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International Review of Curriculum and Assessment Frameworks

Comparative tables and factual summaries - 2004

Sharon O'Donnell

December 2004

Qualifications and Curriculum Authority and National Foundation for Educational Research

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Foreword

The Project

In May 1996, as part of its work in monitoring the curriculum in England, the (then) School Curriculum and Assessment Authority (SCAA[1]), now the Qualifications and Curriculum Authority (QCA), commissioned the National Foundation for Educational Research (NFER) to undertake an international review of curriculum and assessment frameworks in 16 countries[2], to support its evaluation of different methods of curriculum organisation. Data on the Republic of Ireland was added in January 2001 and for Wales in January 2002. Data on Scotland and Northern Ireland is currently being prepared for addition. New sections on initial teacher training began to be added from April 2004.

The aims of the project are:

- to build, maintain, update and develop an accurately researched and ready-to-use resource, comprising descriptions of government policy on the aims, organisation and control, and structure of the education system, on the curriculum and assessment frameworks, and on the initial teacher training systems in mainstream and special education across all countries of the international review
- to help QCA analyse the outcomes of international comparisons
- to provide comparative tables and factual summaries in specific areas of interest
- to provide detailed information on specific areas to enable QCA to evaluate the English National Curriculum and assessment frameworks.

Reactions to international comparisons

Reactions to international comparisons vary, but generally take one of the following five forms:

1. **'Quick Fix'** searches for **the** key action or government regulation which may be transplanted from another country and, when implemented, will transform the nation's students into high performers. This approach lacks realism because it ignores the different social, economic, cultural, religious and family contexts and influences within which educational systems operate.

2. **Understanding other systems***,* through a study of the characteristics which are perceived to contribute to the relative success of high-performing countries, is a more constructive approach. However, whilst this approach makes it possible to learn about the **interplay** of different goals and other variables, it may merely confirm cultural differences without bringing about improvements.

3. **Exploring the causes** of one's own country's relative position in international tests approaches the issue from a different angle. Research has, for example, recently identified classroom/psychological variables as among the most important influences on learning. However, changes in these variables may be difficult to implement, they may have significant ramifications for the curriculum and they may involve choices between different resource priorities.

[1] On 1 October 1997, the School Curriculum and Assessment Authority merged with the National Council for Vocational Qualifications to form the Qualifications and Curriculum Authority (QCA).

[2] Australia, Canada, England, France, Germany, Hungary, Italy, Japan, Korea, the Netherlands, New Zealand, Singapore, Spain, Sweden, Switzerland and the USA.

4. **Informed self-review**, using international indicators, relative success or weakness and contributory causes to evaluate progress from a national perspective, may result in a set of ideas and priorities for action. External evidence of **relative** performance, based on student outcome differences, helps to avoid two weaknesses of self-review: uncritical acceptance of traditional problems and traditional solutions, and undue influence of local and current priorities. Because it looks for solutions to problems **within one's own context**, it does not pursue the task of understanding other systems as a substitute for action at home.

5. **Linking progress to purpose** is essential. The race to be 'top of the league' may not be in students', nor in a country's, best interest. There is enormous scope for demotivation, given that only one country can 'win'. Moreover, educational **purpose** is an important determinant of progress. It is therefore necessary to use the comparative information on possible outcomes, in order to address questions such as:

    - what does the nation want its achievements to be?
    - does the nation want to do (equally) well in all subjects?
    - can performance be improved in all subjects, or only in one at the expense of others?
    - what effect would pursuing higher performance in (for example) science, English and mathematics have on the overall breadth of the curriculum?

The later steps in this list provide the most effective rationale for the use of the International Review of Curriculum and Assessment Frameworks project.

Project outcomes

The outcomes of the project may be grouped as follows:

- The International Review of Curriculum and Assessment Frameworks **Internet Archive**, known as INCA, comprises the country descriptions and is subject to regular revision and updating (www.inca.org.uk).

- **Comparative tables and factual summaries** are constructed on specific areas of interest and annotated to avoid over-simplification and misrepresentation. They provide a guide to the contents of INCA and are regularly updated.

- **Thematic studies** bring together the findings of INCA with additional research. In most cases, invitational seminars involving participants from most of the contributing countries are held, to provide a context for, and deeper insights into, the similarities and differences between countries.

- **Thematic probes** provide snapshot data from the INCA Archive on specific subject areas such as science education, arts education, or the curriculum review process across the INCA countries.

In addition, the findings of the project are also disseminated through articles and presentations. (For details see Appendix 1.)

Comparative tables and factual summaries

The INCA Archive is subject to continual revision and updating. The comparative tables and factual summaries, based on an analysis of the Archive, are also updated on a regular basis.

This edition includes information collected up to December 2004 on:

- General characteristics
- Levels of control and administrative organisation
- National education aims
- Recent education reforms
- Schooling: duration, phases, participation rates
- School structures, access, internal grouping and progression
- Primary curriculum
- Lower secondary curriculum (to age 15/16)
- National assessment and public examination arrangements
- Control and supply of school textbooks
- Distinctive features of education systems.

Principles for data collection and presentation

The sources of information are the online Internet Archive (www.inca.org.uk) (based on primary sources), international comparisons (secondary sources) and personal correspondence and interviews with educators in the countries concerned (see Appendix 2). In the Archive, sources are generally indicated, so that users can evaluate the content and locate sources, where needed. Where possible, individual Country Archives are verified by national authorities in addition.

Considerations

Whilst more manageable than the complete Archive, the comparative tables and factual summaries format inevitably entails simplification of complex data, with the risk of distortion. The following therefore outlines the caveats which apply and the strategies adopted to minimise any negative effects:

- The concepts and categories are distinctively related to the existing curriculum and assessment framework in England and may not apply to other countries. The code not applicable (n/a) has been used where this is known to be the case.
- The terminology used is that used in England. Explanatory notes are provided and the annotations respect, as far as possible, national terminology.
- In some cases, the Archive or the international comparisons used as sources (e.g. OECD) do not include information for all the countries in the study. The code missing (m) has been used where comparable data are not available.
- For those countries with devolved structures (Australia, Canada, Germany, Switzerland and the USA) it is not always possible to provide 'national' data. Readers should therefore recognise that the data may refer to specific states or provinces, as examples, and cannot necessarily be taken to reflect a national position. For this reason, information relating to these countries is indicated in *italics* in all tables.

Comparative tables and factual summaries

Countries are listed in the following order:
England (Eng), Australia (Aus/Aust), Canada (Can), France (Fra/Fran), Germany (Ger/Germ), Hungary (Hun/Hung), Ireland (Ire), Italy (Ita), Japan (Jap), Korea, Netherlands (Neth), New Zealand (NZ), Singapore (Sin/Sing), Spain, Sweden (Swed), Switzerland (Switz), USA, Wales. The terms in brackets () indicate the abbreviations used.

Key

m = missing	This symbol is used when there is no evidence to provide information for this indicator.
n/a = not applicable	This symbol is used when a particular policy or provision is not relevant, most commonly because of a decentralised education system.
X =	This symbol is used when there is evidence in the Archive that a policy or provision applies in the country concerned.

As in the Archive, the term 'student' is used for pupils at all stages in the education system.

Table 1 - General characteristics

This table indicates: overall population figures (2001, unless stated otherwise);
the percentage of the population who were under 15 years of age in 2001 and 1960 (to indicate growth or decline in the school age population);
youth unemployment and adult unemployment (in 2002 and 1992 to indicate an increase or decrease in trends); and
the percentage of gross domestic product spent on education

	Population (millions)	Population density (per km^2)	% of population aged under 15, 1960	% of population aged under 15, 2001	% of men under 25 unemployed, 2002	% of men under 25 unemployed, 1992	% of women under 25 unemployed, 2002	% of women under 25 unemployed, 1992	% of total labour force unemployed, 2002	% of total labour force unemployed, 1992	% GDP on education, public/ private, 1999
Australia	*19.5*	*3*	*30.2*	*20.5*	*13.3*	*20.8*	*11.6*	*18.0*	*6.6*	*9.5*	*5.9*
Canada	*31.1*	*3*	*33.7*	*18.8*	*15.3*	*19.6*	*11.8*	*14.3*	*7.2*	*10.3*	*6.6*
England	59.8UK [3]	244UK[4]	23.3 UK	18.9 UK[5]	12.9 UK	18.8 UK	8.8 UK	11.5 UK	4.8 UK	8.4 UK	5.2 UK
France	59.2	108	26.4	18.8	18.2	16.6	22.8	26.1	8.7	9.5	6.2
Germany	*81.4*	*228*	*21.3*	*15.2*	*11.3*	*5.7*	*7.9*	*6.8*	*7.9*	*5.6*	*5.6*
Hungary	10.2	110	25.3	16.5	13.2	22.0	11.9	15.0	5.8	m	5.2
Ireland	3.8	55	30.5	21.4	8.7	25.1	6.5	21.0	3.7	14.8	4.6
Italy	57.3	190	23.4[6]	14.4	22.6	28.1	31.4	38.1	9.6	11.0	4.9
Japan	127.3	337	30.2	14.4	11.3	4.6	8.7	4.1	5.0	2.1	4.7
Korea	47.3	476	42.3	20.8	9.9	9.3	6.9	6.6	3.8	2.4	6.8
Netherlands	16.0	392	30.0	18.6	6.3	8.0	5.5	7.7	2.7	7.1	4.7
New Zealand	3.9	14	32.9	22.6	11.5	20.4	11.3	16.4	5.3	10.2	m
Singapore	4.0 [7]	6,000[8]	m	21.5[9]	m	m	m	m	3.3 [10]	2.2 [11]	m
Spain	40.3	80	27.3	14.6	18.4	26.5	27.3	40.5	10.5	16.4	5.3
Sweden	8.9	20	22.4	17.7	13.8	16.0	11.9	11.2	5.1	3.3	6.7
Switzerland	*7.2*	*175*	*23.5*	*16.6*	*7.3*	*4.8*	*3.9*	*4.3*	*2.5*	*1.8*	*5.9*
USA	*285.5*	*30*	*31.0*	*21.2*	*12.8*	*15.3*	*11.1*	*13.1*	*4.7*	*6.8*	*6.5*
Wales	2.93 [12]	See England	See England	See England	See England	See England	See England	See England	7.1[13]	See England	See England

Source: ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD) (2003). *OECD in Figures. 2003 Edition. Statistics on the Member Countries*. Paris: OECD.

[3] **England**: The UK (United Kingdom) comprises Great Britain (England, Wales and Scotland) and Northern Ireland. This figure is for 2000.

[4] **England**: The UK (United Kingdom) comprises Great Britain (England, Wales and Scotland) and Northern Ireland. This figure is for 2000.

[5] **United Kingdom:** 2000 figure.

[6] **Italy**: Under 14

[7] **Singapore**: 2000 total population figure. Source: POPULATION CENSUS 2000. (STATISTICS SINGAPORE (2002). *Singapore in Figures* [Online] at http://www.singstat.gov.sg/) The total population figure includes foreign residents in Singapore for one year or longer. Of this 4 million, 3.3 million are Singapore citizens and permanent residents with local residence.

[8] **Singapore**: 2000 figure. Source: POPULATION CENSUS 2000. [Online] at http://www.singstat.gov.sg/

[9] **Singapore**: 2000 figure. Percentage of the 3.3 million Singapore citizens and permanent residents with local residence. [Online] at http://www.singstat.gov.sg/

[10] **Singapore**: 2000 figure (Population Census 2000). Source: SINGAPORE. MINISTRY OF TRADE AND INDUSTRY (2002). *Singapore in Brief 2002*. [Online] at http://www.singstat.gov.sg

[11] **Singapore**: Source: SINGAPORE. DEPARTMENT OF STATISTICS (2001). [Online] at http://www.singstat.gov.sg

[12] **Wales**: Source: OFFICE FOR NATIONAL STATISTICS (ONS) (2000). *Annual Abstract of Statistics.2000 Edition. No 136.* London: The Stationery Office.

[13] **Wales**: Source: OFFICE FOR NATIONAL STATISTICS (ONS) (2000). *Annual Abstract of Statistics. 2000 Edition. No 136.* London: The Stationery Office.

Table 2 - Levels of control and administrative organisation

	National level	Second level	Third level	Institutional level	Notes
Australia	*National (commonwealth) government* [30]	*6 states and 2 territories*	*Districts*	*School councils*	*Responsibility for education rests with the States and Territories. The Commonwealth (federal) Government promotes national consistency and coherence.*
Canada	*Confederation*	*10 provinces and 3 territories*	*Local school boards/ school board districts*		*The Council of Ministers of Education Canada,CMEC ensures national-level communication, but has no direct control.*
England	Ministry	c.150 local education authorities		School governing bodies	Devolved responsibility to schools/school governing bodies.
France	Ministry	*31 académies*	*Régions (22), départements* (96 + 5 overseas) or *communes*		Ministry defines national policies, guidelines and curricula. Devolved responsibility (via *académies*) to *régions* for upper secondary education, *départements* (lower secondary) and *communes* (pre-primary/primary).
Germany	*(National) federal government*	*16 Länder*	*Local school districts*		*Länder set guidelines; local school districts recruit staff, determine curricular content, choose texts etc. Standing Conference of Ministers of Education & Cultural Affairs of the 16 Länder is main instrument of cooperation between Länder.*
Hungary	Ministry	3000+ municipalities or counties (local authorities)		Schools	Policy determined at national level; organisational decisions at local and school level.
Ireland	Ministry			Boards of management	Ministry formulates policy, monitors quality, allocates resources, responsible for some organisational and administrative functions. Boards of management are recent initiative to devolve more responsibility to schools.

[14] **England**: The UK (United Kingdom) comprises Great Britain (England, Wales and Scotland) and Northern Ireland. This figure is for 2000.

[15] **Singapore**: 2000 total population figure. Source: POPULATION CENSUS 2000. (STATISTICS SINGAPORE (2002). *Singapore in Figures* [Online] at http://www.singstat.gov.sg/) The total population figure includes foreign residents in Singapore for one year or longer. Of this 4 million, 3.3 million are Singapore citizens and permanent residents with local residence.

[16] **Wales**: Source: OFFICE FOR NATIONAL STATISTICS (ONS) (2000). *Annual Abstract of Statistics.2000 Edition. No 136.* London: The Stationery Office.

[17] **Singapore**: 2000 figure. Source: POPULATION CENSUS 2000. [Online] at http://www.singstat.gov.sg/

[18] **Germany**: Former West Germany only

[19] **Italy**: Under 14

[20] **United Kingdom:** 2000 figure.

[21] **Singapore**: 2000 figure. Percentage of the 3.3 million Singapore citizens and permanent residents with local residence. [Online] at http://www.singstat.gov.sg/

[22] **Germany**: Former West Germany only

[23] **Switzerland**: 1991 figure.

[24] **Germany**: Former West Germany only

[25] **Switzerland**: 1991 figure.

[26] **Singapore**: 2000 figure (Population Census 2000). Source: SINGAPORE. MINISTRY OF TRADE AND INDUSTRY (2002). *Singapore in Brief 2002*. [Online] at http://www.singstat.gov.sg

[27] **Wales**: Source: OFFICE FOR NATIONAL STATISTICS (ONS) (2000). *Annual Abstract of Statistics. 2000 Edition. No 136.* London: The Stationery Office.

[28] **Germany**: Former West Germany only

[29] **Singapore**: Source: SINGAPORE. DEPARTMENT OF STATISTICS (2001). [Online] at http://www.singstat.gov.sg

[30] Australia: collaboration through the Ministerial Council on Education, Training and Youth Affairs (MCETYA)

Table 2 - Levels of control and administrative organisation (cont'd)

	National level	Second level	Third level	Institutional level	Notes
Italy	Ministry	20 regions	Provinces and communes	School councils	Centralised policy making. Increasing delegation of administrative powers from central government via regions, provinces and communes to schools.
Japan	Ministry	47 prefectures	3400+ municipal/local boards of education	School principals	Ministry oversees; prefectures operationally responsible for upper secondary, municipalities for compulsory education.
Korea	Ministry	16 Municipal/Provincial Education Authorities (MPEAs) or Metropolitan Offices of Education (MPOEs)	Around 180 school district offices of education	'School management committees'	Gradually increasing budgetary, administrative and curricular powers delegated to MPEAs and MPOEs.
Netherlands	Ministry	Provinces	Municipalities (local authorities)	c. 6300 competent authorities	Devolution of financial and management responsibility to the competent authorities.
New Zealand	Ministry			Boards of Trustees	Ministry provides policy advice, allocates resources, develops curriculum and monitors effectiveness. Boards of Trustees (elected by parents) develop school charter of aims/objectives.
Singapore	Ministry			School principal or, increasingly, superintendent in charge of 'cluster' of 6/7 schools.	School principal determines institutional programme/structure, based on national Ministry guidelines. Development of school clusters aims to confer greater authority to school superintendents at this level.
Spain	Ministry	17 Autonomous Communities	Local (municipal) authorities, eg. Municipal School Councils	Governing/educational coordination bodies, e.g. school councils of individual schools	Ministry responsible for general regulation of system, policies and guidance. Autonomous Communities oversee implementation of such nationally defined standards, adapt these to local situation, set up teaching establishments, administer personnel etc.
Sweden	Ministry	Skolverket (the National Agency for Education), the National Agency for School Improvement, and county administrations	289 municipalities	School principals	Municipalities decide how schools are run, following national Ministry guidelines.
Switzerland	*Confederation*	*26 cantons*	c. *3000 municipalities*	*School board/teachers*	*Educational goals defined by cantons Very few national agreements, although there are standards for the Maturität exam (18+), the vocational education school leaving certificate, and there is a developing agreement on school standards.. Most cantons mandate municipalities to set up schools.*
USA	*Federal government*	*50 states*	*Local district school boards*	*School*	*Individual states provide policy guidelines; local districts operate schools within these guidelines. Some national(federal) initiatives influence state policy guidelines.*
Wales	Ministry (National Assembly for Wales, NAfW)	22 local education authorities (LEAs)		School governing bodies	Devolved responsibility to schools/school governing bodies.

