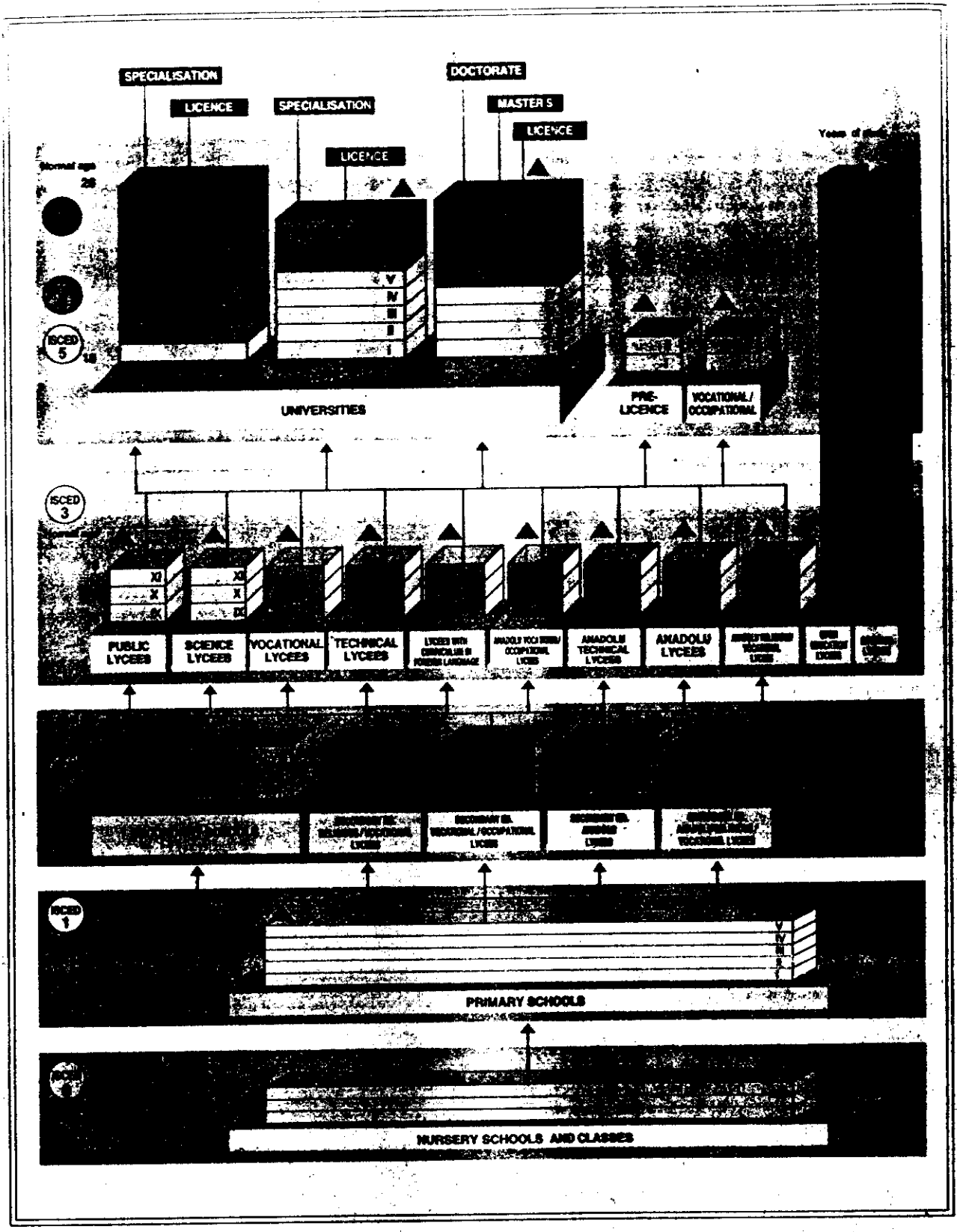
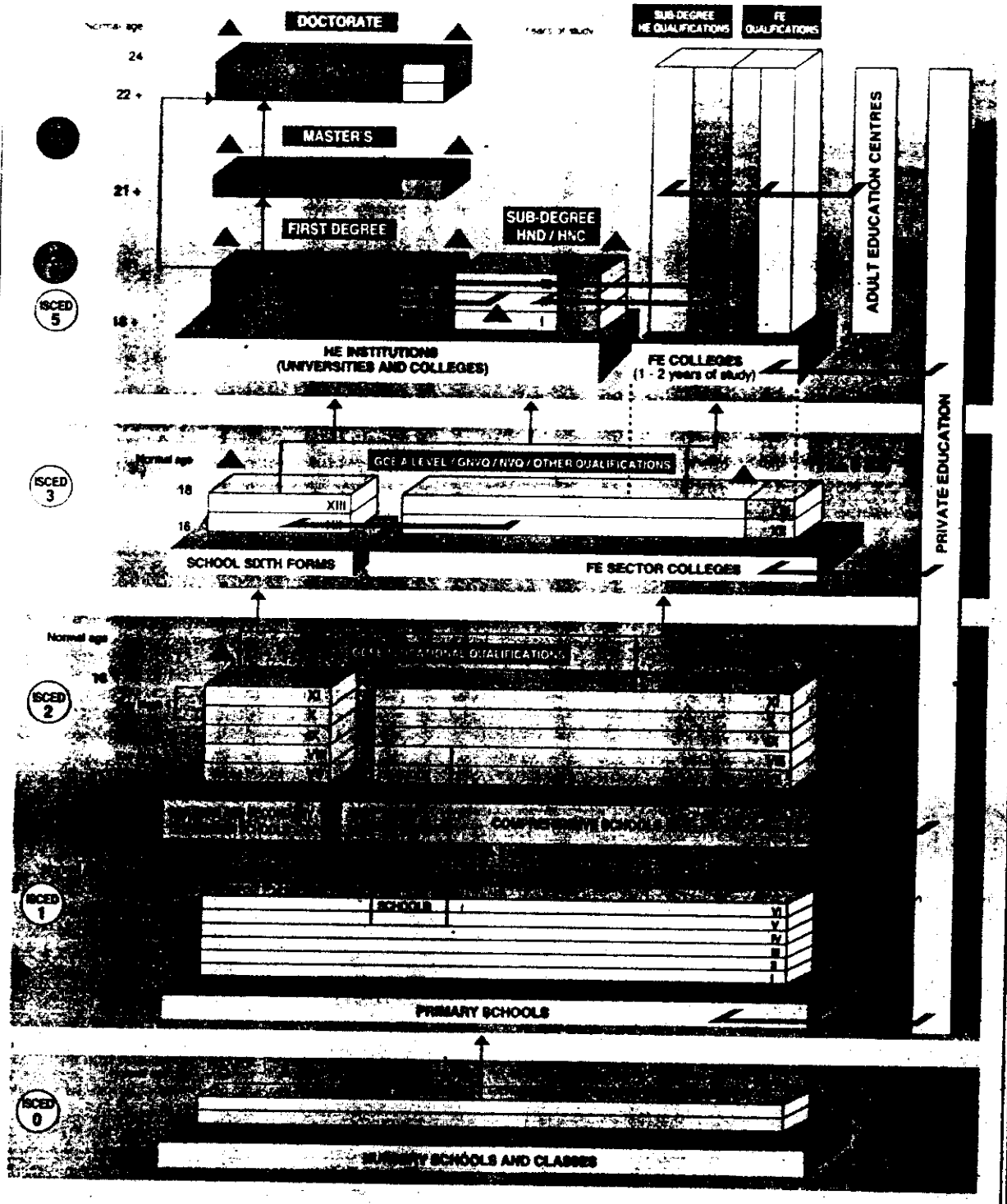

SPECIALISATION
LICENCE
SPECIALISATION
LICENCE
DOCTORATE
MASTER'S
LICENCE
ISCED 5
UNIVERSITIES
PRE-LICENCE
VOCATIONAL/ OCCUPATIONAL
ISCED 3
PUBLIC LYCEES
SCIENCE LYCEES
VOCATIONAL LYCEES
TECHNICAL LYCEES
ANADOLU TECHNICAL LYCEES
ANADOLU LYCEES
ISCED 1
PRIMARY SCHOOLS
NURSERY SCHOOLS AND CLASSES


DOCTORATE
MASTER'S
FIRST DEGREE
SUB-DEGREE HND / HNC
SUB-DEGREE HE QUALIFICATIONS
FE QUALIFICATIONS
ADULT EDUCATION CENTRES
PRIVATE EDUCATION
HE INSTITUTIONS (UNIVERSITIES AND COLLEGES)
FE COLLEGES (1 - 2 years of study)
GCE A LEVEL / GNVQ / NVQ / OTHER QUALIFICATIONS
SCHOOL SIXTH FORMS
FE SECTOR COLLEGES
PRIMARY SCHOOLS
ISCED 5
ISCED 3
ISCED 2
ISCED 1
ISCED 0

The diagram covers the academic year 1993-94. It reflects the structure of education provision in England and Wales. There are differences in Scotland and Northern Ireland.

PRE-PRIMARY EDUCATION

Over 90 per cent of 3 and 4 year-olds receive some form of pre-primary provision: 26 per cent are admitted to maintained nursery schools and classes; 24 per cent are admitted to infant classes in maintained primary schools (mainly 4 year-olds in reception classes); 4 per cent are admitted to special or independent schools, and 41 per cent attend playgroups.

COMPULSORY SCHOOLING

Children of statutory school age (5 to 16) in State schools must study the National Curriculum. It is divided into four "Key Stages" which correspond to different school year groups. Pupils start Key Stage 1 when they reach compulsory school age, that is, at age 5. Key Stages 1 and 2 constitute the primary phase, and Key Stages 3 and 4 the secondary phase.

The National Curriculum requires the regular assessment of pupils' progress. This includes the testing of English and maths at the end of Key Stage 1, and of English, maths and sciences at the end of Stages 2 and 3. The General Certificate of Secondary Education (GCSE) tests National Curriculum subjects at Key Stage 4.

Government policy promotes diversity in school provision. Although the majority of schools are comprehensive, some areas also have grammar and secondary modern schools which cater specifically for children in the higher and lower ability ranges, respectively. Similarly, in most areas a two-tier system of primary and secondary schools operates, with children transferring from one sector to the other, but some areas have a three-tier system of first, middle and upper or high schools. The development of secondary schools specialising in particular subject areas, such as technology, is encouraged. In some areas choice is enhanced by the existence of Grant-Maintained Schools and City Technology Colleges.

Standards of achievement and quality of education are monitored through the regular independent inspection of schools on a four-year cycle by the Office for Standards in Education (OFSTED).

State schools: funding and organisation

At both primary and secondary levels, there are four main categories of maintained (State) schools in England and Wales which are governed and funded in distinct ways:

County schools are funded wholly through the local education authority (LEA). The LEA delegates significant spending power and other responsibilities to the schools' governing bodies, but retains powers of oversight and funding for various services organised centrally.

Voluntary controlled schools are owned by charitable foundations, mostly the Churches. The LEA still retains most powers over the school but the governors have more discretion over the curriculum, reflecting the aims of the Church or voluntary body providing the school.

Voluntary aided schools are also owned by charitable organisations. They appoint the majority of the governing body and the governing body employs the staff of the school. The governors have discretion over certain aspects of the curriculum, in particular the teaching of religious education, and the handling of collective worship. Their recurrent funding comes from the LEA in the same way as for county schools. The LEA is responsible for part of the capital expenditure and repairs, but most is the responsibility of the schools that are eligible for grants of up to 85 per cent on this expenditure.

Grant-maintained schools are free from LEA control and funded by central government through a Funding Agency for Schools, an agency of the Department of Education. Each school controls its full budget and sets its own policies within the national framework of law applying to all maintained schools.

The proportions of these different categories of schools vary between the primary and secondary sectors and in different parts of the country.

Private schools

Parents are free to have their children educated in independent schools, in preference to State schools provided they are able to pay the fees. Independent schools range from small kindergartens to large day and boarding schools and from new experimental schools to ancient foundations.

The government has introduced an Assisted Places Scheme, which enables pupils from low-income families to attend selected independent schools by providing assistance with the cost of tuition fees and some incidental expenses. There are some 35 000 assisted places available in England and Wales.

Special education

Provision for most children with special educational needs is made in mainstream primary and secondary schools and further education colleges. Some children with special educational needs attend, for all or part of their schooling, special schools. Young people who have attended special schools may go on to colleges of further education and to higher education.

POST-COMPULSORY EDUCATION

Further education

Young people aged 16 to 19 may study in either the sixth form of a school or at a college in the Further Education sector. They are offered a framework of three kinds of qualifications: General Certificate of Education (GCE); broad-based General National Vocational Qualifications (GNVQs); and job-specific National Vocational Qualifications (NVQs). Students may study for one of these qualifications or a combination of them within the same programme.

Typically full-time courses last one or two years. Some colleges also offer sub-degree or degree level courses. These qualifications and others can also be studied by adults at colleges within the Further Education sector.

Higher education

In England, 130 universities and colleges of higher education receive public funds to provide higher education – i.e. study above Advanced level (GCE A level, the Scottish equivalent or advanced level GNVQ/NVQ level 3). In addition to 46 "old" university institutions, these include 34 "new" universities – mostly former polytechnics – and 50 colleges. Some FE colleges also provide higher education.

Universities and colleges are autonomous bodies responsible for managing their own financial, administrative and academic affairs, including curricula, admissions and examinations. Universities award their own degrees; most colleges award degrees validated by universities.

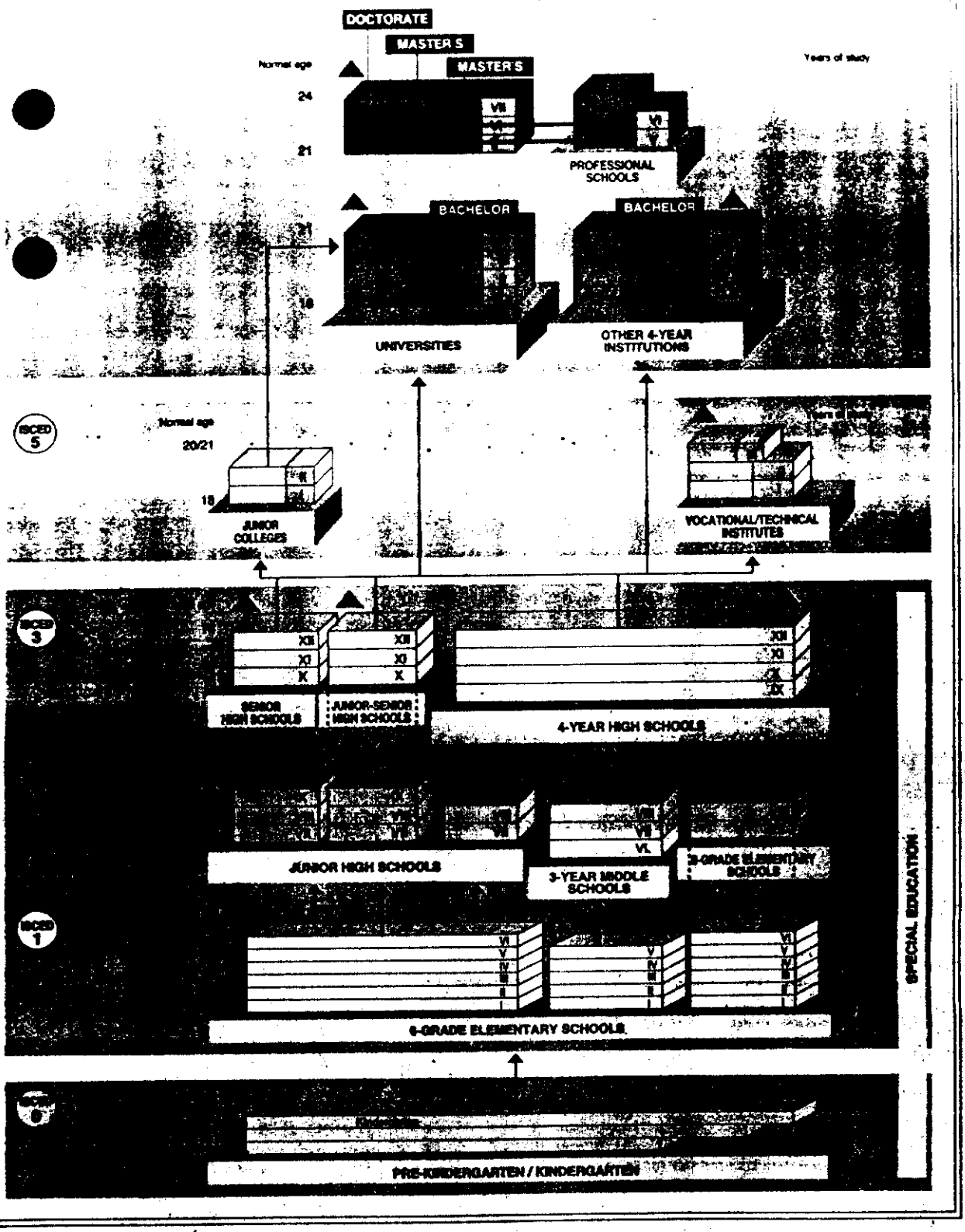
Many undergraduate courses are Bachelor degree courses requiring three or so years' full-time study. Also offered are shorter undergraduate courses leading to diplomas; post-graduate courses leading to Master's degrees; and post-graduate research courses leading to doctorates. Part-time courses, taking longer to complete, are also offered at all levels.

In addition to traditional universities and higher education colleges, the Open University offers, through the medium of distance learning, a range of higher education courses to those over 18 who might otherwise be unable to take advantage of the education system.

Education of adults

Sixty-five per cent of higher education students and 60 per cent of further education students are aged over 21. Adults may resume their education at any age, and have access to a wide range of further and higher education courses, including appropriate short courses. Access courses facilitate the admission to undergraduate courses for mature students or those with non-traditional or non-formal qualification.

Key Stages 1-4	Different levels of the National Curriculum
GCSE	General Certificate of Secondary Education
NVQ	National Vocational Qualification
GNVQ	General National Vocational Qualification
GCE A Level	General Certificate of Education Advanced Level
HND/HNC	Higher National Diploma/Higher National Certificate
FE	Further education
HE	Higher education


DOCTORATE
MASTER'S
MASTER'S
Normal age
Years of study
24
21
PROFESSIONAL SCHOOLS
BACHELOR
BACHELOR
21
18
UNIVERSITIES
OTHER 4-YEAR INSTITUTIONS
ISCED 5
Normal age
20/21
19
JUNIOR COLLEGES
VOCATIONAL/TECHNICAL INSTITUTES
ISCED 3
SENIOR HIGH SCHOOLS
JUNIOR-SENIOR HIGH SCHOOLS
4-YEAR HIGH SCHOOLS
JUNIOR HIGH SCHOOLS
3-YEAR MIDDLE SCHOOLS
6-GRADE ELEMENTARY SCHOOLS
ISCED 1
SPECIAL EDUCATION
PRE-KINDERGARTEN / KINDERGARTEN

Education is a highly decentralised activity. Since responsibility for education is not assigned to the federal government in the Constitution, the responsibility for education has been delegated to the states. Thus, the states organise and operate an education system as they deem appropriate – subject to constitutional guarantees of the rights and privileges of U.S. citizens.

