National Audit Office

INTERNATIONAL EDUCATION COMPARISONS

A COMPENDIUM OF PUBLISHED INFORMATION ON EDUCATION PROVISION AND ACHIEVEMENT IN 10 COUNTRIES

AUGUST 2006

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CONTENTS

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PREFACE

In 2004-05, total government spending on education in the United Kingdom was £45 billion. Education spending is increasing and by 2007-08 it is planned to be £13.3 billion higher than in 2004-05.

The Committee for Public Accounts takes evidence on about four reports of the Comptroller and Auditor General a year on the education sector, covering a range of important issues. In recent years, reports have included: Improving poorly performing schools; Employers' perspectives on improving skills for employment; Extending access to learning through technology: Ufi and the learndirect service; Securing strategic leadership for the learning and skills sector in England; Improving school attendance in England; and Skills for life: improving adult literacy and numeracy. The National Audit Office is currently examining: Procurement in Further Education Colleges; Sure Start; and the Academies Programme.

For members of the Committee for Public Accounts, this report sets the context of the education sector and illustrates how it compares internationally. Caution is required when comparing education data from different countries because of limitations on data availability and comparability, and the impact of social systems beyond education on the measured educational indicators. Nevertheless, the information in this report provides valuable insights into the United Kingdom's position and trends in education relative to other countries.

EXECUTIVE SUMMARY

Introduction

1 In 2002, Members of the Committee of Public Accounts expressed an interest in comparative material on education in other countries. In 2003, the National Audit Office produced a compendium of published information on education provision and achievement in 10 countries, using data mainly from the year 2000. This report presents an update, mainly drawing on data for 2003. A copy has been placed in the library at the House of Commons.

2 The structure of the report is as follows:

- Part 1: Education systems and the learning environment.
- Part 2: Access to education.
- Part 3: Educational achievements and impacts.

3 In addition, two appendices set out more detail on compulsory education, typical graduation ages, length of school year and annual teaching hours (Appendix 1) and educational delivery systems (Appendix 2). Appendix 3 provides definitions of levels of education and types of educational institutions.

Data sources

4 The report is based on comparative data on education in the United Kingdom and nine other countries[1], selected as broadly comparable industrialised nations (specifically, the G7 countries plus three others frequently included in international comparisons). All the data has previously been published, principally as the most recent data sets from the Organisation for Economic Co-operation and Development (OECD).[2] Other sources of data are the Programme for International Student Assessment (PISA) (www.pisa.oecd.org), Trends in Mathematics and Science Study (TIMSS) (www.timss.bc.edu), the Progress in Reading Literacy Study (PIRLS) (www.timss.bc.edu), and the International Adult Literacy Survey 1994-1998.

5 Not all data sets are updated annually. Where data is not available for 2003 the most recent data has been used.

Comparability and completeness of the data

6 The OECD data used extensively in this report is collected by countries primarily for their own purposes and methods, so timing and definitions vary. We have annotated those comparisons that are likely to be particularly prone to problems; however, there is inevitably a margin of uncertainty within the data in all cases.

1 Australia, Canada, France, Germany, Italy, Japan, New Zealand, Sweden, United States.
2 Education at a Glance: OECD Indicators 2002, 2003, 2004 and 2005 editions.

7 Data is mainly presented for the United Kingdom. Where this data is not available, data for England has been used. International data is more complete on some issues of interest than others, so on some measures the United Kingdom is compared to an average (arithmetic mean) of data from fewer than all ten countries. For some issues, such as ethnicity, there is no data on an international basis.

8 The United Kingdom's position relative to other countries is dependent on the countries selected. For example, the United Kingdom's position relative to the average for comparator countries in this report may be significantly different to its position in other reports that consider the United Kingdom's position relative to averages for other groups of European countries or for the OECD group of countries.

Interpreting the data

9 Differences between countries, as measured by any particular indicator, reflect the way education systems are organised, and wider social and demographic factors. They do not necessarily indicate that education received by students is better or worse. Our analysis of the data has therefore been confined to setting out comparisons in tabular and graphical form to show relative positions at certain dates, together with brief textual explanations and highlighting of key differences. We do not examine the causes of differences between countries or draw conclusions on policy issues such as which type of educational system is best, because of the limitations on the data available and the impacts of wider factors on the measured indicators.

The position of the United Kingdom

Total expenditure on education

10 In 2002, the United Kingdom's public expenditure on education as measured by the percentage of Gross Domestic Product (GDP) was, at 5.2 per cent, just below average. The United Kingdom's expenditure on education is rising. In 2004-05, it was 5.4 per cent of GDP and the government expects that by 2007-08 it will have increased to 5.6 per cent of GDP.

Total public expenditure on education as a percentage of GDP, 2002

Nine-country average	5.4%
United Kingdom	5.2%

11 Private spending on education in the United Kingdom is just below average, and equates to an additional 0.9 per cent of GDP. The proportion of spending from private sources in the United Kingdom is growing faster than in most other comparator countries, except Australia and Canada.

Expenditure on education from private sources as a percentage of total expenditure on education, 2002

Nine-country average	16.2%
United Kingdom	15.6%

Early childhood and compulsory education

12 Seven of eight countries showed an increase in combined spend per student at the primary, secondary and post-secondary non-tertiary levels, with the United Kingdom's increase sitting below the country average.

Changes in combined spend per student at the primary, secondary and post-secondary non-tertiary levels between 1995 and 2002

Eight-country average increase in spend per student	14%
United Kingdom's increase in spend per student	12%

13 Four countries showed an increase in spend per student at the tertiary level, though in the United Kingdom there was no change.

Changes in spend per tertiary student between 1995 and 2002	
Four-country average increase in spend per student	17%
United Kingdom's increase in spend per student	No change
Two-country average decrease in spend per student	–11%

14 The United Kingdom spent more than the other countries per child at the pre-primary level[3], and is raising participation at the same time. Between 1998 and 2003 there was a 70 per cent increase in spending on pre-primary pupils in the United Kingdom. Over this period, the participation rate of 4-year-olds and younger in pre-primary education also increased from 51 to 77 per cent, just below the country average. The United Kingdom has the highest ratio of pre-primary pupils to teachers.

Pre-primary education	Expenditure per pupil, 2002 (in equivalent US Dollars)	Participation rate of 4 and under as a percentage of 3 to 4-year-olds, 2003	Ratio of pupils to teaching staff, 2003
Country average	5,467 (eight countries)	80% (nine countries)	15.6 (seven countries)
United Kingdom	8,452	77%	23.5

15 Spend per primary pupil in the United Kingdom is below average. Annual intended instruction time per pupil is above average. Above average instruction time with below average spending relates to the United Kingdom having the highest ratio of primary pupils to teaching staff.

Primary education	Spend per pupil, 2002 (in equivalent US Dollars)	Annual intended instruction time (hours per pupil age 9-11), 2003	Ratio of pupils to teaching staff, 2003
Country average	5,885 (nine countries)	833 (eight countries)	17.0 (nine countries)
United Kingdom	5,150	889 (England)[1]	20.0

1 Year of reference 2002

16 Spend per secondary student in the United Kingdom is the lowest of the comparator countries. The secondary student-teaching staff ratio is slightly above the comparator average and annual intended instruction time per student in England is average.

Secondary education	Spend per student, 2002 (in equivalent US Dollars)	Annual intended instruction time (hours per pupil age 12-14), 2003	Ratio of students to teaching staff, 2003
Country average	7,344 (nine countries)	869 (eight countries)	13.6 (nine countries)
United Kingdom	6,505[1]	870 (England)[2]	14.8

1 Includes post-secondary non-tertiary education.

2 Year of reference 2002.

Student performance

17 Despite the relatively lower expenditure on education per pupil at primary levels, England is among the comparator countries with the highest levels of performance by 10-year-olds in key subject areas. Performance from 2003 data for 14-year-olds in England and 15-year-olds in the United Kingdom is uncertain because of low survey response rates from schools[4], but shows some similarities with previous surveys.

Age and location	Student performance	Rank (number of comparator countries)	Year
10-year-olds in England	Mathematics	2nd (5)	2003
	Science	2nd (5)	2003
	Reading	2nd (8)	2001
14-year-olds in England	Mathematics	5th (7)	1995
		5th (7)	2003
	Science	5th (7)	1995
		2nd (7)	2003
15-year-olds in the United Kingdom	Mathematical literacy	5th (10)	2000
	Scientific literacy	2nd (10)	2000
	Reading literacy	4th (10)	2000

18 Gender differences in student performance are more pronounced in reading than science or mathematics. Results from studies on reading performance of 10-year-olds and 15-year-olds show females do better than males in all comparator countries. For 10-year-olds, England shows the second highest difference between the genders after New Zealand.

3 Child three years and older, and including private spending.

4 United Kingdom school response rates to two separate surveys, PISA and TIMSS, were low. For example, the United Kingdom did not meet the technical requirements for inclusion in the main results of the PISA 2003 survey, because more than a third of schools and nearly a quarter of students selected for the survey did not make returns.

Tertiary education

19 Expenditure per tertiary student in the United Kingdom is just below average. The United Kingdom has the second highest ratio of tertiary students to teaching staff.

Tertiary education	Expenditure[1] per student, 2002 (in equivalent US Dollars)	Ratio of students to teaching staff, 2003
Eight-country average	12,641	14.2
United Kingdom	11,822	18.2

1 Including research and development activities and financial aid to students.

20 The United Kingdom no longer has the highest graduation rate, though it is still well above average. The United Kingdom entry rate has moved to below average. The proportion of people who enter university and complete their degrees successfully remains higher than most other countries, with only Japan performing better.

	Entry rate, 2003	Percentage completing courses, 2000	Graduation rate[1], 2003
Country average	57% (nine countries)	66% (eight countries)	33% (eight countries)
United Kingdom	48%	83%	38%

1 The graduation rate is a function of the percentage of an age cohort entering university (entry rate) and the percentage of students in the same age cohort completing their course.

21 Tertiary education is rapidly becoming an international domain and the United Kingdom remains a popular destination for foreign students, though its market share has shown the largest decline among all comparator countries.

	Market share of foreign students, 2003	Change in market share between 1998 and 2003 (percentage points)
Nine-country average	9.8%	No change
United Kingdom	13.5%	–2.7%

Continuing education and training among the adult population

22 The United Kingdom has low levels of participation in the immediate post-16 years. The United Kingdom's participation rates in later life are higher than other countries, and it is second only to Australia in terms of lifelong participation.

Participation rates in education, 2003	Age 15 to 19	Age 20 to 29	Age 30 to 39	Age over 40
Nine-country average	80%	26%	9%	3%
United Kingdom	76%	26%	16%	8%

23 Immediately after compulsory education, the United Kingdom's participation rates for education fall behind the average for comparator countries. The United Kingdom also has the third highest percentage of 15 to 19-year-olds who are not in education and who are unemployed or not in the labour market.

24 For the 20 to 29 age group participation is at the eight country average. Among 30 to 39-year-olds and people over 40, the United Kingdom has the highest participation rates. In terms of lifelong participation, measured as "expected years in education" (a forward projection on the basis of today's enrolment rates at different stages of education), the United Kingdom ranks second. In the United Kingdom expected years in education average out to 20.4 years.

25 A large proportion of the population do not complete upper secondary education. The United Kingdom's position relative to other countries has deteriorated. Ranked by upper secondary educational attainment, the United Kingdom occupies the seventh position among 55 to 64-year-olds (i.e. people who completed school some 40-50 years ago) but only the ninth position among 25 to 34-year-olds who completed school some 10-20 years ago.

Population that has attained at least upper secondary education, 2003	All (age 25 to 64)	Age 55 to 64 (left school up to 50 years ago)	Age 25 to 34 (left school up to 20 years ago)
Ten-country average	74%	61%	81%
United Kingdom	65%	57%	71%

26 Though many countries have problems with poor adult literacy and numeracy, the United Kingdom has more severe problems than most. The United Kingdom had the highest proportion of people with literacy and numeracy skills at the lowest level among seven comparator countries (1994-98).

Population aged 16 to 65 at the lowest skill levels, 1994-98	Literacy	Numeracy
Seven-country average	17%	16%
United Kingdom	22%	22%

27 The United Kingdom shows an above average rate of participation of the labour force in non-formal job-related continuing education and training but, like most other countries, job-related education and training in the United Kingdom is least common among people who have not completed secondary education. Participation rates among people who have not completed upper secondary education are less than half of those with upper secondary education and around a quarter of those with tertiary education. The intensity of participation, in terms of hours per student, in non-formal job-related education and training is comparatively low.

Participation in some non-formal job-related education and training by employed people aged 25 to 64, 2003	Percentage	Average number of hours per participant in employment
Seven-country average	29%	54
United Kingdom	35%	27

Educational impacts

28 The labour market and financial incentives for completing higher education in the United Kingdom are higher than for most of the comparator countries.

	Unemployment rate for people who have completed tertiary education, 2003	Salary difference – tertiary vs. secondary, 2003
Nine-country average	4.0%	48%
United Kingdom	2.4%	62%

29 People who have not completed upper secondary education in the United Kingdom are less likely to be unemployed than in comparator countries but the financial consequence for not competing upper secondary education is greater than for most of the comparator countries.

	Unemployment rate for people who have not completed upper secondary education, 2003	Salary difference – lower secondary vs. upper secondary, 2003
Nine-country average	9.2%	–21%
United Kingdom	6.9%	–31%

30 Women continue to earn less on average than men, whatever their level of education. This disparity decreases with increasing educational attainment.

Female earnings relative to male earnings for people aged 30 to 44, 2003	
Nine-country average	65%
United Kingdom	56%

PART ONE
Education systems and the learning environment

1.1 This part provides information on the context in which educational systems operate and the financial resources which countries invest in education. It also provides information on the learning environment and the various ways in which school systems are organised in terms of teachers and teaching. A summary of each country's education delivery system is given at Appendix 2.

Context

Relative size of the school-age population

1.2 The size of the school-age population shapes the potential demand for initial education and training. **Figure 1 overleaf** illustrates the proportion of the population in the age band roughly corresponding to the typical ages of students in primary and secondary education. In 2002, the population of 5 to 19-year-olds varied from 15 to 22 per cent of the total population. In the United Kingdom it represented 19 per cent. Over the next decade, most countries expect a decline in their school-age populations. The United Kingdom's 5 to 14-year-old population is expected to decrease by 11 per cent.[5]

Decision making in lower secondary education

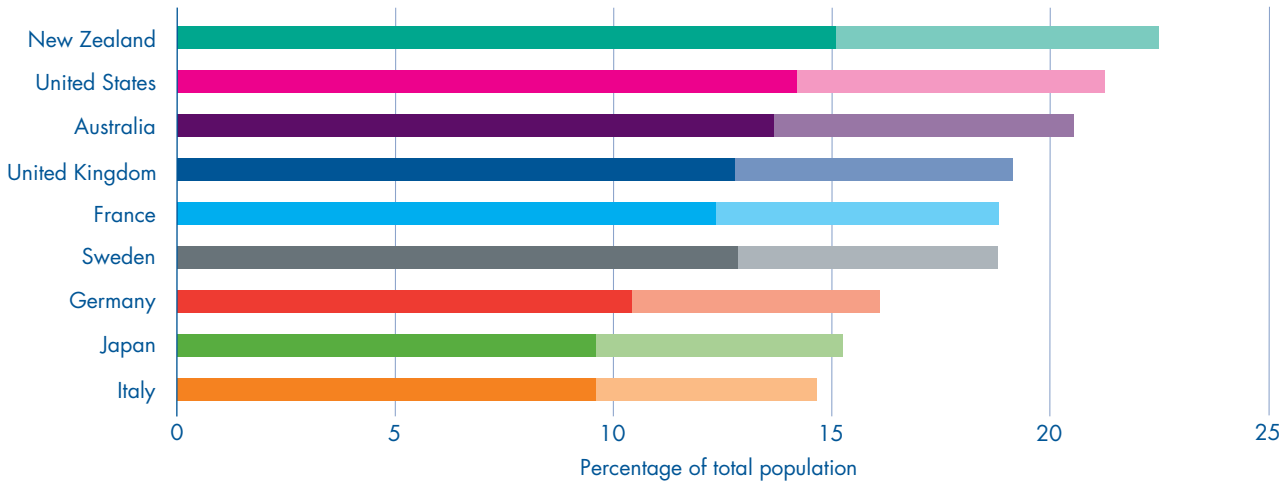
1.3 Placing more decision making responsibility at the lower levels of the education system has been a major element of educational restructuring in many countries over the past two decades. More autonomy for schools is considered to increase efficiency and benefit the local community. **Figure 2 overleaf** shows the percentage of decision making in public sector lower secondary education at three levels: central and state; provincial, regional and local; and schools.

1.4 In England, 85 per cent of decision making took place at the lowest level of the education system: the schools. The state oversaw 11 per cent of decisions, and regional authorities made up the remainder. This was the highest reliance on de-centralised decision making out of the eight comparator countries, with New Zealand having the second highest reliance on decision making at school level, at 75 per cent.

5 Government Actuary's Department, 2003 based principle projections.

1 Relative size of the youth population (2002)

Size of the population aged 5 to 19 as a percentage of the total population.

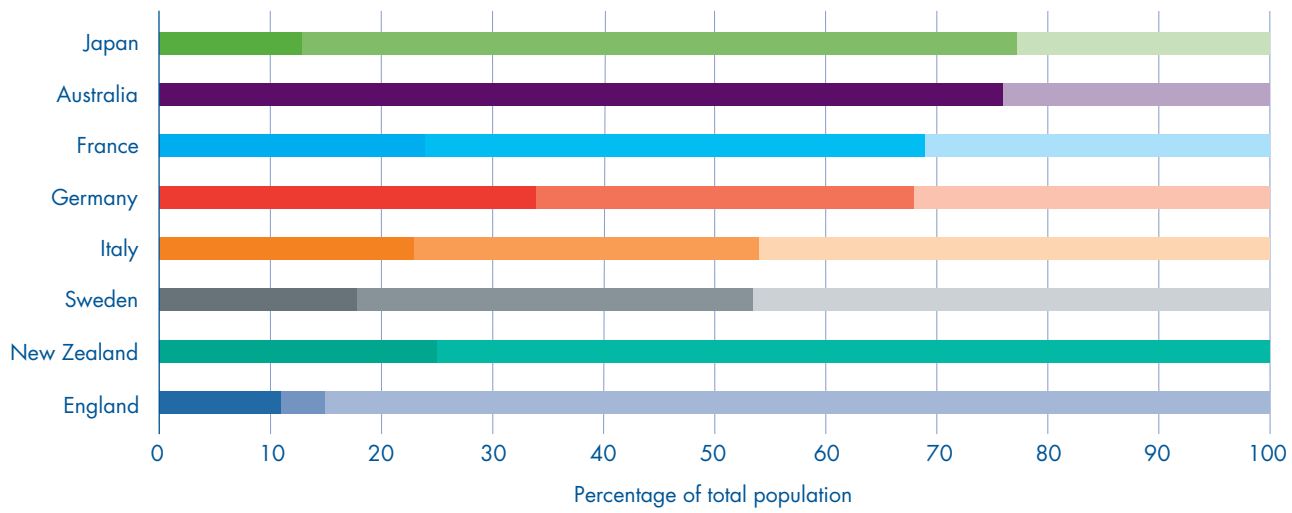


The dark bars represent ages 5 to 14. The light bars represent ages 15 to 19.

Source: OECD education online database

2 Decision making in education systems (2003)

Percentage of decisions relating to public sector lower secondary education taken at each level of government.



The dark bars represent central and state. The middle bars represent provincial, regional and local. The lightest bars represent school.

Source: Table D6.1, Education at a Glance: OECD Indicators 2004, OECD

NOTE

For Australia and New Zealand no decisions are made at the provincial, regional and local level.

Financial resources invested in education

1.5 The proportion of total financial resources devoted to education is one of the key choices made in each country: it is an aggregate choice made by governments, enterprises and individual students and their families. Investment in education can help to foster economic growth, enhance productivity, contribute to personal and social development, and reduce social inequality.

1.6 Education below the tertiary level is dominated by spending on salaries. Other services, particularly those related to research and development, can account for a substantial proportion of tertiary education spending.

Education expenditure as a proportion of Gross Domestic Product

1.7 A widely used means of comparison is expenditure as a proportion of Gross Domestic Product (GDP). **Figure 3 overleaf** shows that public expenditure on education as a proportion of GDP, in 2002, varied from 3.6 to 7.6 per cent, with a ten-country average of 5.4 per cent. Total public education spending in the United Kingdom in 2002 was 5.2 per cent of GDP. This was an increase from the 1999 level of 4.7 per cent but the same as the 1995 level. In 2004-05, the United Kingdom's public expenditure on education as a proportion of GDP was 5.4 cent, and by 2007-08 the government expects total spending on education to increase to 5.6 per cent of GDP.

1.8 Cost sharing between participants in the education system and society as a whole is an issue under discussion in many countries. In 2002, private expenditure varied from 3.3 per cent of total education expenditure on educational institutions in Sweden to 26.2 per cent in the United States, with a nine-country average of 16.2 per cent **(Figure 4 overleaf)**. In the United Kingdom, private sources accounted for 15.6 per cent, up from 12.7 per cent in 1995. In most countries, private sector expenditure comprises mainly of household expenditure on tuition and other fees in tertiary education, while in Germany nearly all private expenditure is accounted for by contributions from the business sector to the dual system of apprenticeship at the upper secondary level and post-secondary non-tertiary levels (Appendix 2).

Educational expenditure per student

1.9 The relative proportions of expenditure in 2002 at each level of education are illustrated in **Figure 5 on page 11**. The proportion of expenditure spent at each level does not necessarily correspond with the proportion of students studying at each level. For example: in the United States, 29 per cent of all expenditure on educational institutions was allocated to secondary education while 35 per cent of students were enrolled at that level. In the United Kingdom, 49 per cent of expenditure was allocated to secondary education with 51 per cent of students enrolled at this level, while 19 per cent of expenditure was allocated to tertiary education (including research and development) with 11 per cent of students enrolled at this level.

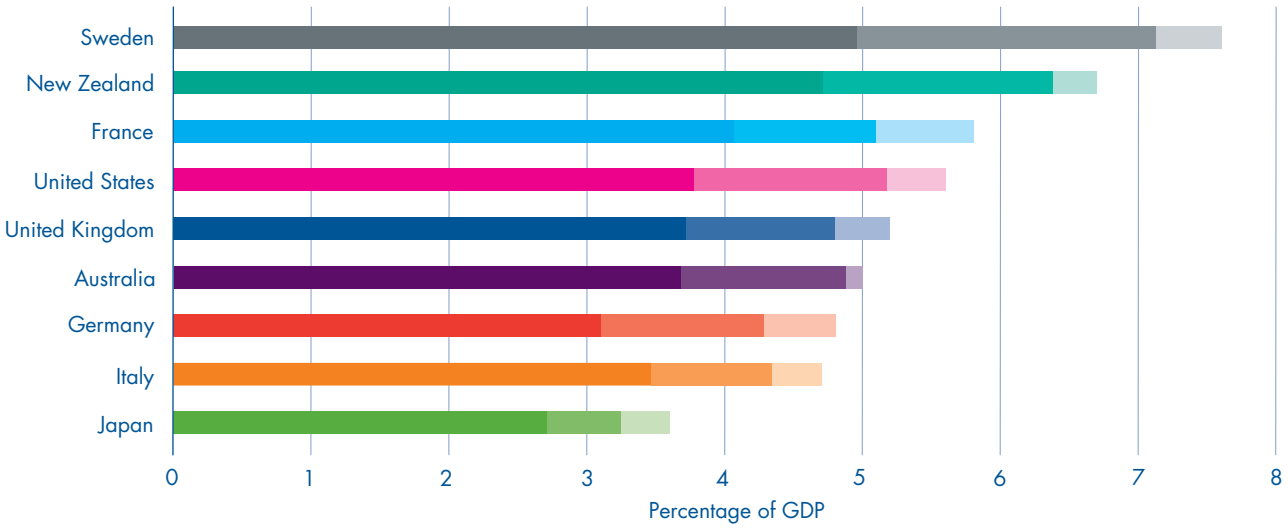
1.10 Educational expenditure per student is an alternative way of measuring resources devoted to education. International comparisons are based on conversions using purchasing power parity (PPP) exchange rates, which are the amounts of national currencies that will buy the same basket of goods and services in a given country as that bought by the US Dollar in the United States. Variations in expenditure per student may reflect, for example, differing ratios of students to teaching staff (Figure 10) and differences in relative salary levels (Figure 13).

1.11 **Figure 6 on page 11** shows that, in 2002, the United Kingdom had the highest expenditure per child at pre-primary level and the third lowest expenditure per pupil at primary level. In 2002-03, the government spent £3.6 billion investing in pre-primary childcare provision. And since 1998 it has spent some £14 billion investing in early years' services, primarily through local authority funding for early years' education and initiatives to improve the availability of childcare. In addition, parents pay a further £3 billion annually towards childcare costs.[6]

6 *Early years: Progress in developing high quality childcare and early education accessible to all*, HC 268, 2003-04.

