

Education at a Glance
OECD Indicators 2003

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Chapter A: The output of educational institutions and the impact of learning

INDICATOR A1: Current upper secondary graduation rates and attainment of the adult population

■ Table A1.1

Methodology

In order to calculate gross graduation rates, countries identified the age at which graduation typically occurs. The graduates themselves, however, could be of any age. To estimate gross graduation rates, the number of graduates is divided by the population at the typical graduation age (Annex 1). In many countries, defining a typical age of graduation is difficult because ages of graduates vary. Typical ages of graduation are shown in Annex 1.

The *unduplicated count of all ISCED 3 graduates* gives the number of persons who graduate in the reference period from any ISCED 3 programme **for the first time**, i.e., students who have not obtained an ISCED 3 (A, B or C) qualification in **previous** reference periods. For example, students who graduated from ISCED 3A programmes in the period of reference but obtained a short ISCED 3C graduation in an earlier year should (correctly) be reported as ISCED 3A graduates, but must be excluded from the unduplicated count of graduates in column 2 of Table C2.2. Similar cases may occur in the reporting of vocational and general programmes.

■ Notes on specific countries

Luxembourg: A significant proportion of the youth cohort study in neighbouring countries at the ISCED 3 level.

Spain: The length of secondary programmes was recently extended, therefore upper secondary graduation rates are lower in 2001.

Turkey: Open education faculties are excluded.

■ Table A1.3

Methodology

Please see notes for Table A1.1.

INDICATOR A2: Current tertiary graduation and survival rates and attainment of the adult population

■ Table A2.1

Methodology

- **Calculation of the country mean for medium and long tertiary-type A programmes**

Countries which included the graduates of medium tertiary-type A programmes among the graduates of long programmes (*x*-code for short programmes) are counted as zero in the calculation of the country mean for medium programmes. In a similar manner, the countries using an *x*-code for long programmes, caused by inclusion of long programmes in the category for short programmes, are counted as zero in the country average for long programmes. This is necessary in order to ensure that the country averages for short programmes and long programmes add up to the correct country average for all first-stage university programmes.

- **Duration categories**

Tertiary-type A programmes can be sub-classified by the theoretical cumulative duration of programmes. For initial programmes at tertiary level, the cumulative theoretical duration is simply the theoretical full-time equivalent duration of those programmes from the beginning of Level 5. For second programmes, cumulative duration is calculated by adding the minimum entrance requirements of the programme (*i.e.*, full-time equivalent years of prerequisite tertiary education) to the full-time equivalent duration of the programme. For degrees or qualifications where the full-time equivalent duration is unknown (*i.e.*, courses of study designed explicitly for flexible or part-time study), cumulative duration is calculated on the basis of the duration of more traditional degree or qualification programmes with a similar level of educational content. The following duration categories are included in ISCED-97:

- Short: 2 to less than 3 years.
- Medium: 3 to less than 5 years.
- Long: 5 to 6 years.
- Very long: more than 6 years.

As “short” programmes would not meet the minimum duration requirement for classification at ISCED 5A, this category is only appropriate for intermediate programmes in the national qualification and degree structure (see below). That is, programmes of less than three years’ duration must be a component or a stage of a longer programme in order to be classified at level 5A. Individuals who complete these short programmes would not be counted as 5A graduates, however.

Typical ages of graduation are shown in Annex 1.

■ **Notes on specific countries**

Czech Republic: All Bachelor's programmes are now classified as ISCED5A (according to Czech law), hence the increase of ISCED 5A graduates.

Finland: ISCED 5B programmes are being abolished, hence the increase of ISCED 5A graduates.

Iceland: There is an increase in the number of ISCED 5A graduates mainly due to reclassification of certain education programmes.

Ireland: The graduation rates at ISCED 5A for Ireland, as published in EAG 2002, included those students with second qualifications at this level (e.g. Masters).

■ **Classification of tertiary programmes: Australia**

ISCED5A	
First	"Bachelor's" (Honours) (4yr); Bachelor of Dentistry (5yr); Bachelor of Veterinary Medicine and Surgery (5yr); Bachelor of Medicine and Surgery (7yr)
Second	Graduate Diplomas (1.5yr); Master's Degree (2yr); Doctorate (by course work) (2yr)
ISCED 5B	
First	Vocational Education and Training Institutions - Diplomas, Advanced Diplomas (2yr); Universities – Undergraduate Diplomas (2 yr); Associate Degree (2 yr)
Second	a
ISCED 6	Doctorates (3yr)

■ **Classification of tertiary programmes: Austria**

ISCED 5A	
First	University degree “Fachhochschulstudium – Magister/ Diplomingenieur“ (4yr); University (of the Arts) degree “Universitäten (der Künste) Magister/ Diplomingenieur/ Doktor (1 st)” (4-6yr)
Second	Post-graduate studies “Diplomier...(plus name of an occupation)/ internationales Magisterium” (2yr)
ISCED 5B	
First	Post-secondary colleges for the training of vocational teachers / Post-secondary training college for teachers in the field of agriculture and forestry “Lehramtsprüfung/ Befähigungsprüfung” (2yr); Master craftsmen and foremen courses / Courses for builders “Meister/ Abschlussprüfungszeugnis” (2yr); Technical and Vocational Education “Diplomprüfungszeugnis”(2yr); Post- secondary colleges for teacher training / medical services/ social work “Lehramtsprüfungszeugnis/ Diplom”(3yr);Vocationally oriented intermediate degree “akademisch geprüfer..” (3yr)
Second	a
ISCED 6	Doctorate “Doktor”(2yr)

■ **Classification of tertiary programmes: Czech Republic**

ISCED 5A	
First	Bachelor University study “bakalář (umění)” (3yr & 3-4yr); Teacher training for primary education Master’s “Magistr” (4yr) University Master of Arts/ Engineering/ Architecture “magistr urmeni/ inženýr (architekt)” (5-6yr); University Master's in (Veterinary) Medicine “doktor (veterinární) medicíny” (6yr)
Second	Post-graduate Pedagogical Certificate “osvědčení” (1yr); Post-graduate Certificate “osvědčení”(2yr); University Master of Arts/ Engineering/ Business “magistr urmeni/ inženýr”(2-3yr)
ISCED 5B	
First	Higher Technical School for technicians, hotel managers, bank clerks, nurses “Vyšší odborná škola” (2-2.5yr and 3-3.5 yr); Performing Arts and Dance Conservatoire Certificate on Maturita or Absolutorium “vysvědčení o maturitní zkoušce”(6 yr & 8 yr)
Second	a
ISCED 6	University Doctoral Study “Doktor” 3yr

■ **Classification of tertiary programmes: Denmark**

ISCED 5A	
First	Tertiary education medium cycle “Diplomingeniør, maskin- mester, sygeplejerske, folke- skolelærer m.fl.” (3-5yr); Bachelor’s Degree (3yr)
Second	Tertiary education long cycle “Cand. Mag., cand. Scient., cand. Polyt., etc” (2yr); Tertiary education long cycle, museum conservator, e.g. from Music Academy “Konservator, konservatorieuddannelserne” (5-7yr)
ISCED 5B	
First	Tertiary education short cycle, including technician qualification “Datamatiker/ byggetekniker/ Maskintekniker” (2-3yr)
Second	a
ISCED 6	Doctoral Programmes “Ph.D.” (3yr); Doctorate “Doktorgrad” (5-10yr)

■ **Classification of tertiary programmes: Finland**

ISCED 5A	
First	Lower University Programmes 3yr; Polytechnic Programmes 3.5-4.5yr; Higher University Programmes 5-6yr
Second	Specialists in Medicine/Dentistry/Veterinary Science 5-6yr
ISCED 5B	
First	Vocational College Programmes 2-3yr
Second	a
ISCED 6	Doctorate Programmes – “Licentiate” 2yr; Doctorate Programmes – “Doctor” 4yr

■ **Classification of tertiary programmes: France**

ISCED 5A	
First	First University Diploma (First cycle 2 years “DEUG” + Second cycle 1 year “Licence”) (3yr); Higher engineering school diploma “Diplôme d’ingénieur” (3-4yr); Higher business school diploma “Diplôme d’ingénieur commercial” (3yr); Specialised Higher Schools diverse professional diplomas including in architecture, veterinary surgery, art etc “Diplômes professionnels divers (notaire, architecte, vétérinaire, journaliste,...)” (3-4yr); University pharmacy diploma “Diplôme de pharmacien” (5yr); University Diploma in Medicine/ Dentistry “Docteur en médecine/ Diplôme de dentiste” (7yr)
Second	University education 2 nd cycle 2 year “Maîtrise” (1yr); Teaching in university institute of training Master (IUFM) “CAPES, Professeur des écoles, etc” (2yr); Special diploma in Health “Diplôme d’études spécialisées” (3yr)
Third	University education 3 rd cycle “Diplôme d’études supérieures spécialisées (DESS) » (1yr)
ISCED 5B	
First	Specific vocational training diploma “Diplôme universitaire de technologie (DUT) » (2yr) ; Specialised higher school short professional diploma e.g. in special education, laboratory technician, social worker “Diplômes professionnels divers (éducateur spécialisé, laborantin, assistante sociale, etc.) » (2-3yr); High-level technician award (school or school and work-based) “Brevet de technicien supérieur (BTS)” (2yr)
Second	
ISCED 6	University education 3 rd cycle 1st year “Diplôme d’études approfondies (DEA)” (1yr); Doctorate Programmes “Diplôme de docteur” (3yr)

■ **Classification of tertiary programmes: Germany**

ISCED 5A	
First	University “Fachhochschulen” degree “Diplom (FH)” (4yr); University „Univeritäten” degree “Diplom oder Staatsprüfung” (5yr)
Second	a
ISCED 5B	
First	Specialised academies (Bavaria) “Abschluss der Fachakademie/ Fachhochschulreife” (2yr); Health sector schools for assistants/ nurses “Abschlusszeugnis für medizinische Assistenten, Krankenschwestern/ -pfleger” (3yr); Trade and technical schools “Fachschulabschluss, Meister/Techniker, Erzieher” (2yr & 3-4yr); Colleges of public administration diploma „Diplom (FH)” (3yr);
Second	a
ISCED 6	Doctoral studies “Promotion” (2-5yr)

■ **Classification of tertiary programmes: Iceland**

ISCED 5A	
First	First University Degree “Háskólanám 3ja/ 4ra/ 5/ 6 ára til fyrstu gráðu” (3yr, 4yr, 5yr or 6yr); Tertiary Technical Programmes - First University Degree “Háskólanám í tæknifræði til fyrstu gráðu” (3.5-4yr);
Second	Master’s degree after 3-4yr 1 st degree “Háskólanám, 1,5-2 viðbótarár ofan á 3-4 ár, tekin viðbótargráða” (1.5-2yr); Master's degree after 5-6yr 1 st degree “Háskólanám, 2 viðbótarár ofan á 5-6 ár, tekin viðbótargráða” (2yr)
ISCED 5B	
First	Tertiary Diploma “Æðra nám í 2 ár án háskólagráðu” (2 yr or 3 yr); Fine and Applied Arts at Tertiary Level “Listnám í æðri skóla, 3ja/ 4ra ára” (3yr or 4yr); Teacher's Qualification (No degree) “Nám til kennsluréttinda án háskólagráðu” (1yr)
Second	a
ISCED 6	Doctoral Programme (Ph.D.) “Doktorsnám” (4yr)

■ **Classification of tertiary programmes: Ireland**

ISCED 5A	
First	Bachelor's Degree (3-4yr); Bachelor's Degree in (Veterinary) Medicine/ Dental Science/ Architecture (5-6yr)
Second	Post-graduate Diploma (1yr); Master's Degree (taught) (1yr); Master's Degree (by research) (2yr)
ISCED 5B	
First	Technical certificate "NCEA/ HETTAC/ IoT" (2yr); National Diploma in Police Studies (2yr); Cadetship (Army, Air Corps and Naval Service Training) "Diploma in Military Studies" (1.75yr)
Second	Technical Diploma "NCEA/ HETAC/ IoT" (3yr)
ISCED 6	Doctorate "Ph.D." (3yr)