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Table 3 - National education aims

This table summarises the general aims, purposes, goals and principles of education, **as stated in the documents consulted** for this review (see the Archive description for each country). This table does not reflect the emphasis placed on each area by the individual country. Individual country Archives should be consulted for this purpose.

	Eng	*Aus*	*Can.*	Fra	*Ger*	Hun	Ire	Ita	Jap	Korea	Neth	NZ	Sin	Sp	Swed	*Switz*	*USA*	Wales
Excellence/raising standards	X	*X*	*X*	X	*X*	X	X			X	X	X	X	X	X	*X*	*X*	X
Individual development	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Values/ethics/moral	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X	*X*	*X*	X
Emotional/spiritual development	X	*X*	*X*	X	*X*		X		X	X	X	X	X	X	X	*X*	*X*	X
Social development	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Personal qualities	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Equal opportunity/multi-culturalism	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
National economy	X	*X*	*X*			X	X	X	X	X		X	X	X	X	*X*	*X*	X
Preparation for work/career/adult life	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Basic skills - literacy/numeracy	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Scientific/technological skills	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Foundation for future education	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Knowledge/skills/understanding	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Citizenship/community/democracy	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Cultural (heritage/literacy)	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Creativity	X	*X*	*X*	X	*X*		X	X	X	X	X	X	X	X	X		*X*	X
Non-mother tongue language skills		*X*	*X*	X		X	X		X	X	X	X	X	X	X	*X*	*X*	X
Environment	X	*X*	*X*		*X*	X	X		X	X	X	X	X	X	X	*X*		X
Health/physical/leisure	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Lifelong education	X	*X*	*X*		*X*	X	X		X	X	X	X	X	X	X	*X*	*X*	X
Parental participation	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Provide for special learning needs (disadvantaged or gifted students)	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
	Eng	*Aus*	*Can*	Fra	*Ger*	Hun	Ire	Ita	Jap	Korea	Neth	NZ	Sin	Sp	Swed	*Switz*	*USA*	Wales

Aims, purposes, goals and principles of education for the devolved countries may not apply in all regions/administrations, but are provided as examples.

Table 4 - Recent education reforms

The tables which follow indicate recent major reforms in specific policy areas. Where available, the date of the legislation or regulation which *introduced* the reform is given. A blank on the table means that the information received does not indicate that there has been a reform in the relevant policy area.

The headings used are as follows:

General framework for the education system
Locus of control over education e.g. level at which decisions are made on structure, funding etc. 'decent' indicates decentralised responsibility
National targets, in terms of learning outcomes
National (or devolved authority) curriculum framework
National (or devolved authority) assessment framework
Promote voluntary participation in pre-compulsory education
Lengthen period of compulsory schooling
Promote voluntary participation in education beyond the minimum school leaving age
Reform of pre-compulsory provision
Reform of primary education (structure, provision etc.)
Reform of primary curricula (range of subjects, content, type of activities ...)
Reform of secondary education (structure, provision etc.)
Reform of secondary curricula (range of subjects, content, type of activities ...)
Reform of vocational education (structure, provision etc.)
Reform of science/technical education (structure, provision etc.)
Reform of examination system at any level (introduce, make compulsory, change content etc.)

Table 4 Recent education reforms

	General framework	Locus of control	National targets	National curriculum	National assessment
Australia [32]	*n/a*	*Decentralised (state)*	*89/97/99*	*89/91/99/01*	91/97
Canada [33]	*n/a*	*Decentralised (province/territory)*	*n/a*	*n/a 1993* [34]	*1989/ 03* [35]
England	88/96/98/02	Decentralised 80/86/88/93/96/98/02	88/96/00/02/04/07	88/96/00/02	88/96/97/04
France	89/94	Decentralised 82/83	89/94/00	89/94/95	85/89
Germany	*49/71/90/94 /97*	*Decentralised (Land)*	*n/a*	*n/a*	*n/a*
Hungary	93/95/ 96/99	Decentralised 90/93/95/96	96	93/95/99	93/95/96/99
Ireland	1998/03 [36]	1998	1999 [37]		89/95
Italy	48/94/01/03	Decentralised 72/97/98/ 01/03 [38]			77/96/97
Japan	1947	Centralised		89/98	
Korea	49/73	Decentralised 91/01 [39]	92-96 [40]	92/97 [41]	87/95/99
Netherlands	69/85/94	Decentralised	93/98/03 [42]	85/93/98/03	
New Zealand	1989	Decentralised	91/93	91/93/02	91/93/95/97/99/00 [43]
Singapore	1957	Centralised		97/01 [44]	97/01
Spain	1990/ 02	Decentralised 78/85/95/02	1990	1990/ 02	1990/ 02
Sweden	65/75/ 85/94/98	Decentralised 1991	1999 [45]	65/75/ 94/98/00	1995
Switzerland	*1970* [46]	*Decentralised 1874*	*n/a*	*02* [47]	*68/94/02*
USA	*89/ 94/ 99/ 02*	*Decentralised (state)*	*84/94/99/02*	*n/a*	*69* [48] *02* [49]
Wales	88/96/ 97/98	Decentralised 88/93/96/98	2000/ 01/04/ 07	88/95/ 96/00	88/96/ 97/99/01/04 [50]

32 **Australia**: Education is the responsibility of individual States and Territories. There is collaboration through the Ministerial Council on Education, Training and Youth Affairs (MCETYA). This is indicated in the table.

33 **Canada**: Provinces and territories control education; some national influence through Council of Ministers of Education, Canada (CMEC)., responsible for national-level communication, but has no direct control.

34 **Canada**: Western and Northern Canadian Protocol (WNCP) agreement established some common curricula. Territories began to sign up to the protocol in 1993. Seven (of 13) now involved.

35 **Canada**: CMEC-developed national School Achievement Indicators Programme (SAIP); standardised lower secondary tests. Proposals exist to replace SAIP with a new testing programme (reading, maths & science).

36 **Ireland**: The Education for People with Disabilities Act 2003 will impact on the general framework for education.

37 **Ireland**: This refers to a target for an increase in retention rates in senior cycle upper secondary education (students aged 15+), and targets for IT (for 2001) set as part of the Schools IT 2000 programme.

38 **Italy**: Legislation passed in February 2003 increased centralisation of curriculum control; as a result, adaptation of the curriculum at the local level may decrease.

39 **Korea**: In January 2001, the organisation of the Ministry of Education in Korea was restructured and its scope expanded. It became the Ministry of Education and Human Resources Development.

40 **Korea**: Seventh Socio-Economic Development Plan for the Republic of Korea.

41 **Korea**: National curriculum subject to regular revision. Sixth revision proclaimed 1992 and implemented from March 1995 - 1999. Seventh implemented gradually from March 2000. Legislation passed in 1997.

42 **Netherlands**: Attainment targets for primary and secondary level education are set nationally every five years.

43 **New Zealand**: The National Education Monitoring Project for small samples of primary age children began in 1995. Voluntary assessment on school entry was initiated nationally in 1997. A National Assessment Strategy (for compulsory education) was introduced in 1999. Following consultation (2001), a new modular/cumulative national certificate of educational achievement (15+) began to be introduced from 2002/3.

44 **Singapore**: Subject syllabuses revised in 2001 to incorporate three national initiatives (thinking skills, information technology and a national education programme - civics, social, family and community education).

45 **Sweden**: Development plan for pre-schools, schools and adult education. A new development plan is usually launched every two years.

46 **Switzerland**: The 26 *cantons* have direct, delegated power over education. 25 have signed this (1970) 'Agreement on the Coordination of Education'.

47 **Switzerland**: In 2002, there was agreement on national output standards for mathematics, languages and science.

48 **USA**: The National Assessment of Educational Progress (NAEP) assesses students' knowledge nationally in reading, writing, mathematics, science and other subjects.

49 **USA**: President Bush's 2002 national education reform strategy - 'No Child Left Behind' - signed into law statutory testing in reading, maths and science throughout the USA.

50 **Wales**: The Daugherty report published in 2004 recommended further changes to the system of national assessment. Previous legislation (2001) abandoned statutory testing at age 7.

Table 4 Recent education reforms cont'd

	Promote pre-school	Lengthen schooling	Promote post-compulsory	Reform pre-school	Reform primary	Primary curricula
Australia	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*89/91*
Canada	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
England	1998	1973	93/96/02	1998/02	44/96/ 97/98	95/97/98/00
France	1989		1989	1989	89/90/98/99	91//95/02
Germany	*93/96*	*n/a*	*n/a*	*93/96/ 03*[51]	1994	1994
Hungary		93/96[52]	93/96	1996	1993	93/95/99
Ireland	1994[53]	1998[54]	95/99[55]	1999/ 04[56]		71/99
Italy	68/91	1999[57]/ 03[58]		68/91	1990/03	85/91
Japan	1947	1947				89/98
Korea	69/82/99	49/97		69/82	1997	92/97
Netherlands	1985	1985		1985	1985	93/95/98/03
New Zealand	89/96/01	1993		89/96/ 02[59]	1989	91/93
Singapore				2003[60]	2000[61]	97/01
Spain	1990	1990	1990	90/02	1990	90/02
Sweden	91/ 98		1992	1998	65	65/94/98
Switzerland		*1970*		*1994*[62]	*1970*	
USA	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Wales	1998	1973	92/93/ 96/00	1998	96/98	95/97/ 00

51 **Germany**: There are current plans to formalise the Kindergarten curriculum and link it further to the curriculum children will encounter when they enter compulsory primary education.

52 **Hungary**: Raised to 16, as a result of 1993 legislation, and to 18 as a result of 1996 legislation. As a result of the latter, those commencing compulsory education since September 1998 have to stay in education to 18.

53 **Ireland**: Specific programme to provide pre-school facilities for those from disadvantaged backgrounds/in disadvantaged areas and to encourage those in such areas to use the facilities provided.

54 **Ireland**: Provision is made in the 1998 Education Act to extend the compulsory school leaving age from 15 to 16. This provision remains to be implemented.

55 **Ireland**: 1995 - The Leaving Certificate Applied (LCA) was introduced in some schools. This was specifically developed to appeal to those students who might not have previously been interested in the (established) Leaving Certificate or the Leaving Certificate Vocational Programme (LCVP).

56 **Ireland**: The 1999 White Paper on Early Childhood Education set out proposals on issues relating to education for children aged 0-6 years. In 2004 a consultation document - *Towards a Framework for Early Learning* – was launched. It is intended that this will lead to the development of a national framework for learning for children from birth to six years of age.

57 **Italy**: Compulsory education extended from 8 to 9 years (students aged 6-15). This law also contained a provision for students to remain in some form of education or training to age 18. This provision remains to be implemented, but looks set to be following legislation passed in 2003 which extends the entitlement to education to 12 years.

58 **Italy**: Legislation passed in February 2003 will enable children who become six before 28 February to begin compulsory education in the previous September.

59 **New Zealand**: The Early Childhood Education Curriculum (Te Whariki) was introduced in 1996. A 10-year Early Childhood Education Strategy was published in 2002.

60 **Singapore**: New pre-school curriculum framework introduced in January 2003.

61 **Singapore**: The Compulsory Education Act was passed in October 2000. As a result, primary education became compulsory from 1st January 2003.

62 **Switzerland**: A new general curriculum for pre-school education in all French-speaking *cantons* came into force in the 1994/95 academic year.

Table 4 Recent education reforms cont'd

	Reform secondary	Secondary curricula	Reform vocational education/post-compulsory	Reform science/ technology education	Reform examinations
Australia	*n/a*	*89/91*	*n/a*	*n/a*	*n/a*
Canada	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
England	88/93/96/02	95/97/00/02	92/00/02	88/93	88/99/00
France	75/95/ 99/01	95/99/ 01	1993/ 01	1993	85/87/99//01
Germany	*93/96*	*93/96*	*1994*	*n/a*	*71/94/ 97/99*
Hungary	93/96	93/95/ 99	1996		93/96/02
Ireland	94	89/94/95	00/01	89/94/95 [63]	89/94/95
Italy	62/77/79/01/03	1979/ 01/	1979/ 01/	1998	79/92/97
Japan	47/94	89/98	1989	1962	
Korea		92/97	74/91/ 95/97/98	1983/97	74/91/ 95/97/98
Netherlands	68/91/99	93/98/99/03	91/99		98/99
New Zealand	89/93	91/93	89/02/03	93/98[64]	02/03
Singapore		97/01	03 [65]		03 [66]
Spain	1990/02	90/92/93/02	90/93		1990/02
Sweden	65/94	65/94/ 98/00	70/94	1998[67]	1969/95
Switzerland	*1970*		*1987* [68]	*1987*	*68/94*
USA	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Wales	88/93/96	95/00	92/00		88/96/97/00

63 **Ireland**: Changes to terminal upper secondary Leaving Certificate qualifications to include more concentration on science/technical/vocational subjects.

64 **New Zealand**: New curriculum statement for science introduced in 1993 and for technology in 1998.

65 **Singapore**: Proposals currently under review.

66 **Singapore**: Proposals currently under review.

67 **Sweden**: 'Tools for Learning', a three-year programme (1999-2001) for information and communications technology (ICT) in schools.

68 **Switzerland**: In 1987, a federal agreement was reached on guidelines for the recognition of, and a curriculum framework for, the recognition of vocational/technical diplomas.

69 **Australia**: Although education is primarily the responsibility of individual States and Territories, there is collaboration through the Ministerial Council on Education, Training and Youth Affairs (MCETYA). This is indicated in the table, but implementation usually remains at the discretion of State and Territory governments.

70 **Canada**: Provinces and territories control education., but there is some national influence through the Council of Ministers of Education, Canada (CMEC). This body is chiefly responsible for national-level communication, but has no direct control.

71 **Switzerland**: The 26 *cantons* have direct, delegated power over education. 25 have signed this (1970) 'Agreement on the Coordination of Education'.

72 **Italy**: Legislation passed in February 2003 increased centralisation of curriculum control; as a result, adaptation of the curriculum at the local level may decrease.

73 **Korea**: In January 2001, the organisation of the Ministry of Education in Korea was restructured and its scope expanded. It became the Ministry of Education and Human Resources Development.

74 **England**: Targets have been set for 2004 and 2007.

75 **Ireland**: This refers to a target for an increase in retention rates in senior cycle upper secondary education (students aged 15+), and targets for IT (for 2001) set as part of the Schools IT 2000 programme.

76 **Korea**: Seventh Socio-Economic Development Plan for the Republic of Korea.

77 **Netherlands**: Attainment targets for primary and secondary level education are set nationally every five years.

Table 5 - Schooling: duration, phases, participation rates

See the tables which follow:

Table 5.1 Compulsory education
Table 5.2 Educational phases

78 **Sweden**: Development plan for pre-schools, schools and adult education. A new development plan is usually launched every two years.

79 **Wales**: Targets have been set for 2004 and 2007.

80 **Canada**: Under the Western Canadian Protocol (WCP) agreement, the four Western Canadian provinces and three northern territories have established some common curricula as a means of ensuring continuity of provision across age ranges and territories. Territories began to sign up to the protocol in 1993.

81 **Japan**: Revision of curricula at kindergarten, elementary and secondary levels takes place every ten years or so. The most recent revision commenced in 1998 and was implemented during the period 2000 to 2003.

82 **Korea**: National curriculum subject to regular revision. Sixth revision proclaimed 1992 and Sixth National Curriculum implemented from March 1995 - 1999. Seventh been implemented gradually since March 2000. Legislation passed in 1997.

83 **New Zealand**: Revised curricula were developed between 1993-2000. Curriculum review/stocktake completed 2002-03.

84 **Singapore**: Subject syllabuses were revised during 2001 to permit incorporation of three new national initiatives (thinking skills, information technology and a national education programme - civics, social, family and community education).

85 **Switzerland**: In 2002, there was agreement on national output standards for mathematics, languages and science.

86 **Canada**: The Council of Ministers of Education, Canada (CMEC) developed the School Achievement Indicators Programme (SAIP). This is a national testing programme in which randomly selected lower secondary age students throughout Canada take part, and which aims to provide data to assist each province and territory in making policy decisions and planning programme improvement. Proposals exist to replace SAIP with a new Pan-Canadian Assessment Programme (PCAP) (in reading, mathematics and science).

87 **New Zealand**: The National Education Monitoring Project for small samples of primary age children began in 1995. Voluntary assessment on school entry was initiated nationally in 1997. A National Assessment Strategy (for compulsory education) was introduced in 1999. Following consultation (2001), a new modular/cumulative national certificate of educational achievement (15+) began to be introduced from 2002/3.

88 **USA**: The National Assessment of Educational Progress (NAEP) assesses students' knowledge nationally in reading, writing, mathematics, science and other subjects.

89 **USA**: President Bush's 2002 national education reform strategy - entitled 'No Child Left Behind' - has signed into law the requirement for statutory testing in reading and mathematics in certain Grades/Years of compulsory education throughout the USA.

90 **Ireland**: Specific programme to provide pre-school facilities for those from disadvantaged backgrounds/in disadvantaged areas and to encourage those in such areas to use the facilities provided.

91 **Hungary**: Raised to 16, as a result of 1993 legislation, and to 18 as a result of 1996 legislation. As a result of the latter, those commencing compulsory education since September 1998 have to stay in education to 18.

92 **Ireland**: Provision is made in the 1998 Education Act to extend the compulsory school leaving age from 15 to 16. This provision remains to be implemented.

93 **Italy**: Compulsory education extended from 8 to 9 years (students aged 6-15). This law also contained a provision for students to remain in some form of education or training to age 18. This provision remains to be implemented, but looks set to be following legislation passed in 2003 which extends the entitlement to education to 12 years.

94 **Italy**: Legislation passed in February 2003 will enable children who become six before 28 February to begin compulsory education in the previous September.

95 **Ireland**: 1995 - The Leaving Certificate Applied (LCA) was introduced in some schools. This was specifically developed to appeal to those students who might not have previously been interested in the (established) Leaving Certificate or the Leaving Certificate Vocational Programme (LCVP).