State statutory provisions for establishing educational institutions and programmes vary greatly. Some are quite specific; others simply mention educational matters in broad terms. Local school districts are the next level of school governance below the state level and are normally the level at which financial decisions about specific expenditures are made. Districts generally have considerable authority to hire staff and establish curricula. School districts are subject to state regulations which cover the duration of the school year and day, graduation requirements, standards for teacher certification, school transportation, health services and fire protection. School districts vary in size from fewer than a dozen to nearly one million students.

Variations in the structure of elementary and secondary schools (ISCED 0 to 3) abound. Frequently, there are different grade patterns for schools within the same district and schools with every conceivable grade span exist within the United States. The accompanying chart provides some typical examples.

PRE-PRIMARY, PRIMARY AND SECONDARY EDUCATION

Pupils ordinarily spend from six to eight years in the elementary grades, which may be preceded by one or two years in nursery school and kindergarten. The elementary programme is frequently followed by a middle school or a junior high school programme, which generally lasts two or three years. Students then finish their compulsory schooling at the secondary or high school level, which may last from three to six years depending on the structure within their school district. The entire programme always requires 12 grades and is generally completed by age 17 or 18.

Schools are required to provide *special education* for all persons under 22 needing services. These special education services may be provided through regular schools or in special facilities.

Education in the United States is compulsory from age 6 or 7 to age 16, 17 or 18, depending on the state. Public education through completion of grade 12 is free. State legislation also provides for establishment of *private schools* at every level, subject to state licensing and accreditation requirements. At elementary and secondary level, these institutions parallel the public institutions in general structure, but more frequently have wider grade spans such as 1 to 8 and 9 to 12 or even 1 to 12. These institutions may receive limited government aid for specialised purposes, but are, for the most part, financially independent.

TERTIARY EDUCATION

High school graduates who decide to continue their education may enter a technical or vocational institution, a 2-year college, or a 4-year college or university. A 2-year college normally offers the first two years of a standard 4-year institution curriculum and a selection of terminal-vocational programmes. Academic courses completed at a 2-year college are usually transferable for credit at a 4-year college or university. A technical or vocational institution offers post-secondary technical training leading to a specific career.

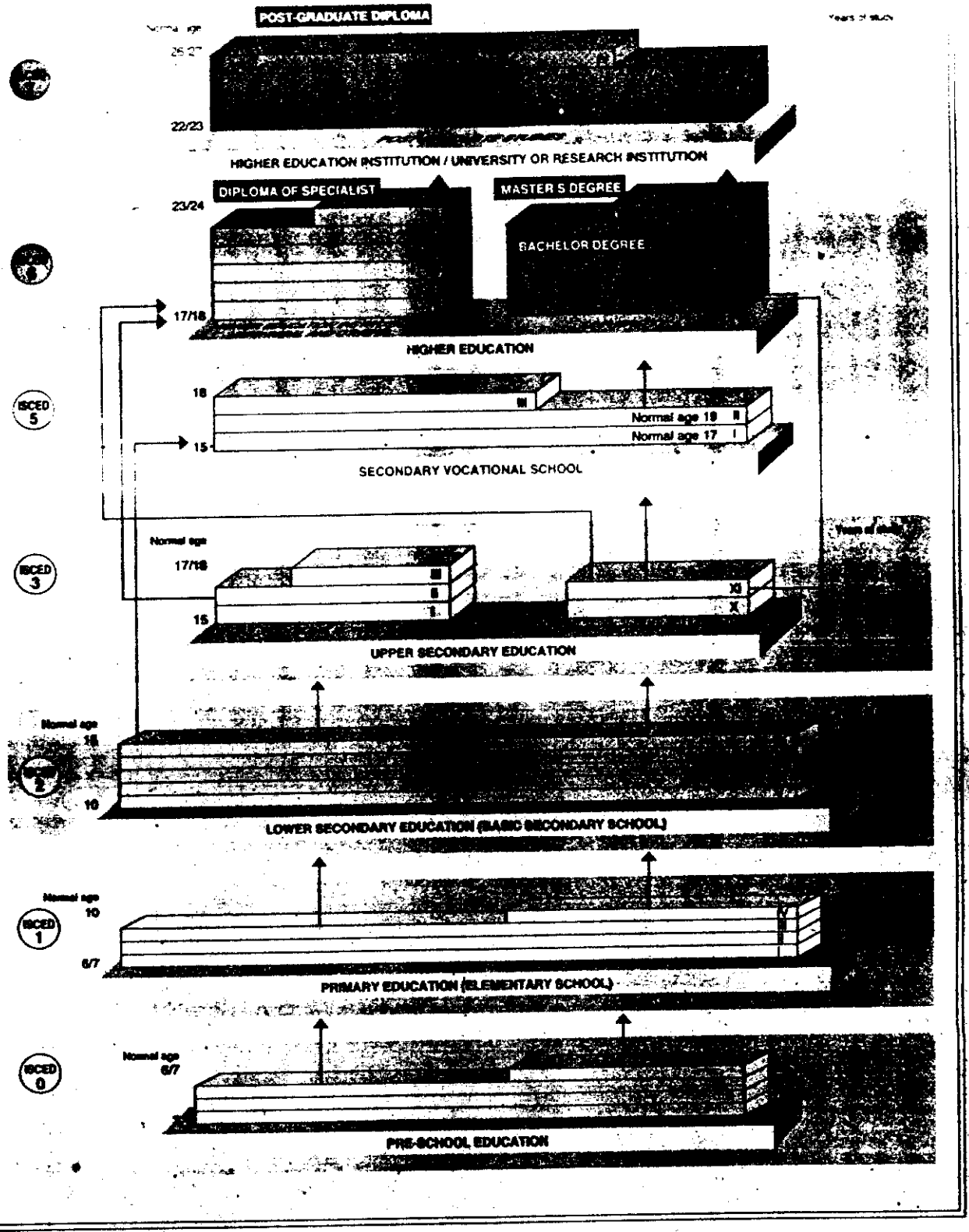
Colleges may be publicly or privately controlled. They receive funds through a variety of sources, including tuition; federal, state and local appropriations; grants and contracts; endowment funds; private gifts; and revenue from auxiliary enterprises and university hospitals. Both public and private colleges receive funds from all of these sources, but the public colleges receive a higher proportion from government sources, while private colleges receive a higher proportion of their funds from tuition and other private sources.

An associate degree requires at least two years of college-level work, and a Bachelor's degree normally can be earned in four years. At least one year beyond the Bachelor's is necessary for a Master's degree, while a doctoral degree usually requires a minimum of three or four years beyond a Bachelor's.

Professional schools differ widely in admission requirements and in programme length. Medical students, for example, generally complete a 4-year programme of premedical studies at a college or university before they can enter the 4-year programme at a medical school. Law programmes normally require three years of course work beyond the Bachelor's degree level.

Post-secondary education in the United States is diverse; American colleges and universities offer a wide range of programmes. For example, a junior college may offer vocational training or the first two years of training at the college level. A university typically offers a full undergraduate course of study leading to a Bachelor's degree as well as first-professional and graduate programmes leading to advanced degrees. Vocational and technical institutions offer training programmes which are designed to prepare students for specific careers. Other types of educational opportunities for adults include community groups, churches, libraries and businesses.

In recent decades, post-secondary education has become more accessible to all segments of the population. The growth of community colleges and low-cost institutions means that the student can attend at minimum cost. Federal student financial aid and other aid programmes also have attracted many students who otherwise would have found it difficult to finance a college education. Businesses frequently provide financial support for their employees who are pursuing additional education. Post-secondary education involves students of all ages. Today, about half of the college students are over age 25.


POST-GRADUATE DIPLOMA
22/23
HIGHER EDUCATION INSTITUTION / UNIVERSITY OR RESEARCH INSTITUTION
DIPLOMA OF SPECIALIST
MASTER'S DEGREE
BACHELOR DEGREE
23/24
17/18
HIGHER EDUCATION
ISCED 5
18
15
Normal age 18
Normal age 17
SECONDARY VOCATIONAL SCHOOL
ISCED 3
Normal age
17/18
15
UPPER SECONDARY EDUCATION
ISCED 2
16
10
LOWER SECONDARY EDUCATION (BASIC SECONDARY SCHOOL)
ISCED 1
Normal age
10
6/7
PRIMARY EDUCATION (ELEMENTARY SCHOOL)
ISCED 0
Normal age
6/7
PRE-SCHOOL EDUCATION

ANNEXES

INDICATOR C01

Australia

The classification of educations has been made according to the new ABS Classification of Qualifications, which corresponds better to ISCED than the old classification. In order to enable the use of this classification, data are reported for 1993 instead of 1992. The main difference compared to the data for 1991 is that some educational programmes have been reclassified from ISCED 5 to ISCED 3.

Belgium

The classification by ISCED levels is based on the highest level of diploma or degree obtained. The unemployed are defined as people who are "full-time" unemployed and who receive unemployment benefits.

Canada

The classification of educational programmes according to ISCED has changed compared to 1991. Allocation to ISCED 3 was previously based on the number of years of schooling. Now, ISCED 3 includes only those who report having received a secondary school certificate or diploma. The increase of the ratio of the population with ISCED 5 is partly a result of ongoing efforts to improve the classification of post-secondary educational programmes.

France

The ISCED classification is based on the highest diploma or degree obtained. To avoid underestimation of the number of people in the higher ISCED categories, the number of people with higher qualifications than suggested by their diploma has been estimated. The estimates have been adjusted accordingly.

Germany

The rate of non-response is 11.1 per cent. In the calculations, respondents and non-respondents are assumed to have the same distribution by educational attainment.

Ireland

Classification by ISCED level is made by level of certificate with the exception of ISCED 0 and ISCED 1, where the number of years of schooling is used. A certain proportion of the population classified as having attained ISCED 2 have completed apprenticeship training comparable to ISCED 3. These persons cannot be identified from the Labour Force Survey. Attainment of ISCED 3 refers to persons who have obtained the leaving certificate, usually at the age of 17 or 18. This is a general qualification that, in principle, offers access to tertiary education.

Norway

Persons for whom the level of educational attainment is unknown have been allocated to ISCED 0/1. The figures given for these categories are therefore equivalent to "unknown".

Switzerland

Apprentices have been defined as being in full-time education. In previous editions of *Education at a Glance*, they were defined as full-time employed.

United Kingdom

The retirement age for women is 60, and therefore 60-64 year-old women are not targeted by the Labour Force Survey. Women 60-64 years of age are estimated to have the same distribution by ISCED categories as women 55-59 years of age.

United States

In 1992, the educational attainment question in the Current Population Survey was changed. ISCED 3 now excludes a small number of individuals who have completed grade 12 but did not receive a diploma or its equivalent. In addition, ISCED 3 includes a large number of people with some tertiary education but no credential. ISCED 5 only includes individuals who received an Associate degree, a credential awarded in programmes normally requiring two years of full-time study. Compared to statistics published in earlier editions of this report, the change will increase the percentage of the population whose highest educational attainment is ISCED 3 and will decrease the percentage whose highest education attainment is ISCED 5.

INDICATOR C02

See notes to C01.

INDICATOR C11

See notes to C01.

INDICATOR C12

For the Czech Republic, Germany (FTFR), Greece, Hungary, Japan, Luxembourg, Poland and Russia the data were not supplied from Network B sources but were derived from the *OECD Labour Force Statistics* database.

Australia

C12(A): The unemployment rates are 1993 figures. Due to a strong recovery in the labour market, unemployment rates in Australia are now about 1.5 percentage points lower.

INDICATORS C21, C23 to C27

A difference of 3 or 4 percentage points is usually required before it can be regarded as significant.

INDICATOR C21

All countries

"Social Subjects" = Geography and History.

Denmark

The subject *Technology* was not included in the Danish questionnaire.

Switzerland

The Swiss questionnaire was modified. *Foreign language* was taken as *English language*.

INDICATOR C22

United Kingdom

The item *Skills and knowledge that will help to continue studies or training* was added to the questionnaire after the commencement of the United Kingdom survey.

INDICATOR C23

Difference can be regarded as worthy of interest.

INDICATOR C24

Switzerland

The Swiss data have not been included because the question was not asked in the agreed upon form.

INDICATOR C25

Switzerland

The Swiss data have not been included because the question was not asked in the agreed upon form.

INDICATOR C27

Caution is advised when interpreting the results in some countries such as France as many people do not know how decisions are actually made in the present system.

INDICATOR F01

Austria, Belgium, Czech Republic, Italy

Figures on private expenditure have not been provided.

Austria

Expenditure for "not allocated by level" includes the main non-tertiary scholarships, schoolbooks and free travel arrangements for students and expenditure for adult and special education.

Belgium

Research expenditures are included to the extent that they are covered by funds provided by the community education authorities. Research funds from other public and private sources are excluded.

Finland

The percentage is affected by the decline in GDP between 1990 and 1992. Expenditure for "not allocated by level" includes expenditure for adult education and educational expenditure from the Ministry of Education and the National Board of Education. Research expenditure includes general university and business enterprise funds but not other separately identifiable R&D funds.

France

Expenditure for "not allocated by level" includes expenditure for special education in primary and lower secondary education and expenditure for arts education. All separately identifiable R&D expenditures are not taken into account; however, compensation of university teaching staff (and other regular university staff) is included, of which the portion of compensation attributable to research.

Germany (FTFR)

Total educational expenditures are not complete. The following expenditures are missing: private schools (however, public grants given to private schools are included); schools for nurses; agricultural training and research centres; German Research Foundation; Federal Institute for Employment (expenditure for retraining, better qualification, etc.); training of apprentices in the public service; support payments for dependent children made to persons undergoing education/training; allowances paid to teachers enjoying the status of public official for medical treatment and health insurance; scholarships granted by private institutions; households' purchases of commodities and services for education.

Public expenditures broken down by level of education and by type of expenditure are estimates.

Figures do not include the payments by private households and other private entities to government-dependent institutions.

Almost all expenditure on research is included: there are some minor omissions.

Hungary

Expenditure for "not allocated by level" includes pedagogical services.

Ireland

Expenditure includes mainstream higher education research.

Expenditures of private entities other than households are underestimated because they are only provided for tertiary education. The expenditures for the other levels of education are not available.

Japan

Expenditures for "not allocated by level" include: expenditure for special education, special training colleges, miscellaneous schools, educational administration, scholarship and textbooks.

All separately identifiable research expenditure has not been taken into account but compensation of teaching staff (and other regular staff) in universities is included.

New Zealand

Expenditures for "not allocated by level" include: policy advice, management of contracts/administration of payments, provision and support of the curriculum, ministerial servicing, payment of salaries and allowances, provision of information, provision of teaching/learning accommodation, provision of teacher and caretaker housing, loss on sale of fixed assets, restructuring expenses, provision for retirement and long-service leave, capital investment.

Norway

Expenditures for early childhood education in government-dependent institutions (their amount is small) are included in expenditures for primary education.

Portugal

There is no distinction between public and private expenditures for public institutions.

Spain

Public expenditures on education are underestimated because an important part of the contributions paid by employees has not been taken into account.

Payments to independent privates institutions for tertiary education are underestimated because only the payments of private entities to universities for their activities of research and development are included.

Expenditure on research has been partly taken into account. Some higher education institutions have all R&D expenditure in their budgets; others have only general university funds and certain types of contracts.

United Kingdom

Expenditure by or on behalf of independent institutions at the tertiary level has been assumed to be negligible.

Only general university funds and grants from the Department of Education are included. All other separate R&D funds have not been taken into account.

United States

All research expenditures are included excepted for funds on major university-administered federal R&D centres.

INDICATOR F02

Austria, Netherlands

Expenditures for independent private institutions are included in expenditures for government-dependent private institutions.

Canada

Expenditure for pre-primary education is included in expenditure for primary and secondary education.

Denmark

Because some expenditures for independent private institutions are not available by level of education, some percentages broken down by school level are included in "all levels of education combined".

Finland

For early childhood, expenditures in government-dependent private institutions are included in expenditures for public institutions.

Germany (FTFR)

The expenditure share of government-dependent private institutions includes public transfers to government-dependent private institutions only.

Expenditures of government-dependent institutions for pre-primary education do not include private expenditures financed by private institutions and by parents (via the kindergarten fees). These expenditures account for a substantial amount of total expenditure. Unfortunately, there are no available data for these expenditure.

United Kingdom

See F01.

All pupils below compulsory school age in independent private schools are assumed to be receiving primary education rather than early childhood education.

INDICATOR F03

Austria

Seventy per cent of full-time apprentices have been excluded from the total number of full-time equivalent enrolments. Subtracting this percentage that represents training in firms was required to adjust the figures to data on expenditure because figures on firms' expenditure were not available. It was assumed that apprentices spend about 30 per cent of their training in public schools and 70 per cent with the employers (these are approximate figures).

Canada

At tertiary level, for public institutions, expenditures are net of ancillary services.

Czech Republic

Costs per student cannot be calculated by distinguishing expenditures for primary and secondary levels because the data for lower secondary education have been included in primary and not in upper secondary education.

Data on expenditures for non-university tertiary education have been included in expenditures for upper secondary education but these expenditures are small.

Denmark

Because adult education is included in the expenditures, the following figures for full-time equivalent enrolments have been used to calculate the participation indicators:

Lower secondary education:	12 000
Upper secondary education:	21 000
Tertiary education:	15 000

Japan

Figures on expenditure by type of institutions do not include expenditure for textbooks and scholarships.

Sweden

Enrolments and expenditure for adult education have not been taken into account.

Switzerland

Costs per student in secondary education and in primary secondary education have not been calculated because figures on apprentices and vocational education students do not correspond to the figures for expenditure at this level.

INDICATOR F04

Austria, Czech Republic

See F03.

Canada, Denmark, Finland

See F02.

Finland

Figures include day care and pre-school education (and meals) provided for 3-6 year-olds, in day-care centres, generally 8 to 10 hours a day, five days a week.

Germany (FTFR)

For pre-primary, primary and secondary levels, figures refer to public institutions only.

For tertiary education and all levels of education combined, shares of enrolments have not been calculated because enrolments cannot be distinguished between public and private institutions

New Zealand

Figures concern only public institutions.

INDICATOR F05

Finland

Early childhood education comprises only current expenditure.

Germany (FTFR)

Figures refer to public institutions only.

Japan

Expenditures for principals and vice-principals are included in expenditures for teachers.

INDICATOR F11

Canada

See F02.

Finland

Data concerning households and private organisations are not available.

United Kingdom

See F01.

INDICATOR F12

Belgium

Figures on central funds are available for all levels of education combined but they cannot be broken down by level of education.

Canada

See F02.

Denmark, Ireland, Spain

Country mean. Totals include certain percentages of funds from international sources. For this reason, the country mean for the three levels of governments does not add up to 100 per cent.

Hungary

There are regional governments (counties) and municipalities as well but it is preferable to regard both as local governments because regional governments have no significant redistributive role.

Japan

Expenditure of prefectures and municipalities cannot be provided separately.

INDICATOR F13

Ireland, Norway, Spain

Figures on total public expenditure are estimates. They refer to fiscal year 1991 and are adjusted by inflation rate.

