonable limits. This in turn allows spending some 20 per cent, sometimes up to 30 per cent, on non-salary costs: books, ICT, scientific equipment, transport, and social expenditures such as school meals for disadvantaged children.
Part three
Relevance of trends in industrialized countries for African countries

What lessons can be drawn from the experience of OECD countries that could be valid for African countries?

The situation is evidently very different between the two groups of countries. Economically, OECD countries are able to invest far more resources in their education systems than African countries, in absolute value if not in relative terms. Their human resource requirements are not the same. There are not many common points between the highly diversified and increasingly knowledge-based economies of OECD countries and the economies of African countries. Yet African countries will probably not follow the same path as European countries, nor will they go through the same stages of development. African countries should especially not forgo the opportunities created by new information technologies or they run the risk of being marginalized for a long time. Investing in human resources beyond simple literacy and consolidating the basic competencies of all youngsters in reading, mathematics and science could encourage foreign investors to take advantage of Africa’s many assets, thus helping to turn the threats of globalization into promises.

Investing in an extended basic education with a view to offering every African young person nine years of quality education would have other important and direct benefits on peoples’ lives, such as better health, enhanced chances of fighting HIV/AIDS through preventive education, a better understanding of their environment, and hopefully better control over it, an increased likelihood that students will become active members of the
community, broader personal development, and promotion of an active and independent attitude towards learning and working. Young people may not find work immediately after they leave school – in fact it is sure that most of them will not as education is a long-term investment that rarely has an immediate effect in terms of increased growth rate – but educated youngsters will have a better mastery of some of the knowledge and skills required to generate some kind of income and to run a small business successfully in an urban or rural setting. As the 1998/1999 *World development report* states:

“Poor countries and poor people differ from rich ones not only because they have less capital but because they have less knowledge. Knowledge is often costly to create and that is why much of it is created in industrialised countries. But developing countries can acquire knowledge overseas as well as create their own…”

Approaching development from a knowledge perspective, that is adopting policies to increase both types of knowledge, know-how and knowledge about attributes, can improve people’s lives in a myriad of ways besides higher income. Better knowledge about nutrition can mean better health, even for those who have little to spend on food. Knowledge about how to prevent the transmission of AIDS can save millions from premature death.” (World Bank, 1998/1999: 1)

Reforming secondary education is also indispensable to the objective of basic education for all. More and better-educated teachers are required and better use of existing resources is also needed at all levels. Last, but not least, increasing opportunities at post-primary level would broaden the horizons of pupils at primary level and encourage them to finish their studies.

A number of findings have been made as a result of this study that may be relevant to the African region and which its decision-makers may want to consider. These concern the history of the development of secondary education,
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the goals and present structures of secondary education, flow regulation and transition to the world of work, curricula, strategies to enhance the quality of teaching and learning, governance, and cost and financing.

1. History of the development of education

In most European countries there was a considerable time lag – of nearly half a century – between the moment when primary education was generalized and made free and compulsory and the moment when access to secondary education was widely opened. At the end of the Second World War countries such as France, Ireland and Spain were enrolling a fairly low proportion of the relevant age group in secondary education. The proportion was slightly higher in the United Kingdom, but even there no more than 50 per cent of the age group were undertaking secondary education. Secondary education was of high quality; it was quite well adapted to the needs of societies and economies of the first half of the twentieth century.

Primary education developed without much state intervention thanks to the church and local communities. This was not the case of secondary education. Fee-paying secondary education did not succeed in enrolling many children outside the ruling class. Secondary education started expanding when public authorities became committed to its expansion and substantially increased the resources allocated to it.

Post-primary education in senior schools or upper primary schools was available to a much larger group: It focused on the ‘three Rs’ and was fashioned to educate the masses of farmers and workers until the age of 14 when they could start working. Later on, when these schools were merged with modern schools, their curricula were enlarged to cover several subjects such as science, technology and manual education, social science and civics education. The existence of parallel sub-systems enrolling children of different social
classes is not to be recommended as it may lead to unacceptable inequalities. However, the idea of transforming lower secondary into a final cycle of basic education, where young people would acquire the basis for further learning and for becoming responsible citizens, is something worth considering for African decision-makers. This implies seriously revising existing curricula, more seriously than some European countries may have done in the past or even are doing at present. This means that new curricula will have to be designed that focus on basic competencies. Identification of new learning areas that regroup several disciplines and are taught by fewer teachers, as is presently being done in several Nordic countries, has the advantage of making knowledge and skills more accessible to the largest possible number of primary school leavers, facilitating the transition from primary to secondary and keeping costs down, particularly in rural areas.

2. Structure and goals of education

A similar structure is found in several OECD countries that emphasize a close connection between primary and lower secondary education and that combine these two levels with a common curriculum, sometimes even keeping students in the same schools until the end of compulsory basic education. In countries such as Norway the same teacher is asked to teach several subjects (up to three or four) until the end of lower secondary so as to reduce the shock of having numerous subject teachers, facilitate transition from class teaching to subject teaching and increase transversal learning.