3 Total public expenditure on education as a percentage of GDP (2002)

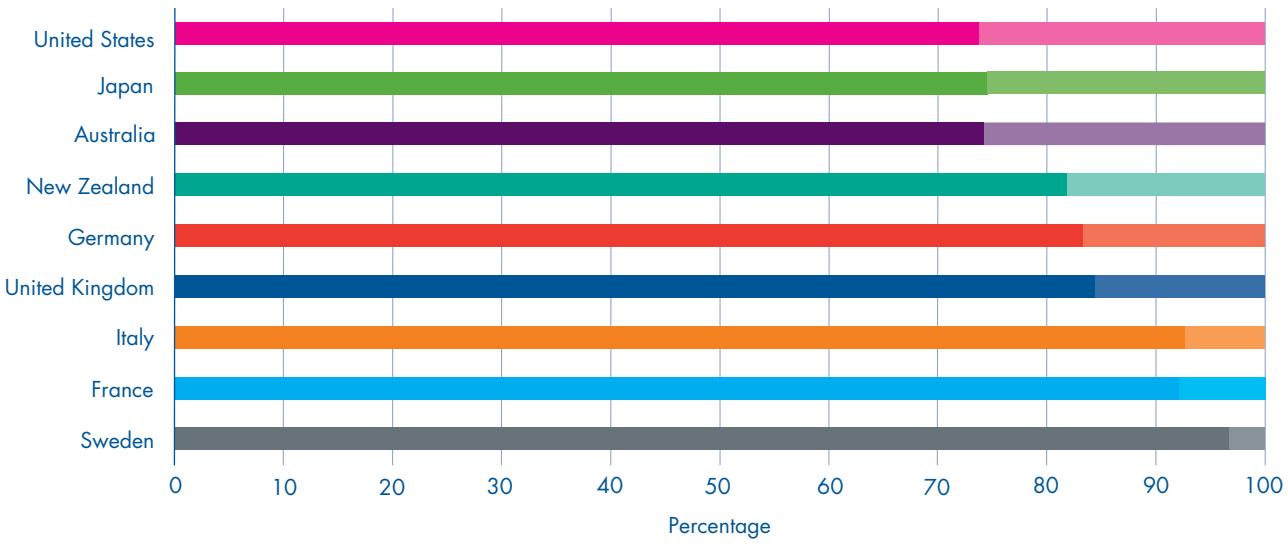
Direct public expenditure on educational institutions plus public subsidies to the private sector as a percentage of GDP, by level of education.



The dark bars represent primary and secondary education. The middle bars represent tertiary. The lightest bars represent early childhood and miscellaneous.

Source: Table B4.1, Education at a Glance: OECD Indicators 2005, OECD

4 Public and private expenditure on educational institutions (2002)



The dark bars represent public expenditure. The light bars represent private expenditure.

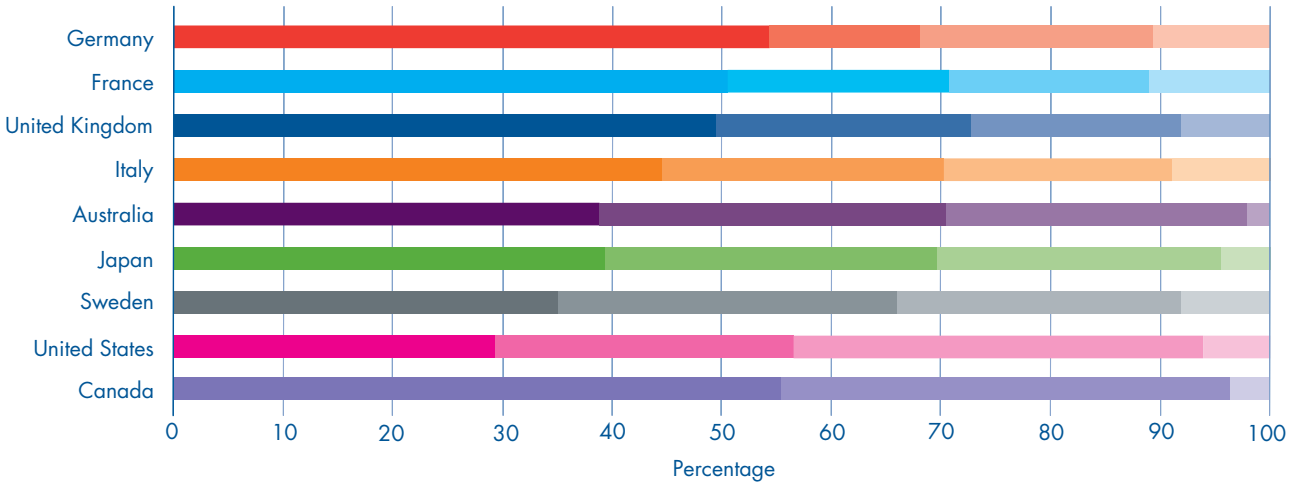
Source: Table B3.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Private spending includes all direct expenditure on educational institutions, whether subsidised or not.

5 Distribution of expenditure on educational institutions (2002)

Distribution of educational expenditure across levels of education.



The darkest bars represent secondary education. The second darkest bars represent primary education. The lighter bars represent tertiary education. The lightest bars represent pre-primary education.

Source: Table B1.5, Education at a Glance: OECD Indicators 2005, OECD

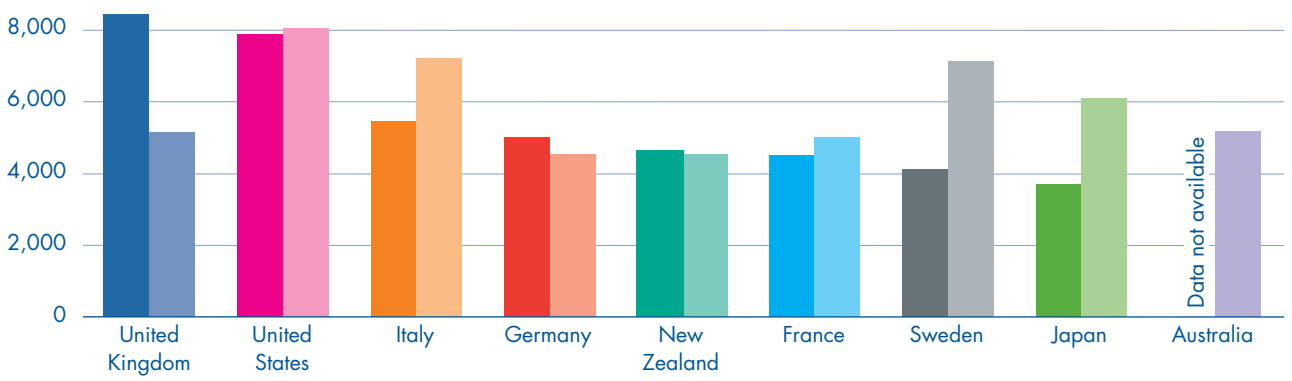
NOTE

Countries are ranked in descending order of percentage of educational expenditure spent on secondary education. Figures for Italy are for public institutions only. Year of reference for Canada is 2001. Primary level data for Canada is included with secondary level data. For Australia, Germany and Italy, expenditure at post-secondary non-tertiary level is not included. For United Kingdom, Canada, Sweden and United States post-secondary non-tertiary expenditure data is split between secondary and tertiary levels.

6 Expenditure per pupil at pre-primary and primary levels (2002)

Annual expenditure per pupil in equivalent US dollars, converted using purchasing power parity exchange rates (PPP), on public and private institutions by the level of education, based on full time equivalents.

Expenditure (in equivalent US dollars converted using PPPs)



The dark bars represent pre-primary education. The light bars represent primary education.

Source: Table B1.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Figures for Italy do not include private institutions. Purchasing power parity (PPP) is the amount of national currencies that will buy the same basket of goods and services in a given country as that bought by the US dollar in the United States.

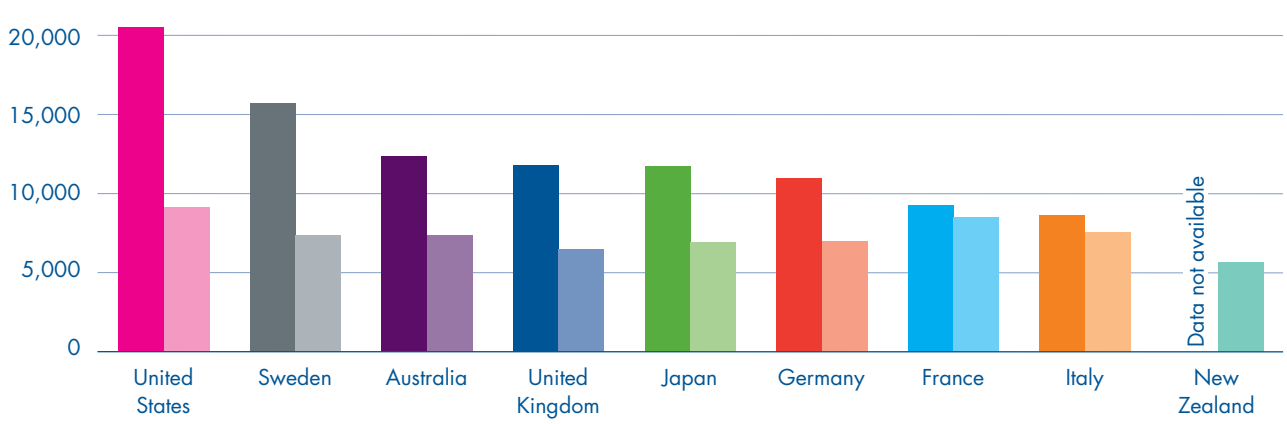
1.12 The United Kingdom had the lowest expenditure per student at secondary level and at the tertiary level was ranked fourth, lower than the eight country average **(Figure 7)**. All countries spend less per student at primary level than secondary level, with an eight country average of 20 per cent less. The difference varied from 3 per cent less in Sweden to 41 per cent less in France, with the United Kingdom at 21 per cent less. All countries spend more per student at tertiary level (including research and development activities and financial aid to students) than secondary level, with an eight-country average difference of 67 per cent. The difference ranged from 9 per cent more in France to 125 per cent more in the United States, with the United Kingdom spending 82 per cent more per student.

1.13 **Figure 8** shows the changes in expenditure per student by level of education between 1995 and 2002. Apart from Sweden, all comparator countries showed an increase in expenditure per student at the primary, secondary and post-secondary non-tertiary levels of education, ranging from 4 per cent in Germany to 32 per cent in Australia, with an eight-country average of 14 per cent. In the United Kingdom, the increase was 12 per cent. There are differing reasons for these changes: in Japan a sharp decrease in enrolments with a small increase in spending resulted in a large increase in spending per student. France and Italy saw large increases in spending with small reductions in enrolments. In Sweden the fall in expenditure per student resulted from rising student enrolments outpacing an increase in education expenditure. In the United Kingdom, the change was due to increases in expenditure outpacing rising enrolments.

1.14 Between 1995 and 2002, expenditure per student at tertiary level increased in most countries, with increases ranging from 10 per cent in Germany to 21 per cent in Italy. However, a rapid increase in the number of tertiary students over this period in Australia and Sweden resulted in expenditure per student decreasing by 7 and 14 per cent respectively in these countries. France was the only country to show a decline in the number of tertiary students between 1995 and 2002. For the United Kingdom, there was no change in expenditure per student at tertiary level, since the increase in expenditure per student was offset by an equal increase in the number of tertiary students.

7 Expenditure per student at secondary and tertiary levels (2002)

Annual expenditure per student in equivalent US dollars, converted using purchasing power parity exchange rates (PPP), on public and private institutions by the level of education, based on full time equivalents.



The dark bars represent tertiary education. The light bars represent secondary education.

Source: Table B1.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Tertiary education includes research and development activities and financial aid to students. Figures for Italy do not include private institutions. Secondary education expenditure per student for the United Kingdom includes post-secondary non-tertiary education.

Education expenditure on subsidies

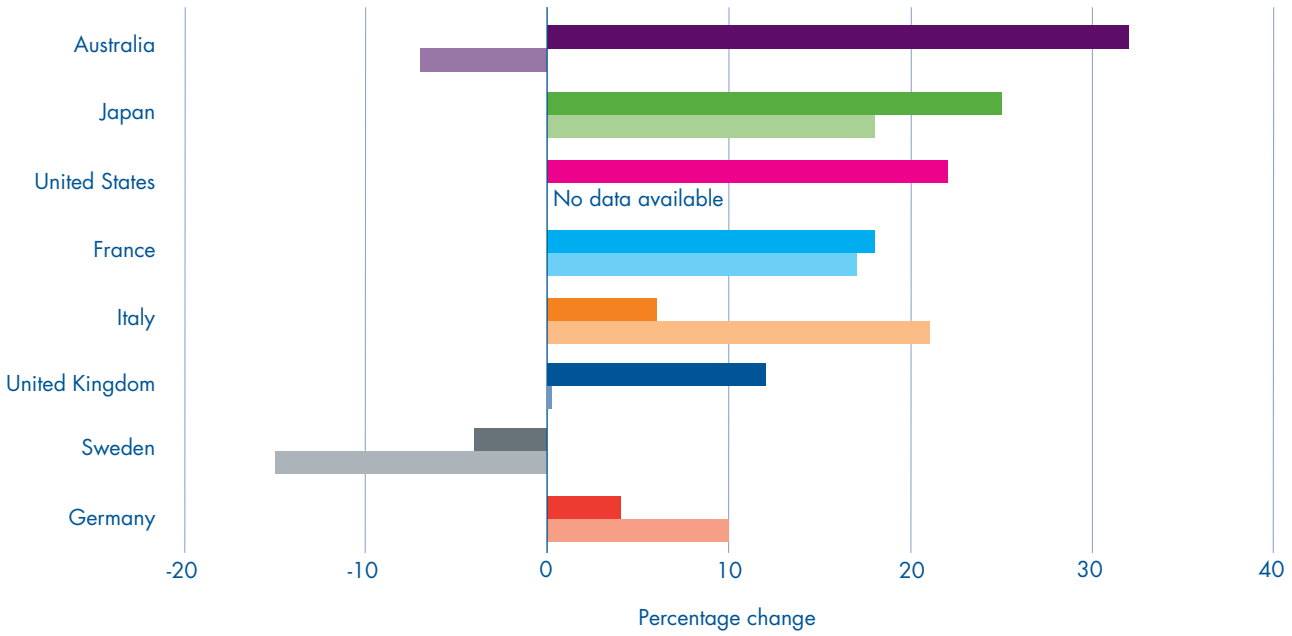
1.15 Through subsidies to students and their families, governments can encourage participation in education, particularly among students from low-income families, by covering part of the cost of education and related expenses. Public subsidies come in many forms: as means-based subsidies, family allowances for all students, tax allowances for students or their parents, or other household transfers.

1.16 **Figure 9 overleaf** shows that the percentage of public educational expenditure spent on providing scholarships and grants to students, households and other private entities at the tertiary level, in 2002, varied from 1.1 per cent in the Japan to 15.8 per cent in Italy. Following transition from grants to loans as the main financial support, in 2002 the United Kingdom spent 22.4 per cent of its public tertiary expenditure on student loans.

1.17 The largest subsidies in the form of student loans are often available in countries with high entry rates into tertiary education – for example Australia, New Zealand and Sweden. However, this is not the case with the United Kingdom, which has one of the largest subsidies in the form of student loans but has tertiary (type A) entry rates below the OECD average (paragraph 2.13).

8 Changes in expenditure per student by level of education (1995 and 2002)

Percentage change in expenditure on educational institutions per student between 1995 and 2002, by level of education.



The dark bars represent primary, secondary and post-secondary non-tertiary education. The light bars represent tertiary education.

Source: Table B1.4, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Figures for Italy, United States and New Zealand include public expenditure only. Italy includes public institutions only. Data for post-secondary non-tertiary education for Japan are included in both upper secondary and tertiary. For the United Kingdom there was no change in expenditure on tertiary education between 1995 and 2002.

The learning environment

Ratio of students to teaching staff

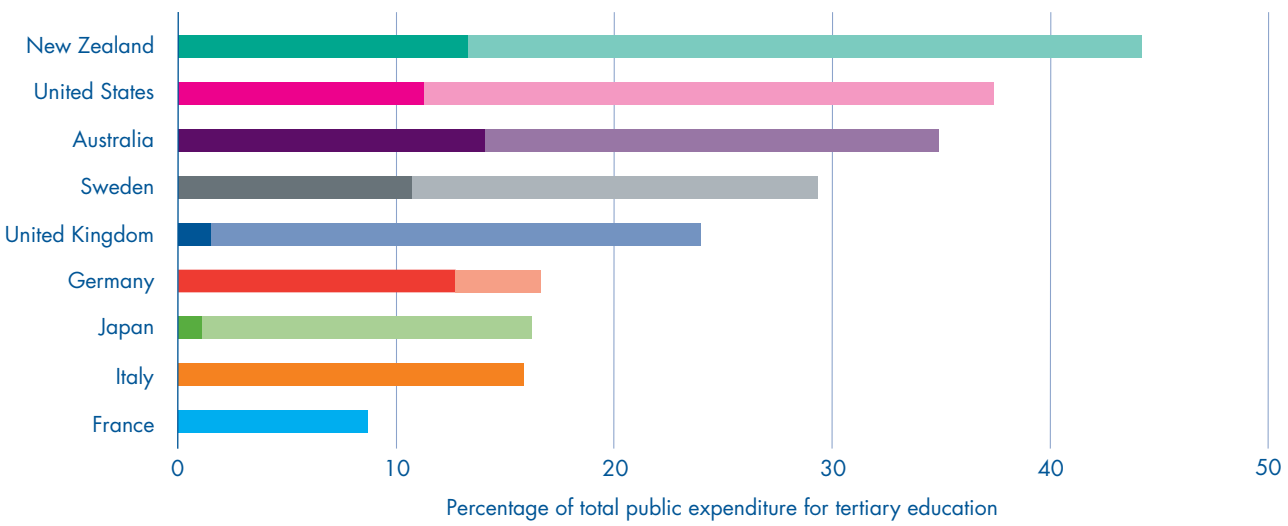
1.18 The ratio of students to teaching staff[7] is an indicator of the resources that countries devote to education. It is often used as a proxy for quality, on the assumption that a smaller ratio of students to teaching staff translates as better access by students to teaching resources.

1.19 **Figure 10 opposite and Figure 11 on page 16** show that, in 2002, the United Kingdom had one of the three highest ratios of students to teachers for primary level education (20), the highest ratio for pre-primary level education (23.5), was above average for secondary level education (14.8) and had the second highest ratio for tertiary level education (18.2). Most countries, including the United Kingdom, have a higher ratio of students to teachers in primary than secondary education.

1.20 Data on average class size is incomplete, but generally mirrors the ratio of students to teachers. In 2003, average class sizes for primary and lower secondary education[8] in the United Kingdom were 26.0 and 24.2 respectively. This compared to six-country averages of 23.3 and 25.0 respectively. The number of students per class tends to increase between primary and secondary levels, but in the United Kingdom there was a decrease. The Government introduced legislation in 2001 to limit the size of classes for five, six and seven-year-olds to 30.

9 Financial aid to students at tertiary level (2002)

Public subsidies for households and other private entities as a percentage of total public expenditure on tertiary education.



The dark bars represent scholarships/other grants to households. The light bars represent student loans.

Source: Table B5.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Expenditure on student loans is reported on a gross basis, that is, without subtracting or netting out repayments or interest payments from the borrowers (students or households). Data for United States is for 2001 and include post-secondary non-tertiary education.

7 Teaching staff refers to professional personnel directly involved in teaching students and does not include teachers' aides and teaching research assistants.
8 Secondary education comprises lower and upper secondary education. This division does not match the examination structure in the United Kingdom. For the purposes on international comparison, lower secondary education in the United Kingdom covers secondary school up to the age of 14 years (Appendix 3 provides more detail).

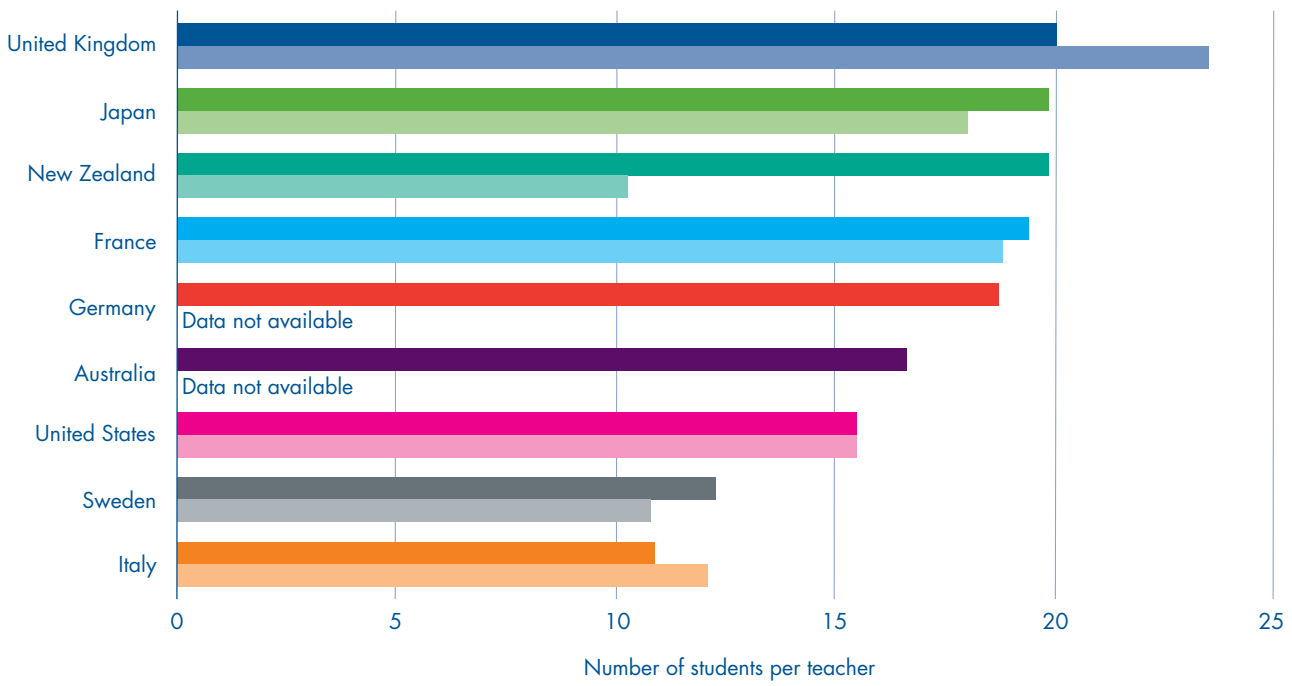
Intended instruction time in primary and secondary education

1.21 Intended instruction time is a measure of the length of time during which learning resources are made available to students and indicates how much contact time is regarded as sufficient in order to achieve the educational goals that have been set by each country. It is an estimate of the number of hours during which students are to be taught the compulsory and non-compulsory aspects of the curriculum, in a formal setting. Compulsory parts of the curriculum are basic skills such as numeracy and literacy, reading, writing, maths and science.

1.22 **Figure 12 on page 17** shows that, in 2003, the total intended instruction hours between ages 7 and 14 varied from around 6,000 hours in Japan to over 8,000 hours in Italy, with a nine-country average of 7,200 hours. For England and Scotland the number of hours was 7,300 and 8,000 respectively. Caution is required when data on intended instruction time is compared because of differences in curriculum policy and length of compulsory education. In addition, intended instruction time varies across regions, and between different types of school and different local education authorities in many countries.

10 Ratio of students to teachers at primary and pre-primary levels (2003)

Ratio for public and private institutions, by level of education, based on full time equivalents.



The dark bars represent primary education. The light bars represent pre-primary education.

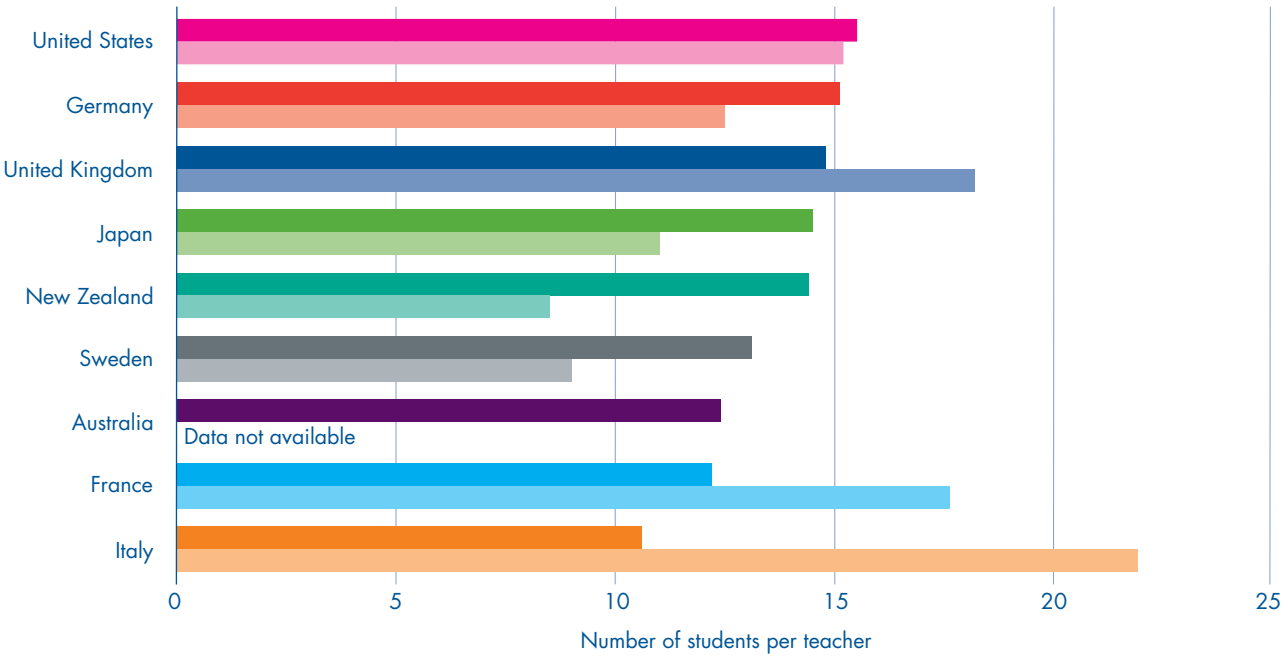
Source: Table D2.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Countries are ranked in descending order of the ratio of students to teachers at primary level. Pre-primary data for Australia and Germany were not available.

11 Ratio of students to teachers at secondary and tertiary levels (2003)

Ratio for public and private institutions, by level of education, based on full time equivalents.