New Zealand, Portugal

Figures on total public expenditure from OECD National Accounts are not available either for 1991 or 1992.

INDICATOR P01

Australia

Lower secondary education includes ungraded secondary students.

The participation figures for non-university tertiary education, as indicated in the commentary, are on the high side. This is mainly due to difficulties in attaching the appropriate [illegible] of school levels to TAFE enrolments: these numbers, currently classified as non-university tertiary education, could be reduced substantially. Many of these could either go into upper secondary education or be classified as "out of scope" i.e. to be regarded as courses whose duration is not long enough to be included in *Education at a Glance*.

Czech Republic

Most part-time students are enrolled in adult education. Their age is unknown. They attend the same curricula as full-time students and take the same examinations.

Denmark

All formal regular education is classified as full-time education. Numbers of pupils and students refer to the number of persons enrolled on 1 October 1991. Adult education is excluded.

Hungary

Disabled students are included in primary and lower secondary education. Age distribution data are estimated for some age groups: at lower secondary education for 14 year-olds and [illegible] at upper secondary education for 19 year-olds and over, at tertiary education for 24 year-olds and over.

Italy, Sweden

No distinction between full-time and part-time at tertiary education.

Japan

Table P01(A1): there are an additional 147 500 students whose ages are unknown, who are not included.

Norway

Figures broken down by age are estimates for primary and secondary education.

United States

No distinction between full-time and part-time [illegible] ary education.

INDICATOR P02

All countries

Participation rates are based on head counts of enrolments and do not differentiate between "full-time" and "part-time" enrolments.

Australia

At primary education, age 5 refers to ages 5 and under.

Austria

Figures refer only to kindergartens and pre-primary classes in primary schools. Day-care centres are generally excluded.

Nearly all private institutions should be classified as "government-dependent" but there remains a very small number of independent private institutions with only a few pupils.

Belgium

Early childhood education starts at age 2 years and six months, so that the relevant population is only half the one taken into consideration. Taking this into account would bring the net enrolment rate for the 2 year-olds to 70.3 per cent.

Czech Republic

There are no kindergartens outside the public sector.

Denmark

Children in crèches (normally before 2 years of age) are excluded. Children in private day care/child-minding are excluded. Children in private kindergartens (receiving substantial public subsidies) are included in public education. A small number of children enrolled part-time in kindergartens are classed as full-time. A small number of children enrolled in both kindergartens and pre-primary classes in primary schools are classed as primary school pupils. Age groups for pupils in pre-primary classes in primary schools are estimated.

Germany (FTFR)

Table P02(B) shows a net enrolment rate of 115.1 for 6 years-old pupils. This overstated figure is due to the fact that the Microcensus, which is the source for these data, was conducted at the beginning of May while the population data are from 1st January.

Enrolments at 2 or 7 years of age occur only in exceptional cases for the *new Länder* [illegible] Territory of the Federal Republic.

Hungary

Figures on early childhood and primary enrolments are estimates.

Japan

Only kindergartens are included. Day nurseries, which are social welfare institutions, are excluded.

Poland

In early childhood education, age 3 refers to ages 3-5.

Spain

Participation rates are higher than 100 because there are more registered pupils than children according to demographic projections from INE.

United Kingdom

Children in day-care facilities are excluded. Ages are recorded in August rather than in December.

The transition from early childhood to primary education can begin as early as age 2 or 3 but very frequently at age 4 (over three-quarters). The 1 per cent of 2 year-olds and 4 per cent of 3 year-olds who are in primary education have been excluded from this indicator.

INDICATOR P03

Australia

Figures on upper secondary enrolments at age 20 refer to ages 20 and over.

Data broken down by single age for part-time enrolments are not available.

Belgium

Some students in full-time vocational programmes are included in general programmes of lower secondary education.

Czech Republic, Denmark, Hungary, Norway

See P01.

Finland, Greece, Ireland

Figures broken down by single age are estimates.

Greece

In secondary education, [illegible]

Ireland

In upper secondary education, [illegible] 24 and over.

Italy

Figures for "short courses" (3 years) are not reported.

Japan

In part-time upper secondary education, age 20 refers to ages 20-24; age 25 to ages 25-29 and age 30 to ages 30 and over.

Table P03(A): see P01(A1).

Norway

In lower secondary education, enrolments broken down by single age are estimates.

Poland

In upper secondary education, age 20 refers to ages 20-23 and age 25 to ages 25 and over.

Russia

In secondary education (part-time), age 16 refers to ages 16-17; and age 29 to ages 18-29.

Spain

Participation rates do not take into account pupils whose age is unknown (about 3 per cent of full-time students in upper secondary education).

No distinction is made between full-time and part-time upper secondary education.

Sweden

See P01.

In upper secondary education, age 22 refers to ages 22 and over. Most of these students are enrolled in adult education.

United Kingdom

In general programmes, age 20 refers to ages 19-20.

Students in second educational programmes are included in first educational programmes.

Vocational course figures are normally only available for students in their last two years of upper secondary education.

Vocational course figures are [illegible] by large numbers of adults taking one or two courses at upper secondary level who are often older than the [illegible]

Students in private [illegible] education aged 19 and over are excluded to avoid possible double counting with public-sector provision.

Part-time enrolment data are shown here; comparable data by single age for other countries are not always available.

United States

See P01.

INDICATOR P04

All countries

See P03.

Australia

In tertiary education, age 16 refers to ages 15-16, age 27 to ages 25-27 and age 30 to ages 28 and over.

Austria

In non-university tertiary education, figures broken down by single age are not available.

In university education, age 17 refers to ages 16-17.

Austria is included in this indicator although it is excluded from most of the analysis because of its inability to provide upper secondary or non-university tertiary enrolments by age.

Belgium

University education corresponds to long tertiary courses and higher education in institutions other than universities; non-university tertiary education corresponds to short courses of higher education.

No distinction is made between first and second stages of university level.

Czech Republic

In non-university tertiary education, age 19 refers to ages 19 and over.

Germany (FTFR)

There is no distinction between first and [illegible] tiary education but there is a distinction [illegible] degrees and Ph.D. degrees. [illegible] generally last from 3 to 5 years.

Italy

See P01.

[illegible]

In part-time tertiary [illegible] 23 to ages 23-24, age [illegible] and [illegible] over.

Poland

No distinction is made between first and [illegible] tiary education.

[illegible] university tertiary education, age 25 refers to ages 25-[illegible] over.

Russia

[illegible]

In tertiary education, [illegible] ages 25-29.

Switzerland

In non-university [illegible] different ages.

Norway

The figures reflect the minimum number of hours for the three-year block (Grades Seven to Nine).

25. **Others includes home economics, pupil/class council, optional subjects (including a second foreign language).**

Portugal

26. **In Grade Three, time devoted to orientation in technology may attain 252 hours per year according to the specific study area and availability of school facilities.**

27. **Religion is optional.**

Spain

ISCED 2 has only three grades. This table shows the minimum curriculum established for all schools in the country. The for-mal document indicates the time to be devoted to diverse subject matters in percentages which have been converted to lessons on the basis of 26 hours per week.

In some Autonomous Communities, a second mother tongue (Catalan, Valencian, Basque, Galician) other than Spanish is taught. In this case, the same amount of time is devoted to teach the proper language as is devoted to teach Spanish. That is, the time devoted to language teaching is doubled. In any case, neither the proper language nor Spanish should be considered a foreign language. The figures reported for reading and writing [illegible] minimum, [illegible] only one language.

S[illegible]

[illegible] build studies [illegible]

INDICATOR P[illegible]

Belgium (French community)

10-20% [illegible] data are missing.

Canada

10-20% of the data are missing.

France

10-20% [illegible] data are missing.

Germany (FTFR)

10-20% [illegible]

Germany (TFGDR)

10-20% of the data are [illegible]

Ireland

Data have not been derived from the IEA study. The figure reflects the number of teaching hours per year for all schools. Calculation: 25 hours of instruction per week x 36.8 full-instruction weeks per year.

INDICATORS P31 and P32

Australia

Teachers include principals, deputy principals and senior teachers mainly involved in administrative tasks.

Denmark

Full-time and part-time teachers are estimated. Distribution [illegible] school level (pre-primary, primary and lower secondary level) is also an estimate. Pre-primary level only includes teachers in pre-primary classes in primary schools.

Kindergartens are classified as public institutions.

France

The number of full-time equivalent teachers [illegible] account the additional hours given by teachers. In [illegible] secondary education institutions, an increase of [illegible] per cent [illegible] full-time equivalents would be observed if the additional hours were taken into account.

The number of teachers in private tertiary education institutions and in independent private secondary education institutions [illegible] estimates.

[illegible] of [illegible] about 18 per cent of all the [illegible] and about 7 per cent of all the staff employed in [illegible]

Germany

Most figures are estimates.

[illegible]

Principals and vice-principals are included in "Teachers" while other staff is included in "Support staff". Full-time equivalents of part-time teachers are not calculated, since there are no valid and reliable data available on the basis of which such calculations can be made.

Netherlands

Teaching staff do not include direction staff.

[illegible]

[illegible] distinction is made between full-time and part-time [illegible]

United Kingdom

Pupil/teacher ratios are based on a head count of pupils aged under 5 rather than on full-time equivalents. Most pupils in early childhood education are enrolled part-time.

Figures on teachers at lower secondary education are included in upper secondary education.

United States

Figures on teachers in early childhood education are included in primary education.

INDICATOR P33

France

Figures for upper secondary education (general and vocational) are included in figures for lower secondary education.

Ireland

Children from 4 to 6 years of age spend two years in formal education in primary schools.

Netherlands

Figures for ISCED 0 include Grades Three and Four (ages 6 and 7).

New Zealand

There is no formal regulation specifying the minimum number of teaching hours per day/week/year for primary schools. However, there is a legal requirement for primary schools to provide a minimum of two hours of teaching before noon and two hours after noon to be deemed as sessions for one half-day respectively, and to be open for 394 or 396 half-days per annum (i.e. 39.5 weeks). In practice, all schools provide more than 4 hours per day, varying usually between 4.6 and 4.75 hours (i.e., on average, 23.5 hours per week), and are open for at least 40 weeks. The official number of hours (not the actual number) has been put in the table.

As with primary schools, there is no formal regulation requiring a minimum of teaching hours per day/week or year for secondary schooling. However, the regulation for funding schools staffing on the basis of weekly teaching half-days is used to indicate the minimum weekly total of 25 teaching hours for secondary schools. Secondary schools must be open for at least 38 weeks.

Sweden

ISCED 3: Different subgroups of teachers have different numbers of teaching hours. Teachers in general subjects like mathematics, languages, etc. have 14 teaching hours per week; teachers in arts, sports, etc. have more. This is a mean estimated from figures on the number of different types of teachers.

ISCED 3 Vocational: Many types of teachers teach at ISCED 3 vocational programmes, teachers in general subjects have 14 teaching hours per week, teachers in vocational subjects like welding have 18 hours per week. This is a mean (rough) estimated from the approximate number of different teachers in these programmes.

Turkey

Figures given are the ultimate hours a teacher instructs p... and include additional teaching hours which are paid ... ingly.

For ISCED 3 vocational, the number of teaching hours ... only to vocational teachers.

United Kingdom

Only figures for England and Wales have been reported.

United States

Survey data, based on teachers' self-reported number of hours they are required to be in school in the most recent full week of teaching. Formula: hours required in the school year 19... (classroom teaching hours/hours required in the school ... 1988).

Figures for upper secondary vocational education are ... in figures for upper secondary general education.

INDICATOR P34

Austria

The number of years varies; the minimum number ... been reported.

For ISCED 2, the number of years varies from three ... minimum number has been reported in the table.

For ISCED 3 vocational, the number of years varies ... to six; the minimum number has been reported in the ...

Finland

Vocational school teachers take four to six years of ... including practice, and one to two years of required ... experience before being qualified. The total number of ... tertiary teacher education thus varies from five to ei... minimum number is reported in the table.

France

The number of years varies; the minimum number of ye... been reported.

In the independent private sector, there is no *a priori* regu... requirement. In order to teach in public institutions co... by the Ministry of Education, the precondition is to ... attended:

- primary education (5 years);
- secondary education (7 years);
- university education up to a first degree (3 years);
- one year of teacher training in a IUFM (*Institut universitaire de formation des maitres*) after the teacher proficiency exam. Preparation for this exam also takes place in the IUFM. An increasing number of would-be teachers take advantage of this preparation year.

The duration of high-level training thus becomes five years.

This training pattern applies to primary and secondary teachers since 1992 when the external exams took place. In 1991/92, however, the prevailing system had the same number of study years (12+4), even if they did not correspond to the same level of higher education for pre-primary and primary teachers (ISCED levels 0 + 1). Auxiliary teachers, or teachers fully qualified by integration or by examination are exempted from attending the preparatory year in a IUFM if they are to teach in a secondary school (ISCED 2 + 3) and may thus not hold a university degree.

Ireland

Two years of formal education for children aged 4 to 6 have been included.

Italy

The number of years in primary and secondary education varies between 12 and 13; the minimum number is reported in the table for ISCED 2 and ISCED 3.

Netherlands

Two years of pre-primary education have been included.

The number of years in secondary education varies; the minimum number is included in the table.

New Zealand

Two years of formal education for children, ages 4 to 6, have been included.

The number of years for ISCED 2 varies; the minimum number has been put into the table.

Tertiary teacher education for teaching at ISCED 3 consists of three years (minimum) to complete a university degree, one year teacher training, and two years for registration.

Tertiary teacher education for teaching at ISCED levels 0 and 1 consists of three years to complete teacher training plus two years for registration. However, most early childhood educators and teachers currently are unregistered and have no tertiary teacher training.

Portugal

The number of years varies; the minimum number of years is included in the table.

Spain

The number of years varies, the minimum number of years is included in the table.

ISCED 3 vocational: with regard to their minimum initial training, teachers can be sorted in three categories: *a)* teachers whose initial training is ISCED 3 vocational, *b)* teachers with a short tertiary degree; and *c)* teachers with a long tertiary degree. They are distributed roughly as follows. Public: *a)* 3 per cent; *b)* 30 per cent; *c)* 66 per cent; and private *a)* 10 per cent; *b)* and *c)* 90 per cent. Accurate data are not available.

Sweden

The number of years varies; the minimum number is shown in the table.

The data are based on all students enrolled in 1991/92. For ISCED 3 vocational, the number of years for teachers in vocational subjects has been reported.

United Kingdom

Only figures for England and Wales have been reported.

United States

There is no published source; standard practice.

INDICATOR P35

Austria

Teachers' salaries depend exclusively on the training they have received (university training versus non-university training).

Germany

Figures are for unmarried teachers with no children.

Spain

Public: weighted means.

United Kingdom

Only figures for England and Wales have been reported.

United States

Teacher compensation is based on teacher assessment reports: includes basic academic salary, plus compensation from school for extra duty, and other job-related income (including bonuses).

INDICATOR P36

Belgium

The data on the age distribution of teachers as percentages of the total teaching body at ISCED 1 public are based on an extrapolation of the data for the Flemish community.

Figures for ISCED 2 public include ISCED 3.

France

Figures for ISCED 1 pubic include ISCED 0. Figures for ISCED 2 public include ISCED 3. Percentages were computed on figures for full-time and part-time enrolments.

Germany

The percentage is for public and government-dependent private; for ISCED 0, *Praktikanten* are included.

Ireland

Figures for ISCED 1 public include ISCED 0.

Italy

Figures on the sex distribution of teachers do not always add up to 100 per cent due to rounding.

Netherlands

Figures for ISCED 2 public include ISCED 3.

New Zealand

Data for ISCED 2 apply only to teachers of Grades One and Two of ISCED 2 and are a percentage of area schoolteachers (i.e. teaching several subjects, and not only one subject). Secondary teachers are covered in ISCED 3.

Portugal

Figures for ISCED 2 public include ISCED 3.

Sweden

The data on ages are derived from the database on teachers. As teachers are not classified according to ISCED, their numbers have been estimated by using the levels at which different subgroups of teachers teach.

United Kingdom

Figures for ISCED 1 public include ISCED 0. ISCED 2 public includes ISCED 3. Figures for only England and Wales have been reported.

United States

School year 1990/91; vocational included with general.

INDICATOR P36(C)

Belgium and Portugal

Figures for lower and upper secondary education (figures for upper general secondary education include vocational education).

France

Figures for upper secondary education (general and vocational) are included in figures for lower secondary education.

France, Ireland and the United Kingdom

Figures for early childhood education are included in figures for primary education.

Italy and the United States

Figures for upper secondary vocational education are included in figures for upper secondary general education.

INDICATOR P41

See also notes to P42

Australia

The figures reflect the high proportion of R&D that takes place in the university sector as well as the availability of detailed Australian statistics on this area. Australia's high ranking on this indicator might be slightly lower if similar data were available for all OECD countries.

The data refer to 1990/91 for the government and private non-profit sectors, and to 1990 for the university education sector. The government sector includes state and federal government levels. In the university education sector, researchers comprise 491 person-years for academic staff and 727 person-years for post-graduate students. Only post-graduates obtaining their qualification solely through research (including those who are not employed by the university or in receipt of a research scholarship) are included in this estimate.

Austria

The government sector data refer to the federal or central government. In the university education sector, post-graduate students are not recorded separately but are included in the academic staff category when on the payroll of the university, or when they are employed as university assistants to work on particular research projects and paid for by research grants.

Finland

The government sector data refer to the central government. In university education category, the researchers comprise 245 person-years for academic staff and 31 person-years for post-graduate students. For post-graduate students, a person-year is included only when they are financed by grants amounting to a normal salary.

Ireland

The government sector data refer to the central government. They include data on an agency that is concerned mainly with research on student assessment. The agency is nominally controlled by a teacher training college and could therefore be alternatively classified in the university education sector. In the university education category, researchers comprise 18 person-years for academic staff and 4 person-years for post-graduate students. Only PhD students are included. The educational research activities of non-profit organisations such as teacher unions and Church associations are not included, but these are likely to be very small.

Netherlands

The Netherlands R&D survey data are organised in terms of education as an area of relevance or as an objective, and therefore are likely to encompass a broader range of activities than in most other nations. R&D activities in the research institutes sector are surveyed using the Frascati methodology. In the university education sector estimates are derived from knowledge of the number of academics who are likely to be engaged in educational R&D and the proportion of their time devoted to research. The government sector data refer to the central government level and include staff employed at the National Curriculum Development Institute. Post-graduate students are not recorded separately but are included in the academic staff category when employed by the university. The university education category comprises 200 person-years in university departments and 160 person-years in research institutes.

New Zealand

The government sector data refer to the central government. In the government sector, the distribution of educational R&D personnel between researchers and other staff categories is assumed to be the same proportion as for government research as a whole. In the university education and private non-profit categories, staff numbers shown as researchers refer to all categories of staff – detailed breakdowns are not available. Post-graduate students engaged in educational R&D are not included in the data. However, they are included in the estimates of total R&D personnel when employed by universities.

Sweden

Government and private non-profit sectors conduct very little educational R&D although they do play a role in funding research. Since education is not included as a field of science in national R&D surveys, estimates for the university education sector are derived from data on the types of research performed in different universities. Information is not available on private and municipality-owned units in the university education sector, but the amount of educational R&D they perform is likely to be negligible. Researchers in the university education category, comprise academic staff and those post-graduate students who are employed by the universities.