■ **Classification of tertiary programmes: Italy**

ISCED 5A	
First	University Degree "Diploma di Laurea" (4-6yr); University Degree "Diploma Universitario" (3yr)
Second	Professional Post-graduate Diploma "Diploma di specializzazione" 2-5yrs; Post-graduate Certificate "Attestato di partecipazione al Corso di perfezionamento" (1yr)
ISCED 5B	
First	Diploma from Fine-arts Academy "Diploma di Accademia di Belle Arti" (4yr); Dramatic Art Studies Diploma "Accademia di arte drammatica – Diploma di attore o diploma di regista" (3yr); Higher Artistic Studies Diploma "Diploma di Istituto Superiore Industrie Artistiche" (4yr); Sport Studies Diploma "Istituto superiore di educazione fisica" (3yr); Music Conservatory Diploma "Conservatorio musicale (specializzazione di 2 anni)" (2yr); Dance Studies Diploma "Accademia di Danza – Diploma di avviamento e/o perfezionamento" (3yr)
Second	a
ISCED 6	Doctorate "Titolo di Dottore di ricerca" (3yr)

■ **Classification of tertiary programmes: Japan**

ISCED 5A	
First	Bachelor's Degree "Gakushi"(4yr); Bachelor's Degree in Medicine/Dentistry/Veterinary Medicine "Gakushi" (6yr);
Second	Master's Degree "Shushi" (2yr); University Advanced Course Certificate of Completion "Daigaku Senkoka" (1yr+)
ISCED 5B	
First	Specialised Training College Postsecondary Course Technical Associate Qualification "Senmonshi" (1yr+); Junior College Associate Qualification "Jun-gakushi" (2-3yrs); College of Technology Associate Qualification "Jun-gakushi" (2yr);
Second	Junior College Advanced Qualification "Tanki-daigaku Senkoka" (1+yr); College of Technology Advanced Qualification "Koto-senmon-gakko Senkoka" (1+yr);
ISCED 6	Doctor's Degree "Hakushi" (5yr); Doctor's Degree in Medicine/Dentistry/Veterinary Medicine "Hakushi" (4yr)

■ **Classification of tertiary programmes: New Zealand**

ISCED 5A	
First	Bachelor's Degree "Bachelor, National Diploma (Level 7)" (3yr)
Second	Post-graduate qualification "Master's Degree/ Post-graduate Certificate/ Post-graduate Diploma/ Bachelor's Honours" (1-2yr)
ISCED 5B	
First	Vocational Diploma "National Diplomas (Levels 5 or 6)" (3yr)
Second	a
ISCED 6	Doctorate/ Higher Doctorate (3-5yr)

■ **Classification of tertiary programmes: Poland**

ISCED 5A	
First	Professional degree (Licentiate) “Licencjat” (3yr); Professional Degree (Engineer) “Inzynier” (3.5-4yr); Master’s Degree (Art/ Education/ Engineering/ Veterinary Medicine, etc) “Magister” (5-5.5yr); Degree in Medicine or Dental Science “Lekarz (Stomatolog)” (6yr)
Second	Post-licentiate Master's Degree “Magister” (1.5-2yr); Post-graduate Certificate “Studia Podyplomowe” (0.5-2yr)
ISCED 5B	
First	Teacher Training Diploma for pre-school, primary and other educational institutions “Kolegium nauczycielskie” (3yr); Foreign Language Teacher Training Diploma/ Qualification to teach foreign European languages “Nauczycielskie kolegium języków obcych” (3yr)
Second	a
ISCED 6	Scientific Doctorate “Studia Doktoranckie”(4yr)

■ **Classification of tertiary programmes: Slovak Republic**

ISCED 5A	
First	"Bachelor's" Degree 3-4yr; "Master's" Degree 4 yr; "Master's" Degree in Engineering 5-5.5yr; Degree in Engineering/Architecture/Medicine/Veterinary Medicine 6yr
Second	Supplementary Educational Study - "Certificate" 2yr; Teaching an Additional Subject - "Diploma" 2-4yr
ISCED 5B	
First	Post-secondary Specialisation Study - "Graduate's Diploma" 2-3yr; Higher Professional Studies - "Graduate's Diploma" 3yr; Dance Conservatory - "Graduate's Diploma" and "Certificate on Maturita Examination" 8yr; Conservatory and Secondary Schools Specialising in Arts - "Graduate's Diploma" and "Certificate on Maturita Examination" 6yr
Second	
ISCED 6	Examina Rigorosa - "Academic Degree (JUDr., PaedDr., RNDr., PhDr., etc)" usually 1yr; Doctorate Study (Ph.D., ArtD.) 3yr

■ **Classification of tertiary programmes: Spain**

ISCED 5A	
First	Bachelor's Degree “Diplomado Universitario, Arquitecto Técnico e Ingeniero Técnico” (3yr); Conservation and Restoration of Cultural Assets “Conservación y Restauración de Bienes Culturales” (3yr); University Degree - First and Second Cycle “Licenciado, Arquitecto e Ingeniero” (4-6yr); Higher Dramatic Art Studies Degree “Título Superior de Arte Dramático” (4yr); Music Studies Advanced Degree “Titulación Superior por especialidad musical” (4yr); Military Programme - Medium Grade “Militar de carrera de la escala media (Diplomado Universitario)” (3yr); Military Programme - Higher Grade “Militar de carrera de la escala superior (Licenciado universitario)” (5yr)
Second	Master's Degree “Licenciado e Ingeniero” (2yr)
ISCED 5B	
First	Specific Vocational Training of Plastic Arts and Design - Advanced Level Qualification “Técnico Superior - Ciclos Formativos de Artes Plásticas y Diseño de Grado Superior” (2yr); Specific Vocational Training - Advanced Level Qualification “Técnico Superior - Ciclos Formativos de Formación Profesional de Grado Superior” (2yr); Specific Vocational Training - Advanced Level (Distance Learning) “Técnico Superior - Ciclos Formativos de Formación Profesional de Grado Superior (Distancia)” (2yr); Military Programme Basic Grade “Militar de carrera de la escala básica” (2yr);
Second	a
ISCED 6	Doctorate “Doctor” (4-6yr)

■ **Classification of tertiary programmes: Sweden**

ISCED 5A	
First	Diploma (2-4yr); Bachelor's Degree (3yr); Master's Degree (4yr); Bachelor's Degree in Pharmacy/ Horticulture/ Forestry/ Landscape Architecture/ Medicine/ Psychology/ Dentistry/ Veterinary Medicine (5-5.5yr)
Second	Nursing Specialisation Qualification (1-1.25yr); Midwifery/ Psychotherapy/ Special Education (1.5yr)
ISCED 5B	
First	Diploma in Engineering (Lower Level) (2yr); Diploma in Dance and The Arts (2yr); Degree Certificate in Advanced Vocational Education (2-3yr)
Second	
ISCED 6	"Licentiate" 2yr; "Doctorate" 4yr (including "Licentiate")

■ **Classification of tertiary programmes: Switzerland**

ISCED 5A	
First	<p>Pedagogical University Certificate « Pädagogische Hochschule/ Haute École Spécialisée Pédagogique » (3yr);</p> <p>University of Applied Science Diploma “Fachhochschul diplom/ diploma” (3yr);</p> <p>University Diploma and Bachelor's Degree “Hochschulen - Lizentiat, Diplom, Staatsexamen” (4yr)</p>
Second	<p>Postgraduate Degree “Fachhochschul Nachdiplom” (1yr); University Postgraduate Diploma “Nachdiplom/ Diplôme du troisième cycle/ Postgrade” (1yr)</p>
ISCED 5B	
First	<p>Diploma of Higher Vocational Education - Stage I "Berufsprüfung/ Examen professionnel" (1-2yr);</p> <p>Diploma of Technical School "Höhere Fach- und Berufsschule/ École technique" (2yr); Teacher's Certificate - Teacher Training II "Primarlehrerpatent/ Fachlehrerpatent" (3yr);</p> <p>Polytechnic School Diploma from a Higher Vocational College “Höhere Fachschule/ École Professionnelle Supérieure/ Scuola Professionale Superiore” (3yr)</p>
Second	<p>Trade Master's Diploma or equivalent in Higher Vocational Education - Stage II “Höhere Fachprüfung/ Examen Professionnel Supérieur” (1-2yr)</p>
ISCED 6	<p>University Doctorate “Doktorat/ Ph.D.” (2yr)</p>

■ **Classification of tertiary programmes: United Kingdom**

ISCED 5A	
First	<p>Bachelor's Degree “BA, BSc, etc” (3-4yr); Bachelor of Education “BEd” (4yr); Bachelor of Medicine “MB” (5yr+)</p>
Second	<p>Master's Degree taught “MA, MSc, MBA, etc” (1yr); "Postgraduate Diploma/Certificate “PG Dip/PG Cert” (9m); Teaching Qualification - Postgraduate Certificate in Education “PGCE” (1yr); Master's Degree by Research “Mphil, etc” (2yr+)</p>
ISCED 5B	
First	<p>Higher National Certificate “HNC” (1yr); Diploma of Higher Education “DipHE” (2yr); Higher National Diploma “HND” (2yr)</p>
Second	<p>a</p>
ISCED 6	<p>Doctor of Philosophy “Ph.D.” (3yr+)</p>

■ **Table A2.2**

■ **Notes on specific countries**

Australia and the United States: The survival rates calculated using the standard OECD methodology are significantly higher than those calculated in national studies.

Belgium (Flemish Community): Social advancement education is not included.

France: Does not include all tertiary graduates included in Table A2.1, only those where new entrants data are available.

United Kingdom: Excludes foreign students.

■ **Table A2.4**

■ **General notes**

Historical data on educational attainment are only available for the three major levels of education:

Less than upper secondary education -- 0/1/2 (ISCED 97 equivalent levels)

Upper secondary and some postsecondary education -- 3/4 (ISCED 97 equivalent levels)

Tertiary non-university and university -- 5/6 (5A/5B/6 ISCED 97 equivalent levels)

Before 1997, educational attainment levels were coded according to international mapping ISCED 76. The ISCED 76 levels have been translated into ISCED 97 levels.

Sources

National Labour Force Surveys except for Belgium (1997-1999), Denmark (1998-2001); Luxembourg (1998-2001) and the Netherlands (1998-1999) for which data come from European Labour Force Survey.

■ **Notes on specific countries :**

Czech Republic : from 1994 to 1996, distributions are adjusted considering the 1997 distribution.

Denmark : There is a break in the time series between 1994 and 1995. There has been a revision of the Danish ISCED97 implementation. The revision is due to reforms of the education system. As a result of these reforms most medium-cycle higher education programmes (with a duration of at least 3

years) have been moved from ISCED 5B to ISCED 5A. Furthermore, the majority of short-cycle higher education programmes are now classified as ISCED 5B. The ISCED mapping has been revised.

Portugal : From 1991 to 1996, the distribution of the “unknown” category has been adjusted on the basis of the known distribution.

Sweden : There is a Break in the time series between 2000 and 2001. This is a result of new data sources and improved information about immigrants.

Switzerland : New mapping in 2001.

United States : For 1991, the distribution is adjusted on the basis of the 1992 distribution.

INDICATOR A3: Graduates by field of study

Classification

The fields of education used follow the revised ISCED classification by field of education. For definitions and instructions refer to the ISCED Classification (UNESCO, 1997). The classification is in accordance with the fields of training defined in the *Fields of Training – Manual* (EUROSTAT, 1999).