The dark bars represent secondary education. The light bars represent tertiary education.

Source: Table D2.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Countries are ranked in descending order of the ratio of students to teachers at secondary level. Figures for Australia and United Kingdom represent only general programmes at lower and upper secondary education. Tertiary data are for tertiary-type A, research and tertiary-type B education.

Teachers

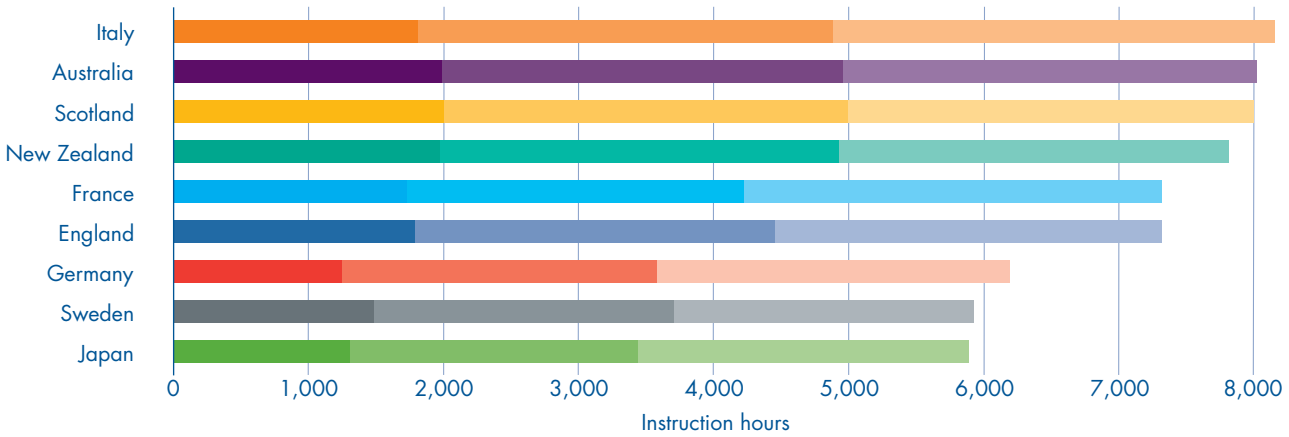
1.23 Ensuring that there will be enough skilled teachers is an important policy concern for all OECD countries. Key determinants of the supply of qualified teachers are their salaries and working conditions, including starting salaries and pay scales, and the costs of becoming a teacher as compared with salaries and costs in other occupations.[9] Teachers' salaries are the largest single cost in providing education.

1.24 **Figure 13** shows the variation in initial salaries and salary scales for upper secondary teachers in 2003. England had starting salaries of around $28,500 (US$ equivalent) and salaries of around $42,000 for teachers with 15 years experience. Scotland had a lower starting salary of around $27,000 and a higher salary of around $43,500 for teachers with 15 years' experience. Average starting salaries for the ten comparator countries were around $28,000 and average salaries after 15 years' of experience were around $40,000. Factors such as teaching time and teachers' workload vary considerably between countries, and therefore need to be taken into account when salaries for teachers are compared.

9 Education at a Glance, OECD Indicators 2005, OECD.

12 Intended instruction hours in public institutions between the ages 7 and 14 (2003)

Total number of compulsory and non-compulsory instruction hours in the curriculum for 7 to 14-year-olds.



The dark bars represent instruction hours between ages 7 to 8. The middle bars represent hours between ages 9 to 11. The lightest bars represent hours between age 12 to 14.

Source: Table D1.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For England, the year of reference is 2002.

13 Teachers' salaries in upper secondary general education (2003)

Annual statutory teachers' salaries in public institutions in upper secondary education, in equivalent US dollars converted using purchasing power parity exchange rates.

The bars represent a range of salary. The circles represents the average salary after 15 years.

Source: Table D3.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Purchasing power parity is the amount of national currency that will buy the same basket of goods and services in a given country as that bought by the US dollar in the United States.

1.25 In addition, several countries run bonus schemes that relate to taking on extra responsibilities or outstanding performance. For example, England and Wales have a main six-point salary scale (usually one point per year of satisfactory experience gained), and an additional five-point upper salary scale based on performance. New teachers normally start at the bottom of the scale, but schools have discretion to start them higher up to recognise other relevant experience outside of teaching in the state sector. Teachers in and around London receive an allowance. Alternative career routes might be to become an Advanced Skills Teacher (classroom teachers who support other teachers) or to join the leadership group (head teachers, deputy heads etc). In a 2003 pay survey, 51 per cent of teachers in England received extra payments for additional responsibilities.[10]

1.26 Between 1996 and 2003, all six comparator countries where data was available showed an increase in teacher salaries including starting salary, salary after 15 years and salary at the top of the scale. In England, the percentage increases for salary after 15 years and salary at the top of the scale (both 6 per cent) were below the country averages (10 and 8 per cent respectively), and the percentage increase for starting salary (22 per cent) was above the country average (14 per cent). In Scotland, all the salary increases were below the six-country averages.

1.27 Teacher demographics have a substantial impact both on the renewal of the teaching force and on the financing of education. Many OECD countries face the challenge of an ageing workforce. The majority of primary and secondary teachers are aged 40 or over **(Figure 14)**. In Sweden, 50 per cent of teachers in upper secondary education are aged 50 or over. In the United Kingdom, 29 per cent of primary and secondary school teachers are aged 50 or over. Of the eight comparator countries displayed in Figure 14, the United Kingdom has the highest percentage of teachers under 30 at both primary and upper secondary levels (22 and 18 per cent respectively).

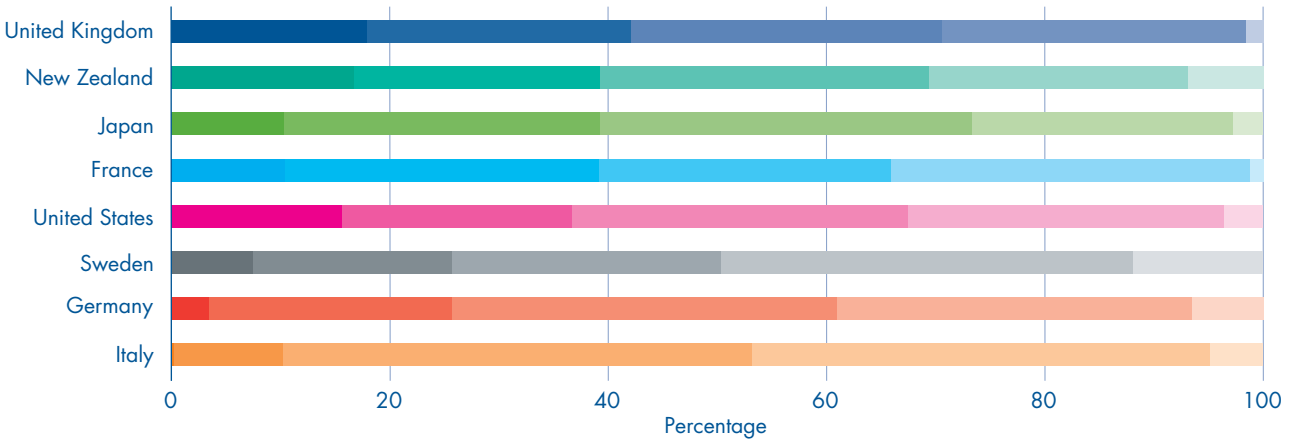
1.28 The government has introduced a wide range of recruitment measures including £6,000 training bursaries for eligible students and 'golden hellos' for newly qualified teachers in priority subject areas (maths, science, modern languages, technology and English). In September 2002, the government introduced a scheme to repay student loans for teachers of shortage subjects. In January 2005, there were almost 432,000 full-time equivalent teachers employed in maintained schools in England, representing an increase of 32,000 since 1997. Over this period the number of full-time teacher vacancies as a percentage of teachers in post in England has increased from 0.6 per cent (2,020 vacancies) to 0.7 per cent (2,480 vacancies).[11] The number of support staff has increased, from 136,000 in 1997 to over 268,000 in 2005.

1.29 In all OECD countries, primary teachers are predominantly women. There are also more female secondary teachers than male in most OECD countries. The position is reversed in tertiary education. **Figure 15** shows the predominance of women in primary education. The United Kingdom is just below the eight-country average of 82.6 per cent of female primary level teachers, at 81.4 per cent.

10 School Teacher's Review Body Teachers' Pay Survey, 2004.
11 *Schools Workforce in England first release*, January 2005 (revised), National Statistics and Department for Education and Skills, 2005.

14 Age distribution of teachers at upper secondary level (2003)

Percentage of upper secondary teachers in public and private institutions, by age groups.



The darkest bar represents under 30 years. The darker bar represents 30 to 39 years. The light bar represents 40 to 49 years. The lighter bar represents 50 to 59 years. The lightest bar represents over 60 years.

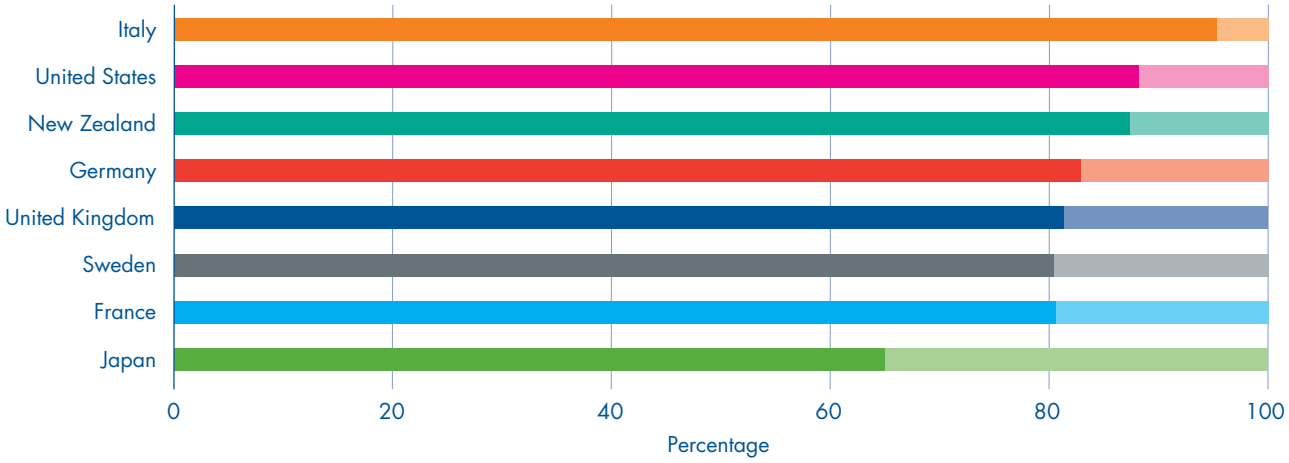
Source: Table D7.1(web only), Education at a Glance: OECD Indicators 2005, OECD

NOTE

Countries are ranked in decending order of the percentage of teachers aged 40 and under.

15 Gender distribution of teachers in primary education (2003)

Percentage of male and female teaching staff in public and private institutions based on head counts.



The dark bars represent female teachers. The light bars represent male teachers.

Source: Table D7.2, Education at a Glance: OECD Indicators 2005, OECD

PART TWO
Access to education

2.1 A well educated population has become a defining characteristic of modern society. This part of our report provides information on expected years in education and participation rates, which are an important indicator of access to opportunities in education.

Average years in education

2.2 One way of looking at participation in education is to estimate the number of years of full-time and part-time education in which a five-year-old child can expect to enrol over his or her lifetime, given current enrolment rates. The estimate can be made by adding the net enrolment rates for each single year of age from five onwards. Net enrolment rates are calculated by dividing the number of students of a particular age group enrolled in all levels of education by the number of people in the population in that age group. Caution is required when data on average years in education is compared, for example because the length of the school year differs between countries. Also, the measure of average years in education is based on head counts and does not distinguish between full-time and part-time participation, so countries with larger proportions of part-time enrolments can have high values for average years in education relative to the actual amount of education undertaken.

2.3 **Figure 16** shows that in 2003, the expected years in education varied between 16.8 and 21.1 years. People in the United Kingdom spent an average of 20.4 years in education. Most of the variation between countries comes from differences in participation rates in upper secondary education, which includes adults in work-based training at levels equivalent to secondary education. Between 1995 and 2003, expected years in education in the United Kingdom increased by 19 per cent, compared to a five-country average of 16 per cent. In Australia, Sweden and the United Kingdom, participation in part-time education accounts for three or more years of expected years in education. The United Kingdom, at 14.9 years, is one of three countries with the lowest expected years in full-time education.

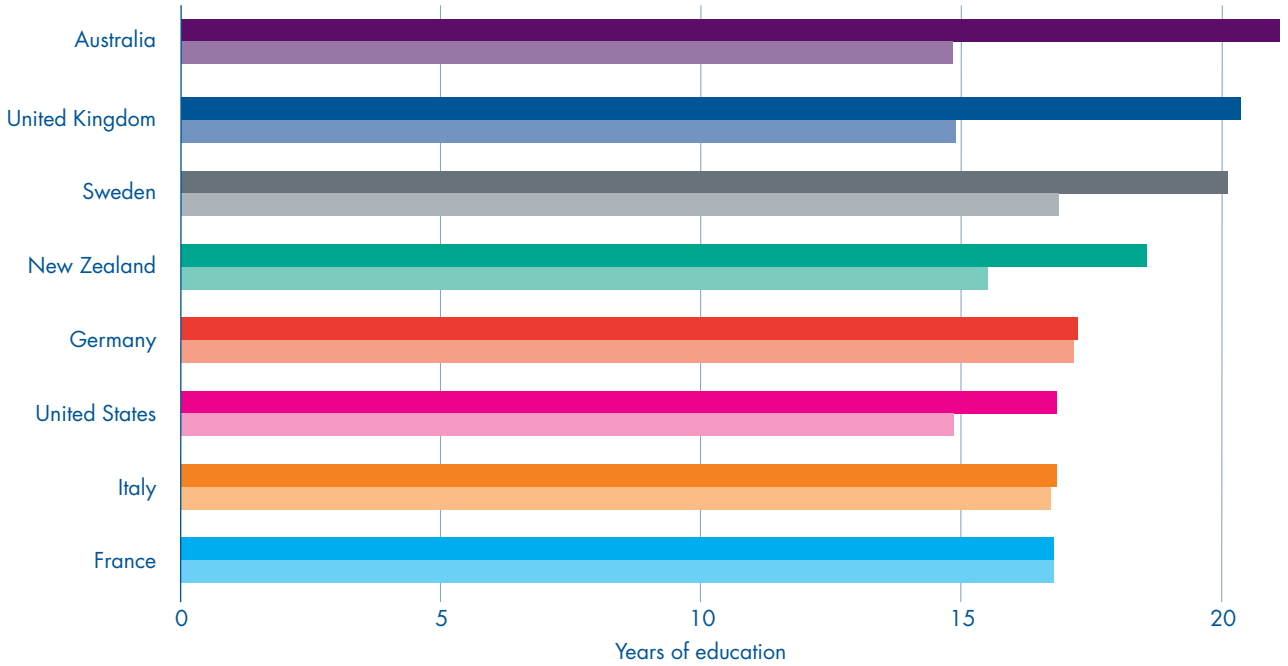
Participation in early childhood education

2.4 Pre-primary education is very important because it helps to build a strong foundation for lifelong learning. Caution is required when comparing data on participation in pre-primary education, because institutionally based pre-primary programmes covered by this indicator are not the only form of childhood education and care available.

2.5 **Figure 17 overleaf** shows that the percentage of the population in education at ages 4 and under, in 2003, as a percentage of the 3 to 4-year-old population, ranged from 41.8 per cent in Australia, to over 100 per cent in Italy and France (reflecting relatively high levels of children under 3 in education), with a nine-country average of 80 per cent. In the United Kingdom, 77 per cent of the population aged 4 and under as a percentage of the 3 to 4-year-old population was in education, an increase from 51 per cent in 1998.

16 Expected years in education (2003)

Expected years in education under current conditions in public and private institutions, excluding education for children under five years of age. It includes education for adults.

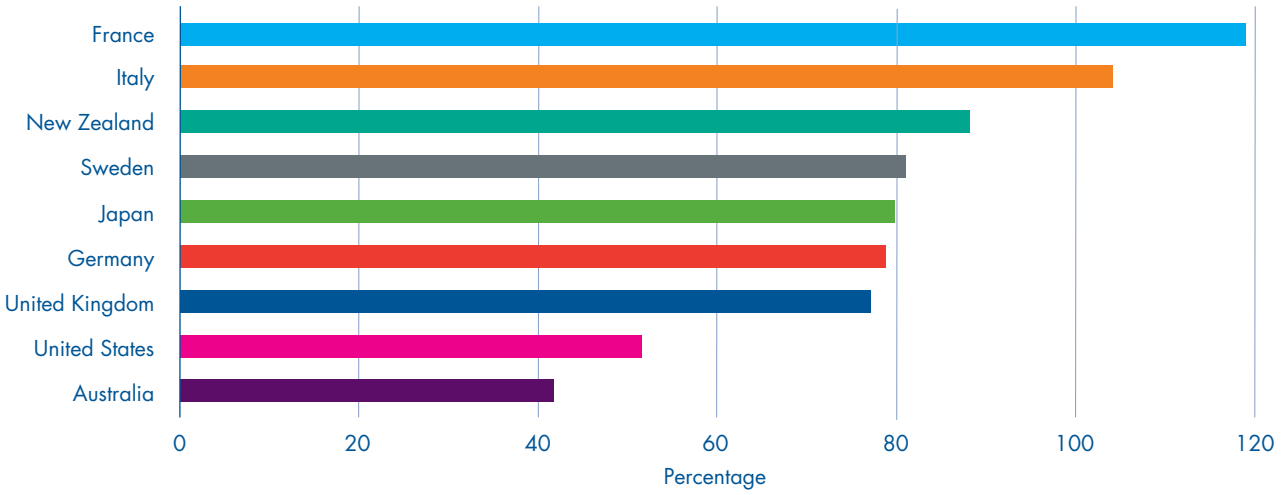


The dark bars represent expected years in education. The light bars represent expected years in education excluding part-time education.

Source: Table C1.1, Education at a Glance: OECD Indicators 2005, OECD

17 Participation in early childhood education (2003)

Pupils aged 4 and under as a percentage of the population of 3 to 4-year-olds.



Source: Table C1.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For France and Italy, the rate 4 and under as a percentage of the population of 3 to 4-year-olds is artificially high, since relatively large proportions of children in education are younger than 3 years old.

2.6 The government has sought to increase accessibility, affordability and quality of childcare and early education; in England, most recently through a ten-year strategy for childcare.[12] In 2005, virtually all 4-year-olds enjoy some form of free, part-time, early education and 93 per cent of 3-year-olds do so. A key target has been to increase the number of childcare places, and at March 2005 the stock of registered childcare places stood at over 1.17 million, benefiting 1.6 million children. A current target is to provide 2,500 children's centres by 2008, increasing to 3,500 centres by 2010.[13]

Participation towards the end of compulsory education and beyond

2.7 In 2003, the percentage of the population aged 15 to 19 still in education varied from 67 to 89 per cent **(Figure 18)**, with an eight-country average of 80 per cent. In the United Kingdom, 76 per cent of people aged 15 to 19 were still in education.

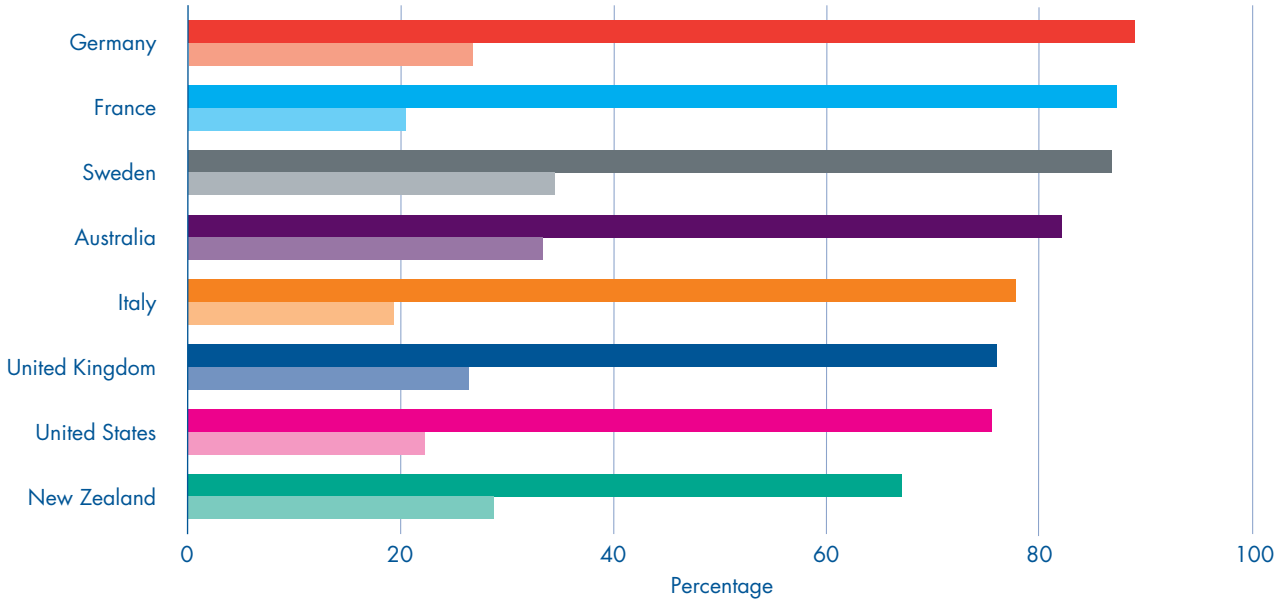
2.8 For all countries, the percentage of the population aged 20 to 29 still in education is substantially lower than that for those aged 15 to 19. In 2003, the percentage varied from 19 per cent in Italy to 35 per cent in Sweden, with the United Kingdom at the eight-country average of 26 per cent (Figure 18). In most countries in 2003, over 30 per cent of the younger (20 to 24) cohort of this age group were still in education, mostly at the tertiary level.

2.9 Among people aged 30 to 39, the United Kingdom showed the highest participation rate of the comparator countries in 2003, at 16 per cent (eight-country average of 8.7 per cent). It also had the highest participation rate for over 40s at 8 per cent (seven-country average of 3 per cent).

12 *Choice for parents, the best start for children: a ten year strategy for childcare*, HM Treasury, 2004.
13 *Departmental Report 2005*, Department for Education and Skills, 2005.

18 Participation rates at ages 15 to 19 and 20 to 29 (2003)

Full-time and part-time students in public and private educational institutions.



The dark bars represent 15 to 19 years. The light bars represent 20 to 29 years.

Source: Table C1.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Participation rates are calculated by dividing the number of students in the relevant age group participating in all levels of education by the total population of that age.

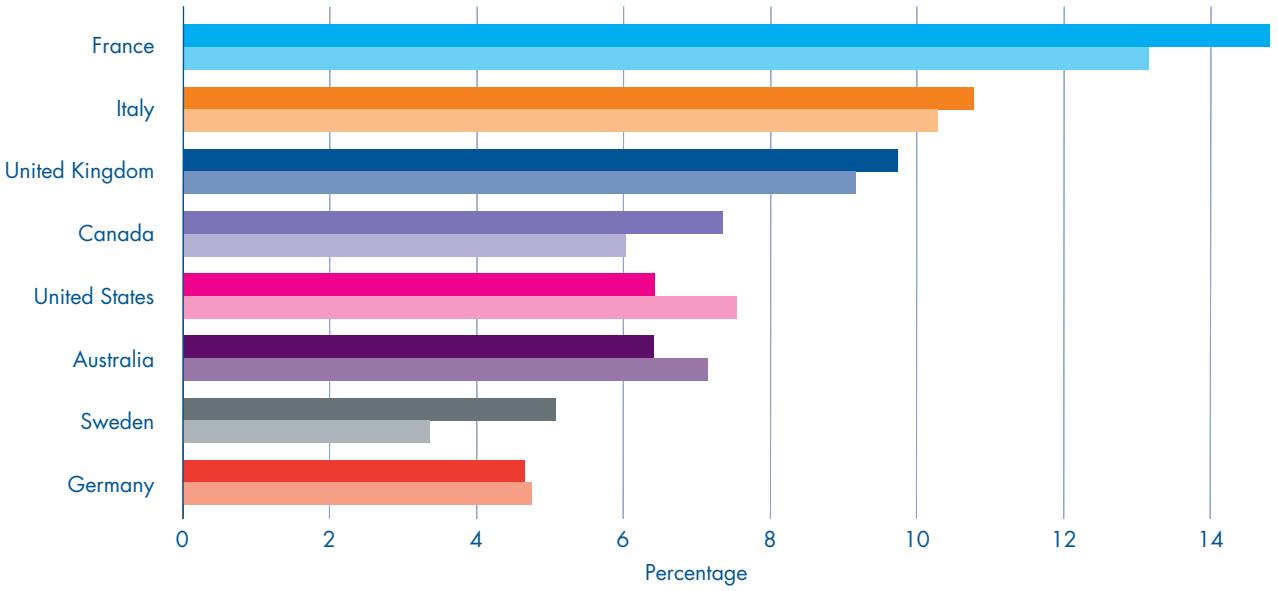
2.10 Although most people between the ages of 15 and 19 are in education, there is a group of young people who are neither in education nor at work. Those actively seeking and available for work are officially considered to be unemployed, while those not available for work are considered not to be in the labour force. In 2003, the size of this whole group varied from 4.3 per cent in Sweden to 14.0 per cent in France, with an eight-country average of 7.9 per cent. In the United Kingdom it was above the average, at 9.5 per cent of 15 to 19-year-olds. There is no consistent gender pattern **(Figure 19 overleaf)**: in five countries the percentage of males was higher and in three countries the percentage of females was higher. In the United Kingdom, the gender difference was small, with males 0.6 of a percentage point higher than females.