United Kingdom

The government sector data refer to the central government level. In the university education category, researchers comprise 977 person-years for academic staff and 1 163 person-years for post-graduate students. Post-graduates studying for a research-based qualification and paid as researcher assistants are included in the estimate. Data are not available on post-graduate students enrolled in non-university institutions.

INDICATOR P42

See also notes to P41

Australia

The government data include expenditure in the state and federal government sectors. In the university education sector, capital expenditure includes 4 million on land and buildings. Government funding for R&D in the university education sector comprises 59 million from the federal government and 3 million from state governments. In the private non-profit sector, government funding for R&D comprises 1 million from the federal government and 2 million from state governments. Data for total public and private R&D expenditure refer to 1990.

Total public and private R&D expenditure in Australia ($5 091 million) is not strictly correct: some data referring to 1990/91 and some others referring to the 1990 calendar year have been aggregated.

Austria

The government sector data refer to the federal government level except for the source of funds classification. In the university education sector, capital expenditure includes 7 million on land and buildings. Government funding for R&D in the university education sector comprises 108 million from the federal government, 0.5 million from provincial governments, and 1.5 million from local or municipal governments.

Canada

Total expenditure on educational R&D may be underestimated since only data for the university education sector are included. However, the lack of data from the government and private non-profit sectors is not viewed as a major problem since it appears that these sectors engage in relatively little educational R&D. The estimated level of expenditure on educational R&D in the university education sector is based on estimates of the consumption of university resources by different academic fields, and on the proportion of expenditure each field allocates to R&D in universities with different research profiles.

Finland

The government sector data refer to the central government level. No data are available for the private non-profit sector, but it appears that little educational R&D occurs in that sector. Expenditure on land, buildings and other capital items is not included, except for the acquisition of equipment in the university education sector. "Other" expenditure includes the labour costs of staff other than researchers.

Ireland

The government sector data refer to the central government level. Data are not available for the private non-profit sector, but educational R&D activities in this sector are likely to be only minor. In the university education sector only the overheads associated with individual academic departments are included; central overheads of any kind are not included. Especially the latter may represent an important source of underestimation in the data.

Netherlands

The government sector data refer to the central government level and comprise 15 million for the National Curriculum Development Institute and 23 million for the research institutes sector. Detailed breakdowns are not available for the research institutes and private non-profit sectors. To construct the table, it has been assumed that two-thirds of the expenditure in those sectors are on labour costs and one-third on other expenditure.

New Zealand

The government sector data refer to the central government level. In the government sector the distribution of educational R&D expenditure between types of expenditure is assumed to be the same as for government research as a whole. Total public and private R&D expenditure is based on data for 1991.

Sweden

Data are not available for the government and private non-profit sectors, but it appears that very little educational R&D is conducted in these sectors, although they do fund some research. Government funding for R&D in the university education sector is supplied by the central government. The data include an estimated share of administrative and other overhead expenditures. Data for total public and private R&D expenditure refer to 1991.

United Kingdom

Data are not available for the private non-profit sector. The government sector data refer to the central government level.

INDICATOR R11

Denmark

See P11.

Classification has changed for basic vocational education (Higher Commercial Examination): before 1992, it was included in vocational upper secondary education. Now, it is classified as general upper secondary education.

Germany (FTFR)

All graduates in general education are first educational programme graduates. The relevant age is 19.

Some graduates in vocational/technical education are first educational programmes graduates (their graduation age is 19) while others are second educational programmes (their graduation age is 22). Therefore, a weighted average has been used to calculate the graduation rate.

Ireland

Around 86 per cent of the age cohort were shown under "first educational programmes" and a further 18 per cent of the age cohort under "second educational programmes". These latter graduates were from vocational programmes in 1991 and had previously obtained a qualification under upper secondary education. Therefore the combination of first and second programmes gives an equivalent of 104 per cent of the age cohort.

Italy

All vocational programme students who want to follow a full course (5 years) must obtain a preliminary degree after roughly 3 years. They are not reported in the table.

[redacted]

Figures on first general educational programmes are based only on students who finish the *Curso de orientacion universitaria (COU)*. Therefore, these rates are underestimated because they do not take into account students who obtain the *Titulo de bachiller* and do not continue to follow the *curso de orentacion universitaria (COU)*: they can leave the education system or study FPII-vocational training).

United Kingdom

Students on second educational programmes are included in first educational programmes.

Many students graduate from general education programmes after 2 rather than 4 years.

INDICATOR R12

Australia

Some post-graduate degrees (as post-graduates qualified/preliminary, post-graduate diploma external/new, Bachelor post-graduate, graduate certificates) are included in Masters' or equivalent.

Belgium

To avoid double counting, 2 033 graduates in teacher training have been dropped since this is a part-time training mostly followed simultaneously with other studies.

Although a Bachelor degree exists in Belgium, it has no value on the labour market. Therefore the Master's degree is considered as a first degree.

Denmark

See P01.

Finland

The first degree is the Master's. But the introduction of a Bachelor degree is being planned in many fields. It takes 6-10 years to obtain a degree depending on the field. In practice, the median age is 27.

Greece

The first degree in medicine takes 12 semesters of studies. Engineering studies last 5 years and award a diploma (e.g. Diploma of architect engineer, of civil engineer); this diploma is a first degree but equivalent to a Master's. Post-graduate studies do not set limits to starting or ending ages and their minimum duration is 2 years for the equivalence to Master's and 3 years for the equivalence to Ph.D. degrees.

Hungary

Some Bachelor degrees (e.g. in teacher training and art colleges with 4 years of training) do not precede Master's degrees. The duration for obtaining them is equivalent to the typical duration for obtaining Master's degrees.

Italy

Less than 5 per cent of students aged 22 (theoretical graduation age) obtain a Master's degree. Around 20 per cent graduate at the age of 25.

Spain

Figures are estimates.

Switzerland

Bachelor degrees are included in Master's degrees.

INDICATOR R14

Belgium, Spain

See R12.

Denmark

See P01.

Italy

Ph.D. degrees by subject are not reported.

Netherlands

Some post-graduates in paramedical science are included in natural and physical science.

United Kingdom

Graduates in interdisciplinary subjects have been pro-rated across the five broad subject groups.

INDICATOR R15

Belgium

See R12.

Hungary

Physical science, mathematics and computing are included in biological science and related.

Japan

"Law and business" includes political science, sociology and other related fields as well.

United Kingdom

This indicator includes a pro-rated share of graduates in interdisciplinary subjects.

INDICATOR R21

See notes to C01.

INDICATOR R22

Austria

The self-employed are not included.

Belgium

Net incomes (after taxes) from the survey have been weighted taking into account differences in tax rates. Data are based on a sample of 4 000 persons.

France

The French ISCED classification is based on the highest diploma obtained. To avoid underestimation of the number of people in the higher ISCED categories, the number of people with qualifications beyond the level of their diploma has been estimated.

Incomes refer to the main source of earnings for the employed persons. Incomes from other sources are not included. The self-employed are likewise not included.

Italy

Data for ISCED 0/1/2 refer only to ISCED 2.

Netherlands

The self-employed are not included. Incomes are reported without taking into consideration employers' contributions to social security and similar schemes.

Spain

ISCED 5 is included in the figures for ISCED 3.

Switzerland

Reported earnings refer to the month preceding the interview, not to the whole year.

INDICATOR R23

Australia

The occupational classification system used differs from ISCO. Some occupations have not been reported.

Canada

No official link exists between the Canadian Standard Occupation and Industry Coding Systems and the ISCO and ISIC systems. An attempt has been made to assign the Canadian codes to the ISCO and ISIC categories as best as possible. Canada has been unable to provide a reasonable link to ISCO-80 since these occupations are contained within a broad range of occupation codes in the Canadian system.

Full-time members of the Canadian armed forces are not eligible to take part in the Canadian Labour Force Survey, and so they are not included in the data for ISIC 75.

France

The French ISCED classification is based on the highest diploma obtained. To avoid underestimation of the number of people in the higher ISCED categories, the number of people with qualifications beyond the level of their diploma have been estimated in the data.

Ireland

In the case of occupations, data on the basis of ISCO-88 were not available for the 1992 Labour Force Survey. Consequently, occupational categories had to be approximated using the national occupation classification.

Due to the likelihood of too small samples underlying some of the grossed up figures for ISCO codes 213, 31 and 80 (computing professionals, physical and engineering science associate professionals, and machine and plant operators), these groups are not reported.

The data on completion of education by industry group were provided on the basis of NACE which is close to ISIC. Due to problems of sample size, ISIC 72 (computer and related activities) was not reported.

Netherlands

ISCED 5, 6 and 7 are considered as one category.

Sweden

The Labour Force Survey (LFS) was used as a source of information for the Swedish data in Table R23(A). It was not possible to make the Swedish data conform strictly to the ISCO-88 definition of occupational groups because of: *a)* the high level of aggregation of occupations in the LFS data; and *b)* the difficulty in converting the Swedish classification into the ISCO-88.

As a result of this it has not been possible to include in the Swedish data several occupations, which belong to the group of Corporate managers (sub-major group 12 of ISCO-88), such as: Department managers in Sales and marketing, Advertising and public relations, Supply and distribution, Computing services, and Research and development.

On the other hand, some occupations, which do not belong to the group of Corporate managers (such as assistant nurses, social workers, economists and statisticians) have been included in the reported data because it was not possible to separate them from the aggregated groups in the LFS statistics.

Owing to the same problems, Sweden has not been able to report data for the complete occupational group of Physical and engineering science associate professions (sub-major group 31 of ISCO-88). Thus, the data reported for this group do in fact only refer to the minor group of Computer associate professionals and to occupations which should not be included in group 31, such as Computer process workers, Repairer, Electronic equipment and Electrical line installers.

Similar problems of delimitation are attached to all Swedish data reported for the occupational groups.

United States

R23(A): The household survey used as the source of information for the United States data does not use the ISCO system. It uses the United States Standard Occupational Classification (SOC). Also, no official link between ISCO and SOC exists. Nevertheless, for the purpose of providing US data, an attempt was made to assign SOC categories to ISCO categories. In some instances this was difficult because occupations grouped together in the SOC are not in the ISCO. For example, Computing professionals (ISCO-213) includes computing system designers. In the SOC, some of these occupations may be included in "Electrical or electronic engineers" and could not be separated from other engineers in this category.

R23(B): The household survey used as the source of information for the United States data does not use the ISIC system. It uses the United States Standard Industrial Classification (SIC). However, some work has been done to create a link between the two classification systems. Nevertheless, there may be some inaccuracies because sometimes in the SIC, an industry that belongs to a particular ISIC category has been grouped with other industries that do not belong or because the United States codes are not exhaustive enough to cover all related areas identified in the ISIC. For example, Computing and related activities (ISIC-72) identifies activities that cannot be identified in the SIC such as Hardware consultancy, Software consultancy and supply, and Maintenance and repair of office, accounting, and computing machinery.

INDICATOR R24

Australia

Data for all school-leavers have been used as the statistics on transition from education to work do not distinguish between those who obtained their Secondary School Certificate (ISCED 3) and those who did not (ISCED 2).

France

One year after leaving education: seven months after leaving education instead of one year. Data for tertiary education are from 1989.

Five years after leaving education: two years after leaving education instead of five. Data for tertiary education are from 1991.

Ireland

Leavers from ISCED 2 include both persons who left full-time education after having successfully completed ISCED 2 and persons who left school while attending ISCED 3, but who did not complete it.

The data relate in all cases to short-term perspectives, i.e. one year following departure from full-time education. Long-term perspective data are not available for any ISCED level.

1992 is the year of survey in all cases. Since submitting data for 1991, some minor adjustments have been made to the estimates over and above those arising from the reclassification of labour force status.

In the case of ISCED 2, data are shown that refer to the labour force status of persons who left full-time education at ISCED 2 one year prior to the survey. Persons who left school while attending ISCED 3 but who did not complete ISCED 3 are included in the total of ISCED 2-leavers.

Leavers from ISCED 3 refer to those who successfully completed ISCED 3 one year prior to the survey and who were not enrolled in full-time education at the time of the survey.

Leavers from both ISCED 5 and 6/7 relate to graduates at this level only.

For all ISCED levels, persons in employment include those on various publicly sponsored work experience and job training schemes for the unemployed. These persons receive an allowance and are regarded as being in employment in the reference period immediately prior to the survey. Persons who have emigrated after leaving school are classified according to their labour force status abroad.

School-leavers from ISCED 2 include those who commenced an ISCED 3 programme but dropped out before graduation. Data for leavers from ISCED 3 include ISCED 3 graduates but exclude those who entered tertiary education and subsequently dropped out. All of the data relate to persons leaving full-time education in the 1990/91 school year.

Sweden

One year after leaving education: data for lower secondary education are from 1990.

Five years after leaving education: data for lower secondary education are from 1988.

United Kingdom

Data refer to England and Wales only.

United States

Data from a household survey with retrospective information were used. The survey, fielded in October, asked respondents about their current level of educational attainment and their current enrolment in education. It also asked respondents about their enrolment in education one year earlier. The population of recent leavers was deduced from this information.

INDICATORS C01 and C02

Australia

Australian Bureau of Statistics, *Transition from Education to Work Survey*, 1993.

Austria

Micro-census of the Austrian Central Statistics Office, averages for 1992.

Belgium

Labour Force Survey 1992. The unemployment register in April 1992 has been used for data on the number of unemployed.

Canada

Canadian Labour Force Survey.

Denmark

Statistical register of the labour force and register of statistics on unemployment.

Finland

The register of completed educational programmes and degrees has been used for the indicators C01 and C02. The *Labour Force Survey* of 1992 has been used for C11 and R21.

France

Labour Force Survey, March 1992.

Germany

Labour Force Survey, 1992.

Ireland

Labour Force Survey, 1992.

Italy

Labour Force Survey, 1992.

Netherlands

Labour Force Survey, 1992.

New Zealand

Household Labour Force Survey, 1992.

Norway

Labour Force Survey, 1992.

Spain

Labour Force Survey, 1992.

Sweden

The register of educational attainment for the population has been used for the indicators C01 and C02. The *Labour Force Survey* of 1992 has been used for C11 and R21.

Switzerland

Enquête suisse population active, Labour Force Survey, 1992.

Turkey

Household Labour Force Survey, 1992.

United Kingdom

Labour Force Survey, 1992.

United States

Current Population Survey, March 1992.

INDICATOR C03

All countries

OECD demographic data base (SMEDUC), 1992.

INDICATOR C11

See notes to C01.

INDICATOR C12

All countries

OECD Labour Force Statistics, Part III, 1994.

INDICATOR C13

All countries

OECD, *National Accounts*, 1994.

INDICATORS F01 to F05 and F11 to F13

Australia

Department of Employment, Education and Training, Higher Education Division, Canberra.

Austria

Austrian Central Statistical Office, Vienna.

Belgium

SEDEP (*Service de Développement et d'Évaluation des Programmes de Formation*), University of Liège; and Katholieke Universiteit Leuven, Faculteit der Psychologie en Pedagogische Wetenschappen, Leuven.

Canada

Statistics Canada, Ottawa.

Czech Republic

Institute for Informatics in Education, Prague.

Denmark

Undervisnings Ministeriet, Datakontoret, Copenhagen.

Finland

Statistics Finland, Helsinki and Ministry of Education, Helsinki

France

Ministère de l'Éducation nationale et de la Culture, Direction de l'Évaluation et de la Prospective, Paris.

Germany

Statistiches Bundesamt, Wiesbaden.

Greece

Ministry of National Education and Religious Affairs, Directorate of Investment Planning and Operational Research, Athens.

Hungary

Penzügyminisztérium, Budapest.

Ireland

Department of Education, Statistics Section, Dublin.

Italy

ISTAT, Roma; and Servizio Statistico, Ministero della Pubblica Istruzione, Rome.

Japan

Ministry of Education, Culture and Science, Research and Statistics Planning Division, Tokyo.

Netherlands

Centraal Bureau voor de Statistiek, Department for Statistics of Education, Voorburg; and Ministerie van Onderwijs en Wetenschappen, Zoetermeer.

New Zealand

Ministry of Education, Wellington.

Norway

Statistisk Sentralbyra, Division for Population, Education and Regional Conditions, Kongsvinger; and The Royal Norwegian Ministry of Education, Research and Church Affairs, Oslo.

Poland

Central Statistical Office, Republic of Poland, Warsaw.

Portugal

Ministerio de Educaçao, Gabinete de Estudos e Planeamento, Departamento de Programação, Lisboa.

Russia

Centre for Science Research and Statistics, Moscow.

Spain

Instituto Nacional de Estadistica, Subdireccion General de Estadisticas e Investigaciones Sociales, Madrid; and Ministerio de Educacion, Officina de Planificacion, Madrid.

Sweden

Swedish National Agency for Education (*Skolverket*), Stockholm; and Statistics Sweden, Örebro.

Switzerland

Office fédéral de la statistique, Bern.

Turkey

State Institute of Statistics, Ankara.

United Kingdom

Department for Education, Darlington.

United States

Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, Washington, D.C.

INDICATORS P01 to P06

All countries

See notes to F01-F05 and F11-F13.

INDICATOR P08

Canada

Adult Education and Training Survey (AETS), which was a supplement to the *Labour Force Survey* fielded in January 1992.

France

Administrative data sources for continuing education and training (DARES - Ministère du Travail) and *Labour Force Survey* (INSEE), 1992.

Germany

Berichtssystem Weiterbildung (*BSW* report system on continuing education).

Ireland

Labour Force Survey.

Norway

Level of Living Survey (*Levekårsundersøkelsen*), 1991.

Spain

Survey of Active Population.

Sweden

Labour Force Survey, June 1993.