Indicators A4-A11

Indicators A5-A7 and A9-A10 are derived from the PISA 2000 assessment of knowledge and skills, undertaken by the OECD in 2000. For further information see also *Knowledge and Skills for Life – First results from PISA 2000* (OECD, 2001).

■ **The PISA concept of “yield” and the definition of the PISA target population**

PISA 2000 provides an assessment of the cumulative yield of education and learning at a point at which most young adults are still enrolled in initial education.

A major challenge for an international survey is to operationalise such a concept in ways that guarantee the international comparability of national target populations.

Differences between countries in the nature and extent of pre-primary education and care, the age of entry to formal schooling, and the institutional structure of educational systems do not allow the definition of internationally comparable grade levels of schooling. Consequently, international comparisons of educational performance typically define their populations with reference to a target age. Some previous international assessments have defined their target population on the basis of the

grade level that provide maximum coverage of a particular age cohort. A disadvantage of this approach is that slight variations in the age distribution of students across grade levels often lead to the selection of different target grades in different countries, or between education systems within countries, raising serious questions about the comparability of results across, and at times within, countries. In addition, because not all students of the desired age are usually represented in grade-based samples, there may be a more serious potential bias in the results if the unrepresented students are typically enrolled in the next higher grade in some countries and the next lower grade in others. This would exclude students with potentially higher levels of performance in the former countries and students with potentially lower levels of performance in the latter.

In order to address this problem, PISA uses an age-based definition for its target population, *i.e.* a definition that is not tied to the institutional structures of national education systems: PISA assessed students who were aged between 15 years and 3 (complete) months and 16 years and 2 (complete) months at the beginning of the assessment period and who were enrolled in an educational institution, regardless of the grade levels or type of institution in which they were enrolled, and regardless of whether they were in full-time or part-time education (15-year-olds enrolled in Grade 6 or lower were excluded from PISA but, among the countries participating in PISA 2000, such students only exist in significant numbers in Brazil). Educational institutions are generally referred to as *schools* in this publication, although some educational institutions (in particular some types of vocational education establishments) may not be termed schools in certain countries. As expected from this definition, the average age of students across OECD countries was 15 years and 8 months years, a value which varied by less than 0.2 years between participating countries).

As a result of this population definition, PISA 2000 makes statements about the knowledge and skills of a group of individuals who were born within a comparable reference period, but who may have undergone different educational experiences both within and outside schools. In PISA, these knowledge and skills are referred to as the *yield* of education at an age that is common across countries. Depending on countries' policies on school entry and promotion, these students may be distributed over a narrower or a wider range of grades. Furthermore, in some countries, students in PISA's target population are split between different education systems, tracks or streams.

If a country's scale scores in reading, scientific or mathematical literacy are significantly higher than those in another country, it cannot automatically be inferred that the schools or particular parts of the education system in the first country are more effective than those in the second. However, one can legitimately conclude that the cumulative impact of learning experiences in the first country, starting in early childhood and up to the age of 15 and embracing experiences both in school and at home, have resulted in higher outcomes in the literacy domains that PISA measures.

The PISA target population did not include residents attending schools in a foreign country.

To accommodate countries that desired grade-based results for the purpose of national analyses, PISA 2000 provided an international option to supplement age-based sampling with grade-based sampling.

■ Population coverage

All countries attempted to maximise the coverage of 15-year-olds enrolled in education in their national samples, including students enrolled in special educational institutions. As a result, PISA 2000 reached standards of population coverage that are unprecedented in international surveys of this kind.

The sampling standards used in PISA permitted countries to exclude up to a total of 5 per cent of the relevant population either by excluding schools or by excluding students within schools. All but three countries achieved the required coverage of at least 95 per cent of the national desired target population, and half of countries achieved 98 per cent or more. The ceiling for population exclusions of 5 per cent ensures that potential bias resulting from exclusions is likely to remain within one standard error of sampling.

Exclusions within the above limits include:

- *At the school level: i) schools which were geographically inaccessible or where the administration of the PISA assessment was not considered feasible; and ii) schools that provided teaching only for students in the categories defined under “within-school exclusions”, such as schools for the blind. The percentage of 15-year-olds enrolled in such schools had to be less than 2.5 per cent of the nationally desired target population. The magnitude, nature and justification of school-level exclusions is documented in the PISA 2000 Technical Report.*
- *At the student level: i) students who were considered in the professional opinion of the school principal or of other qualified staff members, to be educable mentally retarded or who had been defined as such through psychological tests (including students who were emotionally or mentally unable to follow the general instructions given in PISA); ii) students who were permanently and physically disabled in such a way that they could not perform in the PISA assessment situation (functionally disabled students who could respond were to be included in the assessment); and iii) non-native language speakers with less than one year of instruction in the language of the assessment. Students could not be excluded solely because of normal discipline problems. The percentage of 15-year-olds excluded within schools had to be less than 2.5 per cent of the **nationally desired target population**.*

Insert Table 4: The PISA target populations and samples

Table 4 describes the target population of the countries participating in PISA 2000. Further information on the target population and the implementation of PISA sampling standards can be found in the *PISA 2000 Technical Report*.

- **Column 1** shows the total number of 15-year-olds according to 2000 national population registers.
- **Column 2** shows the number of 15-year-olds enrolled in schools (as defined above), which is referred to as the *eligible population*.
- **Column 3** shows the national desired target population. As part of the school-level exclusions, countries were allowed to exclude up to 0.5 per cent of students *a priori* from the eligible population, essentially for practical reasons. The following a priori exclusions exceed this limit but were agreed with the PISA Consortium: **Canada** excluded 1.17 per cent of the eligible population, of which 0.73 per cent accounted for schools on Federal Indian reservations and 0.43 per cent were in the Yukon, Northwest, and Nunuvuk territories. In the case of France, the eligible population included students in the Territoires d’Outre-Mer, but because countries were not required to assess students in outlying territories

not subject to the national education systems, it was permissible to exclude these students. French students in outlying *départements* were, as required, included in PISA 2000. **Ireland** excluded 1.61 per cent of the eligible population. This covered 1.15 per cent of students enrolled in schools not aided by the Department of Education and Science, 0.36 per cent in very small schools, and 0.12 per cent in “designated disadvantaged schools”. **Japan** excluded 4.0 per cent of the eligible population, of which 1.7 per cent were students educated by mail and students in “other small streams (Bekka, Koto-senmon-gakko)”, and 2.3 per cent were in part-time education (“Teiji-sei”). **Mexico** excluded 2.3 per cent of its eligible population in geographically remote schools. Among the non-OECD countries, **Brazil** excluded 15-year-olds enrolled in grades 1 to 6 which accounted for 16 per cent of 15-year-olds enrolled in Brazil. This exclusion was legitimate because such students are not part of the PISA target population. Subtracting the students excluded *a priori* from the eligible population results in the national desired target population in Column 3.

- **Column 4** shows the number of students enrolled in schools that were excluded from the national desired target population.
- **Column 5** shows the size of the national desired target population after subtracting the students enrolled in excluded schools. This is obtained by subtracting Column 4 from Column 3.
- **Column 6** shows the percentage of students enrolled in excluded schools. This is obtained by dividing Column 4 by Column 3.
- **Column 7** shows the *number of students participating in PISA 2000*. Note that this number does not account for 15-year-olds assessed as part of additional national options. These national options account for an additional 82105 15-year-old students across all countries.
- **Column 8** shows the *weighted number of participating students, i.e.*, the number of students in the nationally defined target population that the PISA sample represents.
- Each country attempted to maximise the coverage of PISA’s target population within the sampled schools. In the case of each sampled school, all eligible students, namely those 15 years of age, regardless of grade, were first listed. Sampled students who were to be excluded had still to be included in the sampling documentation, and a list drawn up stating the reason for their exclusion. **Column 9** indicates the number of *excluded students, i.e.* students who fell into one of the categories specified above. **Column 10** indicates the *weighted number of excluded students, i.e.*, the overall number of students in the nationally defined target population represented by the number of students excluded from the sample.
- **Column 11** shows the *percentage of students excluded within schools*. This is calculated as the weighted number of excluded students (Column 10) divided by the weighted number of excluded and participating students (Column 8 plus Column 10).
- **Column 12** shows the *overall exclusion rate* which represents the weighted percentage of the national desired target population excluded from PISA either through school-level exclusions or through the exclusion of students within schools. It is obtained

by multiplying the percentage of school-level exclusions (Column 6) by 100, minus the percentage of students excluded within schools (Column 11) and adding the percentage of students excluded within schools (Column 11) to the result.

- **Column 13** presents an *index of the extent to which the national desired target population is covered by the PISA sample*. The index is expressed in per cent of the national desired target population covered. Luxembourg, Poland and Brazil are the only countries in which less than 95 per cent of the population that PISA seeks to cover is represented by the PISA samples. In the case of **Poland**, the exclusion rate is 10 per cent. This includes the 6.7 per cent of 15-year-olds enrolled in primary schools. The performance of these students in the PISA assessments can be expected to be lower than the performance of 15-year-olds in secondary schools, and this exclusion may imply that the performance of Polish students on the combined reading literacy scale is overestimated by two rank-order positions and on the scientific literacy scale by about three rank-order positions. No rank-order shifts are expected on the mathematical literacy scale. **Luxembourg** has an exclusion rate of 9.1 per cent, due largely to students instructed in languages other than the languages of assessment in Luxembourg. Permissible exclusions included 28 students with special needs; 297 students attending the European School; 32 students attending the American International School; 45 students attending other schools not under the authority of the Ministry of Education; and 14 students attending small schools. It is not expected that the exclusions in Luxembourg overestimate its rank-order position on the PISA scales. **Among non-OECD countries, in Brazil**, the school-level exclusion rate is 18 per cent but much of this is explained by 15-year-olds enrolled in Grade 5 and 6 who do not belong to the PISA target population. No rank order shifts are expected of the exclusions in Brazil. For further information see the *PISA 2000 Technical Report*.
- **Column 14** presents an *index of the extent to which 15-year-olds enrolled in schools are covered by the PISA sample*. The index measures the overall proportion of the national enrolled population that is covered by the non-excluded portion of the student sample. The index takes into account both school-level and student-level exclusions. Values close to 100 indicate that the PISA sample represents the entire education system as defined for PISA 2000. The index is the weighted number of participating students (Column 9) divided by the weighted number of participating and excluded students (Columns 9 plus Column 11), times the nationally defined target population (Column 5) divided by the national desired target population (times 100).

■ Sampling procedures and response rates

The accuracy of any survey results depends on the quality of the information on which national samples are based as well as on the sampling procedures. Quality standards, procedures, instruments and verification mechanisms were developed for PISA that ensured that national samples yielded comparable data and that the results could be compared with confidence.

Most PISA samples were designed as two-stage stratified samples (where countries applied different sampling designs, these are documented in the *PISA 2000 Technical Report*). The first stage consisted of sampling individual schools in which 15-year-old students were enrolled. Schools were sampled systematically with probabilities proportional to size, the measure of size being a function of the estimated number of eligible (15-year-old) students enrolled. A minimum of 150 schools were selected in each country (where this number existed), although the requirements for national analyses often required a somewhat larger sample. As the schools were sampled, replacement schools were simultaneously identified, in case a sampled school chose not to participate in PISA 2000.

In the case of **Iceland, Liechtenstein and Luxembourg**, all schools and all eligible students within schools were included in the sample. However, since not all students in the PISA samples were

assessed in mathematical and scientific literacy, these national samples represent a complete census only in respect of the assessment of reading literacy, and a partial census of the assessment of mathematical and scientific literacy.

Experts from the PISA Consortium monitored the sample selection process in each participating country.

The second stage of the selection process sampled students within sampled schools. Once schools were selected, a list of each sampled school's 15-year-old students was prepared. From this list, 35 students were then selected with equal probability (all 15-year-old students were selected if fewer than 35 were enrolled).