2.11 The number of people between the ages 20 to 24 no longer in education and not at work has grown for all comparator countries and varied between 11.7 per cent in Sweden to 21.6 per cent in Italy in 2003, with an eight-country average of 15.3 per cent. In the United Kingdom this group comprised 15.1 per cent of 20 to 24-year-olds. There is a much clearer gender pattern in the 20 to 24 age group, with the percentage of females higher than males in six out of the eight countries **(Figure 20 overleaf)**. The difference varied between 1.5 per cent in Germany to 8 per cent in the United Kingdom. Only Canada and Sweden had higher percentages of males than females no longer in education and not at work.

2.12 In 1998, the government introduced the New Deal for Young People, which aims to help long-term unemployed young people aged 18 to 24 find jobs. New Deal for Young People achieved its target of placing 250,000 young people into work in September 2000, and by March 2005 had helped 460,550 young people into jobs.[14]

14 Department for Work and Pensions website, www.dwp.gov.uk.

19 Percentage of 15 to 19-year-olds not in education and who are unemployed or not in the labour force, by gender (2003)



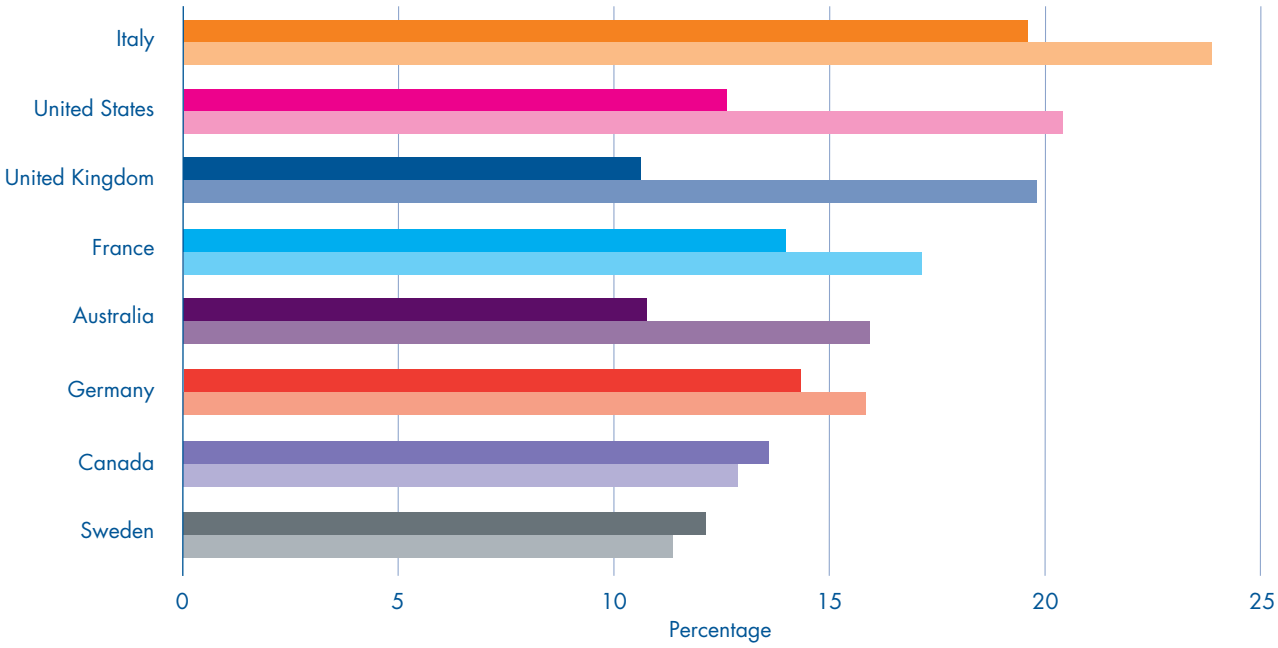
The dark bars represent males. The light bars represent females.

Source: Tables C4.2b and c, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For the United States, the year of reference is 2001.

20 Percentage of 20 to 24-year-olds not in education and who are unemployed or not in the labour force, by gender (2003)



The dark bars represent males. The light bars represent females.

Source: Table C5.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For the United States, the year of reference is 2002.

Participation in tertiary education

2.13 High tertiary participation rates help to ensure the development and maintenance of a highly educated population and labour force. Tertiary education is associated with better access to employment and higher earnings (paragraphs 3.41 to 3.45). Assuming current entry rates continue in the future, over half of all young people will enter tertiary-type A education in the course of their lives – in 2003 the nine-country average was 57 per cent. The United Kingdom's entry rate was below average at 48 per cent. Over the period 1998 to 2003, the entry rate for tertiary-type A education in the United Kingdom has remained the same at 48 per cent.

2.14 The entry rate cannot be compared directly to the Higher Education Initial Participation Rate (HEIPR), which the Department for Education and Skills uses to measure progress against its target for increasing participation in higher education in England to 50 per cent by 2010. The HEIPR is lower than the United Kingdom entry rate because it covers England only, it excludes overseas students and short courses and its measurement process contains mechanisms to prevent double counting. The Department for Education and Skills reported the HEIPR at 43 per cent in 2003-04.[15]

2.15 One way for students to expand their knowledge of other cultures and societies is to study in tertiary educational institutions in countries other than their own. The extent of international student mobility is increasing.[16] One of a number of benefits of foreign student intake is the tuition fee revenue that is generated, which can be substantial where host countries adopt a full-fee tuition policy for overseas students.

2.16 **Figure 21 overleaf** shows that, in 2003, the market share of foreign students enrolled in tertiary education varied from 1.4 per cent in New Zealand and Sweden to 31.1 per cent in the United States, and for the United Kingdom it was 13.5 per cent. Between 1998 and 2003 the United Kingdom showed the largest decline in market share among comparator countries, down 2.7 percentage points.

2.17 The net balance of international student exchange **(Figure 22 overleaf)** shows that some countries, such as Australia and the United Kingdom, have a net intake whereas others, such as Japan and Italy, have a net outflow. Student mobility patterns can be attributed to a variety of push-pull factors, such as language barriers, the academic reputation of particular institutions or programmes, limitations of higher education provision in the home country, university admission policies, financial incentives, tuition and living costs.

Participation in continuing education and training among the adult population

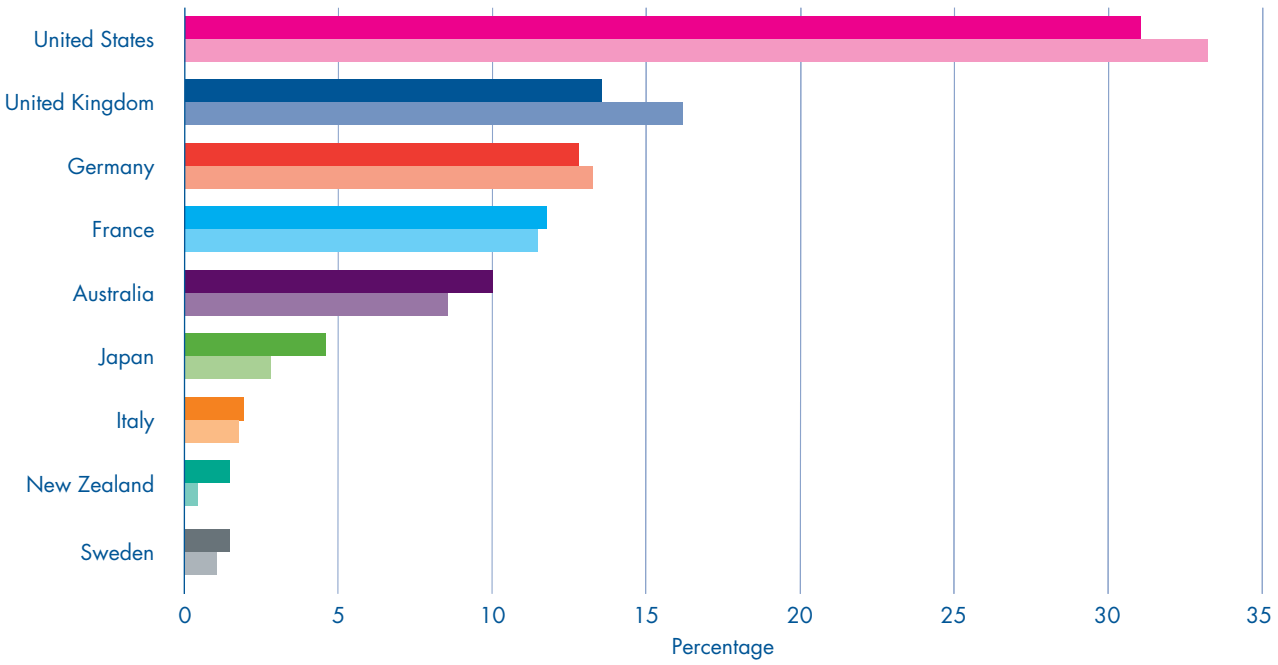
2.18 As a skilled labour force is a prerequisite for success in today's economy, the education and training of current workers is likely to be an effective means of maintaining and upgrading the skills. In 2003, 35 per cent of employed people aged 25 to 64 in the United Kingdom had participated in some non-formal, job-related continuing education and training **(Figure 23 on page 27)**, compared to a seven-country average of 29 per cent. For the unemployed people aged 25 to 64, the corresponding figures were 18 per cent for the United Kingdom and 14 per cent for the seven-country average.

2.19 Hour per participant in non-formal job-related continuing education and training are comparatively low in the United Kingdom, with the average number of hours per participant in employment at 27 hours **(Figure 24 on page 27)**. This was below the seven-country average of 54 hours. For the unemployed, the corresponding figure is 72 hours for the United Kingdom, which was considerably below the seven-country average of 168. This does not necessarily mean that short duration courses are of lower value; for example some of the difference could indicate better targeting.

15 *Departmental Report 2005*, Department for Education and Skills, 2005.
16 *Education at a Glance: OECD Indicators 2005*, OECD.

21 International education market shares (1998 and 2003)

Percentage of foreign tertiary students enrolled in a selection of OECD countries. For the sake of comparability over time, the international market share considered only covers countries for which both 1998 and 2003 data are available.



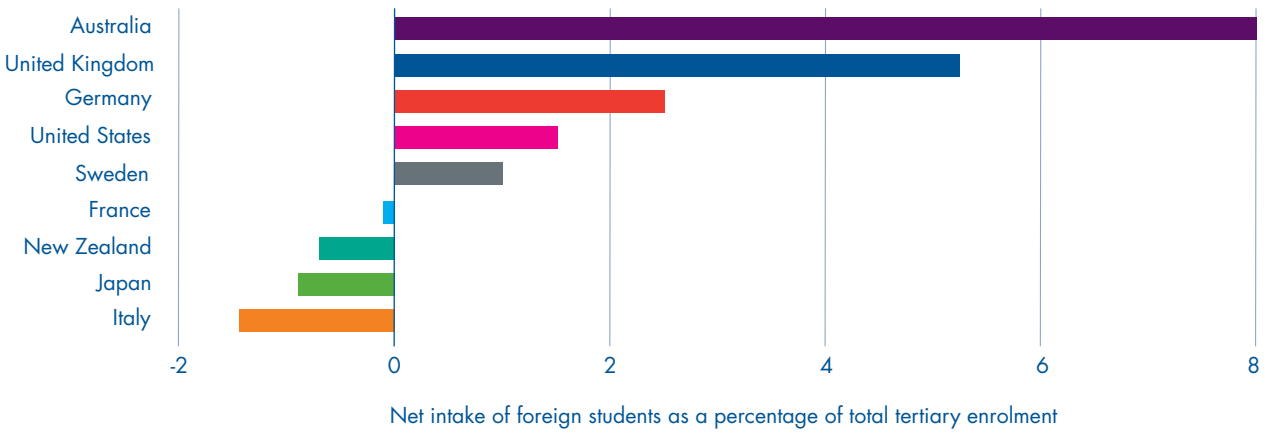
The dark bars represent 2003. The light bars represent 1998.

Source: Table C3.7b (web only), Education at a Glance: OECD Indicators 2005, OECD

NOTE

Figures for Germany exclude advanced research programmes.

22 Net international student exchange in tertiary education (2003)

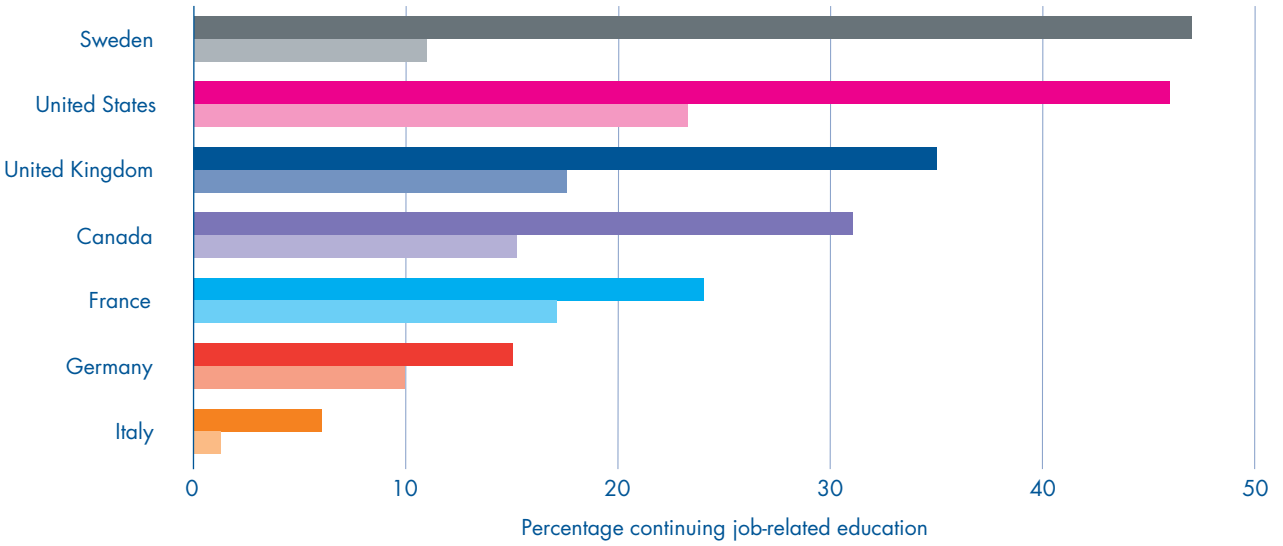


Source: Table C3.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

The balance of students flows takes into account students to and from reporting OECD and non-OECD countries. For New Zealand and France, the year of reference is 2001. Figures for Germany exclude advance research programmes.

23 Participation rate of 25 to 64-year-olds in continuing non-formal job related education and training, by employment status (2003)



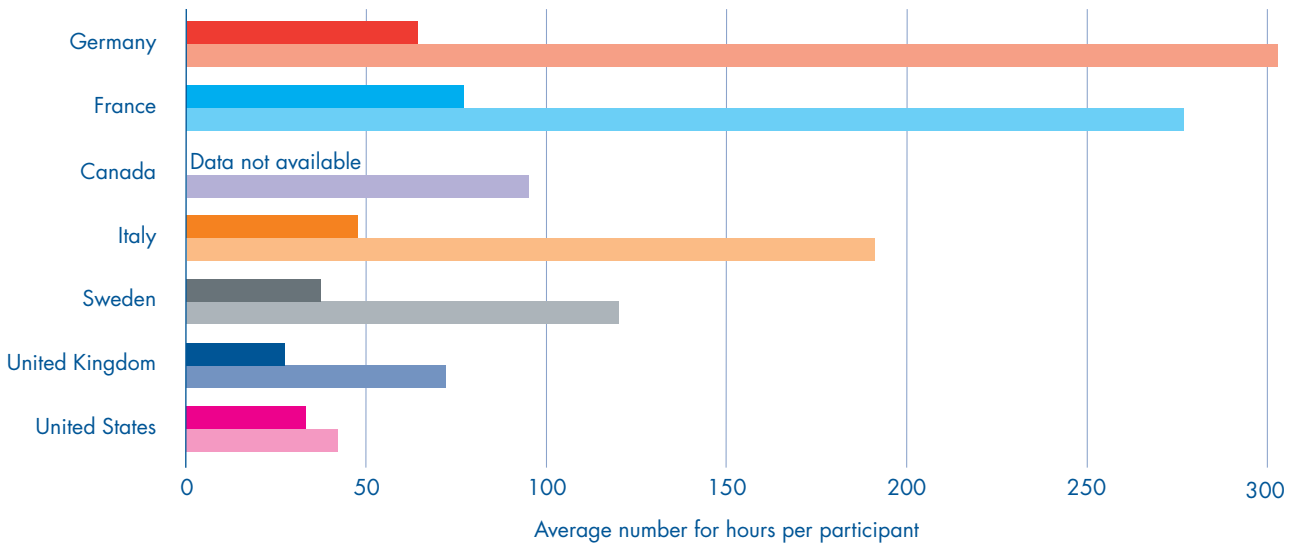
The dark bars represent employed. The light bars represent unemployed.

Source: Table C6.3, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For Canada, the year of reference is 2002.

24 Hours per participant for 25 to 64-year-olds in continuing non-formal job-related education and training, by employment status (2003)



The dark bars represent employed. The light bars represent unemployed.

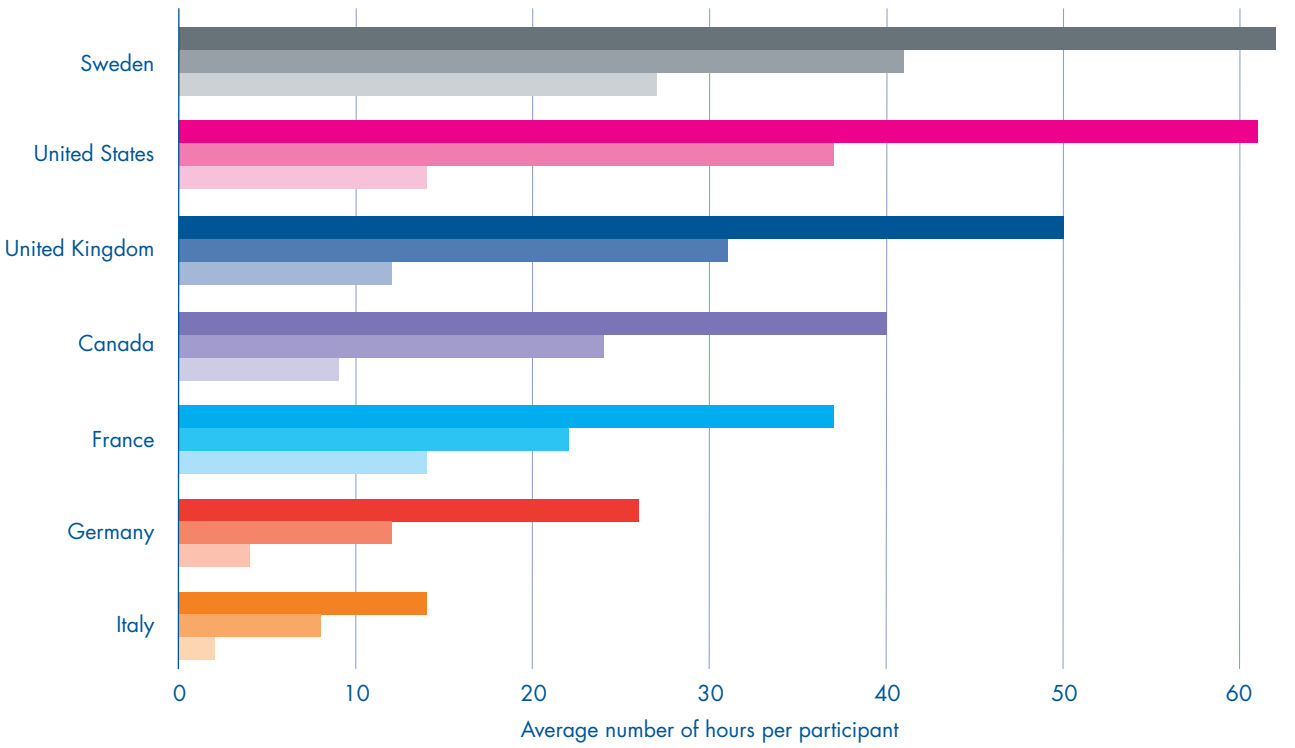
Source: Table C6.3, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For Canada, the year of reference is 2002.

2.20 In 2003, in the United Kingdom, the participation rate in non-formal continuing education and training among employees who have not completed upper secondary education was 12 per cent **(Figure 25)**. This is less than half the rate of people with upper secondary education (31 per cent) and around a quarter of the rate of people with tertiary education (50 per cent). Other countries show similar patterns of participation.

25 Participation rate for 25 to 64-year-olds in the labour force in continuing non-formal job-related education and training, by level of education (2003)



The dark bars represent people with tertiary education. The middle bars represent people with upper secondary and post-secondary non tertiary. The lightest bars represent people who have not completed upper secondary education.

Source: Table C6.2, Education at a Glance: OECD Indicators 2005, OECD

NOTE

For Canada, the year of reference is 2003.

PART THREE
Educational achievements and impacts

3.1 For policy-makers in many countries, international comparisons of student achievement have become essential tools for assessing the performance of their countries' education systems and the adequacy of students' preparation for participation in an increasingly global world. Such comparisons offer an external point of reference for objective evaluation of education systems' effectiveness.

3.2 This part provides information on trends in the educational attainment of the population, the level of student performance in mathematics, science and literacy, completion of tertiary education and adult basic skills. It also provides information on educational impacts in terms of relative earnings and labour force participation.

Educational attainment of the adult population

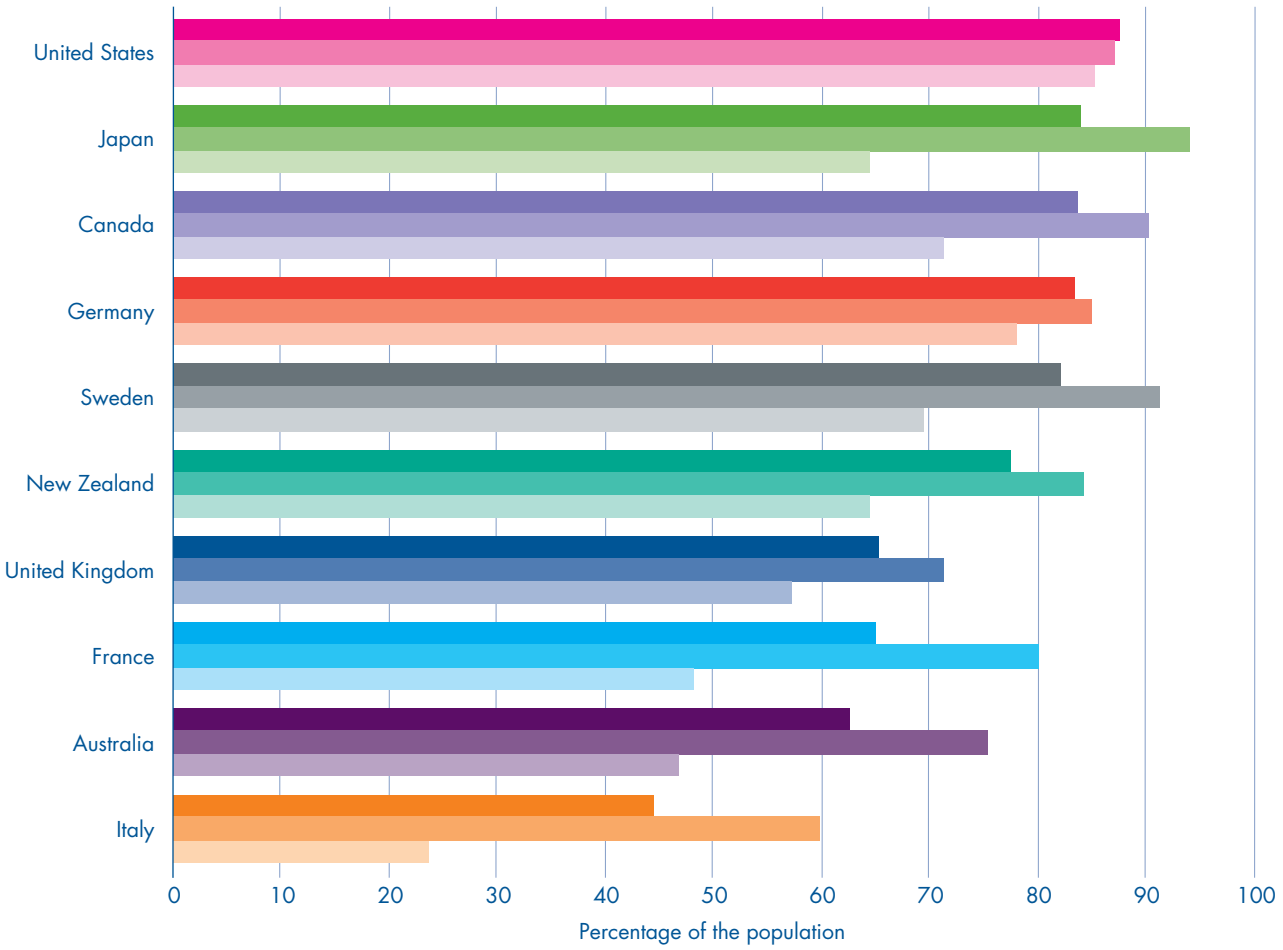
3.3 A well educated and well trained population is important for the social and economic well-being of countries and individuals. Education plays a key role in providing individuals with the knowledge, skills and competencies to participate effectively in society. The level of educational attainment of the population is a commonly used proxy for the skills in the population and the labour force.