United States

National Household Education Survey, adult education component, 1991

INDICATOR P11

LEGEND

1. Data source, full reference
2. Type of data source:
   - law = law or policy document based on law (data on formal arrangements)
   - stat = national statistics (data on formal arrangements)
   - intsur = international survey (data on samples)
   - natsur = national survey (data on samples)
   - other = other
3. **In case of data on formal arrangements:**
   - 3a. **Groups under concern**
   - 3b. **Year of reference**
4. **In case of data on populations:**
   - 4a. Population under concern
   - 4b. Period of data collection
5. In case of data on samples:
   - 5a. Population from which sample was drawn
   - 5b. Period of data collection
   - 5c. Type and size of the sample
   - 5d. How were data collected?:
     - reg = use of register
     - inq = postal inquiry
     - pho = interview by phone
     - vis = interview by visit
     - oth = other
   - 5e. **Sampling errors calculated and accessible?**
   - 5f. **Translation procedure (in case of international survey)**
6. **Deviation from definition of the indicator?**
7. **Other comments**

AUSTRIA

1. Curriculum *Hauptschule*: 1-4 grade *Gymnasium* (RG, wkRG)
2. Ordinance, based on the School Organisation Act (*Schulorganisationsgesetz*)

BELGIUM

1. Flanders: Curriculum of the 3 educational networks
   Direction générale de l'enseignement secondaire du ministère de l'Éducation, de la Recherche et de la Formation de la Communauté française
2. Law

FINLAND

1. National curriculum / Basic lines of national curriculum
2. Decision of State Council

FRANCE

1. **Les données transmises sont issues d'une exploitation spécifique**
2. **Les données mobilisées pour cette exploitation proviennent de deux types de sources:**
   - **le *Bulletin Officiel* (B.O.) du ministère de l'Éducation nationale dans lequel sont intégrés les arrêtés définissant les programmes officiels des différentes filières que peuvent suivre les élèves**
   - **des statistiques nationales exhaustives décomptant les élèves inscrits dans chaque filière, et les élèves qui suivent effectivement chacune des matières proposées**
3. **Les programmes officiels utilisés correspondent à ceux effectivement en vigueur dans toutes les filières proposées aux élèves en 1991/92. Ces programmes sont composés de matières obligatoires (tronc commun) et de matières optionnelles, obligatoires ou facultatives. A chacune de ces matières** correspond un horaire théorique
4. Les effectifs des élèves scolarisés dans chaque filière et le décompte de ceux qui suivent effectivement chacune des matières optionnelles sont connus pour 1991/92 en 6e, 5e, 4e et 3e y compris 4e et 3e technologiques pour tous les établissements publics et privés sous contrat de France métropolitaine (les élèves scolarisés hors de métropole représentent 1.0% des effectifs France entière). Les résultats transmis ne tiennent pas compte des élèves de CPPN et CPA qui correspondent à 1.2% du total des élèves du premier cycle du second degré
7. Une leçon correspond à une heure, les programmes officiels étant les mêmes pour les établissements publics et pour les établissements privés sous contrat. Les résultats qui sont transmis correspondent à l'ensemble des élèves scolarisés dans ces deux types d'établissement de France métropolitaine

GERMANY

IRELAND

ITALY

2. **Law**
3a. **See tables**

NETHERLANDS

1. – Establishing Decree (ISCED 2)
   – 3 different investigations of 1987, 1992 and 1993 (ISCED 1)
2. Law (ISCED 2); natsur (ISCED 1)
3a. **All students**
3b. **1991/92**
5a. **Unknown**
5b. 1987, 1992, 1993
5c. **Unknown**
5d. **Unknown**
5e. **Unknown**

Annex 2 – Data sources

NEW ZEALAND

1. *i)* 1975 Education (Secondary Instruction) Regulations, Education Act 1964 – regulations re. minimum hours per week for compulsory secondary school curriculum

   ii) *Education Gazette* 16 June 1992, Education Act 1989 65A – regulations re. length of 1993 school year

   iii) Assessment, Examination and Certification Regulations and School Qualifications Prescriptions, New Zealand Qualifications Authority, 1993 – regulations re. minimum annual hours for full-time secondary school students to complete courses for senior school examinations and certification

   iv) Education Statistics of New Zealand 1993, Ministry of Education, Oct. 1993 – numbers of students taking various courses

   v) Eleven Wellington secondary schools

2. Law *i), ii)* and *iii)*

   Stat *iv)* -

   Natsurv *v)*

3a. Regulations apply to all New Zealand secondary schools, the administration of which is the responsibility of all boards of trustees, principals, and classroom teachers:

   i) relates to the common curriculum of all New Zealand school students in their first three years of secondary education

   ii) relates to the minimum hours of attendance required for all students to complete each level of secondary education

   iii) sets out the minimum annual hours of instruction for all students seeking to qualify for New Zealand senior secondary school awards

3b. See 1 above

4a. Data applies to the enrolments and staffing levels of all students and sectors of education of the New Zealand education system

4b. The data were collected following the March and July 1993 returns

5a. The sample is selected as a cross section of Wellington area secondary schools (coeducational, single sex (both male and female), state and private, large to medium-sized schools, the sample did not include an integrated school or a small-sized secondary school; it presented c. 4% of the total New Zealand secondary school population

5b. 2.1994

5c. N.A

5d. Interview by phone

5e. N/A

5f. N/A

6. N/A

NORWAY

1. Curriculum Guidelines for Compulsory Education in Norway 1987

PORTUGAL

1. National Curriculum, "preparing the schooling year", LAL document 1991/92

2. Law

3a. Students from Grade Seven up to Nine

3b. 1991/92

SPAIN

1. Orden Ministerial de 2-12-1970 (Orientaciones pedagógicas para la EGB).

2. Law

SWEDEN

1. National curriculum plan (*Läroplan för grundskolan*)

2. Law

7. Two instances given

TURKEY

UNITED KINGDOM

UNITED STATES

INDICATORS P31 and P32

All countries

See notes to F01-F05 and F11-F13.

INDICATOR P33

LEGEND

1. Data source, full reference
2. Type of data source:
   - law = law or policy document based on law (data on formal arrangements)
   - stat = national statistics (data on formal arrangements)
   - intsur = international survey (data on samples)
   - natsur = national survey (data on samples)
   - other = other
3. In case of data on formal arrangements:
   - 3a. Groups under concern
   - 3b. Year of reference
4. In case of data on populations:
   - 4a. Population under concern
   - 4b. Period of data collection
5. In case of data on samples:
   - 5a. Population from which sample was drawn
   - 5b. Period of data collection
   - 5c. Type and size of the sample
   - 5d. How were data collected?:
     - reg = use of register
     - inq = postal inquiry
     - pho = interview by phone
     - vis = interview by visit
     - oth = other
   - 5e. Sampling errors calculated and accessible?
   - 5f. Translation procedure (in case of international survey)
6. Deviation from definition of the indicator?
7. Other comments

AUSTRIA

1. Staff-service-code for teachers (Beamten-Dienstrechtsgesetz 1979)
2. Law
3a. Teachers employed by the Federation or by the provinces/cities
3b. 1991/92

BELGIUM

1. – Ministère de l'Éducation de la Recherche et de la Formation de la Communauté française
   – *Onderwijszakboekje*. Kluwer editorial
2. Law
3a. Preceptor (teacher) of special courses, religion, ethical thinking, physical education and second language education not included
3b. 1991/92

FINLAND

1. Agreements between the Ministry of Education and the teachers' unions on working hours and working conditions

FRANCE

1. – Obligation réglementaire de service (ISCED 0,1)
   – Enquêtes sur le service des enseignants rémunérés par le ministère de l'Éducation nationale (ISCED 2, 3)
2. – Law
   – Stat
3a. Ensemble des enseignants premier degré public + privé à financement public prédominant
3b. 1991/92
4a. Enseignants du second degré public des établissements relevant du ministère de l'Éducation nationale, environ 98% des enseignants du public
4b. 1991/92
7. Pour le second degré, le nombre d'heures d'enseignement est calculé sans heures supplémentaires ; ce nombre est rapporté a un nombre d'équivalents plein temps calculé également sans heures supplémentaires

GERMANY

IRELAND

1. Department of Education

ITALY

1. D.P.R. 399/88, L. 476/86, D.P.R. 417/74
2. Law
3a. Public schools

NETHERLANDS

1. Legal Status (education) Decree; WBO and RPBO
2. Law
3a. All
3b. 1991/92

NEW ZEALAND

1. – NZ law, regulations: *i)* Education Act 1989 sections 20, 25, 65b; *ii)* 1992 state collective contracts for primary teachers (section 2.9) and secondary teachers (sections 4.1 to 4.6))
   – National interpreters: *iii)* key staff from Ministry of Education, Catholic Schools' Council, Independent Schools' Association, New Zealand Education Institute
2. – Law: NZ law and regulations (*i* and *ii*)
   – Other (= national interpreters) *(iii)*
3a. Regulations apply to New Zealand state and integrated primary and/or secondary schools, the administration of which is the responsibility of all school boards of trustees and principals:
   i) relates to the attendance of students, the definition of a school day, the number of half-days schools must be opened for, and staffing allocations;
   ii) addresses the hours of work which teachers may reasonably be required to undertake, Monday to Friday
3b. *i)* 1989; *ii)* 1992

NORWAY

1. Agreements between the Ministry of Education and the teachers' unions on working hours and working conditions

PORTUGAL

1. Statute of the teaching career
2. Law
3a. All groups of teachers
3b. 1991/92

SPAIN

1. – Orden Ministerial de 31-7-1987
   – National Collective Labour Agreement for 1992
2. Law

SWEDEN

2. – Stat: number of subgroups of teachers (but there are no exact data on which programmes different subgroups teach)
   – Other: national agreements between labour market organisations
4. No exclusions (but approximations of breakdowns on ISCED levels)

TURKEY

UNITED KINGDOM

1. School Teachers Pay and Conditions Document 1994 and Secondary School Staffing Survey 1992
2. – Law
   – Natsur

3a. All teachers employed by local education authorities or the governing bodies of grant-maintained or voluntary-aided schools in the provision of primary and secondary education in England and Wales
3b. 1991/92
5a. Teachers in maintained secondary schools in England
5b. January 1992
5c. Stratified sample of schools (N=500, 10% of population). All teachers in sampled schools
5d. Inq
5e. No
7. See notes to tables

UNITED STATES

1. US Department of Education, National Center for Education Statistics, *Schools and Staffing Survey 1990/91* and *1987/88*
2. Natsur
5a. Teacher in Grades K-12, including public and private school teachers
5b. 1990/91 and 1987/88
5c. Stratified cluster sample (N=43, 125) for 1990/91 and (N=56, 242) for 1987/88
5d. – Inq
   – Pho
5e. Yes

INDICATOR P34

LEGEND

1. Data source, full reference

2. Type of data source:
- law = law or policy document based on law (data on formal arrangements)
- stat = national statistics (data on formal arrangements)
- intsur = international survey (data on samples)
- natsur = national survey (data on samples)
- other = other

3. In case of data on formal arrangements:
- **3a. Groups under concern**
- **3b. Year of reference**

4. In case of data on populations:
- **4a. Population under concern**
- **4b. Period of data collection**

5. In case of data on samples:
- **5a. Population from which sample was drawn**
- **5b. Period of data collection**
- **5c. Type and size of the sample**
- **5d. How were data collected?:**
  - reg = use of register
  - inq = postal inquiry
  - pho = interview by phone
  - vis = interview by visit
  - oth = other
- 5e. Sampling errors calculated and accessible?
- **5f. Translation procedure (in case of international survey)**

6. Deviation from definition of the indicator?

7. Other comments

AUSTRIA

1. Federal law concerning university studies on humanities and sciences (*Bundesgesetz über gesetzes- und naturwissenschaftliche Studienrichtungen*); School Organisation Act (*Schulorganisationsgesetz*)
2. Law
3a. Teachers employed by the Federation or by the provinces/cities
3b. 1991/92

BELGIUM

1. – Ministère de l'Éducation de la Recherche et de la Formation de la Communauté française
   – *Education in Belgium: the diverging paths*, Ministerie van de Vlaamse gemeenschap, 1991
2. Law
3b. 1991

FINLAND

1. Teacher education curriculum (cf. law)
2. Law

FRANCE

1. Ministère de l'Éducation nationale IDEP
2. Law
3. Enseignants du secteur public
7. Une proportion croissante de futurs enseignants suit une année de préparation au concours de recrutement dans un Institut Universitaire de Formation des Maîtres (IUFM) – la durée de leurs études est alors de 17 ans.

GERMANY

IRELAND

ITALY

1. D.P.R. 417/74 D.H. 3.9.82 e succ. modifiche
2. Law
3a. See tables

NETHERLANDS

1. – WBO
   – Secondary Education Act
2. Law
3a. – Student teacher training courses
   – Post-graduate teacher training
3b. 1991/92

NEW ZEALAND

1. *i)* Education Act 1989, relevant sections from Education Acts, 1964, 1990, 1993
   ii) "Assessment, Examination, and Certification Regulations" handbook, New Zealand Qualifications Authority, 1993
   iii) Relevant pages from calendars of various colleges of education, and from brochures of New Zealand Teacher Registration Board
   iv) Registrars of the two major secondary colleges of education
   v) Key staff from New Zealand Council for Teacher Education, New Zealand Ministry of Education, and New Zealand Teacher Registration Board
2. – Law: NZ law, regulations, requirements (i) (ii) (iii)
   – Other: regional survey (iv); national "interpreters" (v)
3a. Regulations apply to New Zealand colleges of education, the administrations of which is the responsibility of the college councils and principals:
   i) relates to the entrance criteria, course requirements, and attendance of students; and gives power to the Teacher Registration Board to determine the requirements for teacher registration;
   ii) spells out the prerequisites and course requirements to complete successfully a nationally-approved diploma of teaching;
   iii) provides details prescribed by various colleges of education and by the New Zealand Teacher Registration Board
3b. *i)* 1989, 1964, 1990, 1993
   ii) 1993
5a. The two secondary colleges in Auckland and Christchurch service the training needs of most secondary teacher-trainees
5b. March 1994
5c. Data from the regional survey represent c. 80% of the national intake for 1994
5d. Pho

NORWAY

1. Law

PORTUGAL

1. Higher Education Curriculum Departamento de Programaçao e Gestão Financeira
2. Stat
3a. Student teachers of all schooling levels entering the profession after professional qualification
3b. 1991/92

[redacted]

2. Law

SWEDEN

1. UTB Planer (law)
2. Law
3a. Formal requirements have been described. Requirements differ between different subgroups of teachers
3b. 1991/92
7. On each ISCED level, different types of teachers are teaching; here has been reported the educational backgound of the largest groups on each level

TURKEY

UNITED KINGDOM

1. Database for Teacher Records
2. Law
4a. All succesful completers of initial teacher training in 1992
4b. 1992

UNITED STATES

1. No published source; standard practice

INDICATOR P35

LEGEND

1. Data source, full reference

2. Type of data source:
   - law = law or policy document based on law (data on formal arrangements)
   - stat = national statistics (data on formal arrangements)
   - intsur = international survey (data on samples)
   - natsur = national survey (data on samples)
   - other = other

3. In case of data on formal arrangements:
   - 3a. Groups under concern
   - 3b. Year of reference

4. In case of data on populations:
   - 4a. Population under concern
   - 4b. Period of data collection

5. In case of data on samples:
   - 5a. Population from which sample was drawn
   - 5b. Period of data collection
   - 5c. Type and size of the sample
   - 5d. How were data collected?:
     - reg = use of register
     - inq = postal inquiry
     - pho = interview by phone
     - vis = interview by visit
     - oth = other
   - 5e. Sampling errors calculated and accessible?
   - 5f. Translation procedure (in case of international survey)

6. Deviation from definition of the indicator?

7. Other comments

AUSTRIA

1. Staff-service-code for teachers "Salary and Wage Act (*Gehaltgesetz*)"
2. Law
3a. Teachers employed by the Federation or by the provinces/cities
3b. 1991/92
7. In Austria the salaries for civil servants and teachers are first negotiated between the government and the unions. The result of these negotiations are fixed by law

BELGIUM

1. – Ministère de l'Education, de la Recherche et de la Formation de la Communauté française
   – Direction générale des personnels, des statuts et de l'organisation administrative
2. Stat
4a. Full-time teachers
4b. 10/93 - 02/94

FINLAND

1. Teachers' Wage and Salary Agreement (TWSA) of Municipalities and Central Statistical Office of Finland
2. – Law
   – Stat
3b. 1992
4a. ISCED 1, 2: 98% included; ISCED 3 General: 98% included; ISCED 3 Vocational: 54% included, outside government and government-dependent vocational educational schools
4b. Central Statistical Office data were collected October 1992, TWSA 1991
7. Teachers' Wage and Salary Agreement (TWSA) of Municipalities is in force in the whole country. The basic salary is constructed from TWSA. Data from the national statistics are used to raise the basic salary with average regional compensations and with average compensation of teaching hours and other tasks which exceed hours of the basic salary

FRANCE

GERMANY

IRELAND

ITALY

1. Salaries: DPR 399/88, DPR. n° 13, art. 16, D.L. 19.9.92 n° 384 art. 7 (conv. L. n° 438/92)
   Benefits: DM 372/81, DM 55/93 (retroactive)
2. Law
3a. Public schools (see tables)

NETHERLANDS

1. Legal Status (education) Decree; and RPBO
2. Law
3a. All
3b. 1991/92

NEW ZEALAND

1. *i)* 1992 Primary and Secondary Teachers Collective Employment Contracts - award settlement statement
   ii) "Position of Women in the Education Services, 1991/92", Ministry of Education 1993
   iii) Key staff from Ministry of Education, Catholic Schools' Council, Independent Schools' Association, New Zealand Education Institute
2. – Law : regulations *i)*
   – Stat *ii)*
   – Other (= national interpreters) *(iii)*
3a. The Collective Employment Contract award governs the salaries of all New Zealand state and integrated teachers below the principal (whose salary is negotiated individually with the school's board of trustees) during the period the award specifies (often one or two years)
3b. *i)* 1992; *ii)* 1991, 1993
4a. The data are based on a survey of all teachers in the state and integrated system
4b. 1992

NORWAY

1. Agreements between the Ministry of Education and the teachers' unions on working hours and working conditions

PORTUGAL

1. – Statute of the Teaching career
   – Collective work contract for private schools employees
2. Law
3a. All levels of the system
3b. 1991/92

SPAIN

1. – Public salaries: *Ley de Presupuestos Generales del Estado de 1992*. Differences in salary structure in the Autonomous Communities have been taken into account
   – Private, government-dependent salaries: *Acuerdo Laboral parala Enseñanza Privada para los años 1992 y 1993, complementario del VIII Convenio Colectivo de la Enseñanza Privada*
   – Private, independent salaries: *III° Convenio Colectivo Nacional para Centros de Enseñanza Privada sin Ningún Nivel Concertado o Subvencionado*
2. Law

SWEDEN

2. Other: national agreements between labour market organisations (Swedish Association of Municipalities, Teachers' organisations)
7. According to agreements per 1/7/1991

TURKEY

UNITED KINGDOM

1. – School Teachers Pay and Conditions Document 1994
   – Database of Teacher Records March 1992
2. – Law
   – Stat
3a. All teachers employed by local education authorities or the governing bodies of grant-maintained or voluntary-aided schools in the provision of primary and secondary education in England and Wales
3b. 1991/92
4a. Teachers in maintained nursery, primary and secondary schools in England and Wales
4b. Information relating to March 1992, collected April-December 1992

UNITED STATES

1. US Department of Education, National Center for Education Statistics, *Schools and Staffing Survey 1990/91*
2. Natsur
5a. US Teachers in Grades K-12 public and private sectors
5b. 1990/91
5c. Stratified sample N= 43 125
5d. – Inq
   – Pho
5e. Yes

INDICATOR P36

LEGEND

1. Data source, full reference

2. Type of data source:

- **law** = law or policy document based on law (data on formal arrangements)
- **stat** = national statistics (data on formal arrangements)
- **intsur** = international survey (data on samples)
- **natsur** = national survey (data on samples)
- **other** = other

3. In case of data on formal arrangements:
- **3a. Groups under concern**
- **3b. Year of reference**

4. In case of data on populations:
- **4a. Population under concern**
- **4b. Period of data collection**

5. In case of data on samples:
- **5a. Population from which sample was drawn**
- **5b. Period of data collection**
- **5c. Type and size of the sample**
- **5d. How were data collected?:**
  - reg = use of register
  - inq = postal inquiry
  - pho = interview by phone
  - vis = interview by visit
  - oth = other
- **5e. Sampling errors calculated and accessible?**
- **5f. Translation procedure (in case of international survey)**

6. Deviation from definition of the indicator?

7. Other comments

AUSTRIA
2. Stat

BELGIUM
1. Service des statistiques du ministère de l'Éducation, de la Recherche et de la Formation de la Communauté française
2. Stat
4b. 21/01/94

FINLAND

FRANCE

GERMANY

IRELAND

ITALY
1. DL. 3.2.93 "Conto annuale scuola"
2. Stat
4a. 100%
4b. 1992

NETHERLANDS
2. CASO (Central Administration of Salaries for Education); IPTO (Integral Registration of the Teaching Staff) (source)
3. Stat
4a. – Teaching staff and non-teaching staff in the schools (ISCED 2)
– All teachers in public and private education (ISCED 1)
4b. 3/1992

NEW ZEALAND
1. Teachers Payroll Data: 1/3/92
2. Stat
4a. Data for schooling: primary, intermediate and secondary schools
4b. 1/3/92
7. State and state-integrated schools only

NORWAY

PORTUGAL
1. Statistical Information for Education — INFORED
2. Stat
3a. All teachers for public; 25% for ISCED 1 private; 55% for ISCED 2 and 3 private
3b. 1991/92

SPAIN
2. Stat
4b. At the beginning of school year 1991/92

SWEDEN
1. Database on teachers
2. Stat

TURKEY

UNITED KINGDOM
1. Database for teacher records
2. Stat
4a. All teachers in maintained nursery, primary and secondary schools
4b. April-Dec. 1992

UNITED STATES
1. US Department of Education, National Center for Education Statistics, *Schools and Staffing Survey*, 1990/91
2. Natsur
5a. US Teachers in Grades K-12, including public + private
5b. 1990/91 school year
5c. Stratified cluster sample; N = 43 125
5d. Inq
Pho
5e. Yes

INDICATORS R04 and R05

Data derived from the *Reading Literacy Study* conducted by the International Association for the Evaluation of Educational Achievement (IEA) from October 1990 to April 1991, depending on the country.