All western countries are concerned with the need to ensure continuity from primary to secondary education and to ease the transition between these two levels. Several strategies have been developed in this respect, such as allowing an overlap of curricula, organizing transition years, grouping

15. In Africa it would be rejected as a reintroduction of the colonial school system.
pupils differently for different subjects, encouraging teachers’ co-ordination, introducing peer teaching and asking the most able and advanced pupils to assist those who have difficulties.

Problems of transition, repetition and dropout during secondary schooling is a serious problem in African countries in spite of an often severe selection at the end of primary. All of the above methods could be used to reduce failure in lower secondary and would not incur much additional cost. They would, however, imply a significant change in the organization of lower secondary schools and a radical shift in the institutional culture: First, secondary education should no longer be considered an education for the elite; second, teachers would have to be trained and encouraged to work together as a team; third, the functioning of schools must be revised and their leadership strengthened.

While OECD countries are doing their utmost to retain all youngsters in the education system for as long as possible, a selection process will probably continue to exist at the end of lower secondary education in many African countries until more resources become available.

A quality upper secondary education preparing for university entrance must also be maintained. Even if selection does occur, the lifelong learning perspective emphasized in western countries could be kept in mind, allowing pupils to continue their studies both through other paths, such as by returning to school after having worked for a number of years, and in different schemes, potentially through using radio and other information technologies.

In this respect the goals of secondary education as defined in this study are relevant to all African countries:

- to provide and strengthen essential foundation skills as a basis for further learning;
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- to prepare young people for entry into the world of work; and
- to prepare them for active participation in a democratic society and for a meaningful life.

Another point worthy of mention under this heading is the attention to be paid to equity issues and the education of minority groups and disadvantaged youth. The review shows that all the OECD countries studied place strong emphasis on giving physically disabled learners and other disadvantaged groups the same rights and opportunities to receive education as other students, seeing this as an integral part of the principle of equity. In many African countries the number of physically and socially handicapped children is high; it may even be increasing due to the large number of armed conflicts which affect the region, not to mention HIV/AIDS which is responsible for the increase in the number of orphans. Whether or not mainstreaming, as it is increasingly practised in OECD countries, is the most adequate solution is to be studied on a case-by-case basis. However, African decision-makers would have to consider this issue from a human rights perspective and carefully assess the different possibilities of how various organizational and methodological approaches could be used to provide disabled pupils with an education that is of quality but also cost-efficient.

3. Flow regulation and retention

Repetition is a serious problem in many French and Portuguese-speaking African countries. The large number of repeaters unduly increases the number of pupils enrolled without necessarily increasing the learning achievements of those who repeat. It also increases the age span within schools and classes, which can cause problems.\textsuperscript{16} In many English-speaking countries, automatic promotion is the rule; this introduces heterogeneity in schools and classes.

\textsuperscript{16} This can include problems of sexual harassment.
among pupils as regards their educational knowledge. Sustaining quality is a pedagogical challenge.

The experience of several OECD countries is interesting in this respect:

- First, there is a trend away from repetition, which is considered a waste of time and money for the individual as well as for society. It is even considered counter-productive to further learning if students are discouraged.
- Yet automatic promotion is not applied bluntly: Remedial courses are organized to support weaker students by teachers, peers or members of the community, and summer courses are proposed etc.

Such measures would probably be cheaper to introduce than having 20 to 40 per cent of pupils repeating and many dropping out without having acquired the minimum knowledge and skills.

This would not reduce repetition of pupils who failed selective examinations: Only opening up access would do so. Yet placing education within a lifelong perspective and offering alternative education or training could contribute to lessening the demand for higher levels of education. Introducing fees beyond certain levels and scholarships for brilliant disadvantaged adolescents would have the same effect.

4. Transition to the world of work

There is much to be learnt also from the mechanisms for facilitating access to working life that exist in several OECD countries. Access is opened up by allowing periods in the curriculum for career guidance and counselling, co-operating with social partners to visit the schools, organizing placements in enterprises, and, last but not least, creating different kinds of school-to-
work options where students may be partly at work and partly at school. This approach complements curriculum reforms which emphasize applied science and technology, ICTs, entrepreneurship as a subject area and work-oriented options as well as the teaching of transversal competencies such as problem-solving, reasoning and creativity in all subject areas.

Counselling, advice and entrepreneurship education are much neglected areas in many African curricula. In an attempt to prepare students for the world of work many African countries have introduced pre-vocational subjects in their lower secondary education programmes. The provision of such courses is very expensive if it is to be of good quality. The experience of OECD countries shows that there are cheaper ways of sensitizing students to the world of work and preparing them for entry into it. One possibility that African countries may wish to consider is to make work experience an integral part of the education system to be implemented in close co-operation with social partners in the informal and formal sectors of the economies.

In the great majority of OECD countries reviewed, vocational education and training is considered to be of vital importance to a strong and sound economy. In these countries vocational education and training is offered after lower secondary education. The main lesson to bear in mind is that there is no one ‘perfect’ way of organizing it; it can be done successfully in a variety of ways, in and outside schools depending on the context.

Again, African countries may not have the means to introduce several quality, work-oriented options in the curriculum as some OECD countries do. They may not have the necessary resources – or the need – to maintain a large number of vocational schools at upper secondary level, however suitable ways of training may be found in different schemes outside the formal school system. OECD countries present a variety of possibilities: school-based education combined with work placements, different types of apprenticeships, and combinations of apprenticeships and school-based education.
5. Curricula and content

Curricula in many African countries need to be revisited. Several of the trends reviewed in this document appear quite relevant:

- The fact that curricula should have a triple objective: to teach the traditional subject areas but also social and personal skills as well as ethical values;
- The strong priority given in a number of countries to basics in lower secondary school including literacy, numeracy, natural sciences (including health education) and a foreign language but also the emphasis on skills and competencies that are not directly subject-related (i.e. generic skills);
- The concern for revising curricula with the aim of reducing content and enabling them to cater for a wide range of abilities, aptitudes and interests at upper secondary level;
- The emphasis placed on standards, a point we will return to below; and
- The concern expressed by other countries to build up a broader range of subject areas so as to develop the young person as a well-educated, ‘universal’ human being.

6. Strategies to enhance the quality of learning

One of the most interesting findings of this review for African countries is that most OECD countries are convinced that they must improve the quality of learning and can do so without adding more costly inputs to what is already a very expensive process. Numerous studies have indicated that investing more resources is not the only key to improving quality but that more must be done to improve the teaching and learning process, better differentiate and adapt the pedagogy used to the needs of each individual student and increase interaction between teachers and students. Among the most interesting avenues the following are worth underlining:
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- More time and aid given to students for individual learning. In African countries students cannot be expected to do this at home. When constructing a secondary school it would therefore be worth considering adding a room or two where students can study independently and have at their disposal the relevant reading materials. Students would not be left alone; however, this could be achieved without calling on experienced teachers who add to the school’s expenses. Rather, assistant teachers, including unemployed graduates available in the community, could be employed to fulfil this role;
- Specialized schools (such as Beacon schools). Certain schools can be specialized to educate those specializing in science and technology who would benefit from better equipment than is normally available in ordinary upper secondary schools. At the same time these high performing schools could serve as resource centres and contribute to supporting other schools through the sharing and diffusion of good practice;
- Being clear on what students are supposed to learn at different levels and on the fundamental goal of teaching. This can be elaborated in the form of state curriculum standards;
- Placing emphasis on project work. This requires introducing substantial flexibility in timetables and the use of teachers. Both teachers and headteachers must be trained within this perspective;
- Team teaching. This can be done in large classes, again with the use of assistant teachers;
- Asking teachers to teach several subjects. This would facilitate development of transversal skills and competencies. There is of course a limit to such a system and extending it too far might be detrimental to the quality of the teaching provided (if a teacher no longer masters the subject matter);
- Emphasizing a school-based support system to provide pedagogical help to teachers. This is being carried out through having mentors present in schools and advanced skilled teachers in different subject areas;
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- Emphasizing the role of headteachers in the support of quality education delivery; and
- Placing emphasis on assessment, decentralization and accountability. As far as quality is concerned, however, there is a growing realization that accountability per se is not sufficient and strengthening capacity among actors of the education system is equally crucial.

Most of the innovations mentioned above cannot be implemented without both well-trained and motivated teachers willing to co-operate and the support of headteachers. The report shows that OECD countries are increasingly recognizing that the skills and pedagogical and methodological competencies of teachers are of paramount importance to quality learning. For this reason satisfactory pre-service training is considered important, but so is school-based, in-service training, where teachers are being trained together in their own setting. This is partly as it is cost-efficient but also as it is efficient in relation to learning, particularly when it comes to teaching methods. African countries would be well advised to look into the various aspects of introducing school-based in-service training for teachers. Finding suitable incentives for schools, school heads and teachers who commit themselves to improving their teaching and leadership skills is part of the issue.

From a very practical point of view, time should be left for teachers to interact among themselves and with their students. Rooms must also be set aside for this; teachers’ common rooms or studies would not add considerably to the cost of school buildings.

7. Evaluation, assessment and examinations

In Africa assessment – and particularly examinations – is a crucial aspect of the education system. Exams are used for selection purposes and to ensure that schools comply with curriculum requirements. For these reasons
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and to secure equity and efficiency in the system they must be reliable and transparent. As the review has showed, much discussion is occurring in OECD countries as to various forms of student assessment and how they can improve learning as well as provide a valid basis for the selection of students for different pathways throughout secondary education. The most promising lessons for Africa to be drawn from OECD countries may be the following:

- It is important to clarify the purpose of the assessment method used. The most vital question is whether it is used for selection and control purposes or for the learning purposes and monitoring of individual students.
- More emphasis should be put on the development of assessment methods that may both help teachers in their daily work to identify learning problems in the student group and help improve the teaching and learning process. Various types of diagnostic tests may be one of the means that could be used. Within a cycle more weight should be put on assessment methods that help students to improve and stay IN the system rather than selecting them OUT. This requires training teachers accordingly.
- Care should be taken to develop assessment methods and exams that do not have an unintended ‘tilting effect’ in relation to all the various objectives to be achieved. Exams and tests can be developed in ways which motivate and stimulate schools and teachers to employ a variety of teaching methods and which emphasize application of knowledge and skills in their daily teaching. Various combinations of oral, written, practical and project exams and tests could be considered.
- Examinations used for selection and control purposes must comply with the rules of validity and reliability to ensure equity and fairness as well as efficiency in the sense that the ‘right’ pupils are selected. Different kinds of standardized tests developed centrally and with little scope for subjective deliberation when determining the results of each individual student may be considered in this respect. One of the trends that appears
to be among the most promising is the possibility of combining school-based assessment with external examinations.

8. Governance and participation

In most OECD countries there is a development towards greater decentralization and discussion over what may be the right balance between centralization and decentralization. The main tendency is to centralize curricula and attainment targets, often in combination with centralized tests and exams, whereas local levels of governance, including schools, are given wider autonomy for deciding which subjects are to be taught, the organization of the school, use of resources including teachers and buildings and, last but not least, the organization of the teaching process. There are also increasing accountability demands on schools combined with greater participation from parents, students, social partners and the local community more generally. Lessons for African countries may be the following:

- The need to examine whether the present day division of roles and responsibilities between the national level and the lower levels of governance including schools is conducive to the improvement of resource efficiency and the quality of teaching and learning for students;
- The need to consider how schools could be made more accountable and to whom for the quality of their organization and delivery of teaching to all pupils. How parents, the local community and the students themselves can be brought into such an accountability process is worth considering. How assessment and evaluation methods can be employed constructively in this context is also to be analyzed;
- The importance of examining whether the present rules and regulations applied at the school level have a constraining effect on innovation and development of the multiplicity of teaching and learning methodologies.
necessary to cater for the wide range of abilities, aptitudes and interests within the student group; and

- The need to consider whether the balance is right between controlling school compliance with the national requirements and quality standards and giving support to schools through headteacher and staff development, teaching materials, encouragement and incentives.

9. Cost of secondary education

The countries reviewed devote a fairly large proportion of their GDP to education: This reflects the importance attached to human resource development in these increasingly knowledge-based economies. A good proportion of these resources – some 70 per cent – go to basic education, which in OECD countries includes primary and secondary education. In most countries the unit cost of secondary schools is high: around 24 per cent of the GDP per capita. Several countries have tried to slow down or even stabilize such unit costs so as to limit growth of public spending in education and overall.

There are several findings that may be of interest to African policy-makers when considering expanding secondary education:

- Teacher salaries are not very high in OECD countries considering the level of their qualifications and the challenging mission assigned to them. After 15 years of experience the salaries of lower secondary teachers in the countries reviewed are only 20 to 50 per cent higher than the GDP per capita in these countries (40 per cent higher on average in all OECD countries). Salaries paid to teachers in many African countries are generally much higher when expressed as a ratio of the GDP per capita. There are obvious limits to such a comparison: The GDP per capita does not provide a good indication of the purchasing power in African
countries while it does in OECD countries. Many teachers are obliged to take up another occupation in order to complement their salaries. This indicator nevertheless points out why secondary education will be much more difficult to finance on government funds in African countries than in OECD countries.

- Secondary school teachers receive very similar salaries whether they teach at lower or upper secondary level and their salaries in turn are not very much higher than those of primary school teachers. This reflects the fact that primary and secondary teachers have similar educational qualifications and similar responsibilities regardless of the educational level they teach. Here again the difference with African countries is striking. In many African countries secondary school teachers receive a higher salary than primary teachers, even when their teaching load is lighter (Lewin and Caillods, 2001). Of course they are generally more qualified, however the issue has some implications for the financing of more secondary school places. Beyond the question of salaries and costs is the question of teachers’ status. If African countries aim to introduce a nine-year basic education integrating lower secondary as part of that basic education, continuity will eventually have to be established between the two levels and the status and salaries of teachers will have to be harmonized.

- Given the above facts, the annual cost of a secondary school student is not significantly higher than that of a primary school student in most OECD countries. This again is very different from what is observed in African countries for the same reasons as discussed above.

10. Financing strategies

The following are some of the major findings regarding financing of education in OECD countries:
Cost sharing is very limited in most OECD countries as most secondary education expenditure is funded by public authorities.

There is, however, a diversification of funding sources within the public sector: In some countries local authorities in particular can play a significant role in the funding of educational expenditures. Greater decentralization of educational financing to municipalities has generally led to an increase in resources available for education.

The policy of heavily subsidizing the private sector has given a choice to all families regarding the school to which they send their children without unduly increasing inequalities. At the same time it has allowed additional resources to be mobilized. Subsidies are generally subject to fairly strict control of the conditions of the schools, the curriculum taught and results obtained.

In an effort to contain educational spending several countries have delegated budgets to schools. The expectation was that schools would know better what their requirements are and make more appropriate decisions on how to use resources. Funds go directly from the central government to schools, and the amount to be allocated is decided on the basis of a formula that takes into account age-weighted enrolment and a series of other factors. This new development has contributed to equity and transparency.

On the whole, OECD countries spend between 3.4 and 4 per cent of their GDP on their school education (primary and secondary).

What lessons can we draw from the above for African countries? Obviously the resource situation is very different – African countries have not yet achieved universal primary education and yet many of them, albeit not all, already allocate to education a proportion of their GDP similar to that of OECD countries. In such a context it is unlikely that secondary education can be expanded without:

1. reducing costs;
2. improving efficiency in the use of resources; and
3. introducing some kind of cost-sharing mechanism.

This is true for lower secondary and even more so for upper secondary. Private education has already expanded significantly in many countries, as have community schools. Will this lead to inequalities? Past experience of OECD countries shows that, if restricted to a limited number, free public education will benefit middle-class children rather than disadvantaged children. It is not certain that in Africa a strategy maintaining free attendance at public schools, while private and community schools rely on fees and family contributions, is a more equitable strategy than some kind of cost-sharing in all schools.

Equity and efficiency criteria suggest that girls and bright children from disadvantaged families should be offered scholarships that should include access to some private schools; on the other hand families that can afford to pay some fees should do so.

African countries will try to accomplish within decades what European countries have taken centuries to achieve. But the context has changed. Strong and tough decisions will probably have to be made in different countries. This goes beyond mere questions of finance: It is a question of re-organizing the whole system and introducing some major cultural changes in administration and the schools. The present report should help African decision-makers to select innovations that appear particularly relevant to their own context.
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Data neither available for Finland and Norway for the years 1950 and 1955, nor for the Netherlands for the year 1950.
Data for United Kingdom in 1950 and 1955 apply to England and Wales.
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<td>Finland</td>
<td>3</td>
<td>3</td>
<td>94</td>
<td>96</td>
<td>84</td>
</tr>
<tr>
<td>France</td>
<td>4</td>
<td>3</td>
<td>95</td>
<td>89</td>
<td>55</td>
</tr>
<tr>
<td>Germany</td>
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<td>3</td>
<td>97</td>
<td>92</td>
<td>82</td>
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<td>Ireland</td>
<td>3</td>
<td>2</td>
<td>92</td>
<td>72</td>
<td>29</td>
</tr>
<tr>
<td>Mexico</td>
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<td>3</td>
<td>43</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>Netherlands</td>
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<td>3</td>
<td>107</td>
<td>91</td>
<td>64</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4</td>
<td>3</td>
<td>89</td>
<td>71</td>
<td>28</td>
</tr>
<tr>
<td>Norway</td>
<td>3</td>
<td>3</td>
<td>94</td>
<td>93</td>
<td>87</td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td>4</td>
<td>85</td>
<td>75</td>
<td>35</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3</td>
<td>4</td>
<td>84</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>United States of America</td>
<td>3</td>
<td>3</td>
<td>88</td>
<td>81</td>
<td>25</td>
</tr>
</tbody>
</table>

* Net enrolment rates in public and private institutions, by age, based on head counts.

### Table 2b  Distribution of enrolment in upper secondary by programme orientation (1999)*

<table>
<thead>
<tr>
<th>Country</th>
<th>General education</th>
<th>Technical and vocational education</th>
<th>Full-time technical and vocational education</th>
<th>Part-time vocational education (combined school and work-based)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Canada</td>
<td>91.8</td>
<td>8.2</td>
<td>m</td>
<td>a</td>
</tr>
<tr>
<td>Finland</td>
<td>46.8</td>
<td>53.2</td>
<td>39.2</td>
<td>14</td>
</tr>
<tr>
<td>France</td>
<td>42.8</td>
<td>57.2</td>
<td>37</td>
<td>20.2</td>
</tr>
<tr>
<td>Germany</td>
<td>35.4</td>
<td>64.6</td>
<td>15.9</td>
<td>48.7</td>
</tr>
<tr>
<td>Ireland</td>
<td>79.4</td>
<td>20.6</td>
<td>m</td>
<td>x</td>
</tr>
<tr>
<td>Mexico</td>
<td>86</td>
<td>14</td>
<td>m</td>
<td>a</td>
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<tr>
<td>Netherlands</td>
<td>33.4</td>
<td>66.6</td>
<td>m</td>
<td>a</td>
</tr>
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<td>m</td>
<td>m</td>
<td>m</td>
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<tr>
<td>Norway</td>
<td>46.4</td>
<td>53.6</td>
<td>m</td>
<td>x</td>
</tr>
<tr>
<td>Spain</td>
<td>68.8</td>
<td>31.2</td>
<td>26.5</td>
<td>4.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>33.3</td>
<td>66.7</td>
<td>m</td>
<td>x</td>
</tr>
<tr>
<td>United States of America</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
</tbody>
</table>

*a: data not applicable because the category does not apply.

m: not available.

x: data included in another category/column of the table.

* Enrolment in public and private institutions, by programme destination and programme orientation.

**Trends in secondary education in industrialized countries: Are they relevant for African countries?**

**Table 3 Private enrolment in secondary general education as a percentage of total enrolment (1996)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>34</td>
</tr>
<tr>
<td>Canada</td>
<td>6</td>
</tr>
<tr>
<td>Finland</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>20</td>
</tr>
<tr>
<td>Germany</td>
<td>7</td>
</tr>
<tr>
<td>Ireland**</td>
<td>64</td>
</tr>
<tr>
<td>Netherlands</td>
<td>79</td>
</tr>
<tr>
<td>New Zealand</td>
<td>5</td>
</tr>
<tr>
<td>Norway</td>
<td>5</td>
</tr>
<tr>
<td>Spain</td>
<td>27</td>
</tr>
<tr>
<td>United Kingdom*</td>
<td>8</td>
</tr>
<tr>
<td>United States of America</td>
<td>10</td>
</tr>
</tbody>
</table>

*Independent schools only, excluding grant-aided schools.

**Source:** http://www.eurydice.org

### Table 4a  Number of hours of teaching time per week in general lower and upper secondary, 1997/1998

<table>
<thead>
<tr>
<th>Country</th>
<th>Lower secondary, general education</th>
<th>Upper secondary</th>
<th>Lower secondary</th>
<th>Upper secondary</th>
<th>Lower secondary, general education</th>
<th>Upper secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>22.5 22.5 21.4 21.4 22.5 22.5 22.5 22.5</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Canada</td>
<td>26.6-28.4 26.6-28.4 26.6-28.4 26.6-28.4 26.6-28.4 26.6-28.4 26.6-28.4 26.6-28.4</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Finland</td>
<td>45 45 24.75-29.25 24.75-29.25 45 45 24.75-29.25 24.75-29.25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>France</td>
<td>23.4-27.5 23.4-27.5 23.4-27.5 23.4-27.5 23.4-27.5 23.4-27.5 23.4-27.5 23.4-27.5</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Germany</td>
<td>21.25.5 21.25.5 21.25.5 21.25.5 21.25.5 21.25.5 21.25.5 21.25.5</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Ireland</td>
<td>30 30 30 30 25 25 25 25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Netherlands</td>
<td>26.7 21.25 26.7 21.25 26.7 21.25 26.7 21.25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>New Zealand</td>
<td>40 40 25 25 40 40 25 25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Norway</td>
<td>30 30 30 30 30 30 30 30</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Spain</td>
<td>24.75-29.3 24.75-29.3 24.75-29.3 24.75-29.3 24.75-29.3 24.75-29.3 24.75-29.3 24.75-29.3</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>United Kingdom (England and Wales)</td>
<td>25 25 25 25 25 25 25 25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>United States of America</td>
<td>25 25 25 25 25 25 25 25</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
</tbody>
</table>

*m: not available.

*Source:* [http://www.eurydice.org](http://www.eurydice.org)
**Table 4b Number of days and number of hours per year in lower and upper secondary, 1997/1998**

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of days per year</th>
<th>Number of hours per year</th>
<th>Lower secondary (age 13/14)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower secondary</td>
<td>Upper secondary</td>
<td>Lower secondary</td>
</tr>
<tr>
<td>Australia</td>
<td>m</td>
<td>m</td>
<td>1013-1017</td>
</tr>
<tr>
<td>Canada</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Finland</td>
<td>190</td>
<td>190</td>
<td>855</td>
</tr>
<tr>
<td>France</td>
<td>180</td>
<td>180</td>
<td>841.5-990</td>
</tr>
<tr>
<td>Germany</td>
<td>188</td>
<td>188</td>
<td>790-959</td>
</tr>
<tr>
<td>Ireland</td>
<td>167</td>
<td>167</td>
<td>1,002</td>
</tr>
<tr>
<td>Netherlands</td>
<td>200</td>
<td>200</td>
<td>1,067</td>
</tr>
<tr>
<td>New Zealand</td>
<td>m</td>
<td>m</td>
<td>988</td>
</tr>
<tr>
<td>Norway</td>
<td>190</td>
<td>190</td>
<td>855</td>
</tr>
<tr>
<td>Spain</td>
<td>175</td>
<td>175</td>
<td>866-1,027</td>
</tr>
<tr>
<td>United Kingdom (England and Wales)</td>
<td>190</td>
<td>190</td>
<td>950</td>
</tr>
<tr>
<td>United States of America</td>
<td>m</td>
<td>m</td>
<td>980</td>
</tr>
</tbody>
</table>

* For non-European countries, data from *Education at a glance* (OECD, 2001).

m: not available.

Source: [http://www.eurydice.org](http://www.eurydice.org)
### Table 5  Compulsory and optional subjects at lower secondary

<table>
<thead>
<tr>
<th>Country</th>
<th>Compulsory subjects</th>
<th>Optional subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First year of lower secondary</td>
<td>Last year of lower secondary</td>
</tr>
<tr>
<td>Australia (Queensland)</td>
<td>$a = 8 ; b = 24^*$</td>
<td>$m$</td>
</tr>
<tr>
<td>Canada (Alberta)</td>
<td>$a = 9 ; b = 9$</td>
<td>$m$</td>
</tr>
<tr>
<td>Finland</td>
<td>$a = 13 ; b = 16$</td>
<td>$m$</td>
</tr>
<tr>
<td>France</td>
<td>$a = 8 ; b = 11$</td>
<td>$a = 11^* ; b = 15$</td>
</tr>
<tr>
<td>Germany</td>
<td>$a = 13^{**}$</td>
<td>$m$</td>
</tr>
<tr>
<td>Ireland</td>
<td>$a = 8 ; b = m$</td>
<td>$m$</td>
</tr>
<tr>
<td>Netherlands</td>
<td>$a = 15 ; b = 17$</td>
<td>13</td>
</tr>
<tr>
<td>New Zealand</td>
<td>$a = 7 ; b = 14$</td>
<td>$m$</td>
</tr>
<tr>
<td>Norway</td>
<td>$a = 11^* ; b = 11$</td>
<td>$a = 11$</td>
</tr>
<tr>
<td>Spain</td>
<td>$a = 12 ; b = 16$</td>
<td>$m$</td>
</tr>
<tr>
<td>United Kingdom (England)</td>
<td>$a = 15 ; b = 15$</td>
<td>$m$</td>
</tr>
<tr>
<td>United States of America</td>
<td>$a = 7 ; b = 16$</td>
<td>12</td>
</tr>
</tbody>
</table>

* Compulsory options included.
** Compulsory options to be added (number unknown).

$a$: discipline areas.
$b$: subjects.
$m$: not available.

*Source:* http://www.inca.org.uk; for France, Finland and Norway: www.eurydice.org
Table 6a  Public expenditure on education as a percentage of GDP and as a percentage of total public expenditure (1998)  
Annual expenditure per student in secondary education in equivalent US dollars (converted using PPPs)  
Annual expenditure per student in secondary/primary ratio

<table>
<thead>
<tr>
<th>Country</th>
<th>Public expenditure on education as a percentage of GDP</th>
<th>Public expenditure as a percentage of total public expenditure</th>
<th>Annual expenditure per student in secondary education in equivalent US dollars (converted using PPPs)</th>
<th>Annual expenditure per student in secondary over primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>4.8</td>
<td>13.9</td>
<td>5,830</td>
<td>1.46</td>
</tr>
<tr>
<td>Canada</td>
<td>5.7</td>
<td>12.6</td>
<td>$m$</td>
<td>$m$</td>
</tr>
<tr>
<td>Finland</td>
<td>6.2</td>
<td>12.4</td>
<td>5,111</td>
<td>1.1</td>
</tr>
<tr>
<td>France</td>
<td>6</td>
<td>11.3</td>
<td>6,805</td>
<td>1.76</td>
</tr>
<tr>
<td>Germany</td>
<td>4.6</td>
<td>9.8</td>
<td>6,209</td>
<td>1.76</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.5</td>
<td>13.5</td>
<td>3,934</td>
<td>1.43</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.2</td>
<td>22.4</td>
<td>1,586</td>
<td>1.84</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.9</td>
<td>10.6</td>
<td>5,304</td>
<td>1.4</td>
</tr>
<tr>
<td>New Zealand</td>
<td>7.2</td>
<td>$m$</td>
<td>$m$</td>
<td>$m$</td>
</tr>
<tr>
<td>Norway</td>
<td>7.7</td>
<td>16.1</td>
<td>7,343</td>
<td>1.27</td>
</tr>
<tr>
<td>Spain</td>
<td>4.5</td>
<td>11.1</td>
<td>4,274</td>
<td>1.31</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.9</td>
<td>11.9</td>
<td>5,230</td>
<td>1.57</td>
</tr>
<tr>
<td>United States of America</td>
<td>5.1</td>
<td>$m$</td>
<td>7,764</td>
<td>1.28</td>
</tr>
</tbody>
</table>

$m$: not available.

PPPs: Purchasing Power Parities.

*Source: Education at a glance (OECD, 2001).*
### Table 6b  Expenditure on educational institutions as a percentage of GDP (1998)

(Direct and indirect expenditure on educational institutions from public and private sources by level of education and source of fund)

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>3.21</td>
<td>0.59</td>
<td>3.8</td>
</tr>
<tr>
<td>Canada</td>
<td>3.72</td>
<td>0.34</td>
<td>4.06</td>
</tr>
<tr>
<td>Finland</td>
<td>3.67</td>
<td>x</td>
<td>3.66</td>
</tr>
<tr>
<td>France</td>
<td>4.14</td>
<td>0.22</td>
<td>4.35</td>
</tr>
<tr>
<td>Germany</td>
<td>2.79</td>
<td>0.89</td>
<td>3.68</td>
</tr>
<tr>
<td>Ireland</td>
<td>3.18</td>
<td>0.1</td>
<td>3.28</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.97</td>
<td>0.08</td>
<td>3.06</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4.61</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Norway</td>
<td>4.38</td>
<td>0.04</td>
<td>4.42</td>
</tr>
<tr>
<td>Spain</td>
<td>3.26</td>
<td>0.4</td>
<td>3.65</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.4</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>United States of America</td>
<td>3.4</td>
<td>0.35</td>
<td>3.74</td>
</tr>
</tbody>
</table>

* m: not available.
* x: data included in another category/column of the table.

Trends in secondary education in industrialized countries: Are they relevant for African countries?

Table 6c  Relative proportions of public and private funds for educational institutions (1998)

<table>
<thead>
<tr>
<th></th>
<th>Private sources</th>
<th>Public sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>15.9</td>
<td>84.1</td>
</tr>
<tr>
<td>Canada</td>
<td>8.3</td>
<td>91.7</td>
</tr>
<tr>
<td>Finland*</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>France</td>
<td>7.3</td>
<td>92.7</td>
</tr>
<tr>
<td>Germany</td>
<td>24.1</td>
<td>75.9</td>
</tr>
<tr>
<td>Ireland</td>
<td>3.1</td>
<td>96.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>5.7</td>
<td>94.3</td>
</tr>
<tr>
<td>New Zealand*</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Norway</td>
<td>0.9</td>
<td>99.1</td>
</tr>
<tr>
<td>Spain</td>
<td>10.8</td>
<td>89.2</td>
</tr>
<tr>
<td>United Kingdom*</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>United States of America</td>
<td>9.2</td>
<td>90.8</td>
</tr>
</tbody>
</table>

m: not available.
* Data not available.

Source: Education at a glance (OECD, 2001).
Table 7a  Ratio of students to teaching staff (1999)

<table>
<thead>
<tr>
<th></th>
<th>Ratio of students to teaching staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary education</td>
</tr>
<tr>
<td>Australia</td>
<td>17.3</td>
</tr>
<tr>
<td>Canada</td>
<td>18.7</td>
</tr>
<tr>
<td>Finland</td>
<td>17.4</td>
</tr>
<tr>
<td>France</td>
<td>19.6</td>
</tr>
<tr>
<td>Germany</td>
<td>21</td>
</tr>
<tr>
<td>Ireland</td>
<td>21.6</td>
</tr>
<tr>
<td>Mexico</td>
<td>27.2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>16.6</td>
</tr>
<tr>
<td>New Zealand</td>
<td>20.5</td>
</tr>
<tr>
<td>Norway</td>
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</tr>
<tr>
<td>Spain</td>
<td>15.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>22.5</td>
</tr>
<tr>
<td>United States of America</td>
<td>16.3</td>
</tr>
</tbody>
</table>

*m*: not available.

*x*: data included in another category/column of the table.

Source: Education at a glance (OECD, 2001).
**Table 7b**  
Ratio of salary (secondary over primary teachers) –  
Ratio of salary to GDP per capita for teachers in public lower secondary (1999)

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio of salary to GDP per capita for teachers in public lower secondary (1999)</th>
<th>Ratio of salary (secondary over primary teachers)</th>
<th>Ratio of salary after 15 years' experience to GDP per capita for teachers in public lower secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower secondary over primary teachers</td>
<td>Upper secondary general over primary teachers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starting salary</td>
<td>Salary after 15 years' experience</td>
<td>Starting salary</td>
</tr>
<tr>
<td>Australia</td>
<td>1.04</td>
<td>1.01</td>
<td>1.04</td>
</tr>
<tr>
<td>Canada</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Finland</td>
<td>1.13</td>
<td>1.14</td>
<td>1.16</td>
</tr>
<tr>
<td>France</td>
<td>1.11</td>
<td>1.08</td>
<td>1.11</td>
</tr>
<tr>
<td>Germany</td>
<td>1.12</td>
<td>1.07</td>
<td>1.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>1.05</td>
<td>1.01</td>
<td>1.05</td>
</tr>
<tr>
<td>Mexico</td>
<td>1.28</td>
<td>1.17</td>
<td>m</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.04</td>
<td>1.07</td>
<td>1.05</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Norway</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spain</td>
<td>1.09</td>
<td>1.09</td>
<td>1.19</td>
</tr>
<tr>
<td>United Kingdom (England)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>United Kingdom (Scotland)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>United States of America</td>
<td>0.98</td>
<td>0.96</td>
<td>0.99</td>
</tr>
</tbody>
</table>

*m*: not available.

### Table 7c  Pupil:class ratio in lower and upper secondary.
Number of hours taught per teacher, per year, at lower secondary

<table>
<thead>
<tr>
<th>Country</th>
<th>Pupil:class ratio</th>
<th>Number of hours taught per teacher, per year, at lower secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower secondary</td>
<td>Upper secondary</td>
</tr>
<tr>
<td>Australia</td>
<td>average 25</td>
<td>variable</td>
</tr>
<tr>
<td>Canada</td>
<td>Ontario: maximum 22</td>
<td>Ontario: maximum 22</td>
</tr>
<tr>
<td>Finland</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>France</td>
<td>average 24.5</td>
<td>average 29</td>
</tr>
<tr>
<td>Germany</td>
<td>average 20-25</td>
<td>m</td>
</tr>
<tr>
<td>Ireland</td>
<td>maximum 30</td>
<td>maximum 30</td>
</tr>
<tr>
<td>Mexico</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Netherlands</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>New Zealand</td>
<td>average 17.87</td>
<td>average 17.87</td>
</tr>
<tr>
<td>Norway</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Spain</td>
<td>maximum 30</td>
<td>maximum 35</td>
</tr>
<tr>
<td>United Kingdom (England)</td>
<td>average 24</td>
<td>average 11</td>
</tr>
<tr>
<td>United Kingdom (Scotland)</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>United States of America</td>
<td>Massachusetts: maximum 35</td>
<td>Massachusetts: maximum 35</td>
</tr>
</tbody>
</table>

\(m\): not available.

*Source: Education at a glance* (OECD, 2001); [http://www.inca.org.uk](http://www.inca.org.uk)
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