3.4 **Figure 26 overleaf** shows the percentage of the population, age 25 to 64, that had attained at least upper secondary level of education in 2003. The percentage varied from 44 per cent in Italy to 88 per cent in the United States, with a ten-country average of 74 per cent. In the United Kingdom the percentage was 65 per cent. For people who completed school up to 50 years ago (i.e. 55 to 64-year-olds) the United Kingdom ranked seventh among the ten comparator countries by upper secondary educational attainment, but for people who completed school some up to 20 years ago (i.e. 25 to 34-year-olds) it ranked ninth.

3.5 Upper secondary education represents a level of attainment not necessarily reached while a person was participating in secondary education at school. In the United Kingdom it means attainment of at least level 2: five or more A* to C GCSE grades or the equivalent vocational qualifications. Internationally, upper secondary education includes the United Kingdom level 3: A-levels or NVQ3 (Appendix 3). The government has set a range of performance targets for the percentage of pupils attaining GCSEs, as shown in **Box 1 on page 31** along with actual performance for 2005.

26 Percentage of population obtaining upper secondary level education (2003)

Percentage of the population who have attained upper secondary education by age group.



The dark bars represent the whole age range of 25 to 64-year-olds. The middle bars represent 25 to 34-year-olds. The lightest bars represent 55 to 64-year-olds.

Source: Table A1.2a, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Countries are ranked in descending order for 25 to 64-year-old age group. For Italy, the year of reference is 2002.

3.6 **Figure 27** shows the percentage of the population with tertiary level education in 1991 and 2003. In 2003, the percentage varied from 10 per cent in Italy to 44 per cent in Canada, with a ten-country average of 30 per cent. In the United Kingdom the figure was 28 per cent. Between 1991 and 2003, all comparator countries showed an increase in the population obtaining tertiary level education. Only Canada showed a larger increase (16 percentage points) than the United Kingdom (12 percentage points). These trends indicate that all the countries are developing more skilled labour forces.

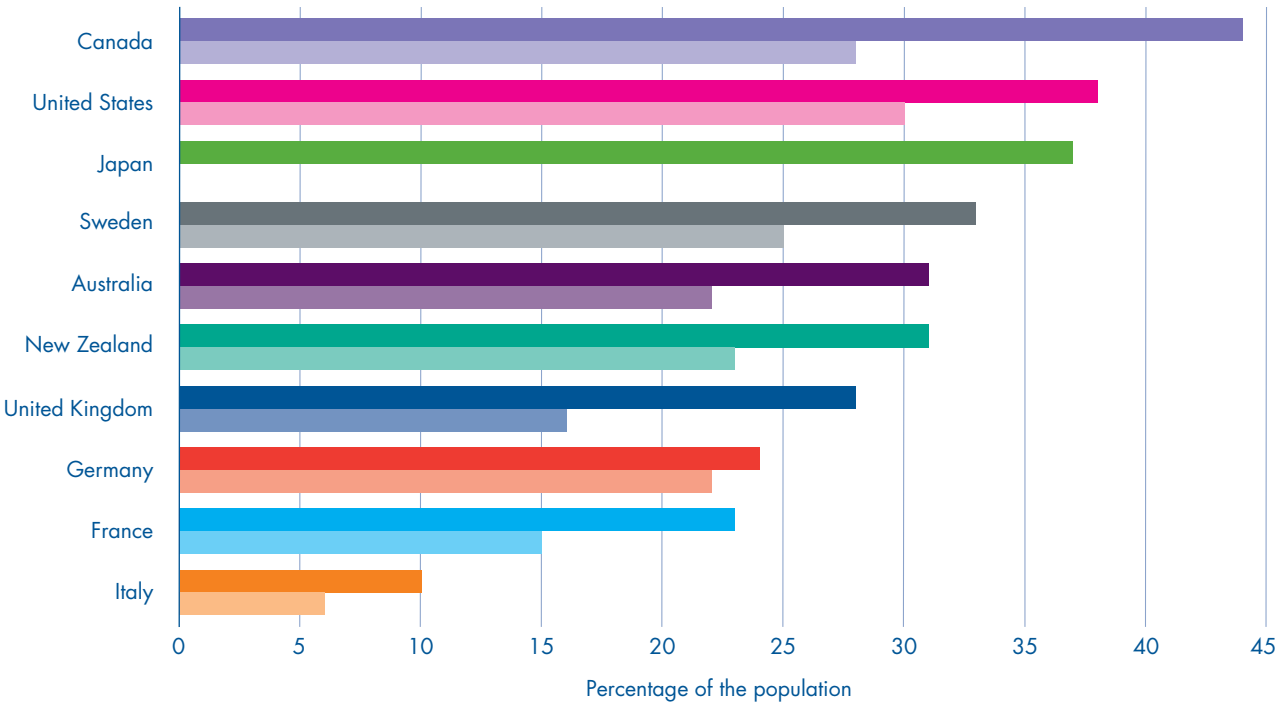
BOX 1

Target	Level/performance, 2004	Performance, 2005
By 2008, 60 per cent of pupils aged 16 to achieve the equivalent of 5 GCSEs at grades A* to C.	53.7 per cent of pupils achieved 5 grades A*-C.	55.7 per cent of pupils achieved 5 grades A*-C.
In all schools at least 20 per cent of pupils to achieve this standard by 2004, rising to 25 per cent by 2006 and 30 per cent by 2008.	All but 71 schools above the 20 per cent target.	All but 38 schools above the 20 per cent target.
To increase the proportion of 19-year-olds who achieve at least level 2 by three percentage points between 2004 and 2006, and a further two percentage points between 2006 and 2008, and increase the proportion of young people who achieve level 3.	Baseline: 66.8 per cent of 19-year-olds in 2004 had achieved level 2 or higher. Measurement of level 3 baseline to be set in 2007.	68.4 per cent of people who will be 19 in 2006 had reached level 2 by age 18. To meet the 2006 target a further 1.4 percentage point increase is needed in 2005-06.
To reduce the proportion of young people not in education, employment or training by two percentage points by 2010.	9 per cent in 2004-05.	Not yet assessed.

Level 2 and level 3 refers to the achievement of qualifications. Appendix 4 describes the different qualification levels.

27 Percentage of population with tertiary level education (1991 and 2003)

Percentage of the population aged 25 to 64 that has attained tertiary education.



The dark bars represent 2003. The light bars represent 1991.

Source: Table A1.3a, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Countries are ranked in descending order of 2003 data. Tertiary includes tertiary-type A and advanced research programmes and tertiary-type B education. For Italy, the year of reference is 2002.

Student performance in mathematical, scientific and reading literacy

3.7 Knowledge and skills in mathematics, science and reading are important outcomes of education. There are three main data sets that provide a basis for comparison of student achievement, which are all sample-based surveys.

3.8 The Programme for International Student Assessment (PISA) assesses the literacy of 15-year-olds in reading, mathematics and science as well as young people's capacity to use their knowledge and skills in order to meet real-life challenges. The PISA survey is conducted every three years and two surveys have been completed, in 2000 and 2003.

3.9 The Trends in International Mathematics and Science Study (TIMSS) conducted by the International Association for the Evaluation of Educational Achievement, assesses the mathematical and scientific achievements of students around the ages of 10 and 14 years. Three TIMSS surveys have been completed, in 1995, 1999 and 2003.

3.10 TIMSS and PISA results are not directly comparable because they examine different skills. TIMSS has a greater focus on curriculum-based knowledge whereas PISA has a greater focus on the application of knowledge, for example problem solving, critical evaluation of information and data analysis.

3.11 The Progress in International Reading Literacy Study (PIRLS), also conducted by the International Association for the Evaluation of Educational Achievement, assesses the reading literacy of primary school students around the age of 10. The first PIRLS survey was completed in 2001 and the next study takes place in 2006 and is due to report in 2007.

3.12 The accuracy of any survey results depends on the quality of the information on which samples are based as well as sampling procedures. It is difficult to ensure national results are representative of the population and this affects the comparability of results between countries. For these reasons quality standards and control procedures were established for sample selection on all three studies. For the PISA, PIRLS and TIMSS surveys a minimum response rate of 85 per cent was required for schools initially selected. Where the response rate was below the minimum (between 65 and 85 per cent for PISA and 50 and 85 per cent for PIRLS and TIMSS), however, an acceptable school response rate could still be achieved through replacement.

3.13 For PISA's 2000 survey, the response rates from United Kingdom schools (61.3 per cent before replacement and 82.1 per cent after replacement) were lower than PISA's targets. However the PISA consortium recommended the data for inclusion as there was no substantial evidence of non-response bias in terms of the GCSE average point score, or socio-economic status as measured by the percentage of students eligible for free school meals.[17] For PISA's 2003 survey the response rates from United Kingdom schools (64.3 per cent before replacement and 77.4 per cent after replacement) were again lower than PISA's targets. There was also evidence for a non-response bias. The PISA consortium concluded that it was not possible to reliably correct for this bias and that it was not possible to say with confidence that the sample reliably reflected that of the national population, with the level of accuracy required by PISA. Therefore, the United Kingdom's data was not included in the 2003 comparisons because it was considered that it could not reliably be compared with those of other countries or with results from PISA 2000.

17 *PISA 2000 Technical Report*, OECD, 2002.

3.14 For the assessment of 14-year-olds in the TIMSS 2003 survey, the response rates from England's schools (40 per cent before replacement and 54 per cent after replacement) were considerably lower than TIMSS targets and therefore the sample may not reliably reflect the national population.

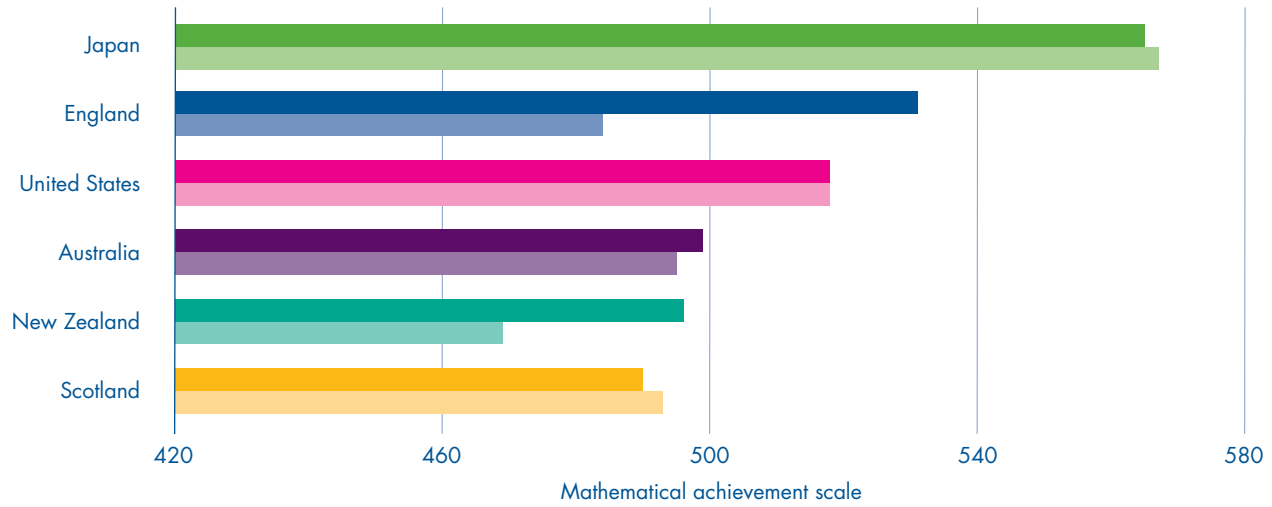
3.15 Following the difficulties experienced with participation rates in PISA 2003 and TIMSS 2003 (14-year-olds), the Department for Education and Skills worked with its new contractor, the National Foundation for Education Research, to develop a strategy for raising the response rate, in consultation with the professional associations, unions and a group of head teachers. A package of measures to engage schools more thoroughly was put in place for recruitment to the PIRLS 2006 and PISA 2006 surveys. A complete sample without replacement, consisting of 150 schools, was recruited for the PIRLS survey. Testing for PISA will take place in November 2006; by the end of June 2006, 170 schools had been recruited in England, representing a response rate of 83 per cent before replacement and just under 90 per cent after replacement. The Department plans to adopt a similar strategy for recruitment to the TIMSS 2007 survey.

Performance of 10-year-olds

3.16 Figure 28 below and Figure 29 overleaf show the mean mathematical and scientific achievement of 10-year-olds from the TIMSS surveys in 1995 and 2003 (for which England's and Scotland's response rates were acceptable). The average age of participants varied from 9.7 years in Scotland to 10.4 years in Japan. Between 1995 and 2003, England and New Zealand were the only countries that showed a statistically significant change in mean mathematical achievement, both showing an increase. England and New Zealand also showed a statistically significant increase in mean scientific achievement between 1995 and 2003.

3.17 Figure 30 overleaf shows the mean score and range of student performance for each country on PIRLS' reading achievement scale for 10-year-olds. England's mean score was above the nine-country average and Scotland's was below the average. The range of student performance varied between countries; England's range was 290 points and Scotland's range was 280 points. The average range for the nine countries was 255 points.

28 Mean mathematical achievement scores of 10-year-olds (1995 and 2003)



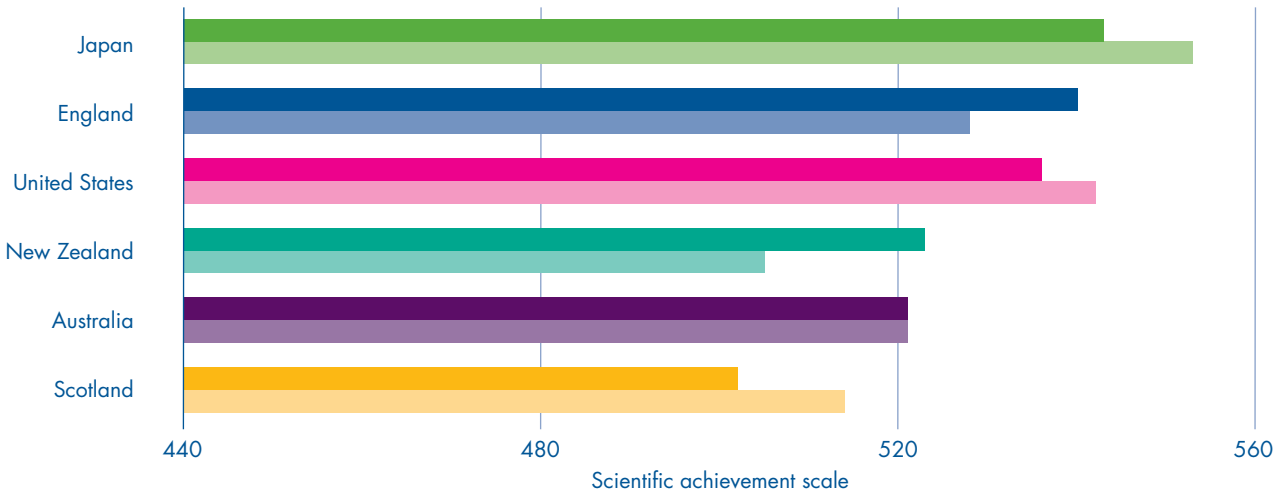
The dark bars represent 2003. The light bars represent 1995.

Source: Table 4, Highlights from the Trends in International Mathematics and Science Study (TIMSS) 2003, United States Department of Education, 2004.

NOTE

TIMSS is a sample based survey so the resulting estimates are associated with some level of uncertainty. In 2003, Australia, England, Scotland and the United States met guidelines for participation rates after replacement schools were included.

29 Mean scientific achievement scores of 10-year-olds (1995 and 2003)



The dark bars represent 2003. The light bars represent 1995.

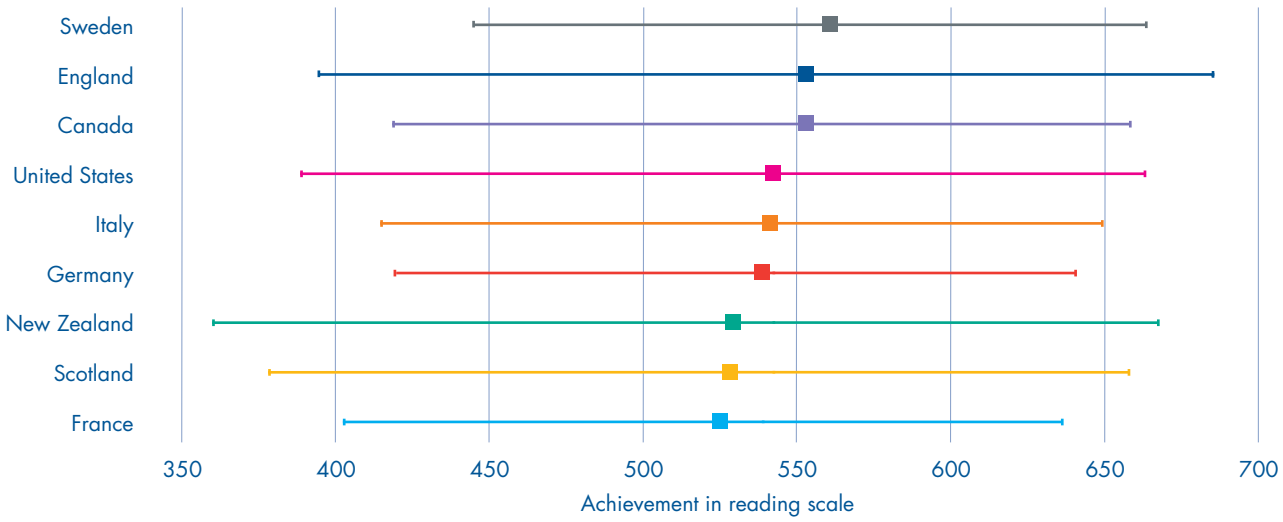
Source: Table 10, Highlights from the Trends in International Mathematics and Science Study (TIMSS) 2003, United States Department of Education, 2004

NOTE

TIMSS is a sample based survey so the resulting estimates are associated with some level of uncertainty. In 2003, Australia, England, Scotland and the United States meet guidelines for participation rates after replacement schools were included.

30 Mean achievement in reading of 10-year-olds (2001)

The bar represents the range of performance from the 5th to 95th percentile and the black square represents the mean



Source: PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools, 2001

NOTE

PIRLS is a sample-based survey so the resulting estimates are associated with some level of uncertainty. England, Scotland and United States met guidelines for sample participation after replacement schools were included. Canada is represented by the provinces of Ontario and Quebec.

3.18 The Government has set a number of targets to raise the standard of English and mathematics of 11-year-olds: 85 per cent of 11-year-olds to reach level 4 or above[18] by 2006, with this level of performance sustained to 2008. In 2004, 78 per cent of 11-year-olds achieved level 4 or above in English and 74 per cent achieved level 4 or above in mathematics.

Performance of 14-year-olds

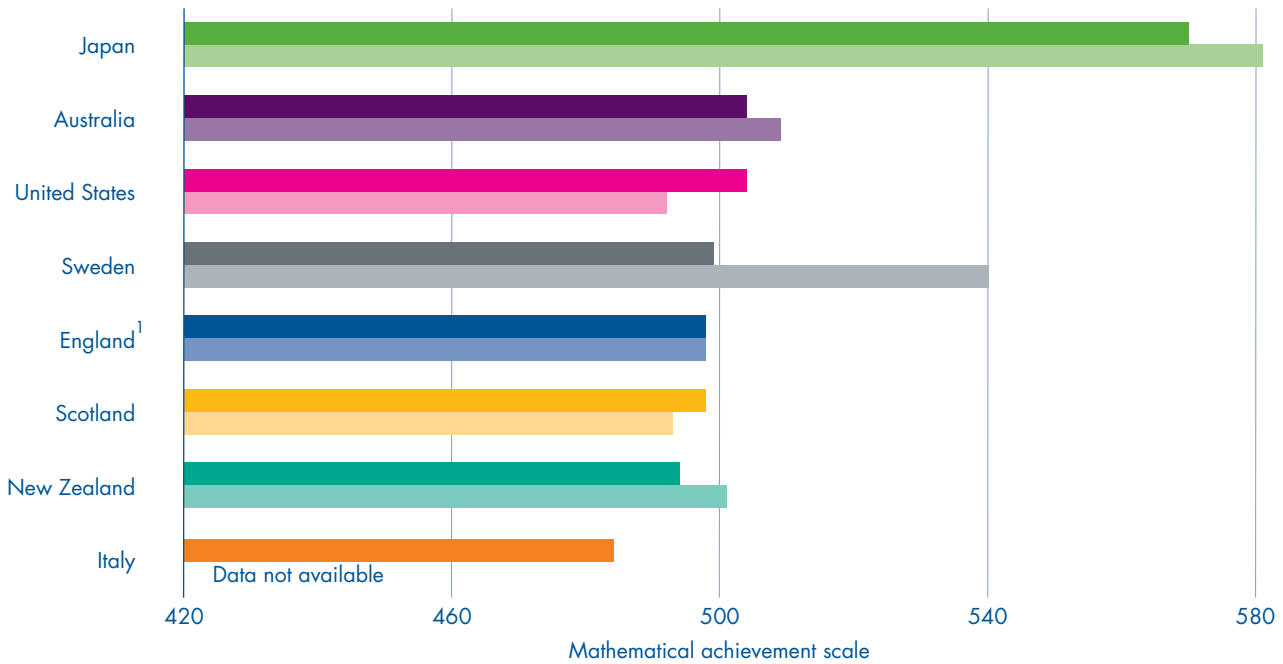
3.19 **Figure 31 below and Figure 32 overleaf** show the mean mathematical and scientific achievement of 14 year-olds from the TIMSS surveys in 1995 and 2003. The average age of participants varied from 13.7 years in Scotland to 14.9 years in Sweden. As explained in paragraph 3.14, data for England did not satisfy guidelines for sample participation rates and therefore may not reliably reflect the national population.

Performance of 15-year-olds

3.20 As explained in paragraph 3.13, 2003 data for the United Kingdom does not meet the PISA response rate standards and therefore cannot reliably be compared with other countries. Therefore, performance data for 15-year-olds presented in Figures 33 to 35 is taken from the 2000 PISA survey.

3.21 Mean student performance in mathematical literacy, from the 2000 PISA survey, is displayed in **Figure 33 overleaf**. The United Kingdom's score was 529 points, compared to a ten-country average of 516 points. Mean mathematics performance scores from the 2000 and 2003 PISA surveys cannot be compared because assessment of performance in the 2003 survey was refined and more thorough than the 2000 survey.

31 Mean mathematical achievement scores of 14-year-olds (1995 and 2003)



The dark bars represents 2003. The light bars represent 1995.

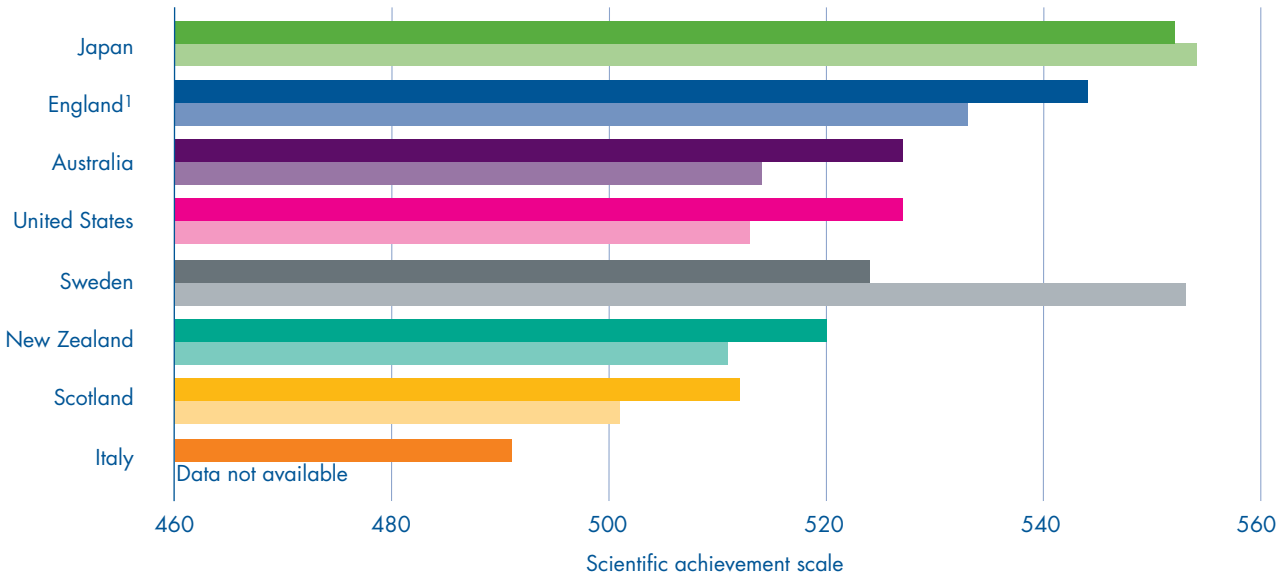
Source: Table 5, Highlights from the Trends in International Mathematics and Science Study (TIMSS) 2003, United States Department of Education, 2004

NOTE

TIMSS is a sample based survey so the resulting estimates are associated with some level of uncertainty. [1]Data for England did not meet the TIMSS response rate standards and therefore may not reliably reflect the national population. In 2003, Scotland met guidelines for participation rates after replacement schools were included.

18 Attainment is split into eight levels of increasing difficulty. Level 4 is the attainment level expected of an 11-year-old.