INDICATORS R11, R12 and R14, R15

All countries

See notes to F01-F05 and F11-F13.

INDICATOR R21

See notes to C01.

INDICATOR R22

Australia

Australian Bureau of Statistics, *Transition from Education to Work Survey*, 1993.

Belgium

Survey on Poverty within the framework of the Second Community Action Programme to combat poverty, 1992.

Canada

Annual Survey of Consumer Finances, April 1992.

Denmark

Register-based personal income statistics, 1991.

Finland

Regional employment statistics.

France

Labour Force Survey, March 1992.

Germany

German Socio-economic Panel (SOEP), 1992.

Netherlands

Yearly Wage Survey, supplementary questionnaire for education.

Norway

Register of salaries and taxes and register of educational attainment.

New Zealand

Household Expenditure and Income Survey, 1991/92.

Spain

Family Budget Survey, 1990/91.

Sweden

The register of educational attainment for the population (January 1993) and the register of regional income distribution (ÅRSYS) 1992.

Switzerland

Enquête suisse population active (Labour Force Survey), 1992.

United Kingdom

General Household Survey, 1992.

United States

Current Population Survey, March 1992.

INDICATOR R23

Canada

Labour Force Survey.

France

Labour Force Survey, 1993.

Ireland

Labour Force Survey, 1992.

Italy

Labour Force Survey, October 1992.

Netherlands

Labour Force Survey, 1992.

New Zealand

Population Census, 1991.

Spain

Labour Force Survey, 1992 (for occupations) and *Socio-demographic Survey*, 1991 (for industries).

Sweden

Labour Force Survey, 1992 (occupations). The register of regional income distribution (ÅRSYS), 1992 (for industries).

Switzerland

Population Census, 1990.

United States

Current Population Survey, March 1992.

INDICATOR R24

Australia

Australian statistics on transition from education to work (cross-tabulation of school-leavers and labour market destinations).

Canada

The National Graduate Survey and follow-up of the National Graduate Survey.

France

Panel téléphonique du CEREQ (Centre d'études et de recherches sur les qualifications).

Ireland

ISCED 2 and 3: *The Economic Status of School-leavers 1991* (Department of Enterprise and Employment). For leavers from ISCED levels 5 and 6/7, the data source is the survey of *First Destination of Award Recipients in Higher Education 1991* (Higher Education Authority).

Spain

Socio-demographic Survey.

Sweden

Follow-up surveys for leavers from education. Data for leavers from ISCED level 3, short-term perspective, are derived from a long-term follow-up for leavers from ISCED level 2 (Grade Nine).

United States

Current Population Survey, October 1992.

INDICATOR C02(B)

Calculation formula

The index of gender differences is calculated by subtracting the quotas among men in ISCED levels 0/1, 2, 5 and 6/7 from the quotas among women in the same categories. The result in category 0/1 is multiplied by 2 and then added to the result in category 2. The result in category 5 is added to the result in category 6/7 which is also multiplied by 2.

The result of this operation in the higher ISCED levels is subtracted from the result in the lower ISCED levels. To get an index that runs in theory from -100 to +100, the result is divided by 4 and multiplied by 100.

To present differences over time, data are calculated for the age groups 25-34 and 55-64 years.

The formula was adapted in accordance with the ISCED levels for which countries provided data.

INDICATORS C21 to C27

The indicators C21 to C27 are based on data collected by means of a questionnaire distributed to a sample of the general public in each of the participating OECD countries. The public were asked for their views on the importance of, and their confidence in, various aspects of education.

The questionnaire referred specifically to the final years of compulsory secondary education and a common set of questions were asked in all countries. The organisation of the survey was undertaken within each country and the surveys were administered by reputable national survey organisations. In some countries additional questions were asked to inform policy matters in these countries.

The recommended sample size was 1 000 individuals.

The following summary indicates sample type and effective sample size. The Network D Report to the INES General Assembly 1995 contains further evaluative analysis of the survey findings. The Network D Technical Report contains full details on sampling methods, calculation of weights and design effects, etc.

	Effective sample size	*Sample type*	*Survey agency*
Austria	1 757	Address-based probability sample.	GFK
Belgium (Flemish community)	808	Address-based probability sample.	Dimarso
Denmark	1 135	Population register-based probability sample.	Danish Research and Development Centre
Finland	1 283	Population register-based probability sample.	Statistics Finland
France	1 508	Address-based non-probability sample.	Research International
Netherlands	934	Address-based probability sample.	University of Twente
Portugal	1 271	Address-based probability sample.	National Institute of Statistics
Spain	1 399	Address-based non-probability sample.	CIS
Sweden	1 003	Population register-based probability sample.	Statistics Sweden
Switzerland	980	Address-based non-probability sample.	GIS
United Kingdom	1 242	Address-based probability sample.	SCPR
United States	1 281	Telephone-based probability sample.	Westat

INDICATOR F03

Comparisons of expenditures for tertiary education, and especially per tertiary student, can be misleading because the figures for universities and other tertiary institutions include substantial expenditures for research.

The research share of total tertiary spending varies among countries partly because of differences in the share of total national research and development (R&D) performed by the higher education sector. As shown in the following table, the percentage of all such R&D varies from less than 17 per cent in Germany (FTFR) to over 26 per cent in Canada and nearly 27 per cent in Sweden.

Percentage of total national R&D performed by the higher education sector (1992)

Canada	26.4	Netherlands	24.7
Finland	22.0	Spain	24.3
Germany (FTFR)	16.6	Sweden	* 26.7
Ireland	22.9	United Kingdom	17.0
Japan	18.5	United States	17.2

* Figure for 1993

Source: OECD, *Main Science and Technology Indicators 1993, No. 2*, Paris, 1994, p. 22.

Another reason why research spending distorts comparison of expenditure per tertiary student is that research outlays have not been included to the same extent in the tertiary expenditure figures of all countries. For example, countries such as Canada, Germany (FTFR) and the United States have included essentially all research outlays of institutions of higher education in their tertiary expenditure statistics, whereas others such as Japan, and the United Kingdom excluded separately funded or separately budgeted research.

Recognising these problems, policy-makers in several countries have asked for an indicator that distinguishes between expenditures for research and expenditures for teaching, and compares countries with respect to expenditure per tertiary student net of the cost of research. Unfortunately, this request is difficult to satisfy. One obstacle is that some countries do not have complete data on the research outlays of their tertiary institutions. Another obstacle is conceptual: an important activity of universities, the "training by doing" of students (especially postgraduate) to be researchers can be described with equal validity as either teaching or research. It is therefore very difficult to measure those two components consistently.

The OECD does have at its disposal, however, a resource that can shed some light on the research-versus-teaching distinction: the statistics on national R&D expenditures compiled by the OECD Directorate of Science, Technology, and Industry (DSTI). These statistics include information on higher education R&D (HERD) expenditures, broken down by source of funds. Using the HERD figures, it is possible to illustrate how exclusion of the research component of tertiary expenditures might affect the international comparison of expenditure per student.

The following table covers the relatively small number of countries for which there is reasonable compatibility between the DSTI/HERD expenditure data and the research component of the country's reported spending for tertiary education. To the extent permitted by the data, the table shows:

1. Total expenditure per tertiary student — that is, before deducting any R&D expenditures (these figures are taken from indicator F03).
2. A corresponding estimate of expenditure per tertiary student, excluding R&D expenditure. These estimates have been calculated by reducing expenditure per tertiary student, as shown in indicator F03, by the percentage that DSTI/HERD expenditure (or, in some cases, only the appropriate part of HERD expenditure) makes up of total tertiary expenditure.
3. The percentage by which expenditure per student excluding R&D is less than expenditure per student including R&D.

Because the tertiary expenditure figures of Belgium, Finland and the United Kingdom in indicator F03 do not include all research spending of tertiary institutions, it is not possible to compare expenditure per student including and excluding R&D for these countries.

Expenditure per tertiary student including and excluding expenditure for higher education research and development (HERD)

	Expenditure per student including R&D expenditure (US dollars)	*Estimated expenditure per student excluding R&D expenditure (US dollars)*	*Percentage by which estimated expenditure per student excluding R&D is less than expenditure per student including R&D*
Austria	5 820	3 653	37
Belgium	*a*	5 095	*a*
Canada	12 350	10 584	14
Denmark	6 710	4 865	28
Finland	*a*	7 408	*a*
Ireland	7 270	6 201	15
Netherlands	8 720	6 816	22
United Kingdom	*a*	8 533	*a*

a. Data not available on tertiary expenditures inclusive of all research spending in institutions of tertiary education.

The results shown in this table, though imprecise and only covering eight countries, suffice to demonstrate two points. First, research spending constitutes an important fraction of total expenditure for tertiary education. Secondly, the estimated research share of total tertiary expenditure varies among countries. For the handful of countries covered, the subtraction of R&D expenditures reduces estimated expenditure per student by amounts ranging from 14 to 37 per cent.

It follows that international differences in spending per tertiary student (shown in indicator F03) and in spending for tertiary education as a percentage of GDP (shown in indicator F01) reflect in part differences among countries in the research roles of institutions of higher education. The spending differentials do not necessarily, or exclusively, reflect differences in the amounts spent per student to support the teaching functions of tertiary institutions. The OECD will endeavour in the future to measure the research component of tertiary expenditures more comprehensively, more precisely, and for a larger number of countries.

INDICATORS P01 to P06

Coefficients for full-time equivalents
2 part-time = 1 full-time

	Early childhood education	*Primary education*	*Lower secondary education*	*Upper secondary education*				*Non-university tertiary education*	*University education*			*Not defined*
				General	*Vocational*	*Apprenticeship*	*Total*		*1st stage*	*2nd stage*	*Total*	
Australia	1	1	1	1	4	3.33	3.37	4.66	2.15	2.26	3.89	1
Austria	1	1	1	1	1	1	1	2	2	2	2	1
Belgium	1	1	1	1	1	1	1	2	2	2	2	4
Canada	2	1	1	1	1	1	1	3	3	3	3	3
Czech Republic	1	1	1	1	1	1	1	2	2	2	2	1
Denmark **	1	1	1	1	1	1	1	1	1	1	1	1
Finland **	1	1	1	1	1	1	1	1	1	1	1	1
France **	1	1	1	1	1	1	1	1	1	1	1	1
Germany	1	1	1	1	1*	1	1	2	2	2	2	*1
Greece **	1	1	1	1	1	1	1	1	1	1	1	1
Hungary	1	1	1	1	1	1	1	1	1	1	1	1
Ireland	1	1	1	2	2	2	2	2	2	2	2	1
Italy **	1	1	1	1	1	1	1	1	1	1	1	1
Japan	1	1	1	1	1	1	1	2	2	2	2	1
Luxembourg *	1	1	1	1	1	1	1	2	2	2	2	1
Netherlands	1	1	2	2	2	2	2	2	2	2	2	2
New Zealand	2	1	2	2	2	2	2	2	2	2	2	1
Norway	1	1	1	1	1	1	1	2	2	2	2	1
Poland **	1	1	1	1	1	1	1	1	1	1	1	1
Portugal *	1	1	1	1	1	1	1	2	2	2	2	1
Russia *	1	1	1	1	1	1	1	2	2	2	2	1
Spain	1	1	1	2	2	2	2	2	2	2	2	1
Sweden	1	2	2	2	2	2	2	1	1	1	1	1
Switzerland	1	1	1	1	1	1	1	2	2	2	2	1
Turkey *	1	1	1	1	1	1	1	2	2	2	2	1*
United Kingdom	1	1	1	2	2	2	2	2.86	2.86	2.86	2.86	1
United States	2	1	1	*1	1	1	1	3	2.5	2.7	2.82	1

* Coefficients determined by INES Secretariat.
** No part-time enrolments.

Typical age ranges in early childhood, primary and lower secondary education

	Early childhood education		Primary education		Lower secondary education		
	Starting age	Ending age	Starting age	Ending age	Starting age	Ending age	Graduation age
Australia	...	...	...	...	...	...	...
Austria	3	5	6	9	10	13	14
Belgium	2.5	5	6	11	12	13	.
Canada	4	5	6	11	12	14	.
Czech Republic	3	5	6	9	10	13 to 14	14 to 15
Denmark	3	6	7	12	13	14 to 15	16 to 17
Finland	3 to 6	3 to 6	7	12	13	15	16
France	2	5	6	10	11	14	.
Germany	3	5	6	9	10	15	16
Greece	3.5	4.5	5.5	10.5	11.5	13.5	14.5
Hungary	3	5	6	9	10	13	.
Ireland	4 to 5	5 to 6	6 to 7	11 to 12	12 to 13	14 to 15	15 to 16
Italy	3	5	6	10	11	13	14
Japan	3	5	6	11	12	14	15
Luxembourg	...	...	...	...	...	...	...
Netherlands	4	5	6	11	12	15	16
New Zealand	2	4	5	10	11	14	.
Norway	3	6	7	12	13	15	.
Poland	3	6	7	.	.	14	15
Portugal	3	5	6	11	12	14	15
Russia	3	5	6	8	9	14	15
Spain	2	5	6	10	11	13	14
Sweden	3	6	7	12	13	15	.
Switzerland *	4 to 5	5 to 6	6 to 7	10 to 12	11 to 13	14 to 15	.
Turkey	3	5	6	10	11	13	14
United Kingdom	2	5	5	10	11	13	.
United States	3	5	6	11	12	14	.

* The span age for theoretical and ending ages reflects the difference in the cantonal school systems. The duration for primary and lower secondary education is nine years for the whole country.

Typical age ranges

Theoretical starting, ending and graduation ages at upper secondary education by type of programme

	General			Vocational technical			Apprenticeship		
	Starting age	*Ending age*	*Graduation age*	*Starting age*	*Ending age*	*Graduation age*	*Starting age*	*Ending age*	*Graduation age*
Australia	16	17	18	16	19	20	16	19	20
Austria	14	17	18	14	15 to 18	16 to 19	15	17 to 18	18 to 19
Belgium	14	17	18	14	17 to 18	18 to 19	15 to 16	17 to 18	18 to 19
Canada	15	17	18	15	17	18	.	.	.
Czech Republic	14 to 15	17 to 18	18 to 19	14 to 15	17 to 18	18 to 19	14 to 15	16 to 17	17 to 18
Denmark	16 to 17	18 to 19	19 to 20	16 to 17	18 to 19	19 to 20	.	.	.
Finland	16	18	19	16	17 to 18	18 to 19	16	17 to 18	18 to 19
France	15	17	18	15	16 to 18	17 to 19	.	.	.
Germany (FTFR) *	16	18	19	16	18	19	.	.	.
Germany	16	17 to 18	18 to 19	16	18	19	.	.	.
Greece	14.5	16.5	17.5	14.5	16.5	17.5	14.5	15.5	16.5
Hungary	14	17	18	14	17	18	14	16	17
Ireland	15 to 16	16 to 17	17 to 18	15 to 16	16 to 17	17 to 18	16 to 17	19 to 20	20 to 21
Italy	14	18	19	14	18	19	.	.	.
Japan	15	17	18	15	17	18	.	.	.
Luxembourg	...	...	...	...	...	...	...	...	...
Netherlands	15	16 to 17	17 to 18	16	18	19	16	17 to 20	18 to 21
New Zealand	15	17	18	16	17	18	16	19	20
Norway	16	18	18	16	18	18	16	18	18
Poland	15	18	19	15	16 to 19	17 to 20	.	.	.
Portugal	15	17	18	15	17	18	15	18	.
Russia	15	17	18	15	17	18	.	.	.
Spain **	14	17	18	14	18	19	.	.	.
Sweden	16	18	19	16	17 to 18	18 to 19	.	.	.
Switzerland	15 to 16	17 to 19	18 to 20	15 to 16	17 to 19	18 to 20	.	.	.
Turkey	14	16	17	14	16 to 18	17 to 19	14	16	17 to 17.5
United Kingdom ***	14	17	16	16	17	18	.	.	.
United States	15	17	18	.	.	.	.	.	.

* Germany: first programmes: 16-18; second programmes: 19-21.

** Spain: first programmes for vocational and apprenticeship: 14-15 (graduation at 16); second programmes for vocational and apprenticeship: 16-18 (graduation at 19); for general programmes: 14-16

*** United Kingdom: many students graduate from general education programmes after 2 rather than 4 years.

Typical age ranges

Theoretical starting, ending and graduation ages at non-university tertiary education

	Starting age	*Ending age*	*Graduation age*
Australia	17 to 18	18.5 to 20.5	...
Austria	18 to 19	19 to 24	20 to 25
Belgium	18	20 to 21	21 to 22
Canada	18	19	20
Czech Republic	18	19	20
Denmark	19 to 20	20 to 21	21 to 22
Finland	19	20 to 21	21 to 22
France	18	19	20
Germany (FTFR)	19	20	21
Germany	19	20	21
Greece	17.5	20.5	21.5
Hungary	18	20	21
Ireland	18	19	20
Italy	19	21	22
Japan	18	19 to 20	20 to 21
Luxembourg	...	...	...
Netherlands *	.	.	.
New Zealand	18	20	21
Norway	19	19 to 20	21
Poland	19 to 20	19 to 22	20 to 23
Portugal	18	20 to 21	21 to 22
Russia	17 to 18	18 to 19	19 to 20
Spain	18	19 to 20	20 to 21
Sweden	19	20 to 20.5	21 to 21.5
Switzerland	20	22	23
Turkey	17	18	19
United Kingdom	18	19	20
United States	18	19	20

* Non-university tertiary education does not exist.