96 **Ireland**: The 1999 White Paper on Early Childhood Education set out proposals on issues relating to education for children aged 0-6 years. In 2004 a consultation document - *Towards a Framework for Early Learning* – was launched. It is intended that this will lead to the development of a national framework for learning for children from birth to six years of age.

97 **New Zealand**: The Early Childhood Education Curriculum (Te Whariki) was introduced in 1996. A 10-year Early Childhood Education Strategy was published in 2002.

98 **Singapore**: New pre-school curriculum framework introduced in January 2003.

99 **Switzerland**: A new general curriculum for pre-school education in all French-speaking *cantons* came into force in the 1994/95 academic year.

100 **Singapore**: The Compulsory Education Act was passed in October 2000. As a result, primary education became compulsory from 1st January 2003.

101 **Singapore**: Proposals currently under review.

102 **Switzerland**: In 1987, a federal agreement was reached on guidelines for the recognition of, and a curriculum framework for, the recognition of vocational/technical diplomas.

103 **Ireland**: Changes to terminal upper secondary Leaving Certificate qualifications to include more concentration on science/technical/vocational subjects.

104 **New Zealand**: New curriculum statement for science introduced in 1993 and for technology in 1998.

105 **Sweden**: 'Tools for Learning', a three-year programme (1999-2001) for information and communications technology (ICT) in schools.

106 **Singapore**: Proposals currently under review.

Table 5.1 Compulsory education

	Starting age	Minimum school leaving age	Duration in years
Australia	*6* [107]	*15/16* [108]	*9-10*
Canada	*6/7*	*15/16*	*9-10*
England	5 [109]	16	11
France	6	16	10
Germany	*6*	*18*	*9/10 FT + 3 PT* [110]
Hungary	6 [111]	18 [112]	12 [113]
Ireland	6 [114]	15	9
Italy	6	15	9 [115]
Japan	6	15	9
Korea	6	15	9
Netherlands	5 [116]	16	12 FT + 1/2 PT [117]
New Zealand	6 [118]	16	10
Singapore	6/7	16/17	10 [119]
Spain	6	16	10
Sweden	7 [120]	16 [121]	9
Switzerland	*6/7*	*15/16*	*9* [122]
USA	*6*	*16*	*10* [123]
Wales	5	16	11

FT = full-time

PT = part-time

[107] **Australia**: Although most children start school at age 5.
[108] **Australia**: 15 in most States/Territories; 16 in Tasmania.
[109] **England (and Wales)**: Although children must start school the term after they reach the age of five years, many children start school at age four.
[110] **Germany**: Students must complete at least 9 or 10 years of full-time education, followed by 3 years of part-time education (dependent on the jurisdiction).
[111] **Hungary**: But, by law, all 5-year-olds must also attend kindergarten for up to four hours per day to prepare for compulsory school.
[112] **Hungary**: Since 1998, all students commencing compulsory education have had to remain in education until the age of 18. Previously the upper limit was 16.
[113] **Hungary**: 8 years' basic education, plus 4 years' upper secondary education, in principle.
[114] **Ireland**: Although compulsory education does not begin until age 6, more than 50 per cent of 4-year-olds and almost all 5-year-olds are in publicly-funded provision in the infants classes of primary schools.
[115] **Italy**: Legislation passed in 2003 looks set to implement long-existing provisions whereby students have to remain in some form of education or training until age 18.
[116] **Netherlands**: Most children start school at age 4.
[117] **Netherlands**: Full-time education is compulsory until students complete at least 12 full years of schooling. From 16, students must receive at least part-time education until the age of 18.
[118] **New Zealand:** Although education does not become compulsory until age 6, children almost universally start school at age 5.
[119] **Singapore:** 6 years' primary education is compulsory. The remaining 4 years' formal general education is universal, not compulsory. Children start primary school in January of the year in which they are 7.
[120] **Sweden**: Although compulsory education begins at age 7, all municipalities must allow all 6-year-olds who wish to to commence compulsory education at 6. Entry may also be deferred to age 8.
[121] **Sweden**: Children who commence compulsory education at age 6 may complete the nine years of compulsory education at age 15.
[122] **Switzerland**: Starting and leaving ages and the duration of compulsory education vary from canton to canton. These figures represent usual/general age ranges and duration.
[123] **USA**: These figures/ages are generalisations. In some states, the kindergarten year (children aged 5-6) is compulsory; in others, students may be expected to stay in compulsory education until the age of 18.

Table 5.2 Educational phases (not necessarily involving transfer from one school to another)

	Pre-school	Primary/basic	Lower secondary	Upper secondary
Australia	*3-5/6*	*5/6-12/13*	*12/13-15/16*	*15/16-18+*
Canada	*4/5-6/7*	*6/7-11/12/13*	*11/12/13-15/16*	*15/16-17/18+*
England	3-5 [124]	5-11 [125]	11-16 [126]	16-18
France	2-6	6-11	11-15 [127]	15-18
Germany	*3-6*	*6-10/12* [128]	*10/12-15/16*	*15/16-18/19*
Hungary	3-6 (compulsory at age 5)	6-10/12/14	6-10/12/14 [129]	10/12/14-18/19
Ireland	3-4/5	4/5-12 [130]	12-15	15-16/17/18 [131]
Italy	3-6	6-11	11-14 [132]	14-18/19
Japan	3-6	6-12	12-15	15-18
Korea	3-6	6-12	12-15	15-18
Netherlands	0-4/5	4/5-12	12-15	15-18
New Zealand	3-5/6	5/6-12/13	12/13-16	16-18+
Singapore	3-6/7	6/7-12	12-16/17	16/17-18-20
Spain	0-6	6-12	12-15	15-18
Sweden	0-6/7	6/7-15/16	6/7-15/16 [133]	15-18/16-19
Switzerland	*4/5-6/7*	*6/7-10,11,12+*	*10,11,12+-15/16*	*15/16-18/19*
USA	*3-5/6*	*5/6-13/14*	*5/6-13/14* [134]	*13/14-17/18*
Wales	3-5 [135]	5-11 [136]	11-16 [137]	16-18

[124] **England**: The period of education from age 3 to the end of the academic year in which a child has his/her fifth birthday is known as the foundation stage.

[125] **England**: Compulsory education begins the term after a child reaches the age of 5. However, many children begin school at 4+.

[126] **England**: There is currently much focus on education for 14- 19-year-olds in England. This table currently reflects the fact that compulsory education lasts until age 16 and consequently defines the compulsory secondary phase (11- 16-year-olds) as lower secondary education. The focus on 14-19 education may result in a revised definition of these phases in England, with the 11-14 age range being defined as lower secondary education and 14-19 as upper secondary. There are no plans to change the compulsory school leaving age.

[127] **France**: Compulsory education ends at age 16. Students must therefore spend at least one year in the upper secondary phase.

[128] **Germany**: Primary education ends at age 10 in 12 of the 16 Länder, and at age 12 in the remaining four.

[129] **Hungary**: Traditionally, Hungarian secondary education admitted general school leavers aged 14+. It is now increasingly common for secondary schools to admit students aged 10+ or 12+.

[130] **Ireland**: Although compulsory education does not formally begin until age 6, the majority of 4- and 5-year-old children are in publicly-funded provision in primary school education.

[131] **Ireland**: At age 15+, students follow either: a one year Transition Year course; three types of two-year Leaving Certificate course; or a three-year course (Transition Year & a two-year Leaving Certificate).

[132] **Italy**: Compulsory education ends at 15; students must spend at least one year in the upper secondary phase. Under current legislation, it is likely that some education/training will be compulsory to age 18.

[133] **Sweden**: Provided in the all-through compulsory school (*grundskola*). Compulsory education begins at age 7. Children who start earlier (age 6) may finish earlier (age 15) after 9 years' compulsory education.

[134] **USA**: Phases vary dependent on the individual state. The *INCA* Archive reflects the system of 8-year elementary school, followed by 4-year high school . Other jurisdictions have a three-year primary school (includes a kindergarten year), 4-year intermediate school, and 3-year junior and senior high; others 5-year elementary school, 3-year middle school and 4-year high school.

[135] **Wales**: There is consultation on the possible introduction of a foundation phase of education for 3- to 7-year-olds.

[136] **Wales**: Compulsory education begins the term after a child reaches the age of 5. However, many children begin school at 4+.

[137] **Wales**: See England footnote re: 14-19 education.

Table 6 - School structures, access, internal grouping and progression

The tables which follow indicate:

- **structure:** that is, whether there is a unitary system of schools catering for all students (**comp**), distinct school types for students of different educational aptitudes (**select**) or a mixed system offering both types of schools (**mixed**). Even where the structure may be common for all, differentiated courses are usually offered at upper secondary level to suit the students' abilities and preferences
- **access:** whether access to educational phases is automatic (**open**) or subject to performance in school leaving certificates or other evidence of performance (**cert**). In the case of higher education, this indicates whether holders of relevant upper secondary school certificates (e.g. *Baccalauréat* in France, *Abitur* in Germany, *VWO* in the Netherlands) have automatic right of access to higher education (**open**) or whether they have to meet additional selection criteria operated by higher education institutions (**select**)

138 **Hungary**: But, by law, all 5-year-olds must also attend kindergarten for up to four hours per day to prepare for compulsory school.
139 **Ireland**: Although compulsory education does not begin until age 6, more than 50 per cent of 4-year-olds and almost all 5-year-olds are in publicly-funded provision in the infants classes of primary schools.
140 **Korea**: Exceptionally, some children may commence at age 5.
141 **New Zealand:** Although education does not become compulsory until age 6, children almost universally start school at age 5.
142 **Sweden**: Although compulsory education begins at age 7, all municipalities must allow all 6-year-olds who wish to to commence compulsory education at 6. Entry may also be deferred to age 8.
143 **Wales**: As in England, many children begin school before the age of 5. However, compulsory education begins the term after the child's fifth birthday.
144 **Australia**: 15 in most States/Territories; 16 in Tasmania.
145 **France:** Students complete their lower secondary education at 15 and are consequently required to continue into upper secondary education until they are aged 16.
146 **Hungary**: Since 1998, all students commencing compulsory education have had to remain in education until the age of 18. Previously the upper limit was 16.
147 **Ireland**: Although the 1998 Education Act makes provision for the extension of the period of compulsory education to age 16, this provision has yet to be implemented.
148 **Sweden**: Children who commence compulsory education at age 6 may complete the nine years of compulsory education at age 15.
149 **Wales**: As in England, students who become 16 before the end of the school year (July) may not leave school before an allocated date, usually in June, of the school year.
150 **Germany**: Students must complete at least 9 or 10 years of full-time education, followed by 3 years of part-time education (dependent on the jurisdiction).
151 **Hungary**: 8 years' basic education, plus 4 years' upper secondary education, in principle.
152 **Italy**: With effect from September 1999, compulsory education was extended from ages 6-14 to 6-15. The legislation enabling this also contains a longer-term provision whereby students have to remain in some form of education or training until age 18. This latter provision remains to be implemented, but looks set to be so following the passing of additional legislation in 2003.
153 **Netherlands**: Full-time education is compulsory from age 5 to 16 or until the student has completed at least 12 full years of schooling. However, from the age of 16, students must receive at least part-time education until the age of 18. Most children (98-99%) start primary school at age 4.
154 **Singapore:** Six years of primary education became compulsory in January 2003. The remaining four years' formal general education is universal but not compulsory. Children start primary school in the January of the year in which they reach 7.
155 **Switzerland**: Starting and leaving ages and the duration of compulsory education vary from canton to canton. These figures represent usual/general age ranges and duration.
156 **USA**: These figures/ages are generalisations. In some states the kindergarten year (children aged 5-6) is compulsory; in others, students may be expected to stay in compulsory education until the age of 18.
157 **England**: The period of education from age 3 to the end of the academic year in which a child has his/her fifth birthday is known as the foundation stage.
158 **Wales**: There is consultation on the possible introduction of a foundation phase of education for 3- to 7-year-olds.
159 **England**: Compulsory education begins the term after a child reaches the age of 5. However, many children begin school at 4+.
160 **Ireland**: Although compulsory education does not formally begin until age 6, as the majority of 4- and 5-year-old children in Ireland are in publicly-funded provision in primary school education, for the purposes of this Archive basic/primary education in Ireland is classified as catering for those aged 4-12.
161 **Germany**: In most *Länder*, secondary education commences at age 10. In some, it commences at 12.
162 **Hungary**: Traditionally, Hungarian secondary education admitted general school leavers aged 14+. It is now increasingly common for secondary schools to admit students aged 10+ or 12+.
163 **Sweden**: Provided in the all-through compulsory school (*grundskola*).
164 **Ireland**: There are various courses available for students aged 15+; a one year Transition Year; three types of two-year Leaving Certificate course; or a three-year course incorporating a Transition Year, plus a two-year Leaving Certificate course.

- **internal grouping** of students: whether classes are defined by **age** or by ability in different subjects (**set**). In some cases, grouping by ability applies in some subjects only (**age/set**), or is introduced from a given class onwards (e.g. age/set Year [Yr] 4). Beyond the compulsory phase, there is considerable variation and students are most commonly grouped according to the courses which they take
- **progression within phases:** whether students automatically move to the next class (**open**) or whether this is subject to their achieving certain minimum standards (**perf**). In most countries where performance governs progression, the decision is made by all the teachers of the relevant class/year group and includes consultation with parents

Table 6.1 School structures

This table indicates whether there is a unitary system of schools catering for all students (**comp**), distinct school types for students of different educational aptitudes (**select**) or a mixed system offering both types of schools (**mixed**). Even where the structure may be common for all, differentiated courses are usually offered at upper secondary level to suit the students' abilities and preferences.

	Primary	**Lower secondary**	**Upper secondary**
Australia	*comp*	*comp*	*comp*
Canada	*comp*	*comp* [165]	*comp* [166]
England	comp	mixed	mixed
France	comp	comp	select
Germany	*comp*	*select*	*select*
Hungary	comp	select	select
Ireland	comp	comp	comp
Italy	comp	comp	select
Japan	comp	comp	select
Korea	comp	comp	select
Netherlands	comp	mixed	mixed
New Zealand	comp	comp	comp
Singapore	comp	comp	select
Spain	comp	comp	Mixed
Sweden	comp	comp	comp
Switzerland	*comp*	*mixed*	*select*
USA	*comp*	*comp*	*comp*
Wales	comp	comp [167]	comp [168]

[165] **Canada**: At one time, secondary schools were primarily academic and prepared students for university. Vocational and technical schools were often separate institutions. Although some of these still exist, most secondary schools are now composite and offer both academic and vocational courses.

[166] **Canada**: At one time, secondary schools were primarily academic and prepared students for university. Vocational and technical schools were often separate institutions. Although some of these still exist, most secondary schools are now composite and offer both academic and vocational courses.

Table 6.2 Access

This table indicates whether access to educational phases is automatic (**open**) or subject to performance in school leaving certificates or other evidence of performance (**cert**). In the case of higher education, this indicates whether holders of relevant upper secondary school certificates (e.g. *Baccalauréat* in France, *Abitur* in Germany, *VWO* in the Netherlands) have automatic right of access to higher education (**open**) or whether they have to meet additional selection criteria operated by higher education institutions (**select**)

	Primary	**Lower secondary**	**Upper secondary**	**Higher education**
Australia	*open*	*open*	*open*	*select*
Canada	*open*	*open*	*cert*	*select*
England	open	open	cert	select
France	open	open	open	open
Germany	*open* [169]	*open/cert*	*cert*	*open*
Hungary	cert	cert	cert	select
Ireland	open	open	open	open [170]
Italy	open	cert, age 11	cert, age 14	open
Japan	open	open [171]	cert, age 15	select
Korea	open	open	cert, age 15	select
Netherlands	open	cert	cert	open
New Zealand	open	open	open	select
Singapore	open	cert	cert	select
Spain	open	open	cert, age 16	select
Sweden	open	n/a [172]	cert, age 15/16	select
Switzerland	*open*	*cert*	*cert*	*open* [173]
USA	*open*	*open*	*open*	*select*
Wales	open	open	cert	select

[167] **Wales**: The overwhelming majority of secondary schools in Wales are comprehensive schools. There are no grammar schools, that is schools which are wholly selective by academic ability or aptitude. However, there are very rare examples of secondary schools which may still select a very limited proportion of students by ability.

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[169] **Germany**: Although, in cases where children are not thought ready, at age 6, to enter primary education, they may be obliged to spend some time in special preparatory classes.

[170] **Ireland**: However, points scores in the Leaving Certificate examinations need to be very high to access places on the most sought after higher education programmes.

[171] **Japan**: Students receive an elementary school leaving certificate, but progress automatically from their local elementary school to their local junior high school.

[172] **Sweden**: Primary and lower secondary compulsory phase education is provided in one 'all-through' school (*grundskola*).

[173] **Switzerland**: Additional entry requirements/criteria are, however, required in certain subject areas, such as medical science, where there is a shortage of places for students.

Table 6.3 Internal grouping

This table indicates whether classes are generally defined by **age** or by ability in different subjects (**set**). In some cases, grouping by ability applies in some subjects only (**age/set**), or is introduced from a given class onwards (e.g. age/set Year [Yr] 4). Beyond the compulsory phase, there is considerable variation and students are most commonly grouped according to the courses which they take.

	Primary	**Lower secondary**
Australia	*age (set)*	*age (set)*
Canada	*age*	*age/set*
England	age/set	age/set
France	age	age
Germany	*age*	*age/set*
Hungary	age/set	age/set
Ireland	age	age/set
Italy	age	age
Japan	age	age
Korea	age/set	age/set
Netherlands	age [174]	age/set
New Zealand	age	age/set
Singapore	age, set at age 10	set
Spain	age	age
Sweden	age	age, set at 12+
Switzerland	*age*	*set (age)*
USA	*age/set*	*age/set*
Wales	age/set	age/set

[174] **Netherlands**: Students in primary education may be grouped by ability in some schools; this procedure is quite rare, however, and students are usually grouped by age.