32 Mean scientific achievement scores of 14-year-olds (1995 and 2003)



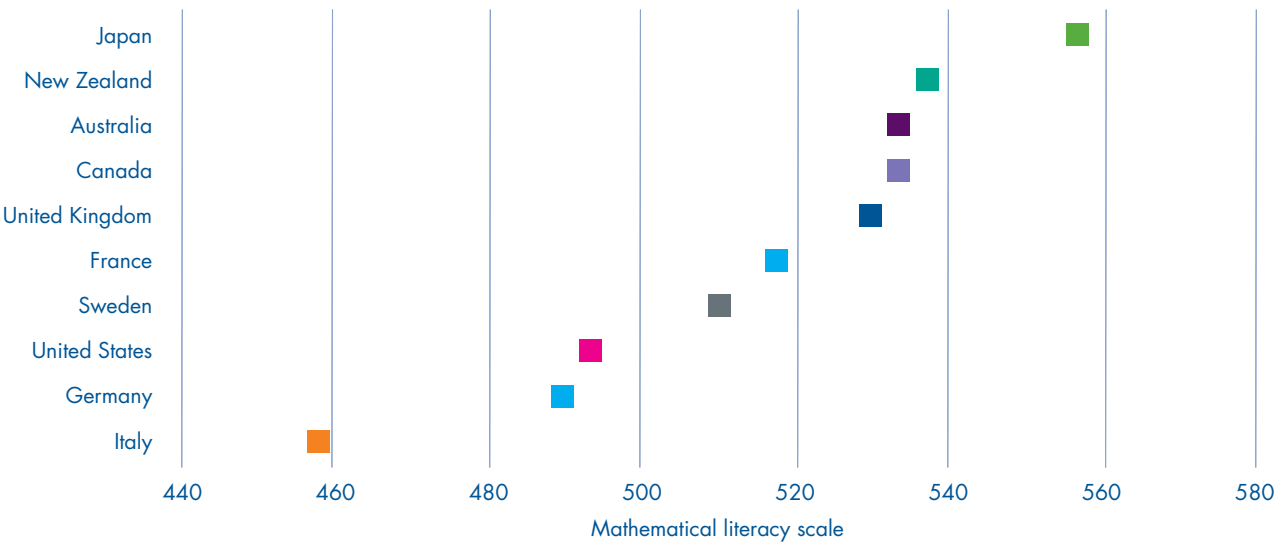
The dark bars represents 2003. The light bars represent 1995.

Source: Table 11, Highlights from the Trends in International Mathematics and Science Study (TIMSS) 2003, United States Department for Education, 2004

NOTE

TIMSS is a sample based survey so the resulting estimates are associated with some level of uncertainty. [1]Data for England does not meet the TIMSS response rate standards and therefore cannot reliably be compared with other countries. In 2003, Scotland met guidelines for participation rates after replacement schools were included, and the United States nearly satisfied the guidelines after replacement schools were included.

33 Mean mathematical literacy scores of 15-year-olds (2000)



Source: Table A6.1, Education at a Glance: OECD Indicators 2002, OECD

NOTE

PISA is a sample based survey so the resulting estimates are associated with some level of uncertainty.

3.22 Mean student performance in scientific literacy from the 2000 PISA survey is displayed in **Figure 34**. The United Kingdom's score was 532 points, compared to a ten-country average of 514 points.

3.23 Mean student performance in reading literacy from the PISA 2000 survey is displayed in **Figure 35 overleaf**. The United Kingdom's score was 523 points, compared to a ten-country average of 513 points.

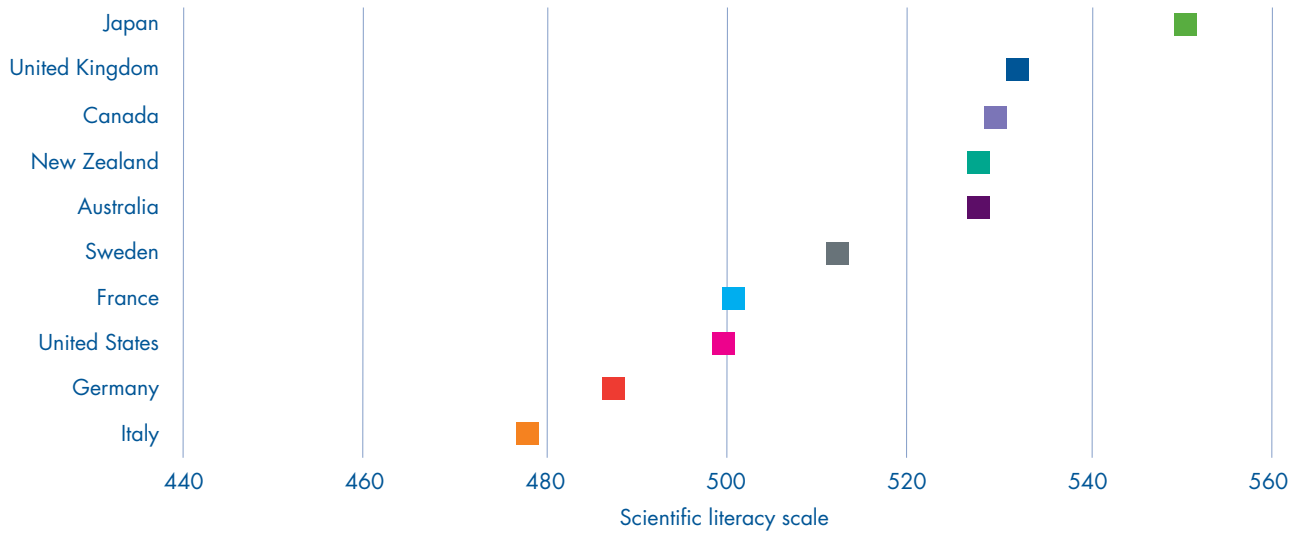
3.24 The Government has set a number of targets to raise the standard of English, mathematics, ICT and science in secondary schools: 75 per cent of 14-years-olds to reach level 5 or above[19] in English, mathematics and ICT (70 per cent in science) by 2004, rising to 85 per cent (80 per cent in science) by 2007. In 2004, the percentage of 14-year-olds that achieved level 5 or above in English, mathematics, ICT and science were 71, 73, 67 and 66 per cent respectively.[20]

Gender differences in student performance

3.25 Policy-makers have given considerable priority to issues of gender equality in education, with particular attention to disadvantages faced by girls and women. Considerable progress has been achieved in reducing the gender gap in formal educational qualifications although in certain fields of study, such as mathematics and computer science, gender differences favouring males still exist. As females have closed the gap and surpassed males in many aspects of education in OECD countries, there is now concern about underachievement of males in certain areas such as reading.

3.26 The results from the 2001 PIRLS survey showed that 10-year-old females do better than males in all comparator countries **(Figure 36 overleaf)**. Likewise, results from the 2000 and 2003 PISA surveys, showed that 15-year-old females have a significantly higher average performance in reading than 15-year-old males in all comparator countries. Results from the 2000 PISA survey suggested the difference in reading literacy between males and females in the United Kingdom was not as great as in most other OECD countries. However, on the PIRLS reading achievement scale, England showed the second highest difference between the genders after New Zealand.

34 Mean scientific literacy scores of 15-year-olds (2000)



Source: Table A6.2, Education at a Glance: OECD Indicators 2002, OECD

NOTE

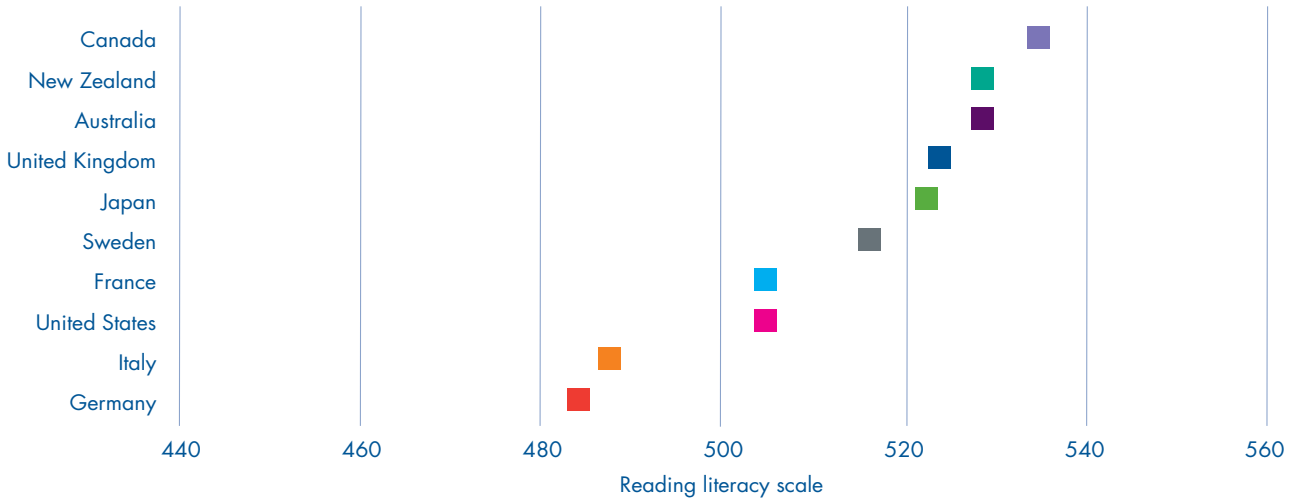
PISA is a sample based survey so the resulting estimates are associated with some level of uncertainty.

19 Attainment is split into eight levels of increasing difficulty. Level 5 is the attainment level expected of a 14-year-old.
20 *Departmental Report 2005*, Department for Education and Skills 2005.

3.27 Gender differences in mathematics performance are more evident in the PISA survey than the TIMSS survey. In the 2003 PISA survey, males performed better in most of the comparator countries. Only Australia and Japan showed no statistically significant difference. In the 2003 TIMSS survey, 14-year-old boys performed better in Italy and the United States and 10-year-old boys did better in Italy, Scotland and the United States.

3.28 Gender differences in scientific performance are more evident in the TIMSS surveys than the PISA surveys. In the 2003 TIMSS survey, 14-year-old boys performed better in all seven comparator countries, except New Zealand which showed no statistically significant difference. For 10-year-olds, most countries showed no significant difference between genders, except Scotland and the United States where boys performed better. In the 2000 and 2003 PISA surveys, most countries displayed no statistically significant difference between genders.

35 Mean reading literacy scores of 15-year-olds (2000)

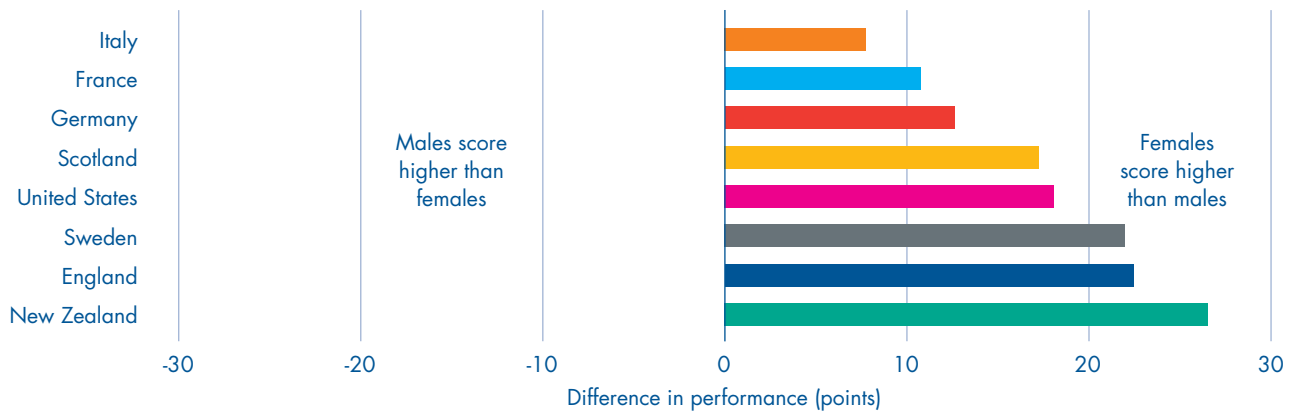


Source: Table A5.2, Education at a Glance: OECD Indicators 2002, OECD

NOTE

PISA is a sample based survey so the resulting estimates are associated with some level of uncertainty.

36 Differences in the mean performance of female 10-year-olds on the PIRLS reading literacy scale compared to male 10-year-olds (2001)



Source: Table A9.2, Education at a Glance: OECD Indicators 2004, OECD

Differences between and within schools

3.29 Policy-makers within Europe have given priority to raising school standards and educational performance. However, catering for the needs of a diverse student population and narrowing the gaps in student performance represent formidable challenges for many countries. In 2000, most countries, including the United Kingdom, showed more variation in PISA reading scores within schools than between schools **(Figure 37)**. Variation in reading performance was greater between schools than within schools only in Germany and Italy. On average, across the nine countries, differences between schools accounted for 30 per cent of the variation in performance.

3.30 Some of the variation between schools is attributable to the socio-economic background of students entering the school, geography of the school – differences between rural and urban areas – and institutional factors, such as privately and publicly managed schools. The extent to which differences between schools is attributable to these factors varies between countries. For example, in Germany these factors accounted for 87 per cent of the between school variation, whereas in Australia and Canada they accounted for less than 10 per cent.

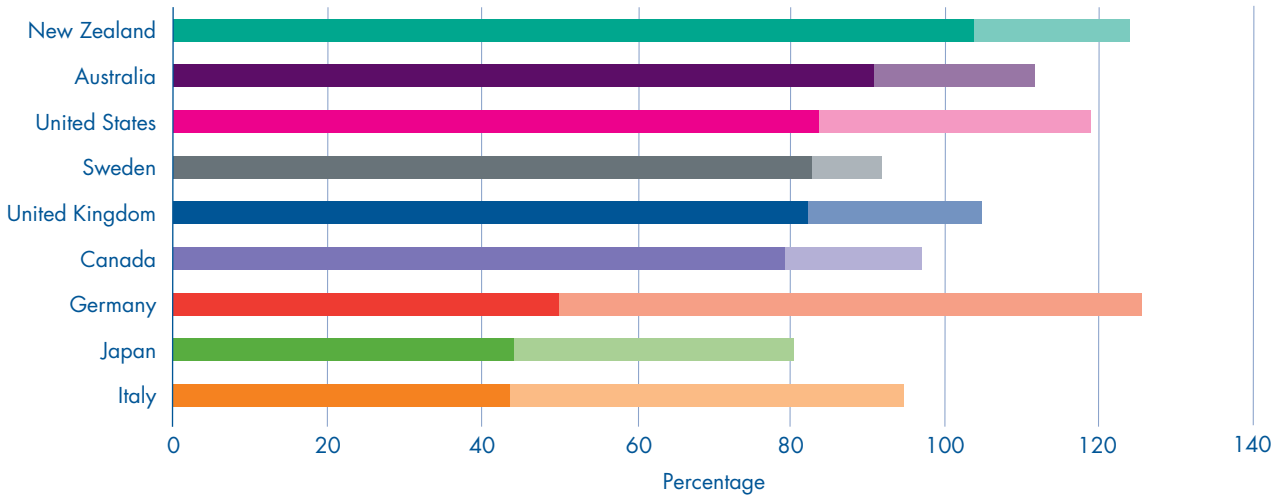
Completion of tertiary education

3.31 Tertiary graduation rates indicate the production of higher level knowledge by a country's education system. Countries with high graduation rates at tertiary level are most likely to be developing or maintaining a highly skilled labour force.

3.32 **Figure 38 overleaf** shows the seven-country average of 33 per cent for 2003, representing people at the typical age of graduation gaining a qualification from a first tertiary-type A programme. The United Kingdom had the second highest rate at 38 per cent, after Australia with 49 per cent. Tertiary-type A students in most countries spend up to five years on a first degree.

37 Variation in student performance in mathematics between and within schools (2000)

Expressed as a percentage of the average variation in student performance on the reading literacy scale in OECD countries.



The dark bars represent variation within schools. The light bars represent variation between schools.

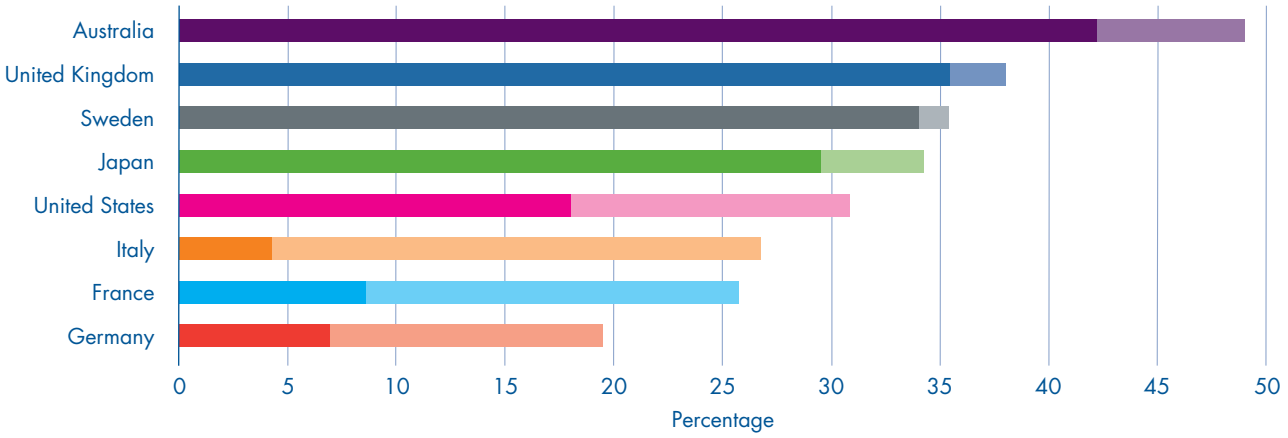
Source: Table 7.1, Education at a glance: OECD indicators 2002, OECD

NOTE

Where the sum of the two bars for each country is larger than 100, this indicates that variation in student performance is greater in the corresponding country than in a typical OECD country.

38 Proportion of population graduating from tertiary-type A education (2003)

Percentage of tertiary-type A graduates to the population at the typical age of graduation, by duration.



The dark bars represent medium first degree programmes (3 to less than 5 years). The light bars represent long first degree programmes (5 years or more).

Source: Table A3.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Figures are calculated as a ratio of graduates to total population at the typical age of graduation (Appendix 1). For Italy, the year of reference is 2001.

3.33 Graduation rates are a function of the entry and completion rates of students. Tertiary level completion rates can be useful indicators of the internal efficiency of tertiary education systems. Specific reasons for leaving before graduation vary: students may realise that they have chosen the wrong subject or educational programme; they may fail to meet the standards set by their educational institution; their personal circumstances may change; they may leave for financial reasons; or they may find attractive employment before completion.[21]

3.34 **Figure 39** shows that, in 2000, tertiary-type A completion rates differed widely across the countries examined, ranging from 42 per cent in Italy to 94 per cent in Japan, with an eight-country average of 66 per cent. The United Kingdom had a completion rate of 83 per cent.

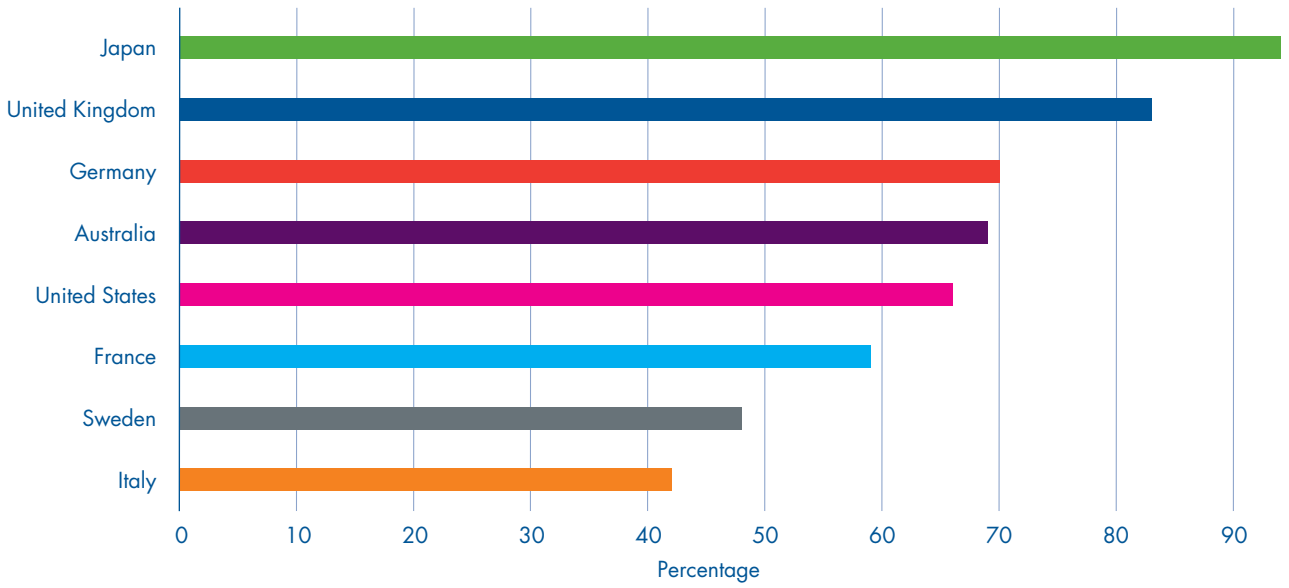
3.35 In 2003, the eight-country average for the proportion of the people obtaining an advanced research qualification, such as a PhD was 1.5 per cent **(Figure 40)**. For the United Kingdom, the proprotion was 1.8 per cent. No recent data is available for second degrees, such as master's degrees. However, in 1999 on average 7.0 per cent of the countries' population at the typical age of graduation completed a second tertiary-type A programme, and in the United Kingdom this proportion was 12.7 per cent.

Graduates by field of study

3.36 In 2003, the nine-country average for the proportion of numerate degrees was 26 per cent of tertiary-type A and advanced research qualifications awarded **(Figure 41 on page 42)**. For individual countries, the percentage ranged from 32.9 per cent in Germany to 17.4 per cent in the United States. In the United Kingdom, it was 28.8 per cent.

21 *Improving student achievement in English higher education*, 2001–02 (HC 639) and *Improving student achievement and widening participation in higher education in England*, 58th report of the Committee of Public Accounts, 2001–02 (HC 588).

39 Completion rates in tertiary-type A education (2000)

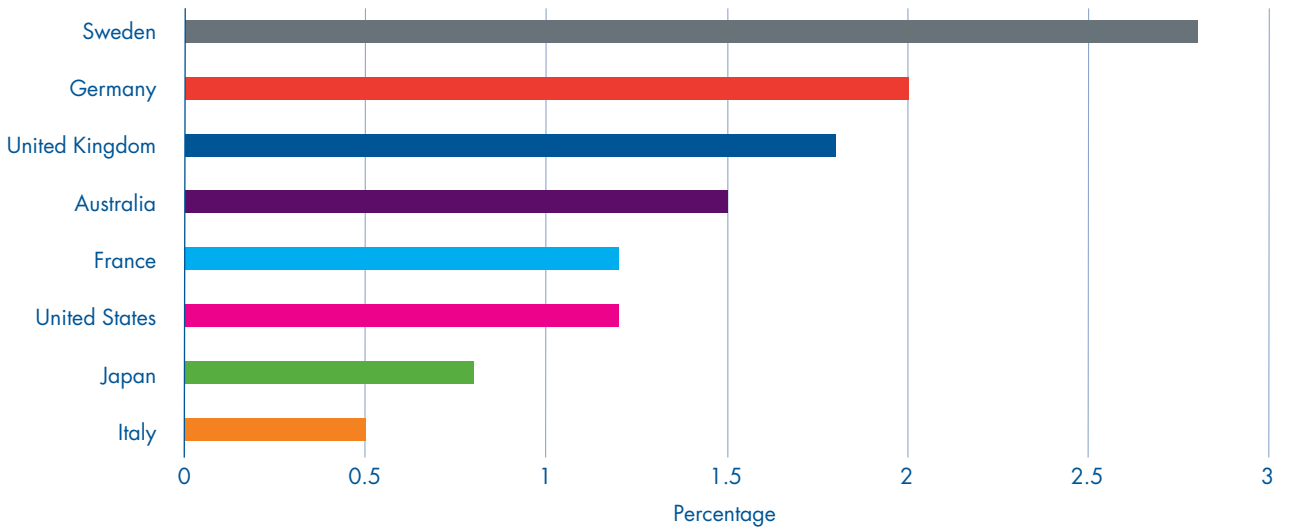


Source: Table A3.4 (web only), Education at a Glance: OECD Indicators 2005, OECD

NOTE

Completion rates are calculated by taking the number of graduates divided by the number of new entrants in the typical year of entrance.

40 Proportion of population graduating from doctoral programmes (2003)



Source: Table A3.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Graduation rates for most countries are calculated in a way that allows for the age profile of the population. The calculations for the United States, Japan, Italy and France make no allowance for the age profile. Year for reference for Italy is 2002.

Adult numeracy and literacy

3.37 The basic skills of literacy and numeracy are important for the effective functioning of labour markets and for the economic success and social advancement of both individuals and societies. Between 1994 and 1998, the International Adult Literacy Survey (IALS) made a standard literacy assessment of twelve countries, including Britain. It examined three literacy domains.