Typical age ranges
Theoretical starting, ending and graduation ages at university education

		Name of degree	Starting age	Ending age	Graduation age
Australia	1	Bachelor	17 to 18	...	21
	2	...	...	...	...
	3	...	...	...	...
Austria	1				
	2	Diplomingenieur or Magister	18 to 19	21 to 24	22 to 25
	3	Doktor	22 to 25	23 to 26	24 to 27
Belgium	1	Candidat or equivalent	18	19	20
	2	Licenciat or equivalent	20	21 to 22	22 to 23
	3	Doctorat or equivalent	22 to 23	25 to 26	26 to 27
Canada	1	Bachelor	18	21	22
	2	Master	22	23	24
	3	Doctorate	24	26	27
Czech Republic	1	Bakalar	18	20	21
	2	Magister, Inzenyr, MUDr., MVDr.	18	22	23
	3*	Doktor	23	25	26
Denmark	1	Bachelor, MVU	19 to 20	21 to 22	22 to 23
	2	Kandidat	19 to 20	23 to 24	24 to 25
	3	Ph.D.	25	26	27
Finland	1	Bachelor or equivalent	19	21 to 22	22 to 23
	2	Master or equivalent	19	24	25
	3	Ph.D. and licenciate	25	28	29
France	1	Licence	18	20	21
	2	Maîtrise	21	21	22
	3	Doctorat	22	25	26
Germany (FTFR)	1				
	2	Staats-Diplomprüfung	19	25	26
	3	Doctor	26	28 to 30	29 to 31
Greece	1	Degree in all disciplines	17.5	20.5	21.5
	2	Master / Diplom	17.5	21.5	22.5
	3	Doctoral degree	22.5	24.5	25.5
Hungary	1	College diploma	18	20 to 21	21 to 22
	2	University diploma	18 or 21	22	23
	3	Doctorate	23	25	26
Ireland	1	Bachelor	18	20	21
	2	Master	21	21	22
	3	Doctorate (Ph.D.)	22		
Italy	1	Laurea Breve	19	21	22
	2	Laurea	19	22	23
	3	Dottorato/Specializzazione post-laurea	23	24	25
Japan	1	Gakushi	18	21	22
	2	Shushi	22	23	24
	3	Hakushi	24	26	27

		Name of degree	Start age	Ending age	Graduation age
Luxembourg	1	...	...	...	...
	2	...	...	...	...
	3	...	...	...	...
Netherlands	1	HBO	18	21	22
	2	Doctoraal	18	21	22
	3	Doctor	22	25	26
New Zealand	1	Bachelor	18	20	21
	2	Bach. Hons/Masters	21	22	23
	3	Ph.D.	23	24	25
Norway	1	.	.	.	.
	2	Cand.mag.	19	21	22
	3	Embetseksamen	19 or 22	24	25
Poland	1	Licenjat or Inzynier	19 or 20	21 to 23	22 to 24
	2	Magister or Lekarz	19 or 20	23 to 25	24 to 26
	3	Doktor	24	26	27
Portugal	1	Bacharelato	18	18 to 21	22
	2	Licenciatura	18	21 to 23	22 to 24
	3	Mestrado/Doctor	22 to 24	23 to 25	24 to 26
Russia	1	.	.	.	.
	2	Specialist s vysshim obrazovaniem	18	21	22
	3	Kandidat Nauk	22	.	26
Spain	1	Diplomado o Ingenerio tecnico	18	20	21
	2	Licenciado, Arquitecto o Ing. superior	18 or 21	22	23
	3	Doctor	23	24	25
Sweden	1	Undergraduate bachelor	19	21 to 23,5	22 to 24,5
	2	.	.	.	.
	3	Licenciate	22	23 to 23,5	24 to 26,5
	3	Doctor	22	25 to 27,5	26 to 28,5
Switzerland	1	x	x	x	x
	2	Licence/diplôme	20	25	26 *
	3	Doctorat	26	31	31 *
Turkey	1	Lisans	17	20	21
	2	Yüksek Lisans	21	22	23
	3	Doktora	23	24 to 26	25 to 27
United Kingdom	1	Bachelor	18	20	21
	2	Master	21	21	22
	3	Doctorate	22	24	26
United States	1	Bachelor	18	21	22
	2	Master	22	23	24
	3	Ph.D.	24	26	27

* Median age of graduation

INDICATOR P11

List of possible subjects that are taught under the headed subjects (a not exhaustive enumeration, derived from additional footnotes provided by some countries)

Reading and writing:
- reading and writing in the mother tongue
- reading and writing in a second "mother tongue"
- reading and writing in the mother tongue as a second language
- language studies
- media studies
- public speaking
- remedial reading

Mathematics:
- mathematics
- mathematics with statistics
- remedial mathematics

Science:
- science
- physics, physical science
- chemistry
- biology, human biology
- earth science
- agriculture/horticulture/forestry
- environmental studies
- geography

Social studies:
- social studies
- classical studies
- community studies
- contemporary studies
- economics
- environmental studies
- geography
- history
- humanities
- legal studies
- liberal studies
- studies of the own country
- social sciences

Foreign languages:
- foreign languages
- a second mother tongue

Technology:
- orientation in technology, including information technology
- computer studies
- construction/surveying
- electronics
- graphics and design
- home economics
- keyboard skills
- word processing
- workshop technology/design technology

Arts:
- arts
- music
- visual arts
- art history
- practical art
- dance and drama
- performance music
- photography

Physical education:
- physical education
- gymnastics
- dance
- health
- human biology
- human relationships/parenting skills
- outdoor education
- recreation and sport

Religion:
- religion
- history of religions
- religions and culture
- ethical thinking

Vocational skills:
- vocational skills (preparation for specific occupation)
- economics
- technics
- domestic science
- accountancy
- business studies
- career education
- clothing and textiles
- polytechnic programmes
- secretarial studies
- shorthand and typing
- tourism and hospitality
- transition
- work experience

Other:
- Latin
- descriptive geometry
- remedial courses
- Greek
- technical activities
- scientific work
- socio-economic initiation
- typing
- form periods
- assemblies
- home economics
- pupil/class council
- optional subjects
- Sloyd
- child studies
- domestic science
- electives (local options)
- elective foreign languages
- artistic activities
- study groups
- upgrading courses
- commercial subjects
- business studies

Note that some subjects have been reported under multiple categories. This must be taken into account when interpreting the subject-categories under concern. This is the case for human biology (science and physical education), environmental studies (science and social studies), geography (science and social studies), economics (social studies and vocational skills), home economics/domestic science (technology, vocational skills, "other"), foreign languages (foreign languages and "other").

INDICATOR P21

Standard errors of sampling were calculated for all percentages and are shown in the table below. The coefficient of variation (standard error/estimate) should not exceed 0.2 according to OECD standards. This standard has been reached for most figures in P21, column 1 "no grouping". Only for Denmark, Germany (TFGDR), the Netherlands and New Zealand, the figures should be interpreted cautiously because of a relatively high coefficient of variation. Within the category "ability grouping" (second column Table P21), the coefficient of variation does not exceed 0.2 for most cases except for the figures of Finland, Greece and Spain, which allows for a proper interpretation of the figures of most countries. The coefficient of variation for the figures in the other three columns is relatively high for all countries.

Table P21: Most frequent type of grouping in percentages (standard errors between brackets)

	No grouping	*Ability groups*	*Interest groups*	*Age groups*	*Other*
Belgium (French community)	71 (4)	16 (3)	9 (2)	1 (1)	3 (1)
Canada (British Columbia)	57 (4)	19 (3)	7 (2)	2 (1)	15 (3)
Denmark	26 (3)	38 (3)	17 (3)	0 (0)	19 (3)
Finland	66 (6)	13 (4)	14 (4)	1 (1)	6 (3)
Germany (TFGDR)	24 (4)	55 (5)	9 (3)	0 (0)	12 (3)
Germany (FTFR)	63 (4)	32 (4)	3 (2)	0 (0)	2 (1)
Greece	84 (3)	9 (2)	4 (2)	1 (1)	2 (1)
Iceland	41 (3)	48 (3)	3 (1)	1 (1)	7 (2)
Ireland	49 (5)	49 (5)	1 (1)	1 (1)	0 (0)
Netherlands	9 (3)	87 (3)	0 (0)	2 (1)	2 (1)
New Zealand	6 (2)	83 (3)	4 (1)	0 (0)	7 (2)
Portugal	69 (4)	14 (3)	13 (3)	0 (0)	4 (2)
[illegible]	89 (2)	8 (2)	1 (1)	1 (1)	1 (1)
Switzerland	52 (3)	16 (2)	12 (2)	1 (1)	20 (3)
United States	31 (3)	45 (3)	4 (1)	12 (2)	7 (2)

INDICATORS P12 and P21

Data for the above-mentioned indicators come from the Reading Literacy Study, which was performed by the IEA (International Association for the Evaluation of Educational Achievement) in the school year 1990/91. One of the aims of the study was to compare the reading literacy performance of pupils in the modal grades of 9 year-olds (Population A) and 14 year-olds (Population B) in different countries. A further major aim of the study was to identify differences in policies and instructional practices in reading (W.B. Elley, *How in the World do Students Read?*, Grindeldruck GMBH, Hamburg, 1992) and this "influence" on differences in pupil achievement.

Description of the target populations and samples

The sample design for the Reading Literacy Study can generally be referred to as a two-stage cluster sample. The first stage sampling units mostly individual schools but sometimes areas (in which case there were three stages of sampling). The schools in each nationally defined target population were selected from an explicitly stratified national sampling frame of schools within explicit strata with a probability proportional to the estimated number of students in the target population grade or school who are in the respective nationally defined target populations (Denmark sampled classes and not schools; in Iceland the whole student target population was tested).

Intact classes were chosen within each selected school with a probability proportional to the class size. The application of this design resulted in unequal selection probabilities which were compensated for by using sampling weights. The sum of weights was then adjusted so that it was equal to the total number of students in the country (Elley, 1992).

The target Population A was defined as follows: all students attending mainstream schools on a full-time basis at the grade level in which most students were aged 9 years and 0 months to 9 years and 11 months during the first week of the eighth month of the school year. Students in separate schools for special education thus were excluded from the desired target population. Most countries sampled from almost all age-eligible children (more than 90 per cent of students were included in the eligible population). The exceptions were France where students in private schools and overseas territories (16 per cent of the students) were excluded, and Finland, where students who participate in Swedish-speaking special education and teacher education colleges (9.2 per cent of students) were excluded. The participation rates were also high in most countries: the participation rate among sampled schools (or classes) was greater than 85 per cent in all OECD countries. The final response rates that were calculated for the study included the use of backup schools as replacements for non-participating original schools. In some systems the reported response rate may therefore overstate the actual level of response.

Samples with large population exclusions bear the risk that the exclusion could change the results. Some of the concerned countries therefore applied *a posteriori* studies to analyse the potential bias.

In the case of Finland, for example, such studies verified that despite a large excluded population the results were not likely to be biased. Such efforts to provide a reasonable explanation about potential bias should be commended and encouraged.

Excluded populations

The following provides a brief description of the achieved target populations.

Belgium

Pupils in the French community who received instruction in Flemish or German (3.6 per cent of 9 year-olds and 3.8 per cent of 14 year-olds) excluded.

Canada (British Columbia)

Pupils in Government Native Indian schools (1.2 per cent of 9 year-olds and 1.1 per cent of 14 year-olds) excluded. British Columbia is one of the ten provinces and two territories that make up Canada.

Denmark

All students in the designed target populations sampled.

Finland

Pupils in schools where the official language was Swedish, and students enrolled in special education and laboratory schools (9.2 per cent of 9 year-olds and 12.4 per cent of 14 year-olds) excluded.

France

Pupils in overseas territories and private schools in mainland France (16 per cent of the 9 year-olds and 21 per cent of the 14 year-olds) excluded.

Germany (TFGDR)

Special schools for the handicapped and those for gifted students (about 8 per cent of each population) excluded.

Germany (FTFR)

Special schools for the handicapped and non-graded private schools (8.3 per cent of the students in both target populations) excluded.

Greece

Four per cent of 14 year-olds attending evening school excluded.

Hungary

All data were excluded because of the high probability of socially desirable responses by the students.

Iceland

Schools with fewer than five students in the target populations (0.5 per cent of 9 year-olds and 2.6 per cent of 14 year-olds) excluded.

Ireland

Private schools and schools with fewer than five students in the target population (4.2 per cent of 9 year-olds) excluded.

Italy

Pupils in private schools (8.6 per cent of 9 year-olds and 4.8 per cent of 14 year-olds) excluded.

Norway

Schools for Lapps (0.3 per cent of 9 year-olds and 0.2 per cent of 14 year-olds) excluded.

Portugal

All data were excluded because of the high probability of socially desirable responses by the students.

Spain

Students from schools with fewer than ten students in the defined grade and from schools where the medium of instruction was not Spanish (11.1 per cent of 9 year-olds and 6.5 per cent of 14 year-olds) excluded.

United States

Schools and students were sampled in 50 states (mainland states, Alaska and Hawaii). Students in eligible schools not capable of taking the reading test (4.9 per cent of each population) excluded.

Nineteen OECD countries participated in the IEA Reading Literacy Study. The following table provides an overview of the number of schools and teachers in OECD countries that participated in Population A (9 year-old students). The teachers are those who were teaching the sampled students in reading. They therefore do not represent the general population of teachers in the countries.

Participation overview

	Schools	*Teachers*
Belgium (French community)	149	150
Canada (British Columbia)	157	151
Denmark	164	209
Finland	136	134
France	136	134
Germany (TFGDR)	100	99
Germany (FTFR)	150	146
Greece	175	175
Iceland	180	281
Ireland	122	122
Italy *		
Netherlands	91	98
New Zealand	176	176
Norway *		
Portugal	145	162
Spain *	324	324
Sweden *		
Switzerland	225	227
United States	165	300

* Italy, Norway and Sweden are not represented in *Education at a Glance 3* for these indicators because of doubts concerning the validity of the data for these comparisons.

Some average figures reported here slightly from the figures in earlier IEA publications. This is because missing data were treated differently in these analyses.

Design effects, standard errors and sampling weights

In the computation of means and standard errors of the means, both the selection probabilities and the stratification of the samples have been taken into account: the selection probabilities by assigning proper weights to each case, the stratification by treating the strata as fixed effects in an analysis of variance model. Using a fixed effects model caused that the computed standard errors were approximately 0 per cent to 20 per cent smaller (depending on the country and the variable involved) than when this would have been ignored. This also implies that the effective sample sizes are in fact slightly larger than the obtained sample sizes and the design effect per country is slightly smaller than 1.

The formula used for calculating the standard errors of the mean is:

SE = sqrt (mean square within strata/sum of weights).

The formula used for calculating the standard errors of percentages is: SE = sqrt (percentage)* (100-percentage/sum of weights).

It must be noted that for all indicators referring to teacher and school-level data of the Reading Literacy Study, the standard errors are relatively high. One reason for this is that the samples had been designed primarily to compare student achievement data and therefore the number of teachers associated with the students is usually relatively small. Furthermore, one should consider the fact that a large standard error could point at a really existing and possibly interesting variation for specific indicators within countries. This could be a motive for presenting figures and charts on the dispersions within countries.

INDICATOR P41

Estimates of the number of personnel engaged in educational research and development, measured in number of full-time-equivalent person-years, are shown in the table below. These estimates were provided by the national authorities of the countries concerned. The country-specific notes in Annex 1 should also be consulted.

Personnel engaged in educational research and development
(Number of person-years)

	Year	Govt. sector		University education		Private non-profit		Total
		Researchers	Other staff	Researchers	Other staff	Researchers	Other staff	
Australia	1990/91	90	27	1 218	165	25	12	1 536
Austria	1989	11	9	87	25	15	13	160
Finland	1991	5	5	276	61	-	-	247
Ireland	1991/92	36	16	22	...	2	...	75
Netherlands	1991	160	100	360	-	100	-	720
New Zealand	1991/92	17	17	53	-	9	-	95
Sweden	1991/92	-	-	193	43	-	-	236
United Kingdom	1991/92	84	121	2 140	977	-	-	3 322

INDICATOR P42

The table below shows additional data on expenditure on educational research and development (in millions in local currency and at current prices). The country-specific notes in Annex 1 should be consulted when interpreting the data.

Expenditure on educational research and development
(in millions in local currency and at current prices)

i) By type of expenditure

	Year	Govt. sector			University education			Private non-profit			
		Capital	Labour	Other	Capital	Labour	Other	Capital	Labour	Other	
Australia	1990/91	1	5	3	9	44	14	0	2	1	78
Austria	1989	-	9	3	9	54	48	1	11	9	143
Finland	1991	-	2	1	7	70	40	-	-	-	120
Ireland	1991/92	-	2	-	-	1	-	-	-	-	3
Nether-lands	1991/92	-	25	13	-	20	10	-	20	10	98
New Zealand	1991/92	-	1	2	-	3	-	-	1	-	7
United Kingdom	1991/92	-	6	-	2	45	-	-	-	-	53

ii) By type of research

	Year	Govt. sector			University education			Private non-profit			
		Capital	Labour	Other	Capital	Labour	Other	Capital	Labour	Other	
Australia	1990/91	2	3	3	25	32	8	1	1	1	78
Austria	1989	3	8	1	40	57	15	3	17	...	143
Ireland	1991/92	-	2	-	-	1	-	-	-	-	3

INDICATORS R04 and R05

See comments for indicators P12 and P21.

Ages of students in the Reading Literacy Study

In order to compare students of different ages within the same grade, the IEA study used three independent approaches to produce an age adjustment. These methods were a regression adjustment, studies of academic growth from ages 9 to 14, and an empirical comparison of adjacent age groups. As all three approaches produced similar results, IEA considered this adjustment statistically valid.

The mean ages of the students sampled in different systems in the IEA Reading Literacy Study varied somewhat across countries. This is important because the average level of reading literacy of secondary students is correlated with their average age. This suggests that scores may be slightly over-estimated in countries in which the mean age of the participating students is above the average. Similarly, scores in countries with younger participants may be slightly under-estimated. The average ages of students included in the study are given below:

	Grade tested	*Mean age (in years)*
Belgium (French community)	8	14.3
Canada (British Columbia)	8	13.9
Finland	8	14.7
France	9	15.4
Germany (TFGDR)	8	14.4
Germany (FTFR)	8	14.6
Greece	9	14.4
Iceland	8	14.8
Ireland	5	14.5
Netherlands	8	14.3
New Zealand	10	15.0
Norway	8	14.8
Spain	8	14.2
Sweden	8	14.8
Switzerland	8	14.9
United States	9	15.0

Measurement error in the Reading Literacy Study

Educational phenomena are seldom measured without error. Errors are introduced because the sampling and estimation procedures used are imperfect. Appropriate standard errors must therefore be calculated and reported, so that readers can take the extent of measurement error in the data into consideration when interpreting the results of the indicator calculations. The following Tables 1 and 5 show the jackknifed standard errors of sampling for the estimates reported in indicators R04 and R05. Tables 2, 3 and 4 offer additional important information about the mean scores, the standard errors, and the number of cases involved in the calculations.

Table 1. Standard errors for Population A, Population B, and the difference between Population A and Population B reading scores [a]

	Population A	*Population B*	*SE difference reading*
Belgium (French community)	5.9	4.3	7.27 (0.06)
Canada (British Columbia)	4.5	3.1	5.50 (0.02)
Denmark	5.1	2.5	5.70 (0.01)
Finland	4.3	2.3	4.88 (0.01)
France	5.8	4.4	7.29 (0.05)
Germany (TFGDR)	6.1	3.5	7.00 (0.01)
Germany (FTFR)	6.4	2.5	6.83 (0.02)
Greece	5.6	2.2	6.02 (0.02)
Iceland	0.0	0.1	0.00 (0.00)
Ireland	6.2	5.1	8.01 (0.03)
Italy	6.1	3.3	6.96 (0.02)
Netherlands	6.1	4.6	7.67 (0.03)
New Zealand	5.8	6.0	8.34 (0.01)
Norway	3.3	2.6	4.23 (0.01)
Spain	3.6	3.0	4.66 (0.02)
Sweden	4.5	2.4	5.06 (0.01)
Switzerland	4.3	3.3	5.39 (0.03)
United States	4.9	5.1	7.10 (0.03)

a) The standard errors for Population A were computed from the following formula: $(SE_A^2 - SE_B^2)^{1/2}$; the standard errors for Population B and for the difference were based on jackknife estimates. SE difference reading is the five-year difference in reading and was computed as (Population B – Population A).

Table 2. Means and standard deviations for all three scores

Five-year difference in reading					
Between country results					
Between country mean Pop A	*Between country mean Pop B*	*Between country mean Difference*	*Between country STD Pop A*	*Between country STD Pop B*	*Between country STD Difference*
342.68	500.78	159.53	31.018	23.90	24.09

Table 3. Number of cases employed in the calculations (unweighted)

	Number of cases LOW amount	Number of cases MODERATE amount	Number of cases HIGH amount	Number of cases UNKNOWN amount
Belgium (French community)	520	1 714	294	205
Canada (British Columbia)	843	2 825	665	556
Denmark	654	2 455	491	313
Finland	149	720	346	164
France	232	1 693	484	219
Germany (TFGDR)	193	1 153	396	221
Germany (FTFR)	555	2 784	619	563
Greece	432	2 073	973	464
Iceland	783	2 522	426	124
Ireland	455	2 291	642	225
Italy	590	1 919	453	127
Netherlands	692	2 432	340	284
New Zealand	371	1 961	507	296
Norway	374	1 481	305	147
Spain	1 517	5 543	1 101	324
Sweden	499	2 264	577	329
Switzerland	789	4 286	1 104	341
United States	473	1 980	603	420

Table 4. Weighted number of cases used in the calculations

(Percentage estimates are based on these figures)				
	Weighted N LOW amount	*Weighted N MODERATE amount*	*Weighted N HIGH amount*	*Weighted N UNKNOWN amount*
Belgium (French community)	583.9	1 650.2	274.6	224.4
Canada (British Columbia)	837.5	2 832.0	662.3	535.7
Denmark	996.9	2 451.8	472.5	249.6
Finland	142.8	713.4	357.0	164.3
France	237.5	1 689.2	473.3	218.1
Germany (TFGDR)	184.6	1 145.6	401.8	119.7
Germany (FTFR)	558.0	2 762.4	620.6	269.3
Greece	440.4	2 060.8	974.4	446.1
Iceland	783.0	2 522.0	426.0	115.0
Ireland	500.2	2 267.7	608.6	262.5
Italy	612.1	1 896.0	435.4	120.8
Netherlands	713.1	2 400.6	339.0	284.5
New Zealand	395.8	1 944.2	492.2	291.3
Norway	386.0	1 476.4	300.2	129.0
[redacted]	1 527.7	5 510.7	1 137.1	309.6
Sweden	510.6	2 253.9	557.4	285.5
Switzerland	831.7	4 280.8	1 104.5	312.1
United States	495.8	1 944.2	587.7	388.9

Table 5: Jackknifed standard errors for [illegible] reading indicator

	SE for percentage [illegible]			
	SE percentage LOW amount	SE percentage MODERATE amount	SE percentage HIGH amount	SE percentage UNKNOWN amount
Belgium (French community)	1.38	1.40	0.82	0.79
Canada (British Columbia)	0.67	0.91	0.62	0.62
Denmark	0.88	0.85	0.63	0.47
Finland	0.84	1.51	1.34	1.00
France	0.84	1.16	0.95	0.69
Germany (TFGDR)	0.86	1.30	1.29	0.68
Germany (FTFR)	0.85	0.93	0.64	0.47
Greece	0.62	0.95	0.87	0.72
Iceland	0.00	0.00	0.00	0.00
Ireland	0.99	1.11	0.81	0.62
Italy	1.02	1.10	0.70	0.52
Netherlands	1.11	1.31	0.57	1.19
New Zealand	0.82	1.07	0.87	0.67
Norway	0.99	1.08	0.86	0.55
Spain	0.68	0.67	0.54	0.30
Sweden	0.74	0.83	0.79	0.58
Switzerland	0.72	0.87	0.70	0.52
United States	0.95	1.13	0.74	0.90

INDICATORS R11 to R15

See the notes to P01 - P06.

Apprenticeship

In calculating the indicators, the apprenticeship programmes are classified as belonging to formal education. Such programmes typically involve an alternation between learning in an educational institution (ordinary or specialised) and learning through work experience programmes, which may include highly organised training in a firm or with a craftsman. The apprentices and the firm (or craftsman) are bound by a legal agreement. Even though only a part of the training occurs in schools, it is considered as a full-time activity, because it covers both theoretical and practical training. Apprenticeship programmes are classified as technical or vocational programmes in upper secondary education (ISCED 3).

Bonferoni

The Bonferoni adjustment is used in international comparisons of the mean achievement scores of students. The procedure involves an adjustment to the test of statistical significance, by dividing the *alpha* level of the significance test into $n(n-1)/2$ categories, where n represents the number of countries being compared.

Continuing education and training

Continuing education and training for adults refer to all kinds of general and job-related education and training organised, financed or sponsored by authorities, provided by employers or self-financed.

Curriculum

Intended curriculum

The intended curriculum is the subject matter content to be taught as defined at the national level or within the education system level. It is embodied in textbooks, curriculum guides, the content of examinations, and in policies, regulations, and other official statements produced by the education system.

Implemented curriculum

The implemented curriculum is the intended curriculum as interpreted by teachers and made available to students. It is set in a pedagogical context that includes teaching practices, aspects of classroom management, use of resources, teacher attitudes, and teacher background.

Early childhood education

Education preceding the first level (pre-primary). All types of establishments or group settings aimed at supporting and stimulating the child's social and intellectual development are included in pre-primary education. The pre-primary starting age is put at the typical starting age in countries where that age is clear and unambiguous. In countries where no exact starting age can be given – due, for example, to an integration of education and pre-primary childminding, with a gradual augmentation of the educational side of things – the starting age is put at three years.

Earnings

Earnings refer to annual money earnings, i.e. direct pay for work before taxes. Income from other sources, such as government aid programmes, interest on capital, etc., is not taken into account. Mean earnings are calculated on the basis of data only for all people with income from work.

Educational attainment

Educational attainment is expressed as a certain highest level of education, defined according to the ISCED system, completed by a percentage of the adult population (25 to 64 years-old).

Educational Research and Development (R&D)

Educational R&D is systematic, original investigation or inquiry and associated developmental activities concerning the social, cultural, economic and political context within which education systems operate; the purposes of education; the processes of teaching, learning and personal development; the work of educators; the resources and organisational arrangements to support educational work; the policies and strategies to achieve educational objectives; and the social, cultural, political and economic outcomes of education.

Educational R&D personnel

The major categories of R&D personnel are researchers, technicians and equivalent staff, and other supporting staff. Post-graduate students are counted as researchers, but reported separately within that category. The categories are defined as follows.

Researchers

Professional researchers engage in the conception or creation of new knowledge, products, processes, methods or systems, and in managing the projects concerned. This category includes managers and administrators engaged in the planning and management of the scientific and technical aspects of researchers' work. The supervision of post-graduate study by academic staff is included as part of R&D activities. Post-graduate students engaged in independent research for a higher degree are counted as R&D personnel, although they may not be receiving income or other employee benefits towards their study.

Technicians and equivalent staff

Persons whose main tasks require technical knowledge and experience in relevant fields. They participate in R&D performing scientific and technical tasks involving the application of concepts and operational methods, normally under the supervision of researchers.

Other support staff

Skilled and unskilled persons, and secretarial and clerical staff participating in R&D projects or directly associated with such projects.

Full-time equivalent personnel in educational R&D

The number of full-time equivalent personnel involved in educational R&D is the number of person-years contributed to educational R&D by all persons employed directly on R&D projects as well as by those providing direct services, such as R&D managers, administrators and clerical staff. The calculation of full-time equivalence is based on total working time, i.e. more than "normal" working time if activities involving R&D occur outside normal hours. By this definition, no person can be working more than one person-year on R&D activities in any year. For example, an academic who spends 30 per cent of his/her time over a year on R&D (and the rest on teaching and administration) would be counted as contributing 0.3 person-years to R&D. A research assistant who worked full-time on an R&D project for six months would be contributing 0.5 person-years.

Employed population

Employed population refers to all persons above a specific age who during a specified brief period, either one week or one day, were in paid employment or self-employment. It includes both those in civilian employment and in the armed forces.

Enrolment: Full-time and part-time

Students are enrolled full-time if they attend a programme that is classified as such by the institution or the authorities. Otherwise they are enrolled as part-time students. In some countries no distinction between full-time and part-time students is made at certain levels.

Expenditure: Capital and current

Capital expenditure refers to expenditure for assets that will be used for many consecutive years (e.g., buildings, major repairs, major items of equipment, vehicles, etc.), even if the financing of these assets is reported in a single financial year. For example, if a school is built in 1993, and if the construction costs are entirely accounted for in the 1993 budget, then the asset will be included as capital expenditure for that budget year.

Current expenditure refers to educational goods and services whose lifespan should not in theory exceed the current year (e.g., salaries of staff, educational supplies, scholarships, minor repairs and maintenance, administration, etc.). Conventionally, minor items of equipment are treated as current expenditure even if the corresponding physical asset lasts longer than one year.

Expenditure: Public and private

Public expenditure refers to the spending of public authorities at all levels. Expenditure by the Ministry of Education or an equivalent public authority that is not directly related to education (e.g., culture, sports, youth activities, etc.) is, in principle, not included. Expenditure on education by other ministries or equivalent institutions, for example Health and Agriculture, is included.

Private expenditure refers to expenditure funded by private sources – mainly households, private non-profit institutions, and firms and businesses. It includes: school fees; materials such as textbooks and teaching equipment; transport to school (if organised by the school); meals (if provided by the school); boarding fees; and expenditure by employers for initial vocational training.

Gross domestic product

The gross domestic product (GDP) is equal to the total of the gross expenditure on the final uses of the domestic supply of goods and services valued at price to the purchaser minus the imports of goods and services.

Gross salary

The sum of wages (total sum of money that is payed by the employer for the labour supplied) minus the employers' premium for social security and pension (according to existing salary scales). Bonuses that constitute a regular part of the wages – such as a thirteenth month or a holiday or regional bonus – are included in the gross salary.

Index of years in education completed

This index is calculated by summing across ISCED levels the product of the fraction of workers in the occupational group who have completed education at a particular level and the typical number of years required to complete that level.

ISCED

ISCED refers to the *International Standard Classification for Education*. This classification, developed by UNESCO, is used by countries and international agencies as a means of compiling internationally comparable statistics on education. According to ISCED, educational programmes may be classified as follows:

- Education preceding the first level (pre-primary) ISCED 0
- Education at the first level (primary) ISCED 1
- Education at the lower secondary level ISCED 2
- Education at the upper secondary level ISCED 3
- Education at the tertiary level, first stage, of the type that leads to an award not equivalent to a first university degree ISCED 5
- Education at the tertiary level, first stage, of the type that leads to a first university degree or equivalent ISCED 6
- Education at the tertiary level, second stage, of the type that leads to a post-graduate university degree or equivalent ISCED 7
- Education not definable by level ISCED 9

Labour force participation rate

The labour force participation rate is calculated as the percentage of the population in different age groups who are members of the labour force. The labour force is defined in accordance with the definitions used in the *OECD Labour Force Statistics*.

Leavers from education

Leavers from education are defined as students who have successfully completed a programme at one level of education, have not completed a higher level, and are not (at the beginning of the reference year) enrolled in full-time education or training.

Non-university tertiary education

Non-university tertiary education is used for tertiary education programmes at ISCED level 5. In some systems, the programmes at this level (i.e. those not leading to a university degree or equivalent) do not lead on to other programmes in higher education; in other systems such programmes allow students who successfully complete their studies at ISCED level 5 to proceed to university degree programmes in the same field. The term "articulation" is used to distinguish the latter type of ISCED 5 programme from the former, "terminal" one. For example, the "Associate Degree", awarded after two years of study in the United States, is not regarded as a university degree for international purposes; it is coded as an ISCED level 5 qualification. This also applies to the *diplôme d'études universitaires générales* (*DEUG*) in France.

Public and private schools

Public schools are organised by public authorities. They normally provide open access without any distinction of race, sex, or religion.

Private schools are normally organised independently of the public authorities, even though they may receive a small public funding.

Private schools predominantly publicly funded are schools that obtain most of their funding from public authorities, even though these schools are not formally part of the public school sector.

Government dependent private institutions are organised independently of public authorities, but receive more than 50 per cent of their funds from the public sector.

Independent private institutions are organised, financed and controlled by private individuals or bodies; they receive less than 50 per cent of their basic funds from the public sector.

Purchasing power parities

Purchasing power parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus PPPs are the rates of currency conversion which eliminate differences in price levels between countries. The purchasing power indices used in this publication are given in *OECD Education Statistics, 1985-1992*.

Relative earnings from work

Relative earnings from work are defined as the mean annual earnings from work of individuals with a certain level of educational attainment divided by the mean annual earnings from work of individuals whose highest level of education is the upper secondary level.

Teachers

A teacher is defined as a person whose professional activity involves the transmitting of knowledge, attitudes and skills that are stipulated in a formal curriculum programme to students enrolled in a formal educational institution.

This definition does not depend on the qualifications held by the teacher. It is based on three concepts: activity, thus excluding former teachers who no longer have active teaching duties; profession, thus excluding people who work occasionally or in a voluntary capacity in schools; and formal programme (curriculum), thus excluding people who provide services other than formal instruction (e.g., supervisors, activity organisers, etc.), whether the programme is established at the country, district or school level. Schools principals without teaching responsibilities are not counted as teachers.

In vocational education, teachers of the "school-part" of apprenticeships in a dual system are included in the definition, and trainers of the "in-company-part" of a dual system are excluded.

Head teachers without teaching responsibilities are not defined as teachers, but classified separately. Head teachers who do have teaching responsibilities are defined as (part-time) teachers, even if they only teach 10 per cent of their time.

Former teachers, people who work occasionally or in a voluntary capacity in schools, people who provide services other than formal instruction e.g., supervisors or activity organisers, are also excluded.

Full-time equivalent teacher

A teacher who has a full-time appointment teaches 100 per cent of the normal teaching hours for a teacher in a specific country. Since the normal teaching hours may differ from country to country, it is impossible to express FTE in person-hours. Thus, a full-time teacher may teach more hours per week/year in one country than in another. The teaching hours of part-timers (also principals who are teachers for a part of the week), can be expressed in FTE by calculating the ratio of the teaching hours of the person under concern and the normal teaching hours for a full-timer.

Teaching hours

Teaching hours (expressed in units of 60 minutes) per week refer to the number of hours per week a full-time appointed teacher is teaching a group of students in a specific country.

Usually, the units of time in which teaching takes place (periods) are less than 60 minutes, which will make a conversion into hours necessary.

Tertiary education

Tertiary education refers to any programme classified as either ISCED level 5, 6 or 7. Entry to a programme at tertiary level requires as a minimum condition of admission the successful completion of a programme of education at the second level. In some countries evidence of the attainment of an equivalent level of knowledge, or the fulfilment of specific conditions such as a combination of age and/or work experience, is accepted as conferring eligibility for enrolment in tertiary education programmes. Tertiary education is divided into university and non-university sectors.

Theoretical age group

In classifying education by level, there is an assumption that, at least for the regular school (and in most cases university) system, a student can proceed through the system in a standard number of years. If it is assumed that the student starts school at the modal age and does not repeat any year, then the ages at which a student begins and completes each cycle or level can be calculated. These are the theoretical age ranges that correspond to each level in the school system. Using a transformation key that relates the levels of a school system to ISCED, the theoretical age range for each ISCED level can be derived.

Total labour force

The total labour force or currently active population comprises all persons who fulfil the requirements for inclusion among the employed or the unemployed as defined in *OECD Labour Force Statistics*.

Total population

All nationals present in or temporarily absent from the country and aliens permanently settled in the country. For further details, see *OECD Labour Force Statistics*

Unemployed

The unemployed are defined as persons who are without work, seeking work and currently available for work. The standardized unemployment rate is the proportion of the unemployed as a percentage of the labour force.

University education

University education refers to any programme classified as either ISCED level 6 or 7 that leads to a university degree or equivalent. ISCED level 6 covers programmes leading to the award of a first university degree or a recognised equivalent qualification. If appropriate conditions are satisfied, this qualification allows a student to go on to a programme at ISCED level 7. These programmes lead to a university degree at post-graduate level. Some countries do not distinguish, for purposes of international data reporting, between ISCED level 6 and level 7.

Upper secondary education

Upper secondary education (ISCED level 3) is also described as second level, second stage education. It includes general, technical or vocational education for students who have completed the first cycle of secondary education (i.e. second level, first stage education: ISCED level 2). Apprenticeship programmes are included as are teacher training programmes offered at this level. Upper secondary education (ISCED 3) may either be "terminal" (i.e. preparing students for entry directly into working life) and/or "preparatory" (i.e. preparing students for tertiary education).

Second programme

If a student has completed a normal or regular sequence of upper secondary education (ISCED 3) and has graduated from that sequence (i.e. obtained the certificate or diploma) and then enrols in upper secondary education again in order to pursue another programme, he or she is said to be in a second upper secondary educational programme. If the student then completes that programme (i.e. obtains an additional certificate or diploma), he or she is a graduate of a second (or subsequent) upper secondary educational programme.

Annex 5 – Participants in the INES Project

As mentioned in the Foreword, many people have contributed to the CERI project on the development of International Indicators of Education Systems (INES). This annex lists the names of the country representatives, policy-makers, researchers and experts on educational measurement and statistics who have actively taken part in the preparatory work leading to the publication of this edition of *Education at a Glance*. The OECD wishes to thank them all for their valuable efforts.

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