Data quality standards in PISA required minimum participation rates for schools as well as for students. These standards were established to minimise the potential for response biases. In the case of countries meeting these standards, it is likely that any bias resulting from non-response will be negligible, *i.e.* typically smaller than the sampling error.

A minimum response rate of 85 per cent was required for the schools initially selected. Where the initial response rate of schools was between 65 and 85 per cent, however, an acceptable school response rate could still be achieved through the use of replacement schools. This procedure brought with it a risk of increased response bias. Participating countries were, therefore, encouraged to persuade as many of the schools in the original sample as possible to participate. Schools with a student participation rate between 25 and 50 per cent were not regarded as participating schools, but data from these schools were included in the database and contributed to the various estimations. Data from schools with a student participation rate of less than 25 per cent were excluded from the database.

PISA 2000 also required a minimum participation rate of 80 per cent of students within participating schools (original sample and replacement). This minimum participation rate had to be met at the national level, not necessarily by each participating school. Make-up sessions were required in schools in which too few students had participated in the original assessment sessions. Student participation rates were calculated over all participating schools, whether original sample or replacement schools, and from the participation of students in both the original assessment and any make-up sessions. A student who did not participate in the first assessment session was not regarded as a participant but was included in the international database and contributed to the statistics presented in this publication if he or she participated in the second assessment session and provided at least a description of his or her father's or mother's occupation.

Table 5 shows the response rates for students and schools, before and after replacement.

Insert Table 5: Response rates

Column 1 shows the *weighted participation rate of schools before replacement*. This is obtained by dividing Column 2 by Column 3. The Netherlands, the United Kingdom and the United States did not meet PISA's requirements for response rates before replacement. In the **United Kingdom**, the initial response rate fell short of the requirements by 3.7 per cent and in the **United States** by 8.6 per cent. Both countries provided extensive evidence to the PISA Consortium that permitted an assessment of the expected performance of non-participating schools. On the basis of this evidence, PISA's Technical Advisory Group determined that the impact of these deviations on the assessment results

was negligible. The results from these countries were included in all analyses. The initial response rate for the **Netherlands** was only 27 per cent. As a result, the PISA Consortium initiated supplementary analyses that confirmed that the data from the Netherlands might be sufficiently reliable and could be used in some relational analyses. Despite this conclusion, the response rate was too low to give confidence that the sample results reflect those for the national population reliably, with the level of accuracy and precision required in PISA 2000. Assuming negligible to moderate levels of bias due to non-response, the rank-order position of the Netherlands may be expected, with 95 per cent confidence, to lie between 2nd and 14th among countries on the combined reading literacy scale, between 1st and 4th on the mathematical literacy scale, and between 3rd and 14th on the scientific literacy scale (for further details see the *PISA 2000 Technical Report*). Mean performance scores for the Netherlands can, therefore, not be compared with those from other countries. In tables where the focus is on the comparison of mean scores, the Netherlands has been excluded. Where the performance of sub-groups is shown, only the relative differences in performance between the relevant sub-groups within the Netherlands should be considered, and the sub-group means should not be compared with those from other countries.

- **Column 2** shows the *weighted number of responding schools before school replacement* (weighted by student enrolment)
- **Column 3** shows the *weighted number of sampled schools before school replacement* (including both responding and nonresponding schools).
- **Column 4** shows the *weighted participation rate of schools after replacement*. This is obtained by dividing Column 5 by Column 6.
- **Column 5** shows the *weighted number of responding schools after school replacement* (weighted by student enrolment).
- **Column 6** shows the *weighted number of schools sampled after school replacement* (including both responding and nonresponding schools).
- **Column 7** shows the *weighted student participation rate after replacement*. This is obtained by dividing Column 8 by Column 9.
- **Column 8** shows the *weighted number of students assessed*.
- **Column 9** shows the *weighted number of students sampled* (including both students that were assessed and students who were absent on the day of the assessment).
- **Column 10** shows the *unweighted number of students assessed*.
- **Column 11** shows the *unweighted number of students sampled* (including both students that were assessed and students who were absent on the day of the assessment).

■ Standard errors, significance tests and multiple comparisons

The statistics in this report represent *estimates* of national performance based on samples of students rather than values that could be calculated if every student in every country had answered every question. Consequently, it is important to have measures of the degree of uncertainty of the estimates. In PISA 2000, each estimate has an associated degree of uncertainty, which is expressed through a *standard error*. The use of *confidence intervals* provides a way to make inferences about the population means and proportions in a manner that reflects the uncertainty associated with the sample estimates. From an observed sample statistic it can, under the assumption of a normal distribution, be inferred that the corresponding population result would lie within the confidence interval in 95 out of 100 replications of the measurement on different samples drawn from the same population.

In many cases, readers are primarily interested in whether a given value in a particular country is different from a second value in the same or another country, *e.g.*, whether females in a country perform better than males in the same country. In the tables and charts used in this report, differences are labelled as *statistically significant* when a difference of that size, or larger, would be observed less than 5 per cent of the time, if there was actually no difference in corresponding population values. Similarly, the risk of reporting as significant if there is, in fact, no correlation between two measures is contained at 5 per cent.

Although the probability that a particular difference will falsely be declared to be statistically significant is low (5 per cent) in each single comparison, the probability of making such an error increases when several comparisons are made simultaneously.

It is possible to make an adjustment for this which reduces to 5 per cent the maximum probability that differences will be falsely declared as statistically significant at least once among all the comparisons that are made. Such an adjustment, based on the Bonferroni method, has been incorporated into the multiple comparison since the likely interest of readers in those contexts is to compare a country's performance with that of all other countries.

For all other tables and charts readers should note that, if there were no real differences on a given measure, then the *multiple comparison* in conjunction with a 5 per cent significance level, would erroneously identify differences on 0.05 times the number of comparisons made, occasions. For example, even though the significance tests applied in PISA for identifying gender differences ensure that, for each country, the likelihood of identifying a gender difference erroneously is less than 5 per cent, a comparison showing differences for 27 countries would, on average, identify 1.4 cases (0.05 times 27) with significant gender differences, even if there were no real gender difference in any of the countries. The same applies for other statistics for which significance tests have been undertaken in this publication, such as correlations and regression coefficients.

■ Development of the PISA assessment instruments

The development of the PISA 2000 assessment instruments was an interactive process between the PISA Consortium, the various expert committees, OECD governments and national experts. A panel of international experts led, in close consultation with participating countries, the identification of the range of skills and competencies that were, in the respective assessment domains, considered to be crucial for an individual's capacity to fully participate in and contribute to a successful modern society. A description of the assessment domains – the assessment framework – was then used by

participating countries, and other test development professionals, as they contributed assessment materials.

The Main Study included 37 Reading Units with 141 items (counting different parts of questions as separate items). The stimulus for 14 of these units came from national contributions, the PISA Consortium was the source of the stimulus material for 13 units, and 10 units came from the International Adult Literacy Survey. The Main Study instruments also included 16 Mathematics Units (32 Items) and 14 Science Units (35 Items).

Five item types were used in the PISA assessment instruments:

- ***Multiple-choice items***: these items required students to circle a letter to indicate one choice among four or five alternatives, each of which might be a number, a word, a phrase or a sentence. They were scored dichotomously.
- ***Complex multiple-choice items***: in these items, the student made a series of choices, usually binary. Students indicated their answer by circling a word or short phrase (for example *yes* or *no*) for each point. These items were scored dichotomously for each choice, yielding the possibility of full or partial credit for the whole item.
- ***Closed constructed-response items***: these items required students to construct their own responses, there being a limited range of acceptable answers. Most of these items were scored dichotomously with a few items included in the marking process.
- ***Short response items***: as in the closed constructed-response items, students were to provide a brief answer, but there was a wide range of possible answers. These items were hand-marked, thus allowing for dichotomous as well as partial credit.
- ***Open constructed-response items***: in these items, students constructed a longer response, allowing for the possibility of a broad range of divergent, individual responses and differing viewpoints. These items usually asked students to relate information or ideas in the stimulus text to their own experience or opinions, with the acceptability depending less on the position taken by the student than on the ability to use what they had read when justifying or explaining that position. Partial credit was often permitted for partially correct or less sophisticated answers, and all of these items were marked by hand.

For further information on the development of the PISA assessment instruments and the PISA assessment design, see the *PISA 2000 Technical Report*.

INDICATOR A12: Labour force participation by level of educational attainment

■ General notes

Methodology

The most important change between ISCED-97 and ISCED-76 is the introduction of a multi-dimensional classification framework, allowing for the alignment of the educational content of programmes from different countries using multiple classification criteria (table 1). These dimensions include: 1) the type of subsequent education or destination to which the programme leads; 2) the programme orientation (whether it be general education or pre-vocational education or vocational education); 3) the programme duration (for the ISCED Levels 3, 4 and 5, where programmes that vary widely in duration exist); and 4) position in the national degree and qualification structure. In ISCED-76, there was no such provision. For detailed notes see glossary and the OECD publication *Classifying Educational Programmes, Manual for ISCED-97 Implementation in OECD Countries, Edition 1999*.

Insert table 1 in annex3-A3.xls “Description of ISCED-97 levels”
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Interpretation

In order to classify national educational attainment levels straddling two or more ISCED-97 levels, a simple rule is used consisting of attributing the programme to ISCED-97 level where most of the national educational activities are concentrated.

Table 2 comprises for each level of ISCED-97 the national programmes that are included in the respective indicators.

Insert Table 2 in annex3-A3.xls “Standardised presentation of national ISCED-97 mappings”

Sources

Insert Table 3 in Annex3-A3.xls “Sources”

INDICATOR A13: Expected years in education, employment and non-employment between the ages of 15 and 29

■ **General notes**

Methods and definitions

The most frequent source is the Labour Force Survey (see Indicator A3). This data request expands the request on labour force status by completed level of education (ISCED-97) and aims at describing the transition process of youngsters aged 15 to 29 years from school to work.

Data refer to the first quarter of each year comprising the following months: January, February, March.

The work status refers to the International Labor Office definition of employment, unemployment and not in the labour force. The type of employment refers to full-time or part-time employment based on a threshold definition of 30-usual-hour cut off on the main job. Full-time workers are those working usually 30 hours or more on their main job.

The school status is understood in terms of Education or/and training currently being received in the regular educational system, which can be during the previous four weeks (including the survey reference week) or a shorter period. If such question does not exist in the national labour force survey, the "Main activity question" have been used to fill the schooling status.

Work study programs are combinations of work and study periods where both aspects are parts of an integrated, formal education / training activity (examples are the "dual system" in Germany, "apprentissage" or "formation en alternance" in France and Belgium, internship or co-operative education in Canada, Apprenticeship in Ireland, Youth Training in the United Kingdom... Vocational education/training occurs not only in school settings but also in a working environment. Sometimes students or trainees are paid, sometimes not. There is a strong relationship between the job and the courses / training.

The ISCED level refers to the ISCED mapping used to code the LFS (See Indicator A3). For those in education, this refers to the level of education of the program attended. For those not in education, this refers to the completed level of education

■ **Notes on specific countries**

Sources

Canada: Students attending all schools includes primary, secondary, college, CEGEP, university and other schools.

United Kingdom: The work study programmes definition includes:

- Government employment or training schemes (Youth training programme, Training for work, Action for Community Employment, Job Skills, National Apprenticeship),
- those on Newdeal scheme, working for an employer in public or private sector, working for the voluntary sector, working for an environmental task force, other type of Newdeal scheme involving practical training (practical training, at college, temporarily away from project/college),
- those on the following government employment or training schemes: in England/Wales on a scheme run by a Training & Enterprise Council, in Scotland on a scheme run by a Local Enterprise Company,
- training course for a qualification in nursing, physiotherapy or a similar medical subject,
- enrolled on a University 'sandwich' course - work in industry included in course,
- teacher training course,
- post Graduate Certificate in Education,
- anyone on a recognised Trade Apprenticeship not included in any of the above schemes.

CHAPTER B: FINANCIAL AND HUMAN RESOURCES INVESTED IN EDUCATION

INDICATOR B1: Educational expenditure per student

See also notes on Indicator B1.

■ **General notes**

Methodology

• **Reference period**

Adjustments were made for countries in which the financial year and the school year do not coincide. In order to match the enrolment data with the financial year 2000, a weighted average of the enrolment data for the academic years 1999/00 and 2000/01 was calculated. The data were weighted in accordance with the proportion of each school year that fell within the financial year 2000 (see Annex 2).

- **Estimation of expenditure per tertiary student over the duration of studies.**

Two alternative methods were employed to calculate the average duration of tertiary studies: the approximation formula and the chain method. For both methods, it should be noted that the result does not give the average duration needed for a student to graduate since all students participating in tertiary education are taken into account, including drop-outs. Hence, the figure can be interpreted as the average length of time for which students stay in tertiary education until they either graduate or drop out. However, in the case of countries with low drop-out rates (see Indicator A2), the result can serve as a good proxy for duration until graduation.

The estimates of cumulative expenditure on education over the average duration of tertiary studies were obtained by multiplying annual expenditure per student by an estimate of the average duration of tertiary studies.

Using the **approximation formula**, the latter estimate was approximated by the rate of turnover of the existing stock of enrolments, obtained from the ratio of flow data (entrants and leavers) to the corresponding numbers of students enrolled. The formula $D = (S_{t-1} + S_t)/(Z_t + A_t)$ was used for this calculation, where S_t is the number of students enrolled at the end of year t , S_{t-1} is the number of students at the beginning of year t (approximated by the number of students enrolled at the end of the preceding school year), Z_t is the number of students who are in their first year of study in year t , and A_t is the number of leavers in school year t (approximated by $S_{t-1} + Z_t - S_t$). Full-time equivalents were used to estimate enrolments. The number of entrants to full-time programmes was used to estimate the inflow. All participants were included, even those who might not obtain a degree.

The estimate is based on a number of simplifying assumptions: first, it is assumed that transition rates are constant over time. Second, expenditure in the current reference year is assumed to be typical of the total duration of studies.

Using the **chain method**, the duration of study is defined as the sum of the probabilities, for each year of study, that a student who has entered tertiary education will still be enrolled in that year of study.

The duration is therefore defined as $D = \sum_{i=1}^{10} q_i$, where q_i is the probability that a student will reach the i -

th year of study, *i.e.*, the proportion of individuals in the i -th year of study relative to those studying in the first year $i-1$ years before. With the chain method all conditional probabilities are derived from data for two adjacent years, the reference year and the preceding year. Given the number of students s in year i of study in year t and the number of students in year $i-1$ of study in year $t-1$, the transition rates can be calculated for each year of study as $a_{i,t} = s_{i,t}/s_{i-1,t-1}$. The transition rates give, for each year of study, the probability that a student in year $i-1$ will continue studying in year i . The product of all transition rates 1 to I gives the probability, for year i of study, that a student who started $i-1$ years before will still be enrolled in year i of study. Finally, the sum of all conditional probabilities gives an estimate of the average duration of tertiary education. Expenditure in the current reference year is assumed to be typical of the total duration of studies.

■ Notes on specific countries

Coverage

See also notes on Indicator B2.

Australia: Previously, university enrolments included some students in overseas campuses. These have been excluded, starting with EAG 2001. This correction affects the number of tertiary students, and consequently the expenditure per student, by 2.8 per cent. Enrolment data for the Vocational Education and Training sector are now based on AQF data rather than stream data, so that there will be breaks in series at ISCED 2, 3, 4 and 5B.

Russian Federation: Expenditure per student at the tertiary level of education is underestimated due to missing private expenditure while tuition fees are paid exclusively from private funds for 34.6% of tertiary type-A students and 31.1% of tertiary type-B students.

United Kingdom: Upper secondary vocational students are excluded from the calculation of expenditure per student, as they were counted on a “whole year” rather than on a “snapshot” basis.

• Estimation of the duration of tertiary education calculated using the chain method

Canada: The 6th year of study includes the 7th, 8th, 9th and 10th years of study.

Germany: The model for the calculation of the average duration of tertiary studies was modified. Students beyond the 10th year of study were not taken fully into consideration. Students in the 10th year of study or beyond amounted to around 10 per cent of total enrolment in the academic year 1994/5. The reported duration is a lower boundary of total duration and probably underestimated. In general, non-university tertiary education has a duration of 2 years, but part-time courses take up to 4 years.

Germany and Italy: No distinction is made between part-time and full-time studies at the university level. However, for expenditure over the duration of studies the effect balances out, since reporting part-time students as full-time students leads both to an underestimate of annual expenditure and to an overestimate of duration of studies.

Greece: The 5th year of tertiary-type B study includes the 6th year and beyond. The 7th year of tertiary-type A and advanced research programmes includes the 8th year and beyond. This leads to an underestimate of duration.

Hungary: Distribution is estimated between ISCED levels 1,2,3.

Iceland: Data were partly estimated, as students in programmes at level 5A (2nd degree) and level 6 are often not signed up for thesis credits until the thesis is completed. Data were therefore adjusted to correct for consequent overestimating of the number of part-time students and underestimating of full-time equivalents.

Ireland: Full-time education only.

Korea: The maximum duration of non-university education is 3 years. The 6th and 8th years and beyond of university education are included in the 7th year of study.

United Kingdom: The chain method was amended slightly in order to use the available UK data. Average durations were calculated separately using the chain method for each of the main types of course at tertiary level. To take account of the fact that many students go on to take a further course after their initial course, these figures were then combined according to the numbers of students following each of the main pathways at tertiary level. The total average durations shown for university and all tertiary levels are therefore weighted averages of the individual average durations of each type of course. Coverage excludes those studying in further education institutions, though these account for less than 10 per cent of all students at the tertiary level.

Interpretation

Switzerland: Expenditure per student is very high at the university level. This is mainly due to the structure of the university system: a high number of universities in relation to the size of the country (partly due to the three language regions), the small size of some universities, a wide range of provision at each university, and relatively low student/teaching staff ratios. Furthermore, teachers' salaries at university level are comparatively high. Advanced research programmes are not included in tertiary education.

Sources

2002 UNESCO/OECD/EUROSTAT (UOE) data collection on education statistics. National sources are:

Australia: Department of Employment, Education, Training and Youth Affairs, Higher Education Division, Canberra; Australian Bureau of Statistics, "Expenditure on Education Finance" collection; in the case of regional government expenditure, state government data (for public institutions) and school data (for private institutions) were used; "Collection of National Financial Data on Vocational Education and Training"; New South Wales Technical and Further Education, unpublished data.

Austria: Austrian Central Statistical Office, Vienna.

Belgium: Flemish Community: Ministry of the Flemish Community, Education Department, Brussels; French Community: Ministry of the French Community, Education, Research and Training Department, Brussels; German Community: Ministry of the German-speaking Community, Eupen.

Canada: Statistics Canada, Ottawa.

Czech Republic: Closing account of the Government of the Czech Republic; regular survey of the Institute for Information on Education; unpublished information from the Ministry of Education, Youth and Sports and the Ministry of Agriculture.

Denmark: Ministry of Education, Department of Economic Affairs, Copenhagen.

Finland: Statistics Finland, Helsinki.

France: Ministry of National Education, Higher Education and Research, Directorate of Evaluation and Planning, Paris.

Germany: Federal Office of Statistics, Wiesbaden.

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

Hungary: Ministry of Culture and Education, Ministry of Finance, Central Statistical Office, Budapest.

Iceland: National Economics Institute, Reykjavik.

Ireland: Department of Education, Statistics Section, Dublin.

Italy: National Institute of Statistics (ISTAT), Rome; Ministry of Public Education, Statistical Service, Rome.

Japan: Ministry of Education, Culture, Sports, Science and Technology, Tokyo.

Korea: Korean Educational Development Institute, Educational Information Research Centre, Seoul.

Mexico: Secretariat of Public Education.

Netherlands: Central Bureau for Statistics, Department for Statistics of Education, Voorburg; Ministry of Education and Science, Zoetermeer.

New Zealand: Ministry of Education, Wellington.

Norway: Statistical Central Office, Division for Population, Education and Regional Conditions, Kongsvinger; The Royal Norwegian Ministry of Education, Research and Church Affairs, Oslo.

Poland: Central Statistical Office, Republic of Poland, Warsaw.

Portugal: Ministry of Education, Office of Research and Planning, Department of Programming, Lisbon.

Spain: National Institute of Statistics, Sub-directorate General of Social Research and Statistics, Madrid; Ministry of Education, Planning and Statistical Office, Madrid; Ministry of Labour, Madrid.

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

Switzerland: Federal Statistical Office, Berne.

Turkey: Ministry of National Education and Higher Education Council, Final financial record.

United Kingdom: Department for Education and Skills, Darlington.

United States: Department of Education, Office of Educational Research and Improvement, National Centre for Education Statistics, Washington, D.C.

INDICATOR B2: Expenditure on educational institutions relative to Gross Domestic Product

■ **General notes**

Methodology

• **Changes in GDP in comparison with earlier editions**

The theoretical framework underpinning the calculation of GDP has been provided for many years by the United Nations' publication *A System of National Accounts*, which was released in 1968. An updated version was released in 1993 (commonly referred to as SNA93).

Statistics on educational expenditure relate to the financial year 2000. For countries where GDP is not reported for the same reference period as data on educational finance, GDP is estimated as: $w_{t-1} (\text{GDP}_{t-1}) + w_t (\text{GDP}_t)$, where w_t and w_{t-1} are the weights for the respective portions of the two reference periods for GDP which fall within the educational financial year. Adjustments were made for **Canada, Japan, the United Kingdom and the United States** (see Annex 2).

• **Calculation of estimates in Charts B2.3 (A), (B) and (C)**

Charts B2.3 (A), (B) and (C) show shifts in educational expenditure that would be expected if participation by children in a country's education were at the OECD average level. The expected enrolment for a given country is calculated as follows: let $POP(i,k)$ be the population in country i at age k and let $AER(k,l)$ be the OECD average enrolment rate at age k at level of education l . The expected enrolment is then calculated as

$$EE(i) = \sum_{k=5}^{29} POP(i,k) * AER(k,l).$$

The expected difference in expenditure for country I at level l , as shown in Charts B2.3(A), (B) and (C), is calculated as $EX(i,l) * (EE(i,l)/RE(i,l)) - EX(i,l)$, with $RE(i,l)$ representing the observed enrolment at level l in country i . The OECD average enrolment rate is calculated using data from countries for which enrolment data by single year of age are available. $EX(i,l)$ represents the expenditure relative to GDP for country i at level l .

• **Calculation of index in Table B2.2**

Table B2.2 shows the changes in expenditure on educational services between 1995 and 2000. All expenditure reported for 1995 was expressed in 2000 constant dollars, adjusted to the price level of 2000 using the GDP deflator (see Annex 2).

■ Notes on specific countries

Coverage

Australia: Starting with EAG 2001, data on educational finance are reported on an academic/calendar year basis and not on a financial year (from July to June) basis, which was used in previous editions. The financial data for 1999 are not comparable with data from previous finance returns. The major reasons for differences between the 1998 and 1999 finance data are the introduction of accrual accounting in the government school sector, the attribution of expenditure on transport subsidies to institutional spending rather than being classified as government grants to households, changes to methodologies in attributing expenditure in the government school sector between ISCED 2 and ISCED 3; and using the Australian Qualification Framework rather than 'stream' in the Vocational Education and Training sector to allocate students to ISCED levels. The 1995 data were compiled using the same methodology.

Austria: Expenditure on R&D in the tertiary sector is partially excluded. Some expenditure by public institutions other than the Ministry of Education is excluded (social insurance bodies, chambers of trade and crafts, and federal funds - *Sozialversicherungsträger, Kammern, Bundesfonds*).

Belgium: Expenditure on retirement by central government is excluded. Research expenditure has been tuned with the DSTI-data, so it now includes all the R&D expenditure (HERD). Also the cost of the administration has been included this year. The expenditure of the local government is based on real expenditure instead of estimated data. The expenditure of households is based on a new survey, which gives us much more detail and precision (only net expenditure was put in the tables). Notes on Belgium apply equally to the **Flemish Community of Belgium**.

Canada : In comparison to EAG 2001, there is a large difference in private post-secondary education expenditures. The reason is a methodological one. A new estimate of private post-secondary expenditures, derived from the National Accounts area at Statistics Canada has been implemented in EAG 2002. This new estimate is significantly higher than the previous estimates.

Czech Republic: Data from the Ministries of Justice, Defence and Internal Affairs are not included.

Denmark: The allocation of expenditure on early childhood, primary and lower secondary education is estimated on the basis of the corresponding enrolments. Expenditure on pre-primary education includes some expenditure on day care. Day care activities are fully integrated into the school day and not costed separately. It is debatable whether this expenditure should be classified as educational or not. While Denmark includes this expenditure, **Finland** and **Sweden** exclude expenditure on similar programmes.

Finland: The coverage of expenditure on pre-primary education has changed considerably in comparison with previous editions. Estimated kindergarten expenditure on day care and child care for

3 to 6-year-olds is excluded. This change in reporting also applies to the trend data presented here. Expenditure on apprenticeship training is included for the first time.

Government transfers and payments to private entities, except financial aid to students, are excluded. Funds from foreign sources are excluded. Local government expenditure also contains private expenditure.

France: All expenditure excludes overseas departments (*départements d'outre mer*, DOM). Gross domestic product and total public expenditure were adjusted accordingly.

Germany: Expenditure on the following programmes is not included in total expenditure: training of trainee civil servants in public service; colleges of nursing; agricultural training centres; and public and private expenditure on institutions providing ancillary services at the tertiary level (*Studentenwerk*). Payments by private households and other private entities to government-dependent institutions are excluded.

Greece: Expenditure on early childhood education is included in expenditure on primary education.

Japan: Expenditure on special training colleges, “miscellaneous schools” and educational administration are not allocated by level.

Korea: Expenditure on R&D in tertiary education institutions is excluded with the exception of R&D funded by the Ministry of Education. Expenditure on educational programmes provided by ministries other than the Ministry of Education is excluded (KAIST, Police College, College of External Affairs, Tax Officers' College and Military Academy).

Netherlands: Figures, as shown in the chapter B of EAG2002, are influenced to a considerable degree by three changes in the Dutch FINANCE data submission for the year 1999, made by Statistics Netherlands. These changes (which were discussed during the 2nd Finance Comparability Study visit), compared to 1998, are:

- A lower proportion of public subsidies are attributed to ‘public grants attributable for tuition fees to educational institutions’ and by consequence more to public grants NOT attributable for tuition fees to educational institutions. This new division is based on the calculation standards in our student grant system. As a consequence the net private expenditure to all educational institutions is considerably higher compared to EAG2001.
- Private expenditure on R&D (3^e geldstroom onderzoek) is included. As a consequence, the total educational expenditure on tertiary institutions is higher, also the private expenditure to tertiary institutions is considerably higher compared to EAG2001.
- A substantial part of student loans in the Netherlands are loans that will be converted into grants when students pass their exams. We estimate the conversion rate of these so called ‘prestatieburzen’ (performance grants) at more than 90%. In the 1998 data, these loans/performance grants were reported as student loans. In the 1999 data these loans/performance grants are reported as grants. As a consequence the proportion of loans in the total public expenditure is lower in EAG 2002.

Portugal: Regional and local transfers to the private sector are not included. Local direct expenditure on educational institutions is not included.

Turkey: Regional direct expenditure on educational institutions is not included.

United States: Funds for major federal R&D centres administered by universities are excluded. Pre-primary education only includes pre-primary classes in public and private primary schools. It excludes independent private schools, which provide a large part of pre-primary education.

Interpretation

Denmark: Data on expenditure at the tertiary level include all expenditure on R&D at the tertiary level in EAG 2001 and 2002. Comparisons with previous editions cannot be made due to significant underestimation of expenditure in previous editions.

Finland: Programmes of tertiary-type B are being abolished. The last intake to 5B programmes was in autumn 1998. Expenditure on 5B programmes is hence decreasing. At the same time, polytechnic education (tertiary-type A) is rapidly growing, as is also expenditure on 5A programmes.

Sources

See Indicator B1.

INDICATOR B3: Relative proportions of public and private investment in educational institutions

■ **Notes on specific countries**

See notes on Indicator B2.

INDICATOR B4: Total public expenditure on education

● **Changes in total public expenditure in comparison with earlier editions**

The theoretical framework underpinning the calculation of total public expenditure has been provided for many years by the United Nations' publication *A System of National Accounts*, which was released in 1968. An updated version was released in 1993 (commonly referred to as SNA93). Notes on specific countries

Statistics on educational expenditure relate to the financial year 2000. For countries, **Australia and Japan**, where total public expenditure is not reported for the same reference period as data on educational finance, total public expenditure is estimated as: $w_{t-1} ((total\ public\ expenditure)_{t-1}) + w_t ((total\ public\ expenditure)_t)$, where w_t and w_{t-1} are the weights for the respective portions of the two

reference periods for total public expenditure which fall within the educational financial year. Adjustments were not made for **Canada, United Kingdom and United States** in this edition yet.

See notes on Indicator B2.

Finland: Public expenditure on educational institutions includes some private expenditure.

INDICATOR B5: Support for students and households through public subsidies

■ **Notes on specific countries**

See notes on Indicator B2.

Canada, Denmark and Germany: Subsidies in kind, such as free or reduced-price travel on public transport systems, is excluded.

Czech Republic: Some scholarships awarded by central government are included in direct payments to educational institutions.

Ireland: Students in tertiary education benefit from subsidised travel on the bus and rail systems, which are owned and funded by the State. The expenditure involved in this subsidy is currently unknown. Students in tertiary colleges and universities can make use of limited on-campus medical facilities funded both from central (exchequer) grants and from registration fees paid by the students themselves. The level of government funding in this area is not known.

Switzerland: Fees for health insurance are publicly subsidised for students from low-income backgrounds. These subsidies amount to several tens of millions of Swiss francs but are excluded.

INDICATOR B6: Expenditure on institutions by service category and by resource category

See also notes on Indicators B1 and B2.

■ **Notes on specific countries**

Coverage of ancillary services

Expenditure by educational institutions on ancillary services, such as student meals, boarding and housing on campus and student transportation should include fees paid by students and families for those services. However, countries have uneven coverage of private spending on ancillary services. While a number of countries exclude private spending on ancillary services, Australia, France, Hungary, Spain, Turkey and the United States provide information on private spending on ancillary services.

Ireland: Ancillary services at the primary to post-secondary non-tertiary level include only school transport.

R&D coverage

Canada: Sponsored research is currently being reported in the UOE data collection without overhead costs. Total expenditure on R&D is therefore underestimated.

France: Expenditure on R&D excludes all funds specifically allocated to R&D, such as subsidies, contracts and special funds. These are included in the OECD/DSTI reporting and account for approx. 0.2 per cent of GDP, or 50 per cent of total expenditure on R&D.

Ireland: Some expenditure on R&D, which is reported to DSTI, is excluded from UOE reporting (16.5 million IEP). This accounts for approx. 10 per cent of all expenditure on tertiary R&D, and for 2 per cent of total expenditure on ISCED 5 and 6.

Mexico: Expenditure on separately funded or separately budgeted research only.

Netherlands: Spending on R&D in tertiary education by private non-profit organisations, business enterprises and abroad is excluded (*derde geldstroom*). This accounts for 26 per cent of all spending on R&D, or 0.08 per cent of GDP.

Notes on distribution of current and capital expenditure

Canada: Current expenditure in independent private institutions at ISCED 5B includes capital expenditure.

Hungary: The significant decrease in government support for capital expenditure in tertiary education can be attributed to the fact that substantial investments were made in the previous year, 1997.

Italy: In comparison with previous editions, educational expenditure by resource category shows a lower percentage of staff compensation (for teaching and non-teaching staff) and a higher percentage of other current expenditure. This is due to the introduction of a new tax, "IRAP", and to the concurrent abolition of some additions to gross salaries.

Japan: Expenditure on part-time employees is included in current expenditure other than compensation of personnel.

Sweden: School and university buildings are rented. Payments for rent are included in current expenditure.

Sources

See Indicator B1.

CHAPTER C: ACCESS TO EDUCATION, PARTICIPATION AND PROGRESSION

INDICATOR C1: School expectancy and enrolment rates

■ General notes

Methodology

• Reference dates

Statistics that relate participation data to population data are published for the reference date that was used by national authorities for these statistics. The assumption is made that age references in the enrolment data refer to 1 January of the reference year. For **Australia**, 30 June is used as the reference date for both enrolments and population data. For **Japan**, 1 October is used as the reference date for ages.

The dates or periods at which students, educational staff and educational institutions were counted have not been provided to the Secretariat by all countries. Some countries collect these statistics through surveys or administrative records at the beginning of the school year while others collect them during the school year, and yet others at the end of the school year or at multiple points during the school year. It should be noted that differences in the reference dates between, for example, enrolment data and population data can lead to errors in calculation (*e.g.*, net enrolment rates exceeding 100 per cent) where there is a significant decrease or increase over time in any of the variables involved. If the reference date for students' ages used in the enrolment data differs from the reference date for the population data (usually 1 January of the reference year), this can be a further source of error in enrolment rates.

Sources: For OECD countries see Indicator B1.

■ Table C1.1

Methodology

School expectancy (in years) under current conditions excludes all education for children younger than five years. It includes adult persons of all ages who are enrolled in formal education. School expectancy is calculated by adding the net enrolment rates for each single year of age. Data by single year of age are not available for ages 30 and above. For persons aged 30 to 39, enrolment rates were estimated on the basis of five-year age bands, and for persons 40 and over, enrolment rates were estimated on the basis of the cohort size of 39 year-olds.

■ Notes on specific countries

Australia: Students participating in Open Learning Courses and two private universities are excluded. Pre-primary enrolment is not included when males and females are reported separately. It is assumed that the overwhelming majority at the pre-primary level would be in full-time education. University enrolments now exclude all students in overseas campuses. There are breaks in series in ISCED 2, 3, 4 and 5B enrolments in the Vocational Education and Training sector, which are now based on AQF data rather than stream data.

Austria: For upper secondary, post-secondary non-tertiary and tertiary-type B education the age group 25 to 29 years could not be broken down by single year of age. Age distribution for tertiary-type B education (ISCED 5B) is estimated. Enrolments of auxiliary nurses in training programmes were included for the first time, adding 1000 enrolments to upper secondary education (ISCED 3).

Belgium: Data concerning entrepreneurship training courses (ISCED 4B part-time education) and apprenticeship training courses (ISCED 3 full-time education) are *not included* for the Flemish Community. Data for independent private institutions are *not available*. Since institutions of this type are not very numerous, data for all types of institution are only slightly underestimated. There is no longer a distinction between public and private institutions in tertiary-type A and B 'hogescholen' and full-time and part-time university education (ISCED 5A and 6).

Finland: Data on full-time students include both full-time and part-time enrolments. Students are not classified into full-time and part-time students on the basis of their study activities. Enrolment at ISCED 0 non-school establishments (children's day care centres and kindergartens: 95 per cent) is estimated. The estimate is based on information supplied by individual municipalities to Statistics Finland and information from the National Research and Development Centre for Welfare and Health.

Germany: Students pursuing doctoral studies (ISCED 6) are not obliged to register at university and it is not possible to estimate their number.

Hungary: The distribution of students aged 26 to 29 and 31 to 40 by single year is estimated for tertiary-type A and advanced research programmes. The age distribution for tertiary-type B students has been estimated from the age distribution for tertiary-type A education.

Ireland: Nursing students who follow a type of dual training, with education and training taking place in hospitals only, are *excluded*. Most but not all adult education is excluded. Adult education includes part-time studies at ISCED 3 and 5 undertaken by persons returning to education after an interruption of some years. Most pre-primary enrolments are *included* because data are not collected from many privately owned pre-schools. Coverage of part-time enrolment data is uneven. Many part-time students in independent private colleges at ISCED levels 3 and 5 have been *excluded*. Only full-session part-time students (doing courses lasting approximately the full year) have been *included* in the data.

Italy: Age distribution is not available for advanced research programmes.

Turkey: Data for under 5-year-olds are included in pre-primary education.

■ **Table C1.2**

■ **Notes on specific countries**

Belgium, France and Iceland: The enrolment rates for 3 to 4-year-olds exceed 100 per cent. This is due to the fact that a large number of children below the age of 3 are enrolled in formal education and are included in Table C1.2 (between 15 and 25 per cent of the total number of children enrolled under the age of 4).

Ireland: In Ireland, the end-age of compulsory schooling was increased to 16 in 2002.

Italy: Participation and school expectancy increase in Italy largely due to the fact that in Italy compulsory schooling was extended to the age of 15 in the 1999/2000 school year.

Spain: Net enrolment rates exceed 100 in some cases. The reason lies partly in the nature of the population forecasts by the National Institute of Statistics, and partly in a possible over-reporting of enrolments by schools.

Turkey: From the school year 1997-1998 a law was passed to extend the duration of primary education to 8 years and the ending of compulsory education was determined at age 14.

United Kingdom: Data cover enrolments in schools only. Therefore enrolments for 3 to 4 year-olds are underestimated.

Chile: Data exclude participation in tertiary education.

Egypt: Data exclude participation in post-secondary and tertiary education.

Jamaica: Data exclude participation in tertiary education.

Jordan: Data exclude participation in tertiary education.

Paraguay: Data exclude participation in upper-secondary vocational programmes and tertiary type 5A/6 education.

Tunisia: Data exclude participation in tertiary education.

Zimbabwe: Data exclude participation in tertiary education.

INDICATOR C2: Entry to and expected years in tertiary education and participation in secondary education

■ Table C2.1

Methodology

- **Calculation of net entry rates**

The net entry rates given in Table C3.1 represent the proportion of persons of a synthetic age cohort who enter a certain level of tertiary education at one point during their lives. The net entry rate is defined as the sum of net entry rates for single ages. The total net entry rate is therefore the sum of the proportions of new entrants to tertiary-type A and B aged i to the total population aged i , at all ages. Since data by single year are only available for ages 15 to 29, the net entry rates for older students are estimated from data for 5-year age bands.

- **Calculation of gross entry rates**

In the case where no data on new entrants by age were provided gross entry rates are calculated. Gross entry rates are the ratio of all entrants, regardless of their age, to the size of the population at the typical age of entry. Gross entry rates are more easily influenced by differences in the size of population by single year of age. Taking into account the effect of changing cohort sizes, all gross rates presented here were tested for possible error. The error is well below five percentage points.

- **Calculation of age at the 25th, 50th and 75th percentiles**

The ages given for the 25th, 50th and 75th percentiles are linear approximations from data by single year of age. The i -th percentile is calculated as follows: let age k be the age at which less than i per cent of new entrants are younger than k years of age and more than i per cent are younger than $k+1$. If $P(<k)$ is the percentage of new entrants aged less than k and $P(k)$ the percentage of new entrants aged k , then the age at the i -th percentile is $k + (i - P(<k)) / (P(k))$.

■ Table C2.2

Methodology

- **Change in total tertiary enrolment**

The change in total tertiary enrolment is expressed as an index, the base year of which is 1995 (100). The number of tertiary students in 2000 is therefore expressed as a percentage of the number of tertiary students in 1995. The impact of demographic change on total enrolment is calculated by applying the enrolment rates measured in 1995 to the population data for 2000: population change was

taken into account while enrolment rates by single year of age were kept constant at the 1995 level. The impact of changing enrolment rates is calculated by applying the enrolment rates measured in 2000 to the population data for 1995, i.e., the enrolment rates by single year of age for 2000 are multiplied by the population by single year of age for 1995 to obtain the total number of students that could be expected if the population had been constant since 1995.

■ Notes on specific countries

Germany: Excludes advanced research programmes.

Hungary: The age distribution for part-time students is estimated, and the age distribution of full-time students is estimated on 1999 data

Turkey: Excludes open university faculties.

■ Tables C2.3 and C2.4

Classification

Educational institutions are classified as either public or private according to whether a public agency or a private entity has the ultimate power to make decisions concerning the institution's affairs. The extent to which an institution receives its funding from public or private sources does *not* determine the classification status of the institution. An institution is classified as *private* if it is controlled and managed by a non-governmental organisation (*e.g.*, a Church, a Trade Union or a business enterprise), or if its Governing Board consists mostly of members not selected by a public agency. The terms “*government-dependent*” and “*independent*” refer only to the degree of a private institution's dependence on funding from government sources; they do not refer to the degree of government direction or regulation. A government-dependent private institution is one that receives more than 50 per cent of its core funding from government agencies. An independent private institution is one that receives less than 50 per cent of its core funding from government agencies.

■ Notes on specific countries

Turkey: Excludes open university faculties.

■ Table C2.5

■ Notes on specific countries

Sweden: The figures specified "by programme destination" do not add up to 100%: Adult education at ISCED level 3 can not be classified according to destination.

INDICATOR C3: Foreign students in tertiary education

■ General notes

Methodology

Students are classified as foreign students if they are not citizens of the country for which the data are collected. Countries unable to provide data or estimates for non-nationals on the basis of their passports were requested to substitute data according to a related alternative criterion, e.g., the country of residence, the non-national mother tongue or non-national parentage (see notes on specific countries).

The number of students studying abroad is obtained from the report of the countries of destination. Students studying in countries which did not report to the OECD are not included in this indicator.

■ Notes on specific countries

Coverage

Belgium: Foreign students are defined by citizenship, hence include children of permanent residents in the country. The number of tertiary students who came to Belgium for the purpose of study is *overestimated*.

Denmark: The number of foreign students by country of origin are estimated.

Ireland: Foreign students are defined by domiciliary origin.

New Zealand: Most Australian students are not counted as foreign students.

Norway: Foreign students are defined by country of birth.

Turkey: Only students who come to Turkey for the purpose of study are counted as foreign students.

Sweden: Students who are not registered in the Swedish population register (mainly from other Nordic countries) are *not included*.

Switzerland: Some foreign students at non-university level tertiary education are *not included*. The total number of foreign students is *underestimated*.

United Kingdom: Foreign students are defined by home address.

■ **Table C3.4**

■ **Notes on specific countries**

Belgium: ISCED 5B programmes are fairly widespread in Belgium. As a result the comparatively high percentage of foreign students enrolled in these programmes reflects a general trend in this country. But this figure also reflects a sociological phenomenon. Since it has not been possible to net out resident foreign students in Belgium, the statistics on foreign students include children of immigrants with a foreign citizenship. These youngsters tend to come from lower socio-economic backgrounds, and have a greater propensity to enrol in ISCED 5B programmes than youngsters of higher socio-economic background.

■ **Additional data**

Please see www.oecd.org/edu/eag2003 for additional web tables under Indicator C3.

INDICATOR C4: Education and work of the youth population

■ **General notes**

All 15 year-olds - as they are estimated are considered in Education and out of the labour force;

Sources

See notes on indicator A12.

■ **Tables C4.1 and C4.1a C4.1b.**

The category “Other employed” includes people in education, who are employed but not included in the work study program.

■ **Notes on specific countries**

Data for **Iceland, Sweden, Norway and Spain** concern 16 to 19-year-olds.

United Kingdom : The number of people aged of 15 to 19 year-olds is assumed to be 1/14 of the number of 16 to 29.

INDICATOR C5: The situation of the youth population with low levels of education

■ **General notes**

All 15 year-olds - as they are estimated are considered in Education and out of the labour force.

The target group is defined as follow: persons 20-24 years old which are not enrolled in education nor in a work study program and have not attained a diploma in upper secondary education (ISCED 3)

Sources

See notes on indicator A12.

■ **Notes on specific countries**

Data for **Iceland, Sweden, Norway and Spain** concern 16 to 19-year-olds.

United Kingdom : The number of people aged of 15 to 19 year-olds is assumed to be 1/14 of the number of 16 to 29.

CHAPTER D: THE LEARNING ENVIRONMENT AND ORGANISATION OF SCHOOLS

Technical background of the OECD International Survey of Upper Secondary Schools (ISUSS)

Several indicators in Chapter D rely on data from the OECD International Survey of Upper Secondary Schools. **Indicator 3** on the use of information and communication technology, **Indicator 4** Part 2 on professional development, and **Indicator 7** on teacher supply and demand derive data from the ISUSS survey implemented in 15 countries during the school year 2001/2002. The short description of the study gives technical background for interpretation of the data. Fuller technical documentation on ISUSS will be published later this year.

■ **Target population**

The target population for the 2001 OECD Survey of Upper Secondary Schools was defined as the total set of schools (school sites) attended by of upper secondary students in mainstream programmes. However, not all upper secondary programmes were included in the target population of the survey (for a full list of upper secondary programmes see OECD, 1999).

The following upper secondary (ISCED 3) programmes were *included*:

ISCED 3A general and 3C vocational programmes (unless they were identified as being one of the programmes mentioned below);

ISCED 3A pre-vocational or pre-technical programmes through ISCED 3C pre-vocational or pre-technical programmes were included only if they (predominantly) prepare for a higher ISCED level or for the labour market, they do not fall outside the typical age range (16-19 year-olds), and they do not fall outside the typical range of cumulative duration (11-13 year-olds).

The following programmes were *excluded* from the definition of the target population:

adult education;

labour market training schemes (for employed or unemployed persons);

special education; and

programmes established to function such as a safety net catering to early school leavers or youth at risk.

■ **Unit of sampling**

In the majority of cases schools are educational as well as administrative units. However, in some countries, a school can comprise two or more school sites in different locations with a staff allocated separately to each. Wherever this was the case, the unit of sampling was defined as the school site rather than the school.

■ **National desired populations**

All participating countries were expected to define their national desired population to correspond as closely as possible to the definition of the international desired population. Sometimes, however, countries had to make compromises. For example, some countries had to restrict geographical coverage by excluding remote regions or atypical segments of their education system. All significant deviations were documented and submitted for approval to the international co-ordinator.

■ **School level exclusions**

Using their national desired population as a general framework, participating countries had to operationally define their population for sampling purposes. This was essentially the sampling frame – the total list of schools where students in the target population were enrolled together with the enrolment figure – from which the first stage of sampling took place. The national defined population could be a subset of the national desired population reduced, for example, by excluding certain schools because their programmes were radically different from the mainstream education system. School level exclusions were required to be kept below 5 per cent of the target population of students.

■ **Sample Design**

According to the guidelines set by Network C, a sampling plan was developed which would:

allow the production of indicators framed in terms of the percentage of students in schools with certain characteristics, and

reflect the major national programme orientation—even though the aim is not to produce estimates at the programme level.

The proposed sampling design was a single-stage sample of school sites drawn with probability proportional to enrolment size (known as PPS sampling design).

■ Sampling procedures

Countries defined their national target population, the sampling frame and the sample according to a standardised procedure. The sampling procedure was documented in a series of forms that countries were required to fill in and submit for approval to the international co-ordinator and sampling referee. Deviations had to be negotiated and approved by the international co-ordination centre.

■ Sample size

The ISUSS sample generally required a sample of 400 school sites which were selected with a probability proportional to the site's enrolment of students in upper secondary programmes. This number of school sites was selected to meet a sampling precision requirement roughly equivalent to that of other established international studies. This sample size was estimated as necessary to ensure that each country would, within 95 percent probability limits, produce estimates for population values that would be within +/- 0.1 of the standard deviation.

In many countries, however, the sample size was large compared to the population size of school sites. In these cases, the sample size requirement was reduced by the 'finite population correction' (for details see the Technical Report). The final number of sample schools was the minimum number of schools a country was expected to sample after the "finite population correction" was made. Countries could, of course, sample additional units if they wished to increase the precision of their estimates, especially within explicit strata selected for national reporting.

■ Stratification

Prior to sampling, countries could order schools or stratify them in the sampling frame of all upper secondary schools in the country. Stratification was recommended when there was some evidence that the school sites within the strata would be less variable than schools in general. Stratification under these conditions would produce low within-stratum variability and would lower the overall sampling error.

There were three conditions cited as good reasons to stratify schools in the ISUSS study:

- to produce reliable estimates for sub-national domains;
- to improve the sampling efficiency, thereby improving the reliability of national estimates; and
- to ensure that different parts of the population are appropriately represented in the sample.

Commonly used stratification variables countries included:

- Regions (states, provinces);
- Urbanisation (rural, urban);
- School size (big schools, small schools);
- School types (publicly managed institutions, privately managed institutions); and

School programme type (vocational, general).

■ Replacements

It was anticipated that a number of schools would not be able to participate. The ISUSS sampling manuals allowed for "replacement" schools to be drawn in such a way as to minimize selection bias. As the school sites were drawn into the sample (using the prepared forms), replacement school sites were simultaneously identified according to rules that limited choices and required pre-selection of schools rather than *post hoc* substitutions. In other words, should school sites be needed to replace non-participating sampled sites, there would be minimum non-response bias because substitute schools had been pre-selected.

■ Implemented samples

Countries were strongly encouraged to ensure a high response rate to maintain the level of precision of estimations required for international comparison. The required response rate for this study was set at 50 per cent as the initial response rate and 85 per cent after replacement school sites were included. Table A3.1 shows the number of schools originally sampled, the original response rates and the response rates with replacement schools. Some losses were caused because of incomplete responses (Table A3.1).

As a final column, the valid sample size is included, the number of schools that could finally be used in the analysis

■ Sample weights

A sampling weight was assigned to each school; it corresponds to the inverse of the adjusted probability of selection of the schools. Since probability of selection was based on the number of enrolled students in the target population, the smaller a school is, the larger weight it was assigned. For any school listed, the school weight was calculated as:

$$W_i = \frac{1}{H_i}$$

where H_i is simply the probability of selection adjusted for non-response rate.

Thus, the sum of the school weights multiplied by the measure of size (*MOS*) for each school in the sample approximates the aggregate measure of size for the upper secondary student population.

■ Adjusted school weights

The original sample weights calculated by the countries were designed to make the PPS-sample represent the true population of schools in each country. Typically small school would have little probability of being drawn to the sample, so a small school in the sample typically represents a large number of equally small schools in the population, resulting in a relative large sample weight. In some cases, extreme weights were encountered. To minimize the bias effect of these in the estimation of

variance, it was technically advisable to ‘trim’ the extreme weights, in other words maximize the acceptable weight. This was done on the basis of studying country level distribution of weights and never concerned more than three schools in any country. The adjusted school weights were used as the school component of the weight formula used in the estimation of frequencies, ratios, and indices.

■ Use and calculation of Weights in the analysis of results

Since the weighting model is optimized for assumptions about students rather than about schools, in order to have each case represent the number of students in the sampled schools, sample weights were combined with the number of students enrolled in the schools. The sum of these combined student weights then approximates the total number of upper secondary students in the target population.

Four student weights are used in the analyses:

- to estimate values for school level indicators, the adjusted school weights are used in combination with the upper secondary (ISCED 3) student enrolment in the school. This weight is used in weighted frequencies, ratios, and unstandardised composite indices related to school level data.
- to estimate values in indicators split by program, the adjusted school weights are used in combination with program enrolments. This weight is used in program level ratios and frequencies.
- to estimate country values on an international standard scale in school level data, a combination of country weights, schools weights and upper secondary (ISCED 3) enrolment weights is used.
- to estimate country values on an international scale in program level data, a combination of country weights, schools weights and programme enrolment weights is used.

Inflating the weight of cases (which is the number of cases observed) leads to underestimation of the standard error of estimation. To avoid this, all four student weights are rescaled to ensure correct standard error estimations.

D1: Total intended instruction time for students in primary and secondary education

■ General notes

Methodology

Instruction time in Indicator D1 refers to intended instruction time based on policy documents (e.g. curricula) in countries where a formal policy exists. In countries, where such formal policies do not exist, the number of hours was estimated from survey data. Data are based on countries’ responses to questionnaire CURR 1 of the system level annual data collection of INES Network C Survey of Teachers and the Curriculum. Data were collected on classroom sessions per year in public institutions, by subject in the modal grades of students age 7 to 15 for the referenced school year 2000/2001. Hours lost when schools were closed for festivities and celebrations, such as national

holidays, were excluded. Intended instruction time does not include non-compulsory time outside the school day, homework, individual tutoring, or private study done before or after school.

List of study areas (subjects) used in the questionnaire:

Reading, writing, and literature: reading and writing, (and literature) in the mother tongue, reading and writing (and literature) in the language of instruction, reading and writing in the tongue of the country (region) as a second language (for non natives), language studies, public speaking, literature.

Mathematics: mathematics, mathematics with statistics, geometry, algebra, etc.

Science: science, physics, physical science, chemistry, biology, human biology, environmental science, agriculture/horticulture/forestry.

Social studies: social studies, community studies, contemporary studies, economics, environmental studies, geography, history, humanities, legal studies, studies of the own country, social sciences, ethical thinking, philosophy.

Modern foreign languages: languages different from the language of instruction

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

Arts: arts, music, visual arts, practical art, drama, performance music, photography, drawing, creative handicraft, creative needlework.

Physical education: physical education, gymnastics, dance, health

Religion: religion, history of religions, religion culture, ethics

Practical and vocational skills: vocational skills (preparation for specific occupation), technics, domestic science, accountancy, business studies, career education, clothing and textiles, driving, home economics, polytechnic courses, secretarial studies, tourism and hospitality, sloyd (handicraft).

Other: Subjects that cannot be classified under one of the above headings.

■ Notes on specific countries

Coverage

Austria: For 11 to 15-year-olds the curriculum of “Realschule” is considered as typical. Modern foreign languages, for 7 and 8-year-olds: 32 classroom sessions per year are devoted to "modern foreign languages" and are integrated into other subjects (except reading and writing own language). Practical and vocational skills, for 7 to 10-year-olds: 10 classroom sessions per year are devoted to

"behaviour in traffic" and are integrated into other subjects. Modern foreign languages for 15-year-olds: in some schools "Latin" can be chosen additionally to a modern language.

Czech Republic: Optional subjects may be introduced in grade 7, but must be included in grades 8 and 9. Each optional subject is taught for at least one semester. They include foreign languages, conversation in a foreign language, computer science, technical education, technical drawing, introduction to economics and accounting, seminar from social sciences, seminar and practical work from geography, seminar and practical work from natural sciences, administrative services and home economics. This list of optional subjects may be extended by the school head in accordance with the facilities and staffing available at the school and the interests of the pupils, as long as they observe the Basic Educational Standard.

Finland: The pupils exempt from religious education study ethics. Practical and vocational skills include student counseling.

Greece: For students aged 10 and 11 years, *Other* includes the subject "Civic Education" (one hour per week). For students aged 12, 13, 14 and 15 years, *Other* includes the subjects Ancient Greek Literature (Grade 7: four hours per week, Grade 8: four hours per week, Grade 9: four hours per week, Grade 10: four hours per week), Civil Education (Grade 9: two hours per week) and Domestic Economics (Grade 7: one hour per week, Grade 8: two hours per week).

Hungary: Geography is divided between Science and Social Studies. The great difference between number of classroom sessions is due to the content-regulation. The 1978th Curriculum and National Curriculum 1995 were in force simultaneously.

Iceland: All 15 years old are following the mainstream program in compulsory education.

Ireland: The curriculum for primary schools is an integrated curriculum and envisages an integrated learning experience for children. The learning experiences organised for children should facilitate cross-curricular activity. To assist schools in planning the implementation of the curriculum, a time framework is suggested that allocates a minimum time to each of the curriculum areas. There should be four hours and ten minutes per day. A period of two hours per week of 'Discretionary Time' is allowed in order to accommodate different school needs and circumstances, and to provide for the differing aptitudes and abilities of the pupils. This is included under 'Compulsory Flexible Curriculum'.

Time allocation is based on the following weekly framework for a 36.6-week school year in primary education: English (4 hours), Irish (3.5 hours), Mathematics 3 hours), Social, Environment and Scientific Education (3 hours), Social, Personal and Health Education (0.5 hours), Physical Education (1 hour), Arts Education (3 hours), Discretionary Curriculum time (1 hour), Religious Education (2.5 hours), Assembly Time (1.6 hours), Roll Call (0.8 hours) and Small Breaks (0.8 hours).

All curriculum in primary education is obligatory for all pupils except those with special educational needs. Children are granted exemption from Religious Instruction at the request of their parents or guardians. The figures on 'Other' include Social, Personal and Health Education, Assembly Time, Roll Call and Small Breaks.

The Curriculum for the 12 to 15 year age group consists of compulsory subjects and approved subjects. The compulsory subjects are Irish, English, Mathematics and Social Studies (includes

History, Geography, and Civic, Social and Political Education). In Tables D1.2a and D1.2b, the total compulsory part of the curriculum includes English and Irish, Mathematics and Social Studies (History, Geography, and Civics, Social and Political Education). Students must also take two subjects from the following list of approved subjects: Latin, Greek, Spanish, Italian, French, German, Science, Technology, Home Economics, Music, Art/Craft/Design, Materials Technology, Metalwork, Technical Graphics, Business Studies, Typewriting and Environmental Studies. In practice, most schools offer and take three rather than two of the above list of approved subjects. Because most students take Science and at least one foreign language from the list of approved subjects, these two subjects have been entered in the data as compulsory subjects and the third subject taken by most students has been entered under non-compulsory curriculum. It is intended that Religion and Physical Education should form part of the curriculum in all schools. There are no regulations governing the precise amount of time to be spent each year on teaching the individual subjects of the curriculum.

Italy: The instruction time of 14-15 years olds are not included in the data. They attend different types of ISCED 3 programmes with different curricula and time allocation for subjects. The average time cannot represent the actual situation. The minimum number of hours per year prescribed for compulsory curriculum at national level is 1020 (948 hours for age 7). About 20% of pupils from 7 to 10 years old and about 29 % of pupils from 11 to 13 years old choose to attend longer programme lasting 1360 hours per year (1224 hours for age 7).

Japan: In elemental school 2nd grade, science and social studies are integrated in the subject "Life Study". In lower secondary education, modern foreign languages are elective but almost all students learn one language. Arts are divided into arts and music. 'Other' includes Moral Education and Special Activities.

Korea: The data reflect the education curriculum implemented in 2001. For the 7-year olds, 'Other' means interdisciplinary subjects including Science, Social studies, Arts, etc., because the national education curriculum was designed to be interdisciplinary for this age group, which makes it very hard to partition the total instruction hours by subject matters except Reading, writing and literature & Mathematics.

Netherlands: The duration of one classroom session may vary in primary education (i.e., students aged 9 to 11 years).

Norway: The subjects of the compulsory core curriculum are not completely compulsory. For pupils 7, 8, 9, 10, 11 and 12 years 38 lessons are compulsory flexible curriculum. For pupils