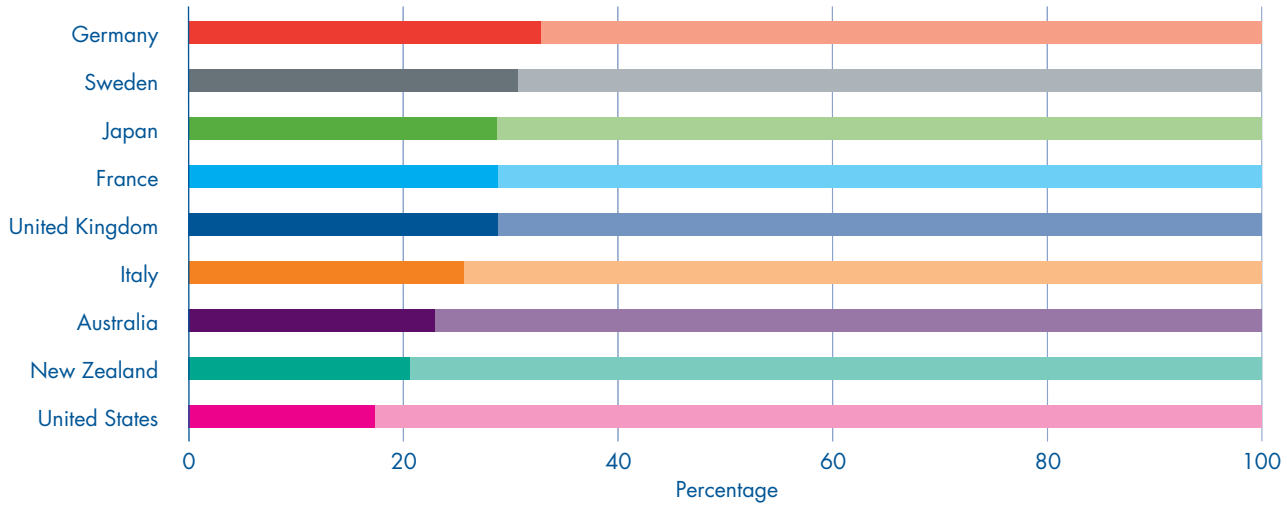
- **Prose literacy** – the knowledge and skills needed to understand and use information from texts, including editorials, news stories, poems and fiction.
- **Document literacy** – the knowledge and skills required to locate and use information contained in various formats, including job applications, transport schedules, maps, tables and graphics.
- **Quantitative literacy (numeracy)** – the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed material, such as balancing a cheque book, or determining the amount of interest on a loan from an advertisement.

3.38 For each domain, literacy proficiency was measured on a scale that was divided into five broad literacy levels.

- **Level 1** indicates people with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to give a child from information printed on the package.
- **Level 2** indicates people who can deal only with material that is simple, clearly laid out, and in which the tasks involved are not too complex. It denotes a weak level of skill, but more hidden than level 1. It identifies people who can read, but test poorly. They may have developed coping skills to manage everyday literacy demands, but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.
- **Level 3** is considered a suitable minimum for coping with demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.

41 Tertiary graduates by field of study (2003)

Graduates with tertiary-type A and advanced research qualifications.



The dark bars represent degrees with a high numerate content. The light bars represent other degrees.

Source: Table A4.1, Education at a Glance: OECD Indicators 2005, OECD

NOTE

Degrees classified as having a high numerate content are life sciences, agricultural mathematics, computer science, engineering, manufacturing and construction. The classification is dictated by grouping of degrees. For example, in the data used, geography is part of the humanities and is therefore not classified as having a high numerate content. For Italy, the year of reference is 2002.

- **Levels 4 and 5** describe respondents who demonstrate command of higher-order information processing skills.

3.39 Though many countries have problems with poor literacy and numeracy, the United Kingdom has more severe problems than most **(Figuress 42 below and Figure 43 overleaf)**. Of the seven comparator countries in the survey, the United Kingdom had the highest proportion of people with literacy and numeracy skills at the lowest level, level 1, and the two lowest levels, levels 1 and 2.

3.40 In March 2001, the Government launched a national strategy, Skills for Life, for improving adult literacy and numeracy. The 2000 Spending Review Public Service Agreement target committed the Department for Education and Skills to improving the basic skill levels of 750,000 adults by 2004, and the Department achieved this first milestone. The strategy has an ambitious target that, by 2010, 2.25 million adults should have improved their levels of basic skills since the launch of Skills for Life in 2001, with a milestone of 1.5 million by 2007.[22]

Educational impacts

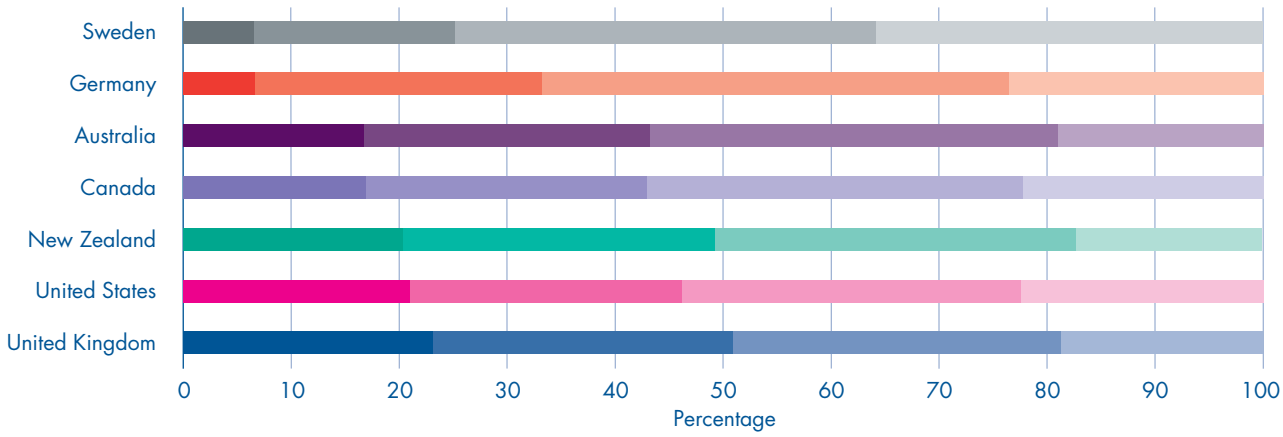
Relative earnings of the population

3.41 One way in which markets provide people incentives to develop and maintain appropriate levels of skill is through earnings differentials, in particular through enhanced earnings from additional education. Such differentials are an indicator of the financial incentives in a country for an individual to invest in further education. The pursuit of higher levels of education is also viewed as an investment by society in human capital.

3.42 **Figure 44 overleaf** illustrates the link between higher levels of education and increased earnings. In all comparator countries, graduates of tertiary level education earned on average substantially more than graduates of secondary education and below. The tertiary earnings premium, relative to upper secondary education, ranged from 28 per cent in New Zealand, to 83 per cent in the United States, with a nine-country average of 48 per cent. In the United Kingdom, tertiary graduates earned 62 per cent more than upper secondary graduates. Earnings differentials between upper secondary and lower secondary and below are less pronounced. The earnings deficit, relative to upper secondary education, ranged from 8 per cent in Sweden to 31 per cent in the United Kingdom, with a nine-country average of 21 per cent.

42 Adult literacy levels

Percentage of population aged 16 to 65 at each literacy level.



The darkest bars represent Level 1. The dark bars represent Level 2. The lighter bars represent Level 3. The lightest bars represent Level 4/5.

Source: International Adult Literacy Survey database, 1998

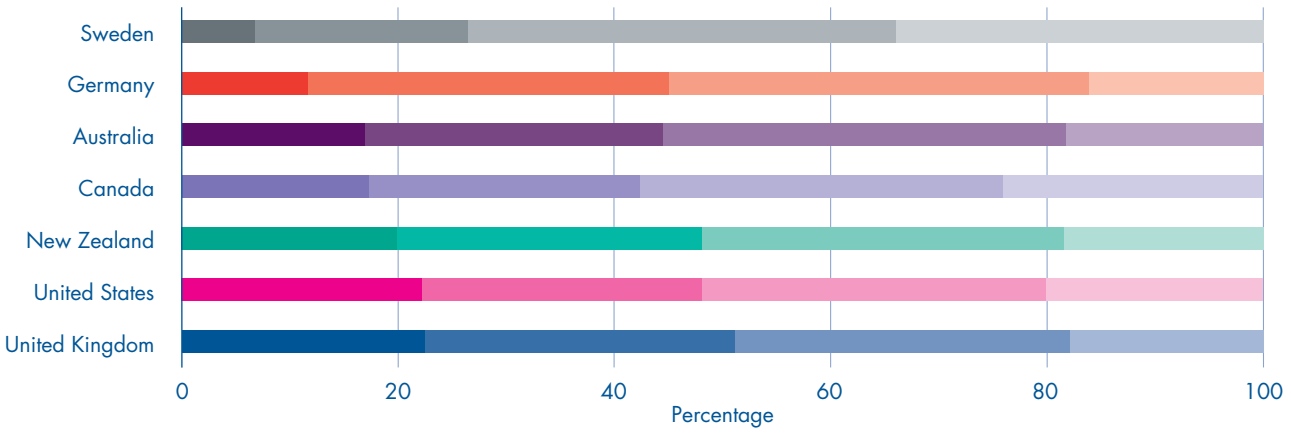
NOTE

Literacy results combine prose and document literacy.

22 *Skills for life: Improving adult literacy and numeracy*, HC 20, 2004–05.

43 Adult numeracy levels

Percentage of population aged 16 to 65 at each literacy level.

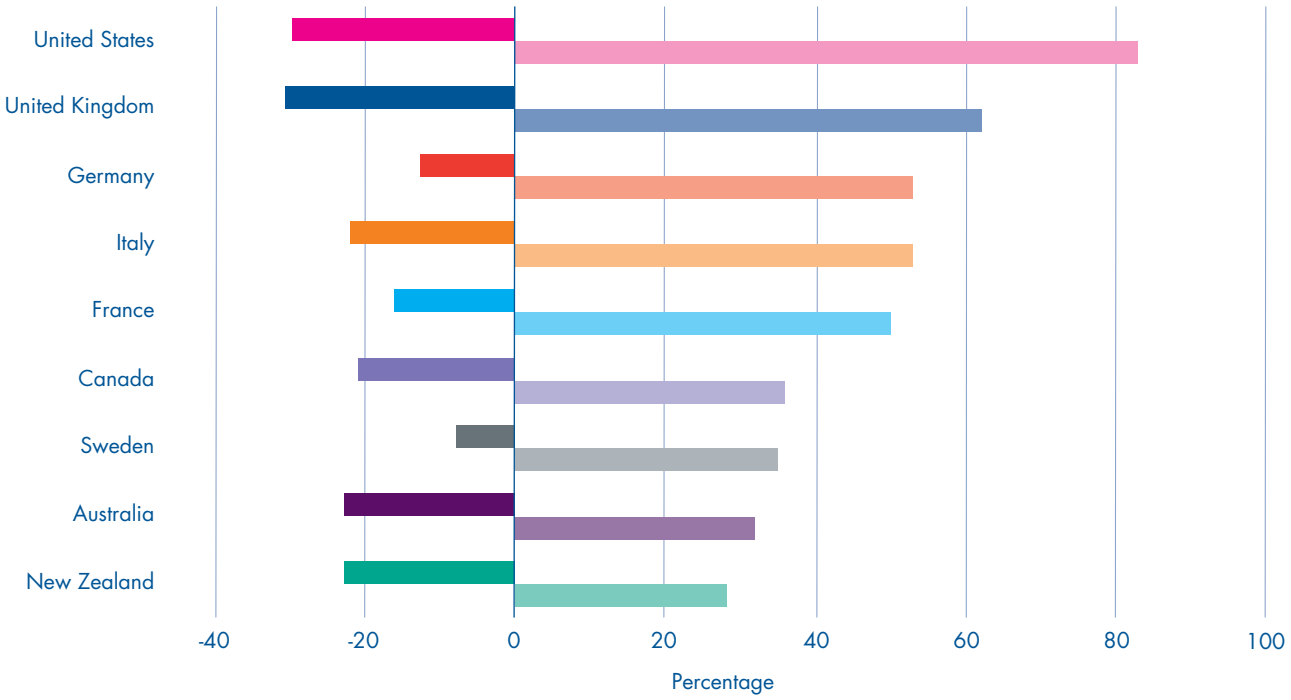


The darkest bars represent Level 1. The dark bars represent Level 2. The lighter bars represent Level 3. The lightest bars represent Level 4/5.

Source: International Adult Literacy Survey database, 1998

44 Relative earnings from employment (2003)

Earnings by level of educational attainment, relative to upper secondary level of education.



The dark bars represent below upper secondary education. The light bars represent tertiary education.

Source: Table A9.1 Education at a Glance: OECD Indicators 2005, OECD

NOTE

For Australia the year of reference is 2001. France, Canada and Italy the year of reference is 2002. For all other countries the year of reference is 2003.

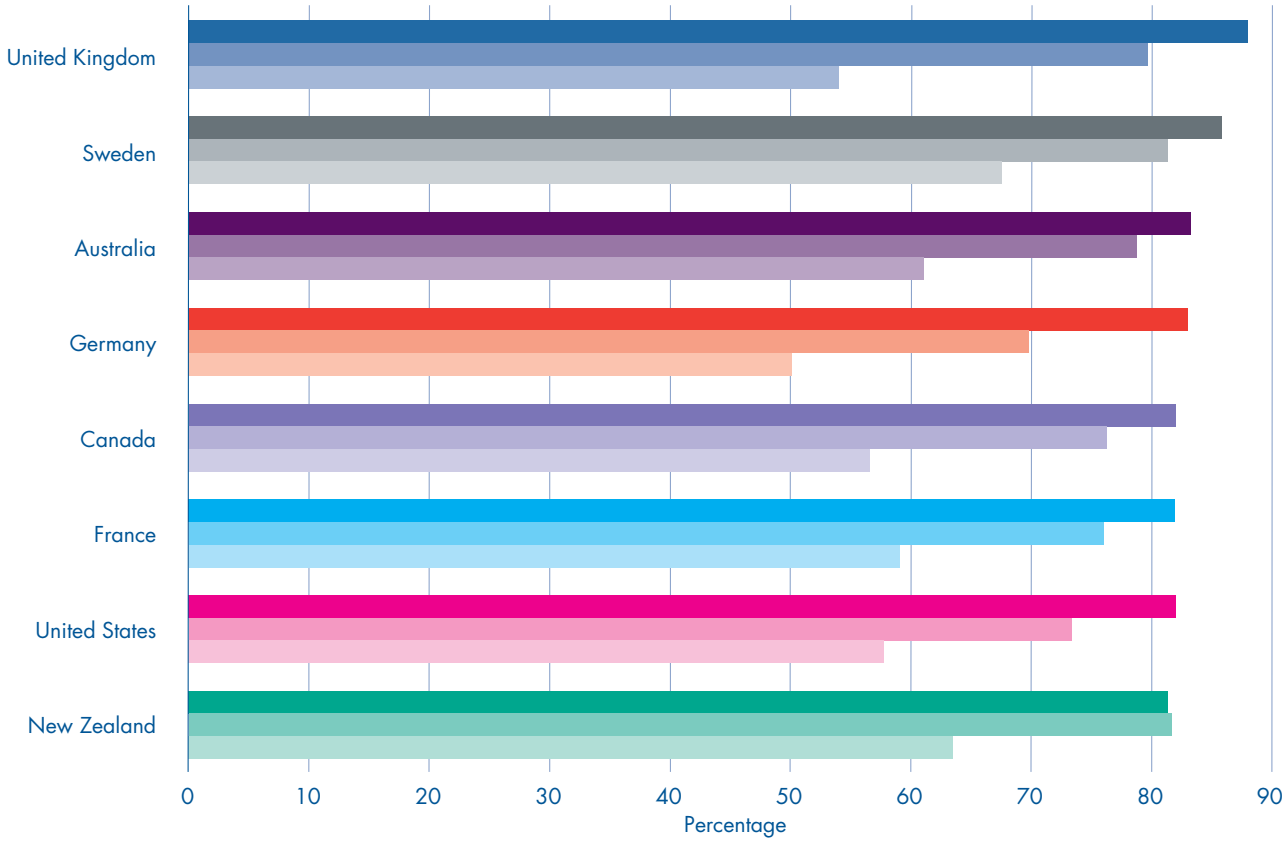
3.43 Gender differences in earnings reflect the general trend of females gaining a lower rate of return on education. For all comparator countries where data was available, females earned less than males at every level of educational attainment. In the United Kingdom, the disadvantage for university-level educated women was close to the nine-country average of 64 per cent. Females aged 30 to 44 who had attained tertiary level education earned the closest to their male counterparts. In contrast, females with below secondary educational attainment earned only 47 per cent of the equivalent male annual earnings, well below the nine-country average of 61 per cent. The gap in earnings between males and females may be explained in part by different choices of career and occupation, differences in the amount of time spent in the labour force, and the relatively high incidence of part-time work among females.

Educational attainment and labour force participation

3.44 Countries are dependent on maintaining a labour force with higher skill levels in order to further their economic development. As levels of educational attainment rise, so does labour force participation. In 2003, in the United Kingdom, 54 per cent of 25 to 64-year-olds with below upper secondary education were in employment **(Figure 45)**. For people who had completed upper secondary and post-secondary non-tertiary education 80 per cent were in employment, and 88 per cent who had completed tertiary education were in employment. The corresponding ten-country averages were 59, 77 and 83 per cent respectively.

45 Educational attainment and labour force participation (2003)

Number of 25 to 64-year-olds in employment as a percentage of the population aged 25 to 64, by level of educational attainment.



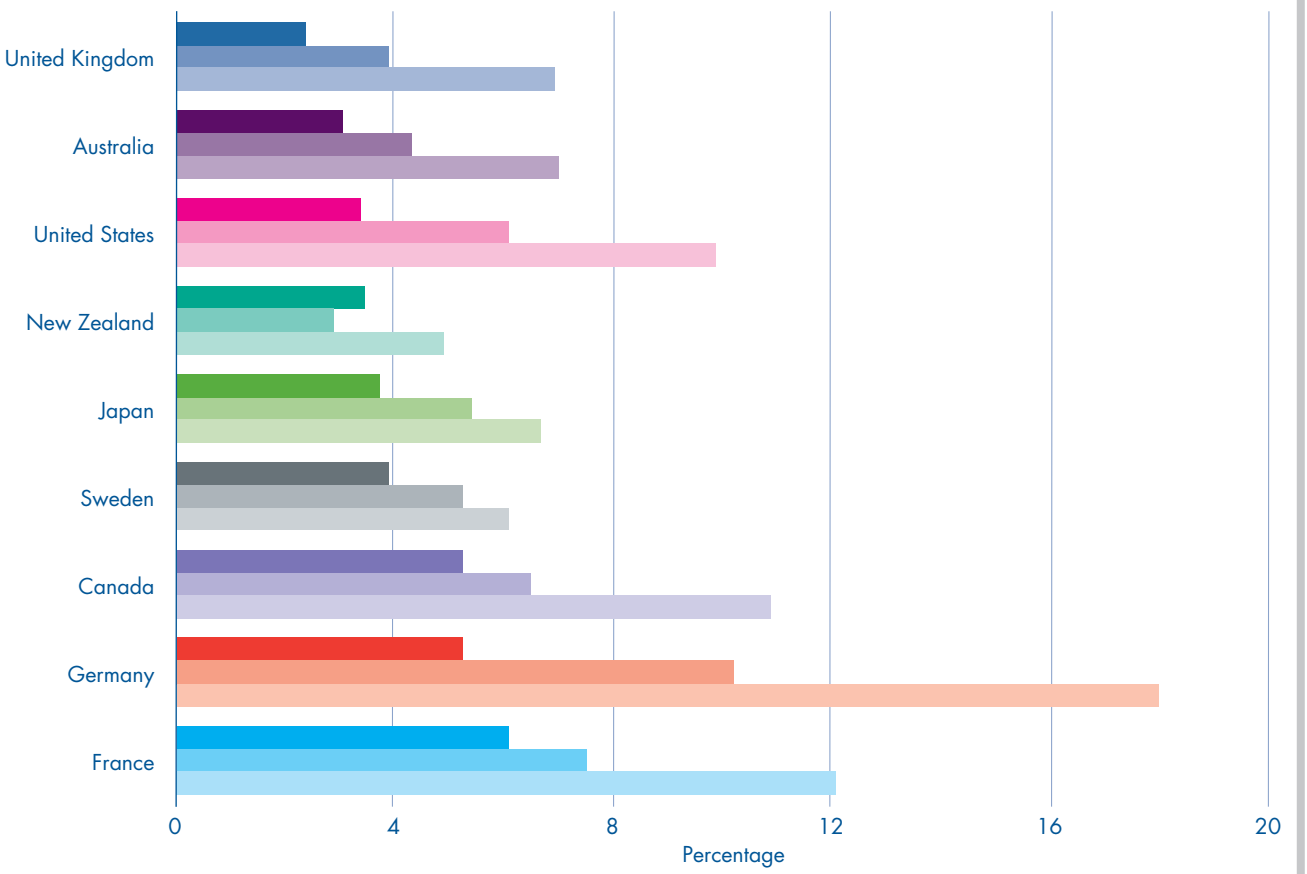
The darkest bars represent people with tertiary education. The lighter bars represent people with upper secondary and post-secondary non-tertiary education. The lightest bars represent people who have not completed upper secondary education.

Source: Table A8.3a, Education at a Glance: OECD Indicators 2005, OECD

3.45 As levels of educational attainment rise, unemployment rates reduce **(Figure 46)**. In 2003, the unemployment rate for those who had completed tertiary education in the United Kingdom was 2.4 per cent; for those who had completed secondary and post-secondary non-tertiary education it was 3.9 per cent and for those below upper secondary education it was 6.9 per cent. The corresponding nine-country averages were 4.0, 6.9 and 9.2 per cent respectively.

46 Educational attainment and unemployment rates (2003)

Number of 25 to 64-year-olds in unemployment as a percentage of the population aged 25 to 64, by level of educational attainment.



The darkest bars represent people with tertiary education. The lighter bars represent people with upper secondary and post-secondary non-tertiary education. The lightest bars represent people who have not completed upper secondary education.

Source: Table A8.3a, Education at a Glance: OECD Indicators 2005, OECD

NOTE

The unemployed are defined as individuals who are without work, actively seeking employment and currently available to start work.

APPENDIX ONE

Compulsory education, typical graduation ages, length of school year and annual teaching hours

Country	Start of compulsory education	Ending age of compulsory education	Typical graduation ages		
			Upper secondary	Tertiary-type B	Tertiary-type A
Australia	5	15	–	–	20-22
Canada	6	16	–	–	–
France	6	16	18-19	20-21	21-22
Germany	6	18	19	21	25
Italy	6	14	19	22-23	22
Japan	6	15	18	20	22
New Zealand	6	16	–	20	–
Sweden	7	16	19	22-23	23-25
United Kingdom	5	16	18	20	21
United States	6	17	–	–	–

Source: Tables C1.2 and X1.1a – X1.1c, Education at a Glance: OECD Indicators 2005, OECD

Notes: Tertiary-type A graduation ages are for medium (3 to 5 years) duration programmes.

Country	School year (days)	Annual teaching hours	
		Primary	Lower secondary
Australia	197	885	825
Canada	–	–	–
France	180	846	842
Germany	188-208	698	875-987
Italy	200	891	891
Japan	193	635	557
New Zealand	194	985	968
Sweden	178	–	–
England	190	798 (5 to 7) 893 (8 to 11)	912
Scotland	190	950	1045
United States	180	1139	1127

Source: Table D6.1 and D6.2, Education at a Glance: OECD Indicators 2003, OECD and Eurydice summary sheets on education systems in Europe

Note: Annual teaching hours for England are minimum recommended hours.

APPENDIX TWO

Education delivery systems

Australia

Administration

1 Each State in Australia has responsibility for its own education system, including curricula, although the Department of Education, Science and Training (formerly known as the Federal Department for Education, Training and Youth Affairs) is responsible for a national education policy and ensures consistency and standards are maintained though all the states and territories. The federal government provides substantial Australia-wide funding for school education. In 2002, public funding accounted for 74.2 per cent of expenditure on educational institutions.

2 Consultation between the federal government and the states occurs through the Ministerial Council on Education, Employment, Training and Youth Affairs. They produce an annual report, the National Report on Schooling in Australia, which focuses on student outcomes and school performance. The Australian Universities Quality Agency promotes, audits and reports on quality assurance in Australian higher education and the National Training Quality Council monitors the national vocational education and training system.

Pre-primary education

3 Pre-primary education is not compulsory in Australia. In most states and territories schools provide one year of pre-primary education and one year of part-time pre-school before the pre-primary year. Pre-school programmes are provided by public and private institutions and parental fees are subsidised by Child Care Benefit.

Compulsory education (primary and lower secondary)

4 Primary and secondary school teachers are expected to implement the curriculum. They may be expected to develop state or territory curriculum statements. Within each state and territory, Ministers, departments, statutory authorities and individual schools determine policies and practices in such matters as curriculum, and there is some variation between states and territories in the degree to which the curriculum is prescribed centrally. Compulsory education in public institutions is free in most states. In 2003, 28.3 per cent of primary and 34.3 per cent of lower secondary students attended government-dependent private institutions.

Upper secondary and post-secondary education

5 Senior secondary education offers several types of programme which prepare students either for future study (tertiary entrance programmes), employment (vocational education and training programmes) or adult life (recreational and personal development courses). Most senior secondary educational institutions charge fees or have contribution schemes. In 2003, 26.7 per cent of upper secondary students attended government-dependent private institutions.

Higher education

6 There are two main types of higher education programme: vocational education and training, offered by Technical and Further Education institutions and industry; and academic programmes offered by universities and other higher education institutions. Higher education students are subject to a range of fees and charges. In 2002, public sources accounted for 48.7 per cent and private sources 51.3 per cent of expenditure on tertiary educational institutions.

Teachers

7 Each state and territory has its own requirements and procedures for the recognition and recruitment of teachers. Teachers, however, must successfully complete four years of tertiary education, which include at least one year of full-time teacher education. In Western Australia, for example, a teacher can qualify in one of two ways, by completing a four-year Bachelor of Education degree, or by completing a tertiary degree (e.g. Bachelor of Science, Bachelor of Arts) and a one-year Graduate Diploma of Education. States must prepare public "report cards" on teacher quality, including the percentage of teachers who are teaching under sub-standard licences, and the quality of teacher education programmes.

Canada

Administration

8 Within the Canadian federal system of shared powers, responsibility for education rests with the ten provinces and three territories. Each has a ministry or department, which develops its own educational structures and institutions. The provinces and territories co-operate on activities at the primary, secondary and post-secondary levels via the Council of Ministers of Education. Each province or territory has its own quality assurance arrangements and teacher evaluation policies. The federal government has responsibilities for economic planning and human resource development. In 2001, public funding accounted for 78.2 per cent of expenditure on educational institutions.