6.4 Progression within phases

This table indicates whether students automatically move to the next class (**open**) or whether this is subject to their achieving certain minimum standards (**perf**). In most countries where performance governs progression, the decision is made by all the teachers of the relevant class/year group and includes consultation with parents.

	Primary	**Lower secondary**
Australia	*open*	*open*
Canada	*open*	*open/perf*
England	open	open
France	perf	perf
Germany	*perf 7+*	*perf*
Hungary	perf	perf
Ireland	open	open
Italy	open - mostly	perf - mostly
Japan	open	open
Korea	open	open
Netherlands	perf [175]	perf
New Zealand	open	open
Singapore	perf	perf
Spain	perf	perf
Sweden	open/perf	open/perf
Switzerland	*perf*	*perf*
USA	*open/perf*	*open/perf*
Wales	open	open

[175] **Netherlands**: But, repeating a year is rare.

[176] **Canada**: At one time, secondary schools were primarily academic and prepared students for university. Vocational and technical schools were often separate institutions. Although some of these still exist, most secondary schools are now composite and offer both academic and vocational courses.

[177] **Wales**: The overwhelming majority of secondary schools in Wales are comprehensive schools. There are no grammar schools, that is schools which are wholly selective by academic ability or aptitude. However, there are very rare examples of secondary schools which may still select a very limited proportion of students by ability.

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[180] **Germany**: Although, in cases where children are not thought ready, at age 6, to enter primary education, they may be obliged to spend some time in special preparatory classes.

[181] **Japan**: Students receive an elementary school leaving certificate, but progress automatically from their local elementary school to their local junior high school.

[182] **Sweden**: Primary and lower secondary compulsory phase education is provided in one 'all-through' school (*grundskola*).

Table 7 - Primary curriculum

England: English; mathematics; science; design and technology; information and communication technology (ICT)); history; geography; art and design; music; physical education; religious education (parents may withdraw their children from religious education). Schools may also cover cross-curricular themes, such as economic awareness, environmental education, European awareness etc. and, since September 2000, have also been expected to follow a non-statutory framework of citizenship and personal, social and health education.

Australia: State/Territory variations but general support for eight Key Learning Areas: the arts (can include dance, drama, graphic communication, media, music and visual arts); English; health and physical education; languages other than English (LOTE - not necessarily from Year [Yr] 1); mathematics; science; studies of society and environment (SOSE); and technology. 'Discovering Democracy' initiative made civics and citizenship education compulsory Commonwealth-wide from 1999 (from mid-primary to upper secondary level education). Plus six cross-curricular areas: environment; information technology; personal and interpersonal skills; career and work education; literacy; and numeracy.

Canada: Variations by province/territory, but most include: language (usually English, plus French in some provinces/territories); mathematics; social studies (usually includes history and geography and often personal, social, health and civics education); general science/technology; the arts (often includes dance, drama, music and visual art); and physical education.

France: Age 6-8 French/literacy; foreign or regional languages; 'discovering the world' (sciences, technology, history-geography); 'living together' (civics); mathematics; physical education and sports; and art (includes music).
Age 8-11 Four main subject areas: French language, literature and humanities (includes French language and literature, foreign or regional language, history-geography, civics); science education (includes science, technology and mathematics); artistic education (music and art); and sport and physical education. Religious education is forbidden in State schools, except in the *départements* of Upper Rhine, Lower Rhine and Moselle. Reforms implemented in September 2002 place an increased emphasis on literacy across all curriculum areas and encourage foreign/regional language learning throughout primary education.

Germany: Includes, in most *Länder*, German; mathematics; *Sachunterricht* (an introduction to economics, social studies, history, geography, science [biology, physics, chemistry] and technology); art; music; sport; and religion. Increasingly, a modern foreign language is offered from Yr 3 (sometimes earlier).

Hungary: 10 cultural domains: Hungarian language and literature (or mother tongue, Hungary recognises 13); foreign language; mathematics; man and society (social studies, civics, economics, human studies, history); man and nature (natural studies, physics, chemistry, biology, health studies); earth and environment; arts (singing and music, dance and drama, visual arts, motion picture and media studies); informatics (computing studies, library use); life management and practical studies (technology, home economics, career orientation); physical education and sport. Plus cross-curricular objectives, e.g. European awareness, careers, environmental education.

Ireland: The primary level curriculum (children aged 4+ to 12) is presented in seven curriculum areas - language; mathematics; social, environmental and scientific education (SESE); arts education; physical education (PE); social, personal and health education (SPHE); and religious education (RE). Some of these curriculum areas are further sub-divided.

Italy: Italian language; foreign language (from Yr 2/3); mathematics; science; history; geography; social studies; art education; music education; physical education. In Yrs 1-2 teaching is generally multidisciplinary. Individual subjects begin to be taught from Yr 3, age 8+. Catholic religion is optional for students.

Japan: Japanese language & literature; mathematics; social studies (Yrs 3-6; Yrs 1-2 taught as life environment studies); science (Yrs 3-6; Yrs 1-2 taught as life environment studies); moral education; music; art and handicrafts; physical education; homemaking; integrated studies. Religious education not taught in state schools. Students participate in extra-curricular activities. English sometimes offered as an optional foreign language.

Korea: Moral education; Korean language; mathematics; social studies (includes history and geography); science; physical education; music; fine arts; practical arts (technology & home economics); English (foreign language) from Yr 3, age 8+; elective courses/school discretionary time; and extra-curricular activities. All subjects (except English) are taught in all years of elementary education (children aged 6-12). In Yrs 1 and 2, however, some of these subjects are taught as the following integrated areas: disciplined life, intelligent life, pleasant life, and 'we are the first graders' (an orientation programme when students enter compulsory education).

Netherlands: Dutch; arithmetic and mathematics; English (foreign language - later years at least); physical education; a number of factual subject areas under the title 'orientation on man and the world', which includes: geography, history, society, technology, environment, promotion of self-reliance and healthy behaviour, and nature study; and art orientation: sub-divided into drawing, art and crafts, music, drama/promoting and developing the use of language, and movement. Schools in the province of Friesland must teach Frisian. It is recommended that, wherever possible, subjects should be taught in interdisciplinary form.

New Zealand: Seven essential learning areas: language and languages; mathematics; science; technology; social sciences; the arts; health and physical well being. Eight groups of essential skills: communication; numeracy; information; problem-solving; self-management and competition; social and cooperative; physical; work and study.

Singapore: English language (usually includes health education); mother tongue ([Mandarin] Chinese, Malay or Tamil); mathematics; science (from Yr 3) ; art and crafts; music; social studies; civics and moral education (CME) (taught in the mother tongue); and physical education.

Spain: Spanish language/literature; knowledge of the natural, social and cultural environment; mathematics; artistic education; physical education; foreign languages (from Yr 3, age 8+); Catholic religion (optional for students, who may instead undertake private study). Additional regional language where applicable. Current reforms propose that a modern foreign language should become compulsory from age 6 (the start of compulsory education) and that, from 2004-05, all children will have to study religious education in some form (Catholic catechism or history of religion).

Sweden: Age 7-16: Swedish (or Swedish as a second language for those of the Sami population); mathematics; English; practical arts subjects (art, domestic science, sport and health education, music, crafts [includes textiles, woodwork and metalwork]); social sciences (geography, history, civics, religious studies); sciences (biology, physics, chemistry, technology); a second foreign language (schools are free to decide when this is introduced); and electives. Schools must also provide study and vocational guidance.

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183 **Germany**: Although, for certain popular subjects, in some *Länder*, a certain performance standard in specific subjects may be required or other additional criteria may be implemented.

184 **Ireland**: However, points scores in the Leaving Certificate examinations need to be very high to access places on the most sought after higher education programmes.

185 **Switzerland**: Additional entry requirements/criteria are, however, required in certain subject areas, such as medical science, where there is a shortage of places for students.

186 **Netherlands**: Students in primary education may be grouped by ability in some schools; this procedure is quite rare, however, and students are usually grouped by age.

187 **Netherlands**: But, repeating a year is rare.

Switzerland: *Canton* usually defines curriculum. Within prescribed aims, teachers enjoy considerable freedom regarding actual curriculum content, except in mathematics, foreign languages and some aspects of mother tongue (German, French, Italian, Rhaeto-Romanic), where there is some national agreement/guidance on standards. In some parts of Switzerland common syllabuses have been adopted. A 2002 national agreement on standards in languages, mathematics and science may further influence curriculum content nationally.

USA: Local variations, but all generally include language arts (English grammar, reading and writing); mathematics; social studies (including history, geography, literature, multiculturalism, ethics and values, religion and contemporary issues); science; art; music; health; and physical education.

Wales: English, Welsh (as a first or second language), mathematics, science, technology (includes design and technology, and information technology), history, geography, art, music, and physical education are compulsory. Personal and social education (PSE) became compulsory in addition from September 2003. There are also 'common requirements': Wales- and Welsh-specific aspects of the curriculum, communication skills, mathematical skills, information technology skills, problem-solving skills, creative skills, and personal and social education. Pilot projects for the teaching of modern foreign languages to 7- to 11-year-olds are being introduced from 2003-04.

Table 7 - Primary curriculum

This tables gives **an indication of the range of subjects covered without reflecting the content, status (compulsory or elective) or length of time for which a subject is studied**. The table does not reflect the inter-disciplinary manner in which subjects are often taught in this phase. Individual Country Archives provide detailed information. 'Opt' means that a child's parents may request that the child does not study religious education.

	Eng	*Aus*	*Can*	Fra	*Ger*	Hun	Ire	Italy	Japan	Korea	Neth	NZ	Sin	Spain	Swed	*Switz*	*USA*	Wales
National language (and literature)	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Alternative national/regional language or mother tongue			*X*	X		X	X				X	X	X	X	X	*X*		X
Foreign language 1	X	*X*		X	*X*	X	X [189]	X	X	X	X	X	[190]	X	X	*X*	*X*	X
Mathematics/arithmetic	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Science	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Environment	X	*X*	*X*	X	*X*	X	X		X	X	X	X		X	X	*X*	*X*	X
Information Technology	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X		X	*X*	*X*	X
Technology	X	*X*	*X*	X	*X*	X	X		X	X	X	X			X	*X*	*X*	X
History	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Geography	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Society/social studies/ civics/ economic awareness	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
The arts/cultural education/drama	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X		*X*	X
Art/craft/fine arts	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X		*X*	X
Music/dance	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X		*X*	X
PE/sport/movement	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X		*X*	X
Health	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X		*X*	X
Moral education/ethics	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X		*X*	X
Religious education	X opt	*some*	*some opt*	[192]	*X*	some	X opt	X opt	some private	some private	some	some	some	X opt [193]	X		*X*	X opt
Homemaking/domestic science	X	*X*	*X*			X			X	X					X		*X*	X
Social/life skills	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X		*X*	X
European dimension/multi-culturalism	X	*X*	*X*	X	*X*	X	X [194]		X	X	X	X	X	X	X		*X*	X

[188] **Switzerland**: The primary curriculum in Switzerland is not restricted to those subjects listed above. There is, however, considerable variation at local level. Those subjects listed appear to be core to the primary curriculum in all *canton*s.

[189] **Ireland**: In those schools participating in a pilot project on modern European languages in primary education.

[190] **Singapore**: English is regarded as an official/national language rather than as a foreign language.

[191] **Wales**: The Government is funding pilot projects of modern foreign language learning for 7- to 11-year-olds from the 2003-04 school year.

[192] **France**: Although public-sector schools in France are secular, which means that religious education is not taught as a subject in its own right (except, for historical reasons, in three *departements*), aspects of religious education are taught in other curriculum subjects with a view to expanding students' cultural knowledge and understanding of world events.

[193] **Spain**: It is proposed that, from 2004-05, all children will have to study religious education in some form (either Catholic catechism taught by Vatican-selected RE teachers, or history of religion taught by state employees).

[194] **Ireland**: The European dimension is an aspect of all curriculum areas, rather than a specific identifiable feature/subject.

Table 8 - Lower secondary curriculum (to age 15/16)

England: Age 11-14: English; mathematics; science; design and technology; information and communication technology (ICT); history; geography; a modern foreign language; art and design; music; physical education; religious education; and sex education (parents may withdraw their children from religious education and/or sex education). **Age 14-16:** As above, but history; geography; art and design; and music are not compulsory; whereas careers education is. (Careers education is also compulsory for 13- to 14-year-olds and, from September 2004 will be compulsory for 11- and 12-year-olds in addition.) Cross-curricular themes, e.g. environment, European dimension, may be offered. Citizenship education became mandatory at ages 11-16 in September 2002. Current reforms will increase curricular flexibility for 14-to 16-year-olds beginning in September 2004, when work-related learning will become compulsory in addition.

Australia: **Age 12/13-15/16:** Local variations but general support for eight key learning areas: the arts (dance, drama, graphic communication, media, music and visual arts); English; health and physical education; languages other than English (LOTE); mathematics; science; studies of society and environment (SOSE); and technology. 'Discovering Democracy' initiative made civics and citizenship education compulsory Commonwealth-wide from 1999 (from mid-primary to upper secondary level education). Plus six cross-curricular areas: environment; information technology; personal and interpersonal skills; career and work education; literacy; and numeracy.

Canada: Age 12/13-15/16: Provision varies. Language arts (English/French); mathematics; arts education (often includes dance, drama, music and the visual arts); health education; physical education; science and technology; and social studies usually studied. Careers and ICT also often included. Foreign language provision varies and is usually optional. Religious education is included in some districts and is a dominant force in publicly-funded denominational schools.

France: Age 11-15: Subjects include French (and regional language in some areas); mathematics; physics; chemistry; biology; geology; history; geography; civics; technology; modern languages; physical education and sport; art; music; and economics. Religious education is forbidden in state schools, except in the *départements* of Upper Rhine, Lower Rhine and Moselle. Latin and Greek are introduced as options for older students during this phase.

Germany: Age 10/12-15/16: Subjects vary with *Land*, and school type, but usually include German; mathematics; social studies/politics; history; geography; biology; physics; chemistry; art; music; sport; religion; and one or more modern foreign languages. **An agreement between *Länder* means that German; mathematics; a foreign language; natural and social sciences; music; art; and sport must be offered in all secondary school types**.

Hungary: 10 cultural domains, compulsory to age 16. Hungarian (or mother tongue) language and literature; modern foreign language; mathematics; man and society (social studies, civics, economics, human studies, history); man and nature (natural studies, physics, chemistry, biology, health studies); our earth and environment; arts (music, dance/drama, visual arts, motion picture and media studies); informatics (computing studies, library use); life management and practical studies (technology, home economics, career orientation); physical education and sport. Plus cross-curricular objectives, e.g. integration into Europe, career orientation, and environmental education.

Ireland: **Age 12-15:** Curriculum in compulsory lower secondary/*junior cycle* education is closely linked with the *Junior Certificate* (the school-leaving certificate). Eight subject areas ('areas of experience') constitute the framework for the curriculum. Areas of experience: language and literature; mathematical studies; science and technology; social, political and environmental education; arts education; physical education (*PE*); religious and moral education; and guidance, counselling and pastoral care are sub-divided into 24 approved subjects. The range of approved subjects varies by school, but all must usually offer Gaeilge (Irish), English, mathematics, history/geography or environmental and social studies, a science or technology subject, PE, a modern European language, and some form of civic/personal education. These constitute the 'required course' for all students

Italy: Age 11-14: Italian; history, civics and geography (as one subject area); foreign language (usually English or French); sciences (includes mathematics, physics, chemistry, natural sciences); technical education; artistic education; music; and physical education. Catholic/religious education must be offered but is optional for students.

Japan: Age 12-15: Japanese language and literature; social studies; mathematics; science; music; fine arts; health & physical education; industrial arts & home making; foreign languages; integrated studies; moral education.

Korea: Age 12-15: moral education; Korean language; mathematics; social studies; science; physical education; music; fine arts; practical arts (home economics); technology and industry; English; plus elective subjects/school discretionary time and extra-curricular activities.

Netherlands: Age 12-15: Compulsory core curriculum (*basisvorming*) comprising: Dutch; English; second modern foreign language; mathematics; biology; physics and chemistry; information technology studies; history and civics/politics; geography; economics/commerce; technology; social and life skills; physical education; and two of: visual arts; music; dance; drama. Schools in the province of Friesland must also teach Frisian and may conduct some lessons in that language. *Basisvorming* is under review.

New Zealand: Age 13-16: Seven essential learning areas: language and languages; mathematics; science; technology; social sciences; arts; health and physical well being; plus eight groups of essential skills: communication; numeracy; information; problem-solving; self-management and competition; social and cooperative; physical; work and study.

Singapore: Age 12-16/17: Exact subject combinations depend on stream/course level, but include English; mother tongue ([Mandarin] Chinese/Malay/Tamil); mathematics; general science/a science subject; literature; history; geography; art and crafts; design and technology and home economics; civics and moral education; physical education; and music. Also included are computer applications and technical studies and electives.

Spain: Age 12-16*:* (Castilian) Spanish language and literature (and regional language, if applicable); foreign languages; mathematics; social studies (includes geography/history); natural sciences; technology (including society, employment, cross-vocational skills); ethics; physical education; art; music; Roman Catholic religion (if student chooses); careers education/guidance; plus elective subjects. It is proposed that, from 2004-05, all students will have to study religious education in some form (either Catholic catechism taught by Vatican-selected RE teachers, or history of religion taught by state employees).

Sweden: Age 7-16: Swedish (or Swedish as a second language for those of the Sami population); mathematics; English (usually from around age 9); practical arts subjects (art, domestic science, sport and health education, music, crafts [includes textiles, woodwork and metalwork]); social sciences (geography, history, civics, religious studies); sciences (biology, physics, chemistry, technology); a second foreign language (age 13); and electives. Schools must also provide study and vocational guidance.

Switzerland: Age 10/12-15/16: Local (*cantonal*) variations, but most include mother tongue (German, French, Italian, Rhaeto-Romanic); mathematics; second national language; natural science; geography; history; civics; music; art; physical education; plus electives, such as the classics or some pre-vocational subjects.

USA: To age 14: Local variations, but all states generally include language arts (English grammar, reading and writing); mathematics; social studies (including US history and government, geography, literature, multiculturalism, ethics and values, religion and contemporary issues); science; art; music; health; physical education and foreign languages.

Wales: **Aged 11-16:** The curriculum varies for those aged in *Key Stage* 3 (aged 11-14) and those aged 14-16 in *Key Stage* 4. In both phases, students follow a core curriculum including English, Welsh (as a first or second language), mathematics, science, and physical education (*PE*). Since September 2003, personal and social education (PSE) has been compulsory throughout secondary education in addition. In *Key Stage* 3, students follow courses in technology (design and technology and information technology), history, geography, art, music and a modern foreign language in addition. Religious education is usually included in the secondary curriculum, although individual students may opt out. In *Key Stage* 4, work related education (WRE) will become statutory from September 2004.

Table 8 - Lower secondary curriculum (to age 15/16)

The above subject listings are drawn from the documentation received from participating countries as forming the curriculum at the lower secondary level, which usually coincides with the compulsory full-time secondary education requirement. The table 'converts' them into comparable subject headings to give **an indication of the range of subjects covered without reflecting the content, the compulsory or elective status of a subject or the length of time for which the subject is studied**. It is strongly recommended that individual country Archives are searched for this detail. 'Opt' in this table = parents may specifically request that their child(ren) should not study religious education.

	Eng	*Aus*	*Can*	Fra	*Ger*	Hun	Ireland	Italy	Japan	Korea	Neth	NZ	Sing	Spain	Swed	*Switz*	*USA*	Wales
National language (and literature)	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Alternative national/regional language(s)/mother tongue			*X*	X		X	X				X	X	X	X	X	*X*		X
Foreign language 1	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Foreign language 2, 3 etc.	X	*X*	*X*	X	*X*	X	X	X	X	X	X		X	X	X	*X*	*X*	X
Mathematics	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Science[195]	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Environment	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X	*X*	*X*	X
Technology/technical education	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
IT/computer literacy	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Classics/Latin/Greek	X		*X*	X	*X*	X	X			X	X	X		X		*X*		
History	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Geography	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Society/social studies/civics/politics	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Economics/ business	X	*X*	*X*	X	*X*	X	X			X	X	X	X				*X*	X
The arts/cultural education/drama	X	*X*	*X*	X		X	X		X	X	X	X	X	X	X		*X*	X
Art/craft/fine arts	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Music/dance	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
PE/sport	X	*X*	*X*	X	*X*	X	X	X	X	X	X	X	X	X	X	*X*	*X*	X
Health	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X		*X*	X
Moral education/ethics/values ed.	X	*X*	*X*	X	*X*	X	X		X	X		X	X	X	X		*X*	X
Religious education	X opt	*some*	*some*	[196]	*X opt*	some	X opt	X opt	some private		some	some	some	X opt [197]	X		*X*	X opt
Homemaking/domestic science	X	*X*	*X*		*X*	X	X		X	X	X		X		X		*X*	X
Social/life skills/sex education	X	*X*	*X*	X	*X*	X	X		X	X	X	X	X	X	X		*X*	X
Careers	X	*X*	*X*	X	*X*	X	X				X	X		X	X	*X*	*X*	X
European/international dimension/ multiculturalism	X	*X*	*X*	X	*X*	X	X [198]		X	X	X	X	X	X	X		*X*	X

[195] All countries provide science as a curriculum subject. In some countries/school types it is taught as 'general science'; in others it is broken down into individual subjects, the most common of which are biology, chemistry, geology, and physics.

[196] **France**: Although public-sector schools in France are secular, which means that religious education is not taught as a subject in its own right (except, for historical reasons, in three *departements*), aspects of religious education are taught in other curriculum subjects with a view to expanding students' cultural knowledge and understanding of world events.

[197] **Spain**: It is proposed that, from 2004-05, all students will have to study religious education in some form (either Catholic catechism taught by Vatican-selected RE teachers, or history of religion taught by state employees).

[198] **Ireland**: The European dimension is an aspect of all curriculum areas, rather than a specific identifiable feature/subject.

Table 9 - National assessment and public examination arrangements

England: Compulsory school entry assessment (aged around 5) at the end of the pre-compulsory foundation stage. National Curriculum assessment: compulsory at ages 7, 11 and 14, voluntary at ages 8, 9 and 10. Assessment at age 16 (end of compulsory education) is non-statutory and usually linked to the main external examination for lower secondary school, the General Certificate of Secondary Education (GCSE), which is generally required for access to upper secondary education. Upper secondary examinations (at age 17/18), leading to qualifications in general and vocational subjects, are not compulsory, but generally required for access to higher education.
Australia: (Voluntary) national statements and profiles are adapted by individual States/Territories. There are various forms of diagnostic and monitoring assessment in literacy and numeracy in particular, and in some other key learning areas. There are upper secondary qualifications in most States/Territories by examination or modular certificates, plus school-based assessment. National literacy and numeracy benchmarks and an associated national testing programme against these benchmarks have/are being gradually introduced for Years 3, 5, 7 and 9/10 (students aged 8-9, 10-11, 12-13 and 14-16 respectively).
Canada: In most provinces/territories, schools set, conduct and mark their own assessment tests and examinations. Most also have some form of provincial assessment programme for certain year groups (commonly English/French and mathematics, sometimes also science and social studies). There are, in addition, periodic national assessments such as the School Achievement Indicators Programme (SAIP) (via the Council of Ministers of Education, Canada, CMEC). No national certification/examination; most provinces have high school graduation certification based on course credits, sometimes combined with examinations.
France: Diagnostic assessment at start of year, students aged 8 and 11 (reading, writing, mathematics) and 15+ (French, mathematics, plus history/geography, and a modern foreign language, or science/technology and economics/management, dependent on course). Lower secondary completion exam (*diplôme national du brevet*) 15, does not affect choices for the final year of compulsory education. Various vocational qualifications, 16+. *Baccalauréat* (18+) grants access to higher education; *certificat de fin d'études secondaires*, for those who fail *Baccalauréat* but have at least 40%.
Germany: Access to primary school depends on students having reached an appropriate level of development. No formal national system of assessment during this phase, but teacher assessment, using a national marking system, leads to school certificates. Various lower secondary leaving certificates (15/16+) grant access to various forms of upper secondary education. *Abitur* (18+) grants access to higher education.
Hungary: National Core Curriculum formulates attainment targets to be assessed throughout compulsory education. Maturity examination (*érettségi,* 18+) does not automatically grant access to higher education. *Kindergarten* certificate required for entry to compulsory *general school*.
Ireland: There is no compulsory national system of assessment in primary education. Most students take the *Junior Certificate* on completion of compulsory education (age 15). The majority of those continuing in education beyond this point take one of the three forms of *Leaving Certificate* available. High points scores from the *Leaving Certificate* examinations are essential for entry to higher education in Ireland.
Italy: Written and oral tests every three/four months throughout compulsory education determine progress to the next class. Successful completion of examinations taken at the end of primary education (*licenza elementare,* 11), lower secondary education (*licenza media,* 14) and upper secondary education (*esame di Stato,* 18/19) are essential for access to the next phase.
Japan: Teacher assessment is the norm, often using commercial tests influenced by examination expectations higher up. There are prefecture tests (Japanese, social studies, mathematics, science and English) on completion of compulsory education, age 15. Access to senior high school or vocational/technical schools is by competition (individual entrance examinations, 14+exams,or similar). Certificate of Upper Secondary Education (from senior high school, age 18+) serves as basis for (highly competitive) admission to higher education.
Korea: Annual nationwide scholastic achievement tests of a proportion of students in certain year groups and certain subjects each year. Entrance tests, combined with continuous assessment results and lottery allocation govern access to senior high school, age 15+. Access to higher education based on College Scholastic Achievement Tests CSATs (Korean, mathematics and English), combined with high school achievement records.
Netherlands: Around 80 per cent of primary schools voluntarily administer CITO tests towards the end of primary level education to guide students' secondary school choice. School leaving examinations of all types: VMBO (pre-vocational education, 16+), HAVO (17+), and VWO (18+), grant access to further and higher education of designated types.
New Zealand: Since 1997 there has been voluntary school entry assessment (age 5/6). The National Education Monitoring Project (NEMP) provides assessment of samples of students aged 8/9 and 12/13. A National Qualifications Framework has been introduced . Cumulative credits acquired from age 15+ lead to various levels of National Certificate of Educational Achievement, NCEA). National examinations s for School Certificate (15/16 on completion of compulsory education), Sixth Form Certificate (16/17) and University Bursary (17/18) gradually being replaced by NCEA.
Singapore: Compulsory Primary School Leaving Examination (PSLE) for admission to secondary education. Singapore Cambridge GCE Ordinary and Normal Level Examinations are available for students of different levels of ability during lower secondary education (taken at age 16 or 17) and Singapore Cambridge GCE Advanced Level examinations are available at age 18+.
Spain: There is INCE national, sample assessment at the end of primary and lower secondary education (aged 12 and 16 respectively). Admission to upper secondary school is dependent on success in the *Certificate of Secondary Education* (age 16). Upper secondary students take *Bachillerato* or intermediate vocational training (*ciclo formativo*) qualifications at age 18. There is a separate national university entrance examination, in addition to the *Bachillerato.* This will be abolished from 2004 to be replaced by individual examinations set by individual universities.
Sweden: Voluntary diagnostic test materials are provided for use with students throughout compulsory education (aged 7-16). In addition, there are voluntary national diagnostic tests (in literacy/numeracy) at the end of Year 2 (age 9); .and tests in Swedish, English and mathematics at the end of Year 5 (age 12, voluntary), Year 7 (age 14, voluntary) and Year 9 (school leaving certificate, age 16, compulsory). There is no upper secondary examination. Each module is assessed by teachers (in line with nationally determined criteria) and grades are taken into consideration for admission to higher education.
Switzerland: No national system of assessment (although a 2002 agreement on national standards for languages, mathematics and science may have some impact). Examinations at 18+ for the *Maturität* (general academic upper secondary qualification) or the *DMS* (vocational/technical) certificates. These are required for access to university and higher technical education respectively. Nationally recognised standards apply to these examinations.
USA: Many States operate state assessments (especially for diagnostic purposes) or participate in periodic large scale assessments such as the National Assessment of Educational Progress (NAEP). Scholastic Aptitude Tests (SATs), American College Testing (ACT) and Advanced Placement (AP) examinations assess students' suitability for admission to higher education. No Child Left Behind, President Bush's 2002 Education Act requires statutory assessment for all students nationwide in Grades/Years 3-8 in all the States of the *USA* - in reading and mathematics and, in some Grades, in science - from autumn 2005.
Wales: Baseline (school entry) assessment at age 4/5 (within seven weeks of entry to compulsory education) has been compulsory since September 1999. National Curriculum assessment is compulsory at ages 7, 11 and 14 (end of Key Stages 1, 2 and 3 respectively), although at Key Stage 1, since May 2002, this has only involved statutory teacher assessment and not statutory national testing. Assessment at age 16 (end of compulsory education) is non-statutory and usually linked to the main external examination for lower secondary school, the General Certificate of Secondary Education (GCSE). Upper secondary examinations (at around age 18), leading to qualifications in general and vocational subjects, are not compulsory, but generally required for access to higher education. National Curriculum assessment (in Key Stages 1, 2 and 3) is currently the subject of a major review, which may result in significant changes.

Table 9.1 - National standardised assessment system

All systems feature ongoing teacher assessment, which frequently determines student progression between classes. This is NOT shown in the tables. Figures indicate the ages at which national assessment or public examinations take place. **Bold** figures indicate that assessments/examinations are compulsory **or** essential for admission to the next phase.

	National standardised assessment system	At school entry	During compulsory primary education	During compulsory secondary education
Australia	*(yes)*[199]	*(no)*[200]	*varies*	*varies*
Canada	*no*[201]	*no*	*varies*[202]	*varies*
England	yes	**5**[203]	**7**,8,9, 10, **11**[204]	**14**
France	yes	no[205]	**8**	**11**/15
Germany	*no*[206]	*6*[207]	*no*	*15/16*
Hungary	yes	**6**[208]	yes	yes[209]
Ireland	no	no	no[210]	15
Italy	yes	no	**11**	**14**
Japan	no	no	no	15
Korea	yes	no	SAT	SAT[211]
Netherlands	yes	no	12 for some	14/15[212]

[199] **Australia**: National literacy and numeracy benchmarks and assessment against these exist in most States and Territories in Years 3, 5, and 7 and, in some States in Years 9 or 10 (students aged 8-9, 10-11, 12-13 and 14-16 respectively).

[200] **Australia**: Although school entry assessment is compulsory in the state of Victoria.

[201] **Canada**: But periodic national assessment does take place, usually via the Council of Ministers of Education, Canada (CMEC). Examples include the School Achievement Indicators Programme (SAIP).

[202] **Canada**: Several provinces implement provincial testing/assessment programmes for specific subjects (literacy and numeracy, in particular) and specific age groups during primary and secondary education.

[203] **England**: Children must attend school from the beginning of the term following their fifth birthday; most receive some form of early years education prior to this date in the pre-compulsory foundation stage (3- to 5-year-olds). At the end of the foundation stage, children take part in a compulsory school entry assessment scheme (based on their performance throughout the phase) known as the "foundation stage profile".

[204] **England**: Statutory testing of English and mathematics and teacher assessment in English, mathematics and science are compulsory for 7-year-olds. Changes being implemented from the 2004/05 school year increase the emphasis on the teacher assessment aspect of this process.

[205] **France**: Although a nursery school "record of achievement" is kept and passed on to a child's first compulsory level school.

[206] **Germany**: Although, there is a national, standardised marking system across all *Länder* and for all levels of schooling, and an agreement on recognition/standardisation of the *Abitur* (upper secondary leaving certificate/higher education access certificate).

[207] **Germany**: Children are evaluated, usually by the school doctor, to judge their maturity/readiness for school. In some cases, alternative provision is recommended.

[208] **Hungary**: The kindergarten certificate is essential for entry to primary education.

[209] **Hungary**: Throughout compulsory education – against the attainment targets of the National Core Curriculum (NCC).

[210] **Ireland**: The Department of Education and Science (DES) has recently announced plans to make standardised testing a requirement for all children at key points during compulsory education. It is currently intended that, from the 2006/07 school year, children will take tests in Year 1 of compulsory (primary) education (ages 6-7), in Year 6 (ages 11-12) and at one other time.

[211] **Korea**: National assessment of educational achievement via scholastic achievement tests (SATs) for some year groups.

[212] **Netherlands**: Tests are supplied by the National Institute of Educational Measurement (CITO) to evaluate whether students have achieved the attainment targets of the compulsory core curriculum for lower secondary education (*basisvorming*). These tests may be taken after two years of the course or at the end of the three-year period of *basisvorming*.

Table 9.1 cont'd - National standardised assessment system

All systems feature ongoing teacher assessment, which frequently determines student progression between classes. This is NOT shown in the tables. Figures indicate the ages at which national assessment or public examinations take place. **Bold** figures indicate that assessments/examinations are compulsory **or** essential for admission to the next phase.

	National standardised assessment system	At school entry	During compulsory primary education	During compulsory secondary education
New Zealand	yes	5/6	8/9 [213]	12/ 13 [214]
Singapore	yes	no	**10, 12** [215]	**16/17**
Spain	yes	no	INCE, **12** [216]	INCE, **16**
Sweden	yes	no	9	12, 14, **16**
Switzerland	*no*	*no*	*no*	*no*
USA	*no* [217]	*varies*	*varies*	*varies* [218]
Wales	yes	**4/5**	**7** [219]**, 11** [220]	**14** [221]

213 **New Zealand:** A sample in the National Educational Monitoring Project (NEMP).

214 **New Zealand:** A sample in the National Educational Monitoring Project (NEMP).

215 **Singapore**: Children are streamed at the end of Yr 4 (aged 10) for the final two years of primary education – via a school-based examination in English, the mother tongue and mathematics. At age 12, the end of primary education, children take the Primary School Leaving Examination (PSLE).

216 **Spain**: 1990 legislation established a national body to evaluate the education system (INCE). INCE undertakes (national sample) surveys of student attainment on completion of compulsory primary and secondary education (students aged 12 and 16 years respectively).

217 **USA**: No Child Left Behind, President Bush's national education reform strategy, which was formally approved and signed into law in January 2002, will require future statutory assessment in English (reading) and mathematics for students in Grades/Years 3-8, and for some Grades in science, in all the States of the USA. Introduction is expected to begin in autumn 2005.

218 **USA**: No Child Left Behind, President Bush's national education reform strategy, which was formally approved and signed into law in January 2002, will require future statutory assessment in English (reading) and mathematics for students in Grades/Years 3-8, and for some Grades in science, in all the States of the USA. Introduction is expected to begin in autumn 2005.

219 **Wales**: Since May 2002 statutory assessment at the end of Key Stage 1 (children aged 7) has involved teacher assessment only. There is no statutory national testing (as existed previously at this level).

220 **Wales**: The tests at age 11 became non-statutory in the 2004/05 school year. Teacher assessment remains statutory. New skills tests in literacy, numeracy and problem-solving will be introduced at around age 10.

221 **Wales**: The tests at age 14 will shortly become non-statutory. They will be replaced by statutory teacher assessment of all National Curriculum subjects at the end of key stage 3, age 14.

222 **Australia**: National literacy and numeracy benchmarks and assessment against these are being introduced in Years 3, 5, 7 and 9/10 (students aged 8-9, 10-11, 12-13 and 14-16 respectively).
223 **Canada**: But periodic national assessment does take place, usually via the Council of Ministers of Education, Canada (CMEC). Examples include the School Achievement Indicators Programme (SAIP).
224 **Germany**: Although, there is a national, standardised marking system across all *Länder* and for all levels of schooling, and an agreement on recognition/standardisation of the *Abitur* (upper secondary leaving certificate/higher education access certificate).
225 **USA**: No Child Left Behind, President Bush's national education reform strategy, which was formally approved and signed into law in January 2002, will require future statutory assessment in English (reading) and mathematics for students in Grades/Years 3-8, and for some Grades in science, in all the States of the USA. Introduction is expected to begin in autumn 2005.
226 **England**: Children must attend school from the beginning of the term following their fifth birthday; most receive some form of early years education prior to this date in the pre-compulsory foundation stage (3- to 5-year-olds). At the end of the foundation stage, children take part in a compulsory school entry assessment scheme (based on their performance throughout the phase) known as the "foundation stage profile".
227 **Australia**: Although school entry assessment is compulsory in the state of Victoria.
228 **France**: Although a nursery school "record of achievement" is kept and passed on to a child's first compulsory level school.
229 **Germany**: Children are evaluated, usually by the school doctor, to judge their maturity/readiness for school. In some cases, alternative provision is recommended.
230 **Hungary**: The kindergarten certificate is essential for entry to primary education.
231 **Canada**: Several provinces implement provincial testing/assessment programmes for specific subjects (literacy and numeracy, in particular) and specific age groups during primary and secondary education.
232 **New Zealand:** A sample in the National Educational Monitoring Project (NEMP).
233 **Singapore**: Children are streamed at the end of Yr 4 (aged 10) for the final two years of primary education – via a school-based examination in English, the mother tongue and mathematics. At age 12, the end of primary education, children take the Primary School Leaving Examination (PSLE).
234 **Spain**: 1990 legislation established a national body to evaluate the education system (INCE). INCE undertakes (national sample) surveys of student attainment on completion of compulsory primary and secondary education (students aged 12 and 16 years respectively).
235 **USA**: No Child Left Behind, President Bush's national education reform strategy, which was formally approved and signed into law in January 2002, will require future statutory assessment in English (reading) and mathematics for students in Grades/Years 3-8, and for some Grades in science, in all the States of the USA. Introduction is expected to begin in autumn 2005.
236 **Wales**: Since May 2002 statutory assessment at the end of Key Stage 1 (children aged 7) has involved teacher assessment only. There is no statutory national testing (as existed previously at this level).
237 **Hungary**: Throughout compulsory education – against the attainment targets of the National Core Curriculum (NCC).
238 **Korea**: National assessment of educational achievement via scholastic achievement tests (SATs) for some year groups.
239 **Netherlands**: Tests are supplied by the National Institute of Educational Measurement (CITO) to evaluate whether students have achieved the attainment targets of the compulsory core curriculum for lower secondary education (*basisvorming*). These tests may be taken after two years of the course or at the end of the three-year period of *basisvorming*.
240 **New Zealand:** A sample in the National Educational Monitoring Project (NEMP).
241 **USA**: No Child Left Behind, President Bush's national education reform strategy, which was formally approved and signed into law in January 2002, will require future statutory assessment in English (reading) and mathematics for students in Grades/Years 3-8, and for some Grades in science, in all the States of the USA. Introduction is expected to begin in autumn 2005.
242 **Australia**: Most states do not, but South Australia has a primary school certificate.
243 **Hungary**: But, as part of the National Core Curriculum, attainment targets have been set for students throughout compulsory education.
244 **Sweden**: Primary and lower secondary compulsory phase education is provided in one 'all-through' school (*grundskola*).
245 **Switzerland**: Although, in some *canton*s there is an examination during the final year of primary education (age 10, 11 or 12 depending on *canton*) which may, in combination with other factors, influence lower secondary entry.
246 **Korea**: Entrance tests, combined with continuous assessment results and lottery allocation govern access to high school on completion of this phase, age 15+.
247 **Switzerland**: Although, in some *canton*s, at the end of lower secondary education (age 15/16), students can take a written and oral examination in their main subjects to obtain a leaving certificate.
248 **England**: Students in schools generally study for GCE 'AS' qualifications or GCE 'A' Levels. GCE 'A' Levels (sometimes known as A2 examinations) are single subject examinations which usually take two years to complete (age 18) and comprise six modules or units. The three modules/units taken in the first year of a GCE 'A' Level course comprise the GCE 'AS' qualification, taken at age 17. This is a 'stand-alone' qualification. Consequently, students may choose not to complete a further three modules to gain the GCE 'A' Level in the second year.
249 **France**: Various vocational qualifications at 16+. *Baccalauréat* at 18.
250 **Korea**: College Scholastic Achievement Test (for higher education entry).
251 **Wales**: Students in schools generally study for GCE 'AS' qualifications or GCE 'A' Levels. GCE 'A' Levels (sometimes known as A2 examinations) are single subject examinations which usually take two years to complete (age 18) and comprise six modules or units. The three modules/units taken in the first year of a GCE 'A' Level course comprise the GCE 'AS' qualification, taken at age 17. This is a 'stand-alone' qualification. Consequently, students may choose not to complete a further three modules to gain the GCE 'A' Level in the second year.

Table 9.2 National examination or certification framework to mark the end of an educational phase

All systems feature ongoing teacher assessment, which frequently determines student progression between classes. This is NOT shown in the tables. Figures indicate the ages at which national assessment or public examinations take place. **Bold** figures indicate that assessments/examinations are compulsory **or** essential for admission to the next phase.

National examination or certification framework to mark the end of an educational phase			
	Primary	**Lower secondary**	**Upper secondary**
Australia	*no*[252]	*no*	*18+*
Canada	*no*	*no*	*18/19*
England	no	**16**	**17/18**[253]
France	no	**15**	**16+/18**[254]
Germany	*no*	*15/16*	*18/19*
Hungary	no[255]	no	**18+**
Ireland	no	**15**	**17/18**
Italy	**11**	**14**	**18/19**
Japan	no	**14+**	**18**
Korea	no	**15**[256]	**18**[257]
Netherlands	12	14/15	**16, 17, 18**
New Zealand	no	**15+/16**	**17,18**
Singapore	**12**	**16/17**	**18+**
Spain	**12**	**16**	**18**
Sweden	n/a[258]	**16**	**18/19**
National examination or certification framework to mark the end of an educational phase			
	Primary	**Lower secondary**	**Upper secondary**
Switzerland	*no*[259]	*no*[260]	*18+*
USA	*no*	*varies*	*18*
Wales	no	**16**	**17/18**[261]

252 **Australia**: Most states do not, but South Australia has a primary school certificate.

253 **England**: Students in schools generally study for GCE 'AS' qualifications or GCE 'A' Levels. GCE 'A' Levels (sometimes known as A2 examinations) are single subject examinations which usually take two years to complete (age 18) and comprise six modules or units. The three modules/units taken in the first year of a GCE 'A' Level course comprise the GCE 'AS' qualification, taken at age 17. This is a 'stand-alone' qualification. Consequently, students may choose not to complete a further three modules to gain the GCE 'A' Level in the second year.

254 **France**: Various vocational qualifications at 16+. *Baccalauréat* at 18.

255 **Hungary**: But, as part of the National Core Curriculum, attainment targets have been set for students throughout compulsory education.

256 **Korea**: Entrance tests, combined with continuous assessment results and lottery allocation govern access to high school on completion of this phase, age 15+.

257 **Korea**: College Scholastic Achievement Test (for higher education entry).

258 **Sweden**: Primary and lower secondary compulsory phase education is provided in one 'all-through' school (*grundskola*).

259 **Switzerland**: Although, in some *canton*s there is an examination during the final year of primary education (age 10, 11 or 12 depending on *canton*) which may, in combination with other factors, influence lower secondary entry.

260 **Switzerland**: Although, in some *canton*s, at the end of lower secondary education (age 15/16), students can take a written and oral examination in their main subjects to obtain a leaving certificate.

261 **Wales**: Students in schools generally study for GCE 'AS' qualifications or GCE 'A' Levels. GCE 'A' Levels (sometimes known as A2 examinations) are single subject examinations which usually take two years to complete (age 18) and comprise six modules or units. The three modules/units taken in the first year of a GCE 'A' Level course comprise the GCE 'AS' qualification, taken at age 17. This is a 'stand-alone' qualification. Consequently, students may choose not to complete a further three modules to gain the GCE 'A' Level in the second year.

Table 10 - Control and supply of school textbooks

This table outlines:

- who produces textbooks (state or commercial bodies)
- whether the State (or devolved authority) prescribes content etc. of textbooks
- whether the State (or devolved authority) draws up a list of authorised textbooks
- who selects textbooks for use in class
- whether textbooks are provided free by the State (or devolved authority), or whether parents are required to buy them

Table 10 - Control and supply of school textbooks

	Textbook production	State provides list of approved textbooks	Choice of books for use in class	Textbook provision
England	Commercial	No	Teachers – free choice [262]	School provides/lends
Australia	*Mostly commercial. Boards of Studies may publish support materials*	*No*	*Teachers - free choice*	*Parents generally buy (or pay a levy to schools for book hire)*
Canada	*Commercial (by approval). Provinces produce and pilot books*	*Province or territory usually provides recommended list of approved titles*	*District or school usually from recommended list*	*School usually provides free of charge*
France	Commercial - state approved. Local/regional associations and documentation centres may produce teaching materials to supplement those published for national use	State prescribes content and format, approves all textbooks for use in schools, and provides list of approved texts	Teachers - from list of approved textbooks	Compulsory education - school provides. Post-compulsory, parents usually buy.
Germany	*Commercial - Länder approved*	*Land prescribes cost, content, format and quality and provides list of approved textbooks. RE textbooks are approved with the agreement of the church authorities*	*Teachers - from approved textbooks list. Sometimes subject to Schools' Inspectorate approval or consultation with representatives of parents and children*	*School provides (on loan)*
Hungary	Commercial (state approval). The State underwrites bank loans to publishing companies	State generally prescribes content, approves and provides recommended list. Teachers are free to select other material, in addition.	Teachers - generally from recommended list, but can select additional material	Parents buy (subsidised prices) (assistance for needy). Textbooks for minority language education must be provided by the State.
Ireland	Commercial. Ministry provides guidelines and may produce/commission materials for distribution	No	Teachers - free choice	Parents usually buy or rent from schools. Some state subsidies available.
Italy	Commercial	State issues guidance on cost and frequency of updates, but does not prescribe or approve	Council of teachers - free choice	Provided free at primary level. Parents usually buy thereafter; increasing financial assistance available to low income families.
Japan	Commercial with state approval, or state-produced	State-approved, commercially produced (some state-approved and state-produced) textbooks with prescribed content	Local boards of education or headteachers determine which books will be used from prescribed list	In compulsory education, **all** students receive new books, free, each year. Post-compulsory, parents/students buy.
Korea	State, or commercial with state authorisation or approval	Ministry compiles some and authorises or approves other textbooks	Single textbook replaced by range of government-copyrighted and approved textbooks for individual subjects, enabling teachers to choose	Provided free at primary level (6-12) (and students may keep, as in Japan). Thereafter, parents buy but costs are kept low.
	Textbook production	**State provides list of approved textbooks**	**Choice of books for use in class**	**Textbook provision**

[262] **England**: There are, however, set texts for certain examination syllabuses. In addition, the programmes of study for English at Key Stages 1-4 contain criteria and categories from which to select the range of reading.

	Textbook production	State provides list of approved textbooks	Choice of books for use in class	Textbook provision
Netherlands	Commercial	No (Ministry prescribes educational attainment targets but does not prescribe or produce specific teaching materials)	Teachers - free choice	School provides at primary level (on loan). Many secondary schools provide; at upper secondary level, in particular (aged 15+), students often contribute to the cost.
New Zealand	State and commercial. (Learning Media, a crown-owned company, publishes a range of resources free to schools. Use is not mandatory)	No	Teachers - free choice	School provides (loaned, parents contribute for damage or loss). Parents buy supplementary materials, particularly at post-compulsory upper secondary level.
Singapore	State and commercial with state approval	State prescribes content and produces Approved Textbook List (ATL). All books on the ATL are approved by the Ministry for five years	Teachers - from ATL	Parents buy, free for needy
Spain	Commercial under state supervision. Centre for Educational Research and Documentation (CIDE) assists in development/ dissemination of curriculum materials and teacher guides	No general prescription, but the Autonomous Community (via the regional/local education authority) usually provides a recommended list	Schools/teachers - usually from recommended list	Parents usually buy. Increasing financial aid available for low income families.
Sweden	Commercial	No	Teachers - free choice	School provides. (Occasionally some post-compulsory schools - students aged 16+ - may request a parental contribution for certain items.)
Switzerland	*Cantons (compulsory phase)*	*Cantons usually prescribe content and provide recommended lists for compulsory phase*	*Teachers – usually from recommended list; free choice for upper secondary*	*School provides. Upper secondary (post-compulsory) parents buy.*
USA	*Commercial (dominated by about ten main corporations)*	*About half of the States recommend textbooks after some process of review against State curriculum guidelines.*	*Teacher (or school committee) choice; in about half of the States from approved list. (In California, for example, schools may only opt out of the state-recommended textbook system with an official waiver.)*	*In most States, schools provide books to students free of charge. Some States charge all but the most needy. Others may request a contribution from students in high school (age 14+) in particular.*
Wales	Commercial	No	Teachers - free choice [263]	School provides (on loan)
	Textbook production	**State provides list of approved textbooks**	**Choice of books for use in class**	**Textbook provision**

[263] **Wales**: There are, however, set texts for certain examination syllabuses. In addition, the *programmes of study* for English at *Key Stages* 1-4 contain criteria and categories from which to select the range of reading.

Distinctive features of education systems

Australia

- a decentralised system with State/Territory autonomy and some voluntary collaboration between States, Territories and the Commonwealth on National Goals for Schooling and a curriculum and assessment framework
- States and Territories also frequently collaborate with the Federal Government to endorse a number of national policies which have implications for the role of schools in relation to humanistic, ethical, cultural and international dimensions of education
- there is some movement towards delegating management and financial responsibility to schools and strong policies in support of implementing partnerships with parents
- the school year runs from January to December, organised (usually) over four terms
- compulsory education usually begins at around age 6 (although many children start school at 5) and last for nine years in most States (ten in Tasmania)
- a framework of Statements (content and processes in each learning phase) and Profiles (statements of outcomes across levels of achievement) for eight Key Learning Areas (KLAs) (English, mathematics, science, technology, health and physical education, languages other than English, studies of society and environment, and the arts), originally developed in 1989, serves as a reference point for States, Territories, professions and associations, schools and teachers in determining pedagogy, assessment, resources, materials and classroom organisation and has been adopted and adapted according to local needs
- two new pilot curriculum framework projects (Queensland and Tasmania) organise the curriculum around more abstract clusters such as "life pathways and social futures" (Queensland) or "personal futures" and "communicating" (Tasmania). A similar curriculum reorganisation will begin to be introduced in Victoria from 2005
- linked to a system of nationally agreed literacy and numeracy benchmarks for children in Year 3 (aged 8-9), Year 5 (aged 10-11) and Year 7 (aged 12-13), there is a system of assessment of students in these years across all States and Territories
- there is no denominational education in State schools, but one of the national goals is the development of ‘a capacity to exercise judgement in matters of morality, ethics and social justice’. State support and funding for the (non-government) Catholic sector is institutionalised and private schools for other denominations also receive financial support. In some States/Territories, State schools may provide a limited amount of religious education each week. Express approval must be sought from the (local) State Department of Education
- textbooks are not approved by States/Territories but selected at school level. Parents usually buy

Canada

- the Confederation Act of 1867 defined education as the domain of provincial/territorial governments. However, the provinces/territories share an ethos of equal opportunity and the provision of universal, free schooling to college or university level
- there is a Council of Ministers of Education, Canada (CMEC), which is responsible for 'providing leadership in education at the pan-Canadian level' and for ensuring communication between the Ministers of Education of the 13 provinces and territories on issues such as funding, curricula and student assessment. CMEC also oversees periodic national assessment programmes such as the School Achievement Indicators Programme (SAIP) (soon to be replaced by a new Pan-Canadian Assessment Programme (PCAP))
- immigration (from Europe, the Middle East, Africa, and the Caribbean) has had a major impact on schooling, particularly in urban areas in British Columbia, Alberta, Ontario, and Quebec, which absorb the majority of new immigrants
- historical connections to both England and France have also had major impacts on education. The perceived benefits for employment of being fluent in the country's two official languages (English and French), for example, mean that virtually all Canadian school districts outside Quebec include French immersion schools for Anglophone children, French designated schools for Francophone youngsters, and English schools in which students study French as a second language during a relatively small part of the school week. These policies affect teacher education, curriculum development and teaching resources
- compulsory education commences at age 6 or 7, dependent on the jurisdiction, and lasts for around 10 years, although most students remain in education until the end of Year/Grade 12, aged around 18+. Pre-school programmes are provided in all provinces/territories in addition
- schools in Canada are generally secular, although in some provinces publicly-funded denominational schools (usually Catholic or Protestant) do exist
- there is no national curriculum; provinces/territories draw up their own curricula, which are intended as guides and usually provide a philosophy and rationale for the teaching of the subject in question, a description of the content to be taught, intended learning outcomes and, sometimes, recommended time allocations for each subject
- similarly, there is no national assessment or qualifications/certification system. However, some provinces/territories implement standardised assessment programmes in some year groups (usually in key subject areas such as languages [reading, writing] and mathematics) and most provinces/territories have graduation certificates based on course credits, sometimes combined with examinations. Successful graduation from high school is essential for progression to higher education. Additional entry criteria usually also apply
- parents/students are provided with regular, written reports on progress and, where students are involved in standardised provincial assessment programmes, the results of these are reported to parents
- individual provinces/territories usually provide lists of recommended textbooks/ resources from which local districts/schools select. These are mostly provided free of charge to students

England

- overall responsibility for all aspects of publicly-funded education in England lies with the national Government, but many responsibilities are delegated to local education authorities and school governing bodies
- compulsory phase education, students aged 5-16, is divided into four key stages. Primary education comprises key stages 1 and 2 (key stage 1, ages 5-7; key stage 2, ages 7+-11). Compulsory lower secondary education includes key stage 3 (students aged 11-14) and key stage 4 (14-16)
- primary school students are usually taught by a generalist class teacher; secondary students by specialist subject teachers
- although children must, by law, start compulsory education in the school term after they reach 5 years of age, many children start school at some point in the school year before they reach 5
- there is a statutory National Curriculum and a linked national system of assessment. Private/independent schools may or may not choose to follow these
- the statutory curriculum generally includes English, mathematics, science, information technology, design and technology, history, geography, art and design, music and physical education (PE). A modern foreign language and careers education are also included at some levels, as are personal, social and health education (PSHE) and citizenship education
- an increasing range of vocational and other alternative subject options and qualifications is being offered to students from the age of 14. In addition, there are increased possibilities for schools to vary the curriculum for individual students during key stage 4 (ages 14 to 16)
- work-related learning became a statutory requirement for all students in key stage 4 from September 2004
- statutory assessment (involving standardised tests and/or teacher assessment) takes place on or around the age of entry to compulsory education and at the end of key stages 1, 2 and 3 (students aged 5, 7, 11 and 14 years respectively). Results do not normally affect children's progress through school
- assessment on completion of compulsory education (age 16) generally involves the General Certificate of Secondary Education (GCSE). Although not compulsory, these qualifications, traditionally taken in a range of academic subjects, and increasingly available in a range of vocational subject areas, are usually required for access to further study
- teachers must provide at least one written report for each student in each academic year and, where students have taken part in statutory assessment, parents must be informed of their child's results
- religious education and collective worship must be provided by publicly-funded schools. Individual students may opt out
- textbooks are commercially produced, not approved by the State and selected for classroom use by teachers

France

- a very centralised education system until 1982, when responsibilities began to be decentralised to regional administrations (acting as agents for the national Ministry)
- a 1989 law established education as the top national priority, aiming by 2000 to educate all young people to at least 'vocational aptitude certificate' or 'vocational studies certificate' level, and to increase to 80 per cent the number of students staying on to age 18 (*baccalauréat*)
- religion is not taught in public-sector schools (80 per cent of all schools) **except** in three *départements* in the north east which were part of Germany before 1918. However, aspects of religious education may be taught in other curriculum subjects with a view to expanding students' cultural knowledge and understanding of world events
- education is compulsory from age 6 to 15 years and is divided into various 'learning cycles'
- the amount of time students spend in learning cycles can be extended or reduced by one year if the Class Council (comprising all those teaching a class) considers this appropriate
- pre-school education is optional and free and available between ages 2 and 6; at 3, every child should be able to attend a nursery school or infant class at his or her family's request
- there is a statutory national curriculum for the various cycles of compulsory education
- the General Inspectorate of National Education is responsible for monitoring and evaluating the implementation of the curriculum (teaching methods are not prescribed)
- there is mass diagnostic national assessment at the start of specific cycles (ages 8, 11 and 15+) to enable teachers to gauge students' strengths and weaknesses and adapt their teaching accordingly
- indicators of regional and national performance are published and influence policy making
- students have a legal right to academic and career guidance and counselling
- textbooks are chosen by teachers from Ministry approved lists and are usually loaned to students free of charge whilst in compulsory education

Germany

- a decentralised system with autonomy for the individual regions (*Länder*), but an obligation on the Ministers for Culture and Education of the *Länder* to achieve consensus in key areas
- a key agreement was reached by the Standing Conference of the Ministers of Education and Culture of the 16 *Länder* in 2002. This could result in common national educational standards being identified for German, mathematics, science and the first foreign language for students in each year group throughout education in Germany. Standardised testing could also be introduced
- religious education is a compulsory part of the curriculum in most *Länder*
- compulsory schooling starts at the age of 6 and usually lasts for around 12 or 13 years, usually including nine or ten years of full-time schooling followed by at least three years of part-time education. The upper secondary phase is

characterised by the predominance of some form of vocational education, catering for around 80 per cent of students

- kindergarten education (traditionally for children aged 3 to 6) is voluntary and children usually attend for five mornings a week. Groups are of mixed ages and there is no set curriculum
- children whose general development is assessed as being insufficient for compulsory education at age 6 may be required to attend separate 'pre-school classes'
- secondary level education (which begins at age 10+ in most *Länder*; at 12+ in some) is provided in schools catering for students of varying ability levels. Parents select school type, based on the child's academic performance in primary education
- curricula (developed in curriculum planning commissions comprising teachers, the *Länder* education administration, inspectorate and research institutes and, less commonly, subject specialists from higher education) provide guidelines (goals, content, methods) for planning and implementation by teachers to meet the needs of their students
- most German students do not attend school during the afternoon. Compulsory homework therefore constitutes an important part of the learning **and** assessment activity from the start of primary education and ranges from 10 minutes to 2.5 hours a day (dependent on educational phase)
- there is no standardised performance assessment at *Land* level. Teacher assessment is continuous and based on classroom observation, students' oral, written and practical contributions, homework and subject-based learning checks
- reports on student performance are issued twice yearly, using a nationally agreed and recognised six-point grading system, and determine students' progress through school and access to different types of secondary, further and higher education (although school leaving examinations are subject to some external moderation/assessment). This power to judge and accredit student learning is one of the reasons for requiring teachers to be civil servants
- textbooks are chosen by teachers from lists approved by the *Länder* Ministries. They are provided to students free of charge

Hungary

- has moved through a period of reducing central control of school operations
- 1993 legislation extended compulsory education from age 14 to 16. In 1996, legislation was passed making education compulsory until age 18. As a result, students entering compulsory education since September 1998 (age 6 in September 1998) now have to remain in education until age 18
- since the raising of the school leaving age to 18, the education system in Hungary has essentially been based on an 8 + 4 system, that is, eight years of education in the 'general school' (students aged 6-14), followed by four years' upper secondary education (aged 14-18+). Some students do, however, leave general school at age 10 or 12 to move on to secondary education
- compulsory education commences at age 6, but all 5-year-olds must attend kindergarten for up to four hours per day in preparation for compulsory schooling. A kindergarten certificate is essential for admission to compulsory primary level education

- recognises 13 minority languages and the individual's right to receive instruction through the medium of any of these languages, provided there is sufficient demand
- adopted (1995) a National Core Curriculum (NCC) – based around 10 'cultural domains' (subject areas) for gradual implementation from September 1998. The NCC provides a framework within which local schools develop their curricula
- the NCC formulates attainment targets for students
- most national testing is currently deferred to age 18 when students take the maturity examination; essential for entry to higher education
- religious education is usually offered in schools supported by church organisations
- textbooks are usually chosen by teachers from a State recommended list, although additional material can also be selected. Parents usually buy textbooks

Ireland

- overall responsibility for the organisation and administration of the education system in the Republic of Ireland, and for the formulation and implementation of legislation rests with the (central) Department of Education and Science (DES)
- all schools are encouraged to have boards of management in place; these boards include representatives of the school's owners, teachers and parents. Provision is made within the 1998 Education Act for these boards to become statutory
- education is compulsory for children from the age of 6 to 15 (primary education ages 6-12; post-primary junior cycle education, students aged 12-15). Although provision is made within the Education Act (1998) to extend the compulsory school leaving age to 16, this provision remains to be implemented
- although education does not become compulsory until the age of 6, well over 50 per cent of 4-year-olds and almost all 5-year-olds are in the infants classes of publicly-funded primary education. The statutory primary curriculum takes account of this fact
- a revised statutory primary curriculum (The Primary Curriculum 1999) is being introduced gradually; the previous version dates from 1971. The lower secondary curriculum framework (students aged 12-15) is linked with the Junior Certificate - the school leaving certificate taken at age 15
- a 2004 consultation document *Towards a Framework for Early Learning* looks likely to lead to the development of a national framework for learning for children from birth to six years of age
- the Department of Education and Science has recently announced plans to make standardised testing a requirement for all children at key points during compulsory education. It is currently intended that, from the 2006/07 school year, children will take tests in Year 1 of compulsory (primary) education (ages 6-7), in Year 6 (ages 11-12) and at one other time
- assessment for the school leaving certificate - the Junior Certificate - (at age 15) is usually terminal. This may change as a result of the current review of the junior cycle (students aged 12-15)
- there is a government initiative to encourage at least 90 per cent of 15-year-olds to remain in education until the age of 17 or 18. Beyond age 15, students either follow a one-year Transition Year programme, or begin one of three types of two-year Leaving Certificate programmes (general/academic, applied, or

vocational). In some areas, students follow a three-year programme, combining a Transition Year and a Leaving Certificate programme

- access to higher education is highly competitive, with students having to achieve minimum points scores in the Leaving Certificate examinations
- religious education is included in the curriculum for compulsory level education, but individual students may opt out
- school textbooks are commercially produced, not approved by the State, selected by teachers and usually provided by parents. Some State subsidies are available

Italy

- essentially a centrally-controlled system, but with increasing delegation of organisational, administrative and managerial responsibilities, in particular, to regions, provinces and schools
- individuals have a legal right to establish and fund independent schools
- a long-standing commitment to raise the school leaving age was implemented in September 1999. Compulsory education now extends from age 6 to 15 (previously 6 to 14)
- additionally, legislation passed in February 2003, means that children who reach the age of six before 28 February of a given year may start school in the previous September
- there is a statutory national curriculum for compulsory level education and religious education must also be offered by schools. Individual students may opt out of religious study
- primary education has two cycles: the first lasts for two years (ages 6-8), is interdisciplinary and taught by generalist class teachers; in the second, three-year cycle, teaching becomes more subject-based, using specialist teachers (see below)
- since 1990, primary classes have been staffed at a rate of three teachers to two classes or four teachers to three classes. Teachers remain with the same classes for the whole cycle and teach one of three specialist subject areas (linguistic-expressive, scientific-logical-mathematical, or historical-geographical-social). (February 2003 legislation looks set to remove team teaching from Italian primary schools)
- lower secondary subject teachers normally remain with the same class for the three years of the cycle; upper secondary specialist subject teachers normally also remain with their class for the duration of the cycle
- access to (non-selective) lower secondary education is dependent on obtaining the primary school leaving certificate, which may, exceptionally, require some students to repeat a year
- upper secondary (that is, post-14) education currently lasts for three to five years and differentiates between various types of establishment such as the classical *Liceo* (preparing for higher education in arts and humanities), the scientific *Liceo* (preparing for higher education in science, medicine and surgery), technical education, vocational schools and art schools. Access requires the lower secondary school certificate
- 2003 educational reform legislation will result in compulsory education or training being extended to 12 years, and to students at age 14 choosing between a five-year general/academic *Liceo* option or a four-year vocational education and training course

- reports on students, based on ongoing teacher assessment, are issued three or four times a year
- school textbooks, which are not prescribed by the State, are usually purchased by parents of students in lower and upper secondary education, although some financial assistance is gradually becoming available. Textbooks for primary school children are provided free of charge.

Japan

- a centralised system which is controlled by the Minister of Education, Culture, Sports, Science and Technology, appointed by the Prime Minister, who in turn appoints the personnel of the Ministry of Education, Culture, Sports, Science and Technology (MEXT)
- the Japanese education system consists of three years of pre-compulsory education (Kindergarten) (3- to 6-year-olds), six years of primary (elementary) education (6-12 years), three years of lower secondary (junior high school) education (aged 12-15) and three years of upper secondary education (senior high school) (15- to 18-year-olds). Some schools are being introduced combining lower and upper secondary education within one institution
- no fees are payable for compulsory education, which lasts for nine years for students between the ages of 6 and 15
- there are competitive academic entry requirements for students entering senior high school (15+)
- the school year spans from the beginning of April to the end of March, organised over three terms
- revision of the curricula of Kindergarten, elementary, junior and senior high schools and special schools takes place regularly (every ten years or so). The most recent revision was finalised in 1998 and was introduced gradually during the period 2000-2003
- the focus of this most recent curriculum revision - with a view to preparing students for the demands of the 21st century - is to foster creativity and a more flexible learning environment in which students can develop as individuals
- as part of the revision, curricular content has been reduced, and, in April 2002, the school week was reduced from six days to five (Monday to Friday). Ministers cited the reasons for this reduction as being 'to encourage students to become more involved in society and their communities and to help them develop social and family skills, as well as to foster independence'
- moral education is a subject in its own right and a theme which permeates all aspects of school life
- private schools may include religious education in their curriculum; publicly-funded schools may not
- there are no national assessment schemes; individual institutions arrange assessment which takes place at the end of lower secondary education (the record of which may influence entry to senior high school) and at the end of upper secondary education, when a Certificate of Upper Secondary Education is issued by each institution. This Certificate is just one of the requirements for entry to higher education
- textbooks are usually compiled by private publishing companies. A very few are compiled by the Ministry of Education, Culture, Sports, Science and

Technology (MEXT). All textbooks must be authorised by MEXT. They are provided free to students in compulsory education

Korea

- a centralised system although academic freedom, expertise and non-partisanship are guaranteed by law, and educational administration is slowly becoming more decentralised via regional education offices
- the State is required to promote lifelong education in pursuit of the intrinsic goal of educating Koreans 'as the prospective leaders for the 21st century'
- the school system is linear 6-3-3-4 (elementary, ages 6-12; middle, 12-15; high school, 15-18; and higher education, 18+). Entrance examinations to middle schools were abolished in 1969 and students are now allocated to schools near their residence by lottery
- compulsory education (age 6-15) is largely free, but fees are charged for high school education (age 15-18). Access to high school education is often governed by entrance tests. However, increasingly schools take a student's compulsory education record into account. Lottery allocation may also be used in over-subscribed schools
- the school year runs from March to the end of February, organised over two semesters
- a new national curriculum is introduced on a regular basis - the Sixth National Curriculum was introduced in 1995. The - current - Seventh National Curriculum has been phased in as its replacement since March 2000. Unlike those before it, the Seventh National Curriculum consists of two parts: the national compulsory curriculum for Year 1 to Year 10 (ages 6-16) and optional courses for Year 11 and Year 12 (students aged 16-18). The Seventh National Curriculum is also being organised according to different levels of difficulty rather than by Year/Grade, that is, in Years 1 to 10, the curriculum for Korean, English, mathematics, science and social studies is differentiated on the basis of a student's academic ability
- the Seventh National Curriculum has also reduced the amount of subject content students have to cover each year. This is in order to extend school discretionary time - that is, to encourage schools to adapt the curriculum to local needs and to encourage students' self-directed learning, independent studies and creative activities
- moral education is obligatory throughout compulsory education
- some private schools include religious education in their curriculum
- students in some year groups are assessed in some subjects every year by means of national Scholastic Achievement Tests
- students wishing to progress to higher education have to take the College Scholastic Achievement Test (at around age 18). Entry to higher education is usually governed by the results of this test, combined with high school records (and possibly interview)
- the Ministry produces and compiles some textbooks and authorises all others. It subsidises the Educational Broadcasting System and suggests the basic format for all its (TV and radio) programmes

Netherlands

- a unified education system, regulated by central laws, with decentralised administration and management of schools
- the constitutional freedom to establish private-sector schools which reflect a denominational or educational philosophy (e.g. Steiner, Montessori) co-exists with strong central educational policy (governing teachers' qualifications and conditions of service, funding and spending, school leaving examinations, inspection)
- public- and private-sector schools are financed wholly, and on an equal basis, from central government funds, subject to meeting the conditions set out in laws and regulations. Students aged 16 or over must pay annual tuition fees, but remission is available on a graduated scale according to parental income
- a deregulation policy, devolving budgets and responsibility to the competent authority of each school, with increasing local accountability, has been followed since the early 1980s
- schools must submit a school plan (including overview of the organisation, content of teaching, lesson timetable) for inspectorate approval
- full-time education is compulsory from the first day following a child's fifth birthday until the end of the school year in which he/she reaches the age of 16, or has completed 12 full years of schooling. From 16, students must receive at least part-time education until the age of 18. In reality, most children (98-99 per cent) attend school from the age of 4
- primary school children are grouped mainly by age (very few students do not progress annually), with the same teacher teaching them all subjects of the statutory minimum national curriculum (except perhaps specialised subjects like physical education). A set of core objectives determines the minimum content of primary education. The preferred approach is interdisciplinary
- from age 12, different types of secondary education [six-year general academic VWO; five-year general HAVO; four-year pre-vocational VMBO] cater for students of different abilities. Access is based on successful completion of primary education and, in some cases, (standardised) assessment of suitability
- all secondary schooling starts with three years of statutory national foundation curriculum (*basisvorming*) (students aged 12-15) covering 15 subjects. Computer skills are included in the core objectives for nearly every subject. Around 25 per cent of the time is not prescribed, allowing schools to emphasise their specific character
- *basisvorming* is under review
- there are no prescriptions of methodology, but national (minimum) attainment targets are defined for primary and lower secondary education (and revised every five years - 1993-1998; 1998-2003; 2003-2008) and there are prescribed syllabuses for final (upper secondary) examinations
- final examination marks are usually combined with teacher assessment to constitute students' final grades in each subject
- the qualification gained on completion of the second cycle of secondary education (upper secondary education) (the VMBO, HAVO or VWO at age 16, 17 or 18 respectively) determines the opportunities open to students on leaving secondary school
- religious education is usually provided in denominational schools only

- textbooks are produced commercially, selected by free choice and provided on loan to students by schools, although in upper secondary education students often contribute towards the costs of books and other learning materials

New Zealand

- the national Government determines education policy. Local government, which otherwise prospers, has no educational role
- attitudes and values, along with knowledge and skills to provide New Zealand with a highly skilled, adaptable and motivated workforce, are an integral part of the New Zealand curriculum. Values specified include: honesty, reliability, respect for others, respect for the law, tolerance, fairness, caring/compassion, non-sexism and non-racism
- considerable attention is paid to respecting the unique place of the Maori, their culture and language and to increasing their participation and success through the advancement of Maori education initiatives such as pre-school 'language nests; *kura kaupapa Maori* schools (where Maori is the principal language of instruction); and schools offering some Maori-medium education
- since the early 1980s, many private schools, particularly denominational schools, have integrated into the state system (special provisions allow them to retain their individual character), and receive a bulk grant from the State (less than that payable to public sector schools)
- educational aims are supported by statements of 'desirable outcomes' and a series of targets to measure progress. Monitoring and evaluation mechanisms are detailed
- in terms of curriculum content, schools are expected to provide a broad and balanced education, covering seven essential learning areas: language and languages; mathematics; science; technology; social science; the arts; and health and physical well-being
- curriculum statements in the seven essential learning areas (which have been developed separately for the English and Maori populations) define desirable levels of knowledge, understanding and skills to be attained; strands of learning are also defined, each with one or more achievement aims. Objectives are specified at eight levels of achievement and standardised assessment tasks are available for schools to assess their students' progress against national standards
- schools are required to provide curriculum balance at the same time as increased focus for the senior secondary years, age 15/16+
- a modular National Certificate of Educational Achievement (NCEA) has been introduced for senior secondary students within the new National Qualifications Framework (and gradually replaced the qualifications previously available at this level)
- national monitoring is undertaken on small samples of primary phase students (ages 8-9 and 12-13) and covers all curriculum areas over a four-year period
- religious education is usually offered in denominational schools only
- the quality of curriculum resource materials developed by an agency of the Ministry is distinctive. These materials are produced free for schools however, teachers have free choice of textbooks, which are not approved by the authorities, and are usually provided free of charge to students

Singapore

- education is centrally controlled (by the Ministry of Education)
- six years of primary education – for 6/7- to 12-year-olds – became compulsory in January 2003. Prior to 2003, 10 years of general education was universal, but not compulsory, for children from age 6/7-16
- children start school in the January of the year they become 7
- the school year runs from January to December, organised over four terms
- classes are streamed from the end of Primary Year 4 (age 10+) according to children's performance in a school-based examination in English, the mother tongue (Chinese, Malay or Tamil) and mathematics, and students may repeat Year 5 (the penultimate year) before taking the Primary School Leaving Examination (PSLE) in Year 6
- on the basis of their PSLE results, students are placed in secondary education in 'special' or 'express' streams (leading to the Singapore GCE O Level certificate in four years, age 16) or in 'normal' streams (which lead to the Singapore GCE 'N' level qualification in four years and enable some students to take the Singapore GCE 'O' Level in a fifth year, age 17)
- the five main areas of emphasis in the curriculum are: literacy, numeracy, bilingualism (English and the mother tongue, which is either Chinese, Malay or Tamil), physical education and civics and moral education (CME). The syllabus for each subject defines topics, skills, learning tasks and activities and learning outcomes; with suggested teaching strategies and assessment modes
- subject syllabuses reflect three specific Ministry of Education initiatives - thinking skills; information technology; and a national education programme - civics, social, family, community and country education
- religious education is usually only offered in schools supported by religious foundations
- there is an approved textbook list from which teachers select. Parents usually buy textbooks

Spain

- 17 *Autonomous Communities* (regions of the country) are responsible for education at the local level (regulated and coordinated by the Ministry at national level)
- following widespread consultation, major reform of all aspects of 6-18 education, (including raising the school leaving age to 16) was phased in between 1990 and 2000
- class sizes in all phases (pre-compulsory to post-compulsory upper secondary education) are limited by law
- compulsory education (age 6-16) comprises a primary phase (basic general education, age 6-12) and a secondary phase (age 12-16) which includes some vocational elements for all
- the official compulsory national curriculum is defined by the State, but only accounts for around two thirds of teaching time. There is regional autonomy to define the remainder of the curriculum according to local need, as well as to adapt the compulsory national curriculum
- primary children study Spanish language and literature, mathematics, the natural, social and cultural environment, artistic education, physical education, a foreign language and (optionally) religion. Foreign language learning is

compulsory from age 8 (the start of the second primary cycle). The regional language is also taught in some *Autonomous Communities*
- the official curriculum states minimum goals for students to attain during each level of education, defined as a series of abilities and broad curricular areas
- successful completion of compulsory lower secondary education (age 16) and the consequent receipt of the Certificate of Secondary Education is currently required for entry to (post-compulsory) *bachillerato* courses or intermediate level specific vocational training (16+)
- recent legislation proposes the statutory introduction of a modern foreign language at age 6, the start of compulsory education
- reforms before Parliament (2003) (which remain to be implemented) propose some changes to secondary education. In the first two years, 12- to 14-year-olds would follow a core curriculum, choosing, at age 14, whether to continue their studies following a vocational/professional route or a general/academic one
- on completion of upper secondary education, in addition to their *bachillerato* qualification, students must also pass a separate national university entrance examination to proceed to higher education. This national university entrance qualification is scheduled to be abolished from 2004 to be replaced by separate examinations set by individual universities
- under current reform plans, a standardised school leaving qualification would be introduced at age 18. This would be necessary for access to all forms of higher education
- the fundamental right to religious education is guaranteed by the State; schools must offer Catholic religion, but it is currently optional for students. However, from 2004-05, it is intended that all students in compulsory education will have to study religious education in some form
- families fund teaching material, textbooks, transport and school meals, but can receive financial assistance from the State. Books are selected by teachers, usually from a recommended list of authorised materials provided by the *Autonomous Community*. Current reforms propose an end to such textbook authorisation.

Sweden

- although the national education framework (curricula, national objectives, other guidelines for public sector schooling) is defined centrally by the Ministry of Education and Science, municipalities (at the local level) are largely free to decide how schools are run
- within reasonable economic and organisational restrictions, students have the right to choose the school or higher education institution they wish to attend, with the assurance that education provided within different types of school (and within different municipalities) has parity of esteem
- nine-year compulsory education is provided in a single school type catering for the full age range (7-16 years). (However, all 6-year-olds wishing to attend school are entitled to attend full- or part-time groups for at least 525 hours per year. Alternatively, entry may, exceptionally, be deferred until age 8)
- schools are free to determine internal organisation, teaching arrangements and class sizes, but must provide students with a minimum number of taught hours over the nine years of compulsory education. Curriculum content must also allow students to achieve nationally specified goals (in each subject area) by

Years 5 (age 12) and 9 (age 16). Individual teachers determine teaching methods and choose materials

- schools are free to set aside a proportion of teaching time for their own options
- English is the compulsory first foreign language. A second foreign language is also compulsory. Schools are free to decide when to introduce the mandatory first and second foreign languages. English is usually introduced at around age 9 or 10, although approximately one third of children begin studying English in Year 1, aged 7
- in upper secondary education, for 16- to 19-year-olds, 15 of the 17 programmes are vocational; the remaining two provide a foundation for university-level education. All upper secondary students follow a common foundation of eight core subjects for around one third of total study time; the remainder is organised by programme-specific subjects
- voluntary diagnostic tests in reading, writing and arithmetic are administered in public sector schools at the end of the Year 2, and on completion of Year 5 (age 12) and Year 7 (age 14) in Swedish, English and mathematics. There are also compulsory national tests in Swedish, English and mathematics on completion of Year 9, age 16 (the end of compulsory education). These tests are compulsory in both state and private schools
- achievement in upper secondary schooling is measured in terms of points/credits, based on minimum teaching time per course. Completion of this phase can therefore take more or less than the normal three years, according to individual students' needs and performance. The student record from upper secondary education influences access to higher education
- religious education is usually offered in schools which are funded to some extent by the private sector, usually a religious denomination
- textbooks are commercially produced, provided free of charge to students and selected by teachers (free choice)

Switzerland

- a highly decentralised system with no federal or national Ministry of Education. Each of the 26 *cantons* has its own education legislation and supreme power in its educational organisation, leading to 26 systems with notable regional differences
- there are some 'national' agreements. 25 of the *cantons* have, for example, signed an "Agreement on the Coordination of Education". This defines the age of entry to education across the 25 *cantons* as age 6, the duration of compulsory schooling as 9 years, provides an agreed definition of the length of the school year, and on the length of education prior to the upper secondary certificate (12/13 years) and the structure of primary education; the structure of lower secondary education differs markedly, but is usually streamed in some form
- towards the end of 2002, there was a key national agreement on a definition of national standards for mathematics, languages and sciences (project Harmos) (these standards remain to be implemented)
- four Regional Conferences (French-speaking Switzerland and the Ticino, north-west Switzerland, central Switzerland and eastern Switzerland), which have particularly close collaboration for linguistic, historical and geographical reasons, have created some coordination, drawing up common curricula, publishing material, jointly managing institutions and agreeing qualifications and admissions

- in all *cantons*, children have the right to receive at least one year (sometimes two) of publicly-funded pre-school education. Attendance is voluntary, but around 99 per cent of children receive some pre-school education in the year before they start compulsory school
- compulsory lower secondary education prepares around 30 per cent of students for academic studies at age 15/16+ and around 70 per cent for specialised vocational education or apprenticeship
- upper secondary schools enjoy considerable independence. The academic 'sixth form colleges' (*Gymnasia*) are selective and have a virtual monopoly over university entrance
- there are nationally recognised standards for the examinations for the general/academic upper secondary certificate (the *Maturität*) and for the DMS diploma (the vocational upper secondary qualification) taken on completion of upper secondary education, age 18/19)
- most *cantons* prescribe or approve textbooks for compulsory phase education and produce a list of recommended titles from which teachers select. These are provided free of charge during compulsory school

United States of America (USA)

- the Constitution does not mention education, which is historically the responsibility of individual States. State legislation establishes the regulations by which public sector schools operate and the criteria by which private schools are accredited; the day to day operation of schools is primarily a local matter. All States are, however, required to operate schools which meet federal (national) standards
- the United States Congress has enacted legislation - the Elementary and Secondary Education Act (ESEA) - which affects States, communities and schools. In January 2002, President Bush enacted 'No Child Left Behind' - a national education reform strategy
- education is compulsory in all 50 States of the USA and is generally divided into primary (kindergarten to Grade 2, ages 5+-8), intermediate (Grades 3-6, aged 8-12), junior high (Grades 7-9, 12- to 15-year-olds)) and senior high (Grades 10-12, aged 16-18 years). Education is normally compulsory from Grades 1 to 10 (aged around 6 to 16)
- most States have common guidelines for a core curriculum which generally includes the language arts, mathematics, social studies (which can include history, geography, literature, multiculturalism, ethics and values, religion, contemporary issues), science, health, music, art and physical education (PE)
- many States operate State assessment programmes (especially for diagnostic purposes) or participate in periodic large scale national assessments, such as the National Assessment of Educational Progress (NAEP) in reading, writing, science and mathematics
- No Child Left Behind will introduce statutory annual testing of students throughout the USA in Grades 3-8 (ages 8-14) in English (reading) and mathematics and, in some Grades, in science
- there are national tests during senior high school education (participation is voluntary). These are generally Scholastic Aptitude Tests (SATs), American College Testing (ACT) and Advanced Placement (AP) examinations, which all assess students' suitability for admission to higher education

- about half of the States recommend textbooks at the State level after some process of review against curriculum guidelines. These are usually commercially produced and, in most states are provided free of charge to most students

Wales

- overall responsibility for the administration of the education system in Wales, for implementing legislation and for formulating secondary legislation lies with the National Assembly for Wales (NAfW). Central government, that is, the UK Parliament in London, via the Department for Education and Skills (DfES) retains primary legislation-making powers for education. In reality, many responsibilities are delegated to local education authorities and school governing bodies
- there is a statutory National Curriculum and a linked national system of assessment. Private/independent schools may or may not choose to follow these
- compulsory phase education, students aged 5-16, is divided into four key stages. Primary education comprises Key Stages 1 and 2 (Key Stage 1, ages 5 to 7; Key Stage 2, ages 7 to 11). Compulsory lower secondary education includes Key Stage 3 (students aged 11 to 14) and Key Stage 4 (ages 14 to 16)
- primary school children are usually taught by a generalist class teacher; secondary students by specialist subject teachers
- although children must, by law, start compulsory education in the school term after they reach 5 years of age, many children start school at some point in the school year before they reach 5 (4+)
- the statutory curriculum generally includes English, mathematics, Welsh, science, technology (information technology and design and technology), history, geography, art, music and physical education (PE). A modern foreign language and careers education are also included at some levels
- personal and social education (PSE) became a compulsory subject for all key stages in September 2003. Work related education (WRE) will become compulsory in Key Stage 4 from September 2004
- there are fewer statutory subjects and an increasing range of vocational and alternative subject options and qualifications at Key Stage 4, students aged 14+. In addition, there are increased possibilities for schools to vary the curriculum for individual students during Key Stage 4 (ages 14 to 16)
- statutory assessment takes place on or around entry to compulsory education (children aged 4/5). There is also statutory teacher assessment at the end of Key Stages 1 and 2 (7- and 11-year-olds). The statutory tests at the end of Key Stage 1 become non-compulsory in the 2001-02 school year, and at the end of Key Stage 2 in the 2004-05 school year. New skills tests in literacy, numeracy and problem-solving look likely to be introduced in Year 5 (10-year-olds). National Curriculum testing at the end of Key Stage 3, age 14, will also be phased out. Teacher assessment will again remain compulsory
- assessment on completion of compulsory secondary education (age 16) usually involves the General Certificate of Secondary Education (GCSE). Although not compulsory, this qualification, taken in a range of general (academic) subjects, is usually required for access to further study

- teachers must provide at least one written report for each student in each academic year and, where students have taken part in statutory assessment, parents must be informed of their child's results
- religious education and collective worship must be provided by publicly-funded schools. Individual students can, however, opt out
- textbooks are commercially produced, not approved by the State and selected for classroom use by teachers. Schools provide textbooks

Appendix 1

Project Outcomes

The Archive

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Appendix 2

Principal agencies consulted

The project team acknowledges with gratitude the contributions of the following agencies.

Australia

Australian Council for Educational Research (ACER)
Australian National University Centre for UNESCO, Canberra
Commonwealth Department of Education, Science and Training (DEST)
Curriculum Corporation
Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA)
New South Wales: Department of Education
Queensland Board of Teacher Registration
Queensland: Department of Education (Education Queensland)
Queensland School Curriculum Council
Queensland Studies Authority
Queensland Teachers' Union
Tasmania: Department of Education
Tasmania Teachers' Registration Board
Tasmania: Woodbridge District High School
University of Canberra
University of Melbourne
Victoria: Board of Studies
Victoria: Department of Education and Training
Victorian Institute of Teaching

Canada

Alberta: Alberta Learning (Alberta Ministry of Education)
Alberta: University of Calgary
British Columbia: Ministry of Education
British Columbia College of Teachers
British Columbia Teacher Qualification Service
Council of Ministers of Education, Canada (CMEC)
Council on Alberta Teaching Standards (COATS)
Ontario: Ministry of Education
Saskatchewan: Saskatchewan Learning (Ministry of Education)

England

Department for Education and Skills (DfES)
EURYDICE Unit for England, Wales and Northern Ireland
National Foundation for Educational Research (NFER)
Office for Standards in Education (OFSTED)
Qualifications and Curriculum Authority (QCA)
Teacher Training Agency

France

EURYDICE Unit at the Ministry of Education
French Embassy, London
Ministry of Education

Germany

Bayern: Staatsinstitut für Schulpädagogik und Bildungsforschung
EURYDICE Informationsstelle der Länder im Sekretariat der Kultusministerkonferenz
Institut für die Pädagogik der Naturwissenschaften an der Universität Kiel (IPN)
Ministry of Education, Science, Research and Technology
Nordrhein-Westfalia: Landesinstitut für Schule und Weiterbildung

Hungary

EURYDICE Unit, Hungary (c/o Ministry of Education)
Hungarian Institute for Educational Research
Ministry of Education
National Institute of Public Education

Ireland

Department of Education and Science (DES)
EURYDICE Unit at the Department of Education and Science
National Council for Curriculum and Assessment (NCCA)

Italy

EURYDICE Unit at the Ministry of Education (Ministero della Pubblica Istruzione)
Ministry of Education
Universita degli Studi di Milano-Bicocca

Japan

Japanese Society for the Study on Teacher Education
Ministry of Education, Culture, Sports, Science and Technology (MEXT)
National Institute for Educational Policy Research (NIER)
Rissho University, Tokyo, Japan

Korea

Embassy of the Republic of Korea, London, UK
Ewha Women's University
Korean Educational Development Institute (KEDI)
Korea Institute of Curriculum and Evaluation (KICE)
Ministry of Education & Human Resources Development (MOEHRD)
Yeungnam University

The Netherlands

Central Office for Catholic Education (Algemeen Bureau Katholiek Onderwijs)
EURYDICE Unit (at the Ministry of Education, Culture and Science)
Inspectorate for Education
Ministry of Education, Culture and Science

National Institute for Curriculum Development (SLO)
National Institute for Educational Measurement (CITO)

New Zealand

New Zealand Council for Educational Research (NZCER)
New Zealand Ministry of Education
New Zealand Qualifications Authority (NZQA)

Singapore

British Council, Singapore
Ministry of Community Development and Sports
Ministry of Education
National Institute of Education
Shireland High School, Smethwick, England
Singapore High Commission, London
University of Cambridge Local Examinations Syndicate (UCLES), Cambridge, England

Spain

The Centre for Educational Research and Documentation (CIDE) (in the Ministry of Education, Culture and Sport [MECD])
EURYDICE Unit, Spain (in the MECD)
Ministry of Education, Culture and Sport (MECD)
Spanish Embassy, London (Education Office)
UNED (Open University), Madrid
University of Barcelona

Sweden

EURYDICE Unit at the Ministry of Education and Science
Ministry of Education and Science
National Agency for Education (Skolverket)

Switzerland

Swiss Conference of Cantonal Directors of (Publicly-Funded) Education
Swiss Coordination Centre for Research in Education (SKBF/CSRE)
Swiss Embassy, London
University of Berne
Zürich School of Education

USA - National agencies

American Association of School Administrators (AASA)
Association for Supervision and Curriculum Development (ASCD)
United States Department of Education

USA - State agencies

Kentucky: State Department of Education
Maryland: State Department of Education
Massachusetts: Department of Education
Massachusetts: Uxbridge Public Schools Department
Wisconsin: State of Wisconsin Department of Public Instruction

Wales

EURYDICE Unit for England, Wales and Northern Ireland
National Assembly for Wales (NAfW)
Qualifications, Curriculum and Assessment Authority for Wales (ACCAC)