Pre-primary education

9 Pre-school programmes or kindergartens, which are operated by local education authorities, are free of charge. In some provinces it is mandatory for children to attend kindergarten and for others it is not. Children may attend kindergarten for one or two years at the age of four or five.

Compulsory education (primary and lower secondary)

10 Curricula are either developed centrally by the provincial ministry or jointly with local school boards. There is neither a national curriculum nor national standards for education. Under provincial jurisdiction, individual schools are operated and administered by local boards of education. Most secondary schools offer a mix of academic and vocational courses, although a few offer only academic or vocational courses. Compulsory education in public institutions is free of charge. In 2001, 1.4 per cent of primary and 1.1 per cent of lower secondary students attended government-dependent private institutions and 5.1 per cent of primary and 6.7 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

11 Most secondary schools also provide post-compulsory education for students aged 16 to 18. Colleges, known as Cépags, offer both a general programme that leads to university admission and a professional programme that prepares students for the labour force. College students are generally charged tuition fees, whereas secondary school students are not. In 2001, 0.7 per cent of upper secondary students attended government-dependent private institutions and 4.5 per cent attended independent private institutions.

Higher education

12 Higher education is provided by universities and university colleges, which offer a range of degree courses, and community colleges which offer vocationally oriented or technical programmes and sometimes academic university transfer programmes. Universities are largely publicly funded and charge tuition fees. In 2001, public sources accounted for 58.6 per cent, and private sources accounted for 41.4 per cent of expenditure on tertiary educational institutions.

Teachers

13 In most Canadian jurisdictions, becoming a teacher requires the completion of a three- or four-year degree from an accredited university and at least one year of teacher training, or its equivalent. The structure of teacher education programmes may differ by province; some universities include special programmes or certificates as part of their required curriculum.

England, Wales and Northern Ireland

Administration

14 The responsibility for educational services lies with the Department for Education and Skills in England, with the National Assembly for Wales Training and Education Department, and in Northern Ireland with the Department for Education and Department of Employment and Learning. In England and Wales, the planning and funding of further education is the responsibility of non-departmental public bodies (the Learning and Skills Council and the National Council for Education and Training), and funding higher education is the responsibility of the Higher Education Funding Council for England and the Higher Education Funding Council for Wales. In Northern Ireland, the Department of Employment and Learning is responsible for both areas. In 2002, public funding accounted for 84.4 per cent of expenditure on educational institutions in the United Kingdom.

15 The inspection of schools in England is the responsibility of a non-ministerial government department, the Office for Standards in Education. A non-departmental public body, the Adult Learning Inspectorate, is currently responsible for the inspection of further education institutions [planned merged Ofsted]. In Wales, a single body (Estyn) inspects pre-school, schools and further education institutions, while in Northern Ireland, the Education and Training Inspectorate within the Department of Education, is responsible for inspecting schools and further education institutions.

Pre-primary education

16 For children aged from three months to three years, provision is largely in the private and voluntary sectors, and parents pay fees. For children aged from three to five, the government is expanding and developing publicly funded early years education and childcare in co-operation with private and voluntary sectors. In England and Wales, free part-time nursery provision is now available to all three- and four-year-olds whose parents request it. Northern Ireland is also working towards provision of a full year of pre-school for every child whose parents want it.

Compulsory education (primary and lower secondary)

17 Primary schools and most secondary schools accept pupils without regard to ability. In Northern Ireland, and in some areas of England, there are selective secondary schools. Many secondary schools also provide education for post-compulsory students aged 16 to 18. Compulsory education in publicly funded institutions is free of charge. In 2003, 0.3 per cent of the United Kingdom's lower secondary students attended government-dependent private institutions. In 2003, 4.9 per cent of primary and 6.4 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

18 There are three types of upper secondary education; secondary schools and sixth form colleges offer largely general education; further education colleges offer vocational education and many also offer general education; tertiary colleges offer both general and vocational education. Upper secondary education in publicly funded institutions is free of charge. In 2003, 70.9 per cent of United Kingdom's upper secondary students attended government-dependent private institutions, such as sixth-form colleges, and 2.7 per cent attended independent private institutions.

Higher education

19 Higher education institutions include universities, higher education colleges and a small number of university colleges. Universities charge tuition fees. In 2002, public sources accounted for 72.0 per cent, and private sources accounted for 28.0 per cent, of expenditure on tertiary educational institutions in the United Kingdom.

Teachers

20 School teachers are employed either by the local authority or by the individual institution, depending on the type of school. Initial teacher training generally involves a four-year Bachelor of Education degree course or a bachelor's degree followed by a one-year postgraduate certificate in education.

France

Administration

21 The State assumes overall responsibility for education policy. The Ministry of Youth, Education and Research lays down guidelines for teaching, draws up the school curriculum and administers staff recruitment, training and management. To implement policy, the Ministry has 30 external administrative departments, each with jurisdiction over a particular geographical area. In 2002, public funding accounted for 92.1 per cent of expenditure on educational institutions.

22 Several inspectorates supervise the system. Two general inspectorates are entrusted with broad responsibilities for evaluation. In addition, national education inspectors visit primary schools and monitor the performance of their teachers, while regional inspectors of teaching activity are responsible for marking and assessing secondary school teachers.

Pre-primary education

23 Pre-primary education, for pupils aged between two and six, is optional and free of charge. Schools have a full teaching programme and their teachers belong to the same profession as teachers in primary schools.

Compulsory education (primary and lower secondary)

24 The Ministry of Education establishes educational curricula and basic guidelines. Teachers choose their own teaching methods and textbooks. Pupils normally complete at least one year of upper secondary education to comply with compulsory schooling requirements. Compulsory education in public institutions is free of charge. In 2003, 14.3 per cent of primary and 21.0 per cent of lower secondary students attended government-dependent private institutions and 0.2 per cent of primary and lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

25 There are two types of upper secondary education: general or technical; and vocational. Curricula are drawn up at the national level, with teachers choosing methods and materials. Upper secondary education is free of charge. In 2003, 29.7 per cent of upper secondary students attended government-dependent private institutions and 0.8 per cent attended independent private institutions.

Higher education

26 Higher education institutions include universities and public sector or private institutions providing vocational training. Technological, vocational and teacher training institutes may be attached to universities. Universities charge fees. In 2002, public sources accounted for 85.7 per cent, and private sources accounted for 14.3 per cent, of expenditure on tertiary educational institutions.

Teachers

27 To enter teaching students must have completed a university degree. A year's preparation is organised in university institutes for teacher training, followed by a competitive examination. Success in the examination is followed by a compulsory year of teacher training, combining theoretical work with periods of classroom practice.

Germany

Administration

28 Responsibility for the education system reflects the federal structure of the State. Educational legislation and administration are primarily the responsibility of the Länder in a system involving the Ministry of Education, the Ministry of Cultural Affairs and Science, the regional authorities and the school offices at local level. In 2002, public funding accounted for 83.3 per cent of expenditure on educational institutions.

29 The federal government has responsibilities concerning the general framework for higher education and the financial assistance for individual training, including promotion of young academic staff. School supervisory authorities in each Land are responsible for inspection and exercise academic, legal and staff supervision within the school system. Public law corporations, such as chambers of industry and commerce, supervise vocational training in the workplace.

Pre-primary education

30 Children aged three to six can attend Kindergärten, to which parents are required to contribute financially, though there are major public subsidies and other funding sources. Most Kindergärten are run by non-public bodies, such as churches and welfare associations.

Compulsory education (primary and lower secondary)

31 Parents decide the type of school attended at lower secondary level on the basis of an assessment made by the primary school. The Länder determine the curriculum, recommend teaching methods and approve textbooks. Compulsory education in public institutions is free of charge. In 2003, 2.7 per cent of primary and 7.1 per cent of lower secondary students attended private institutions (government-dependent and independent).

Upper secondary and post-secondary education

32 There are three types of education at these levels: general upper secondary, full-time vocational and a dual system of vocational training in the workplace and at school. The curriculum varies with the type of education and training. Two-thirds of all young people experience the dual system. Firms finance the training in the workplace. Upper secondary and post-secondary education is free of charge. In 2003, 7.5 per cent of upper secondary students attended private institutions (government-dependent and independent).

Higher education

33 Higher education institutions include universities and equivalent higher education institutions, colleges of art, colleges of music and universities of applied science. Access to publicly funded higher education institutions is normally free. In 2002, public sources accounted for 91.6 per cent, and private sources accounted for 8.4 per cent, of expenditure on tertiary educational institutions.

Teachers

34 Teachers are trained at universities and colleges of art and music and take a state examination, usually in two subjects and educational science. Primary school teachers are generalists and secondary teachers are subject specialists. Teachers are generally employed by the Land.

Italy

Administration

35 Overall responsibility lies with the Ministry of Education, University and Research, which is represented at local level by regional and provincial education offices. In 2002, public funding accounted for 92.6 per cent of expenditure on educational institutions. From 2000-01, all schools have autonomy in the fields of administration, organisation, pedagogy, research, experimentation and development. At the higher education level, universities are private sector institutions, promoted and managed by bodies and private citizens. A technical inspectorate, responsible to the Ministry, supervises the educational system as a whole.

Pre-primary education

36 Daycare centres or crèches are available for children up to the age of three. From then on, children can attend nursery school, which is the first stage of the school system. Nursery schools are free of charge.

Compulsory education (primary and lower secondary)

37 The general curriculum is nationally determined and adapted to local needs by each school. Compulsory education in public institutions is free of charge, but in lower secondary school pupils have to buy their own textbooks. In 2003, 6.8 per cent of primary and 3.4 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

38 There are four types of education: classical, artistic, technical and vocational. Fees are payable but students in state schools may be exempt or receive financial support depending on their family income. Central government determines basic curricula for each type of education and gives guidance on teaching methods. In 2003, 0.7 per cent of upper secondary students attended government-dependent institutions and 5.4 per cent attended independent private institutions.

Higher education

39 There are two main types of higher education, university and non-university. Universities offer a range of degree courses and diplomas, some of which qualify students for various professions. Non-university higher education is offered by various institutions, each of which has its own particular structure, regulations and organisation. Most universities charge enrolment fees and some also charge special fees. In 2002, public sources accounted for 78.6 per cent, and private sources accounted for 21.4 per cent, of expenditure on tertiary educational institutions.

Teachers

40 Teachers in nursery and primary school must obtain the degree diploma di laurea. A two-year post-graduate course is necessary for secondary school teachers. Primary teachers are generalists and secondary teachers are subject specialists.

Japan

Administration

41 Overall responsibility lies with the Ministry of Education, Culture, Sports, Science and Technology. The Ministry of Education closely supervises curriculum and textbooks, and classes with much the same content are taught throughout the country. In cities, towns and villages, boards of education administer local education, under the guidance of regional boards of education. These regional boards report to the Minister of Education. In 2002, public funding accounted for 74.5 per cent of expenditure on educational institutions.

42 Japan supports a wide-range of academic institutions outside of the school system. This network consists of home-tutors, correspondence courses and exam preparation schools, and is collectively referred to as juku by Japanese parents and students.

Pre-primary education

43 Education prior to primary education is provided at kindergartens and day-care centres. Public and private day-care centres take children from less than a year old up to five years old. Fees are charged.

Compulsory education (primary and lower secondary)

44 Compulsory education comprises attendance at elementary and lower secondary or secondary school. The Ministry of Education defines the elementary and junior high school curricula, although teachers have a degree of autonomy at high school. School fees are not charged in public institutions, but there is a charge for textbooks. In 2003, 0.9 per cent of primary and 6 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

45 Upper secondary schools are divided into three types: general; vocational; and combined comprehensive. The first year of senior high school is devoted to general education for all students. Other institutions that offer secondary and post-secondary education include colleges of technology, specialised training colleges and schools for the blind, deaf and people with other disabilities. Fees are payable for post-secondary education. In 2003, 30.2 per cent of upper secondary students attended independent private institutions.

Higher education

46 Higher education is provided by colleges and universities, junior colleges, and special training schools. Colleges and universities provide a range of four-year courses. Junior colleges, the majority of which are private institutions, generally offer two-year vocational courses. Higher education institutions charge tuition fees. In 2002, public sources accounted for 41.5 per cent, and private sources accounted for 58.5 per cent of expenditure on tertiary educational institutions.

Teachers

47 Teachers are hired by the local or regional boards and are rotated through the schools on a pre-determined schedule. Teachers must obtain a university degree. Prospective teachers must also pass a highly competitive prefectural qualifying exam. Once hired, new teachers are required to undergo various in-service training sessions during their first years in the school system.

New Zealand

Administration

48 The Ministry of Education is responsible for the regulation and funding of education. A board of trustees, comprising elected parent and community volunteers, the school principal and a staff representative governs each state school. The Ministry has local offices, which support school boards. The Education Review Office, a government department, is responsible for evaluating all New Zealand schools and early childhood services. In 2002, public funding accounted for 82.5 per cent of expenditure on educational institutions and private sources accounted for 17.5 per cent of expenditure.

Pre-primary education

49 Pre-primary education is available to children under five years of age through a wide range of services. Early childhood services include kindergartens, childcare centres, playcentres, and home-based care, most of which are administered by voluntary agencies with government assistance. Childcare centres and playcentres charge a fee, whereas kindergartens ask parents to help out at some sessions and with fundraising or committee work.

Compulsory education (primary and lower secondary)

50 Compulsory education is divided into primary, intermediate and secondary schooling. The Ministry of Education decides the scope of the curriculum. It has responsibility for setting national curriculum objectives within the national guidelines. Schools and teachers make the decisions as to what will be learned and taught in order to meet these objectives. Compulsory education in public institutions is free of charge. In 2003, 2.1 per cent of primary and 4.5 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

51 Upper secondary education is provided by secondary schools, area schools and colleges. Some students transfer to colleges to complete their upper secondary education, though the colleges charge fees. Post-secondary education is provided by polytechnics that offer a range of vocational and technical training, and charge tuition fees. In 2003, 10.4 per cent of upper secondary students attended government-dependent private institutions and 5.5 per cent attended independent private institutions.

Higher education

52 Higher education is provided by universities, polytechnics and colleges of education. The universities provide a broad range of degree courses that are subject to tuition fees. The polytechnics, some of which are named institutes of technology, are state funded and provide education and training at many levels, from introductory studies to full degree programmes. Colleges of education provide specialised training for teachers. In 2002, public sources accounted for 62.5 per cent and private sources 37.5 per cent, of the expenditure on tertiary education.

Teachers

53 Initial teacher training generally involves a four-year Bachelor of Education degree course or a bachelor's degree followed by a one-year postgraduate certificate in education.

Scotland

Administration

54 The First Minister for Scotland is responsible for the overall supervision and development of educational services. Day-to-day responsibility for education is delegated to the Minister for Education and Young People and the Minster for Enterprise and Lifelong Learning, each support by a department of the Scottish Executive. Further and higher education institutions are autonomous bodies funded by the Scottish Executive through two funding councils. The First Minister is advised by Her Majesty's Inspector of Schools and the national bodies dealing with the development of the curriculum and public examinations. In 2002, public funding accounted for 84.9 per cent of expenditure on educational institutions in the United Kingdom.

Pre-primary education

55 Attendance at pre-primary level is optional. A free nursery place is available for all children whose parents want it in the two years before they are due to start primary school. Education is provided in public, private and voluntary centres.

Compulsory education

56 The curriculum is not determined by statute or regulation but by advice from the Scottish Executive Education Department in various curriculum documents. In 2001, regulations were introduced to ensure classes in the first three years will have a maximum of 30. Compulsory education in public institutions is free of charge. In 2003, 0.4 per cent of the United Kingdom's lower secondary students attended government-dependent private institutions and 4.9 per cent of the primary and 6.4 per cent of secondary students attended independent private institutions.

Upper secondary and post-secondary education

57 Secondary schools and further education colleges provide post-compulsory education. Vocational training is also offered by independent trainers and by employers in the workplace. Upper secondary education is free of charge in publicly funded institutions. In 2003, 70.4 per cent of United Kingdom's upper secondary students attended government-dependent private and 2.7 per cent attended independent private institutions.

Higher education

58 Nineteen universities and six other education institutions provide higher education. Further education colleges also offer courses at higher education level. All major higher education institutions are autonomous bodies and charge tuition fees. In 2002, public sources accounted for 72.0 per cent, and private sources accounted for 28.0 per cent, of expenditure on tertiary educational institutions in the United Kingdom.

Teachers

59 Local authorities employ schoolteachers. Initial teacher training for primary and secondary teachers involves a four-year education degree or a bachelor's degree and one-year post graduate certificate in education.

Sweden

60 The Ministry of Education and Science has overall responsibility for education and sets the framework for education at all levels but the municipalities are responsible for providing and operating schools at basic, secondary and adult education levels. Universities and university colleges are responsible for providing and operating higher education. In 2002, public funding accounted for 96.7 per cent of expenditure on educational institutions. The National Agency for Education is responsible for monitoring, evaluation and supervision of Swedish schools, while the National Agency for Higher Education is responsible for evaluation and supervision of higher education institutions.

Pre-primary education

61 The municipalities are required to provide pre-school activity for all children aged one to five whose parents work or study. This is generally provided in pre-schools, but also by childminders. Municipal pre-school activity is jointly financed by the municipal budget and parental fees, usually income-related. In 2002, a maximum childcare charge was introduced in most municipalities, and from 1 January 2003 all children should be offered a place in pre-school from the autumn term they become four years old.

Compulsory education (primary and lower secondary school)

62 Within the curricula framework, determined at national level, teachers and institutions have freedom to determine teaching methods and select teaching materials. Compulsory education in public institutions is free of charge. In 2002, 5.1 per cent of primary and 5.4 per cent of lower secondary students attended government-dependent private institutions.

Upper secondary and post-secondary education

63 Upper secondary education programmes take place in the Gymnasieskola, which is free of charge. Teachers and schools work within the nationally determined framework. In 2003, 3.4 per cent of upper secondary students attended government-dependent private institutions.

Higher education

64 Higher education is provided in universities and university colleges. It is government funded and, with a few exceptions, there are no tuition fees for Swedish or foreign students. In 2002, public sources accounted for 90 per cent, and private sources accounted for 10 per cent, of expenditure on tertiary educational institutions.

Teachers

65 To be permanently employed, a teacher must complete a study programme at a university or university college. An applicant not fulfilling this requirement can be appointed for a maximum of 12 months. In July 2001, a new integrated teacher training degree was established. The degree varies in length, from three to five and a half years of full time study, depending on the chosen area and level.

United States

Administration

66 The United States does not have a national school system. In most states, education policy and legislation is developed by the state board of education. Each state department of education, headed by the superintendent (or commissioner), is responsible for implementing policy and overseeing the state's school districts. The federal government provides guidance and funding for federal education programmes, in which both public and private schools take part, and the United States Department of Education oversees these programmes. In 2002, public funding accounted for 73.8 per cent of expenditure on educational institutions.

Pre-primary education

67 Pre-primary education is provided by public and private kindergartens, elementary schools, day care centres, child care services (including home services), and charitable organisations. Some states pay a strong central role in the selection of learning materials for their students, whereas in others decisions are left to local school officials. Fees are charged.

Compulsory education (primary and lower secondary)

68 Compulsory education comprises attendance at elementary school, middle or junior high school, and high school. States establish their own guidelines and policies for the curriculum while considerable freedom is often left to local and school authorities. Compulsory education in public institutions is free of charge. In 2003, 10.8 per cent of primary and 9.2 per cent of lower secondary students attended independent private institutions.

Upper secondary and post-secondary education

69 Vocational and technical education is offered at both the secondary and post-secondary levels. Post-secondary education providers include public community colleges and vocational/technical institutes as well as private trade and technical schools, employers, and independent training services. Community colleges offer up to two years of academic instruction beyond secondary school, and provide a transitional link between high school and university. Tuition fees are charged by upper secondary and post-secondary education institutions. In 2003, 9.1 per cent of upper secondary students attended independent private institutions.

Higher education

70 Higher education is provided by universities, four-year colleges and institutes of technology, which offer various degree programmes. Public universities, colleges and institutes usually charge tuition fees. In 2002, public sources accounted for 45.1 per cent, and private sources accounted for 54.9 per cent of expenditure on tertiary educational institutions.

Teachers

71 Every state has its own requirements for teachers. Teachers, however, must complete a bachelor's degree, an approved teacher training programme, a prescribed number of subject and education credits and supervised practice teaching.

APPENDIX THREE

Definitions

Definitions of the levels of education

1 The levels of education used in this compendium are defined with reference to the *International Standard Classification of Education* (ISCED) of 1997. These levels are based on the nature of the education rather than the age of those educated, but there is a typical age group associated with each level.

- **Early childhood education** – covers all forms of organised and sustained centre-based activities before formal primary education. In the United Kingdom it covers nursery schools and classes, playgroups, day nurseries and reception classes.
- **Primary education** – begins at age 5, 6, or 7 (Appendix 1) and lasts 4 to 6 years. Programmes at the primary level generally require no previous formal education. In the United Kingdom it covers primary school.
- **Secondary education** – comprises **lower** and **upper** secondary education. Lower secondary usually consists of 2 to 6 years of schooling and continues the basic programmes of primary education, usually in a more subject-specific manner. Upper secondary usually consists of 2 to 5 years of schooling and may prepare students for tertiary education or for entry directly into working life. The division into lower and upper levels does not match the examination structure in the United Kingdom. The Department for Education and Skills and the devolved administrations have an agreement with the OECD on definitions for statistical purposes. In the United Kingdom, lower secondary education covers secondary school up to the age of 14 years and employer supported on-the-job and off-the-job training. Upper secondary education covers GCSEs and A-levels, GNVQs, NVQ levels 1-3, traditional and modern apprenticeships, and work-based training for young people and adults.
- **Post-secondary non-tertiary education** – straddles the boundary between upper secondary and tertiary education. Students tend to be older than those enrolled at the upper secondary level. In the United Kingdom it covers only higher education access courses.
- **Tertiary education** – comprises tertiary-type A and B programmes. Tertiary-type A programmes are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as dentistry, medicine or architecture. Tertiary-type B programmes are typically shorter and focus on practical, technical or occupational skills for direct entry into the labour market. In the United Kingdom tertiary-type A education covers bachelors degrees (2-4 years and Open University), masters degrees, post-graduate diplomas and certificates, professional post-graduate on-the-job training, and doctorates. Tertiary-type B education covers nursing education, Higher National Diplomas, Higher National Certificates, and activities leading to NVQ Level 4 or 5.

Definition of educational institutions

2 An institution is classified as **public** if it is controlled and managed directly by a public education authority or agency; or by a government agency directly or by a governing body (council, committee, etc), most of whose members are either appointed by a public authority or elected by public franchise.

3 An institution is classified as **private** if it is controlled or managed by a non-governmental organisation (e.g. Church, trade union, or a business enterprise), or if its governing board consists mostly of members not selected by public agency. A distinction is made between **government-dependent** and **independent** private institutions on the basis of the extent of a private institution's dependence on funding from government sources: government-dependent private institutions generally receive more than 50 per cent of their core funding from governmental agencies.

Qualifications and levels

4 In 2000, the United Kingdom's Qualifications and Curriculum Authority established the National Qualifications Framework, which sets out the levels at which qualifications can be recognised. Its website has a searchable database, OpenQUAL (www.qca.org.uk/openquals), of all qualifications in the National Qualifications Framework. In September 2004, the Qualifications and Curriculum Authority introduced a revised framework and associated criteria. The main change was that the number of levels in the framework increased from six to nine (entry level to level 8). Entry level to level 3 have remained the same and levels 4 and 5 have been revised **(Figure 47)**.

47 Qualification levels

Qualification level		Description	Examples of qualifications[1]
Original	**Revised**		
Entry Level		**Entry level** qualifications recognise basic knowledge and skills and the ability to apply learning in everyday situations under direct guidance or supervision.	Entry level certificates in adult literacy and numeracy
Level 1		**Level 1** qualifications recognise basic knowledge and skills and the ability to apply learning with guidance or supervision. Learning at this level is about activities which mostly relate to everyday situations and may be linked to job competence.	NVQ level 1 GCSE Grades D-G
Level 2		**Level 2** qualifications recognise the ability to gain a good knowledge and understanding of a subject area of work or study, and to perform varied tasks with some guidance or supervision. Learning at this level is appropriate for many job roles.	NVQ level 2 GCSE Grades A*-C
Level 3		**Level 3** qualifications recognise the ability to gain, and where relevant apply, a range of knowledge, skills and understanding. It is appropriate for people wishing to go to university, people working independently, or in some areas supervising and training others in their field of work.	NVQ level 3 A levels
Level 4	**Level 4**	**Level 4** qualifications recognise specialist learning and involve detailed analysis of a high level of information and knowledge in an area of work or study. Learning at this level is appropriate for people working in technical and professional jobs, or managing and developing others.	Certificates of higher education
	Level 5	**Level 5** qualifications recognise the ability to increase the depth of knowledge and understanding of an area of work or study to enable the formulation of solutions and responses to complex problems and situations. Qualifications at this level are appropriate for people working as higher grade technicians, professionals or managers.	Diplomas of higher and further education, foundation degrees, higher national diplomas
	Level 6	**Level 6** qualifications recognise a specialist high level knowledge of an area of work or study to enable the use of a person's own ideas and research in response to complex problems and situations.	Bachelors degrees, graduate certificates and diplomas
Level 5	**Level 7**	**Level 7** qualifications recognise highly developed and complex levels of knowledge which enable the development of in-depth and original responses to complicated and unpredictable problems and situations.	Masters degrees, postgraduate certificates and diplomas
	Level 8	**Level 8** qualifications recognise leading experts or practitioners in a particular field.	Doctorates

NOTE

1 Examples of qualifications from the National Qualifications Framework and the Framework for Higher Education Qualifications. Further information on the Framework for Higher Education Qualifications and qualifications awarded by higher education institutions is available from the Quality Assurance Agency (www.qaa.ac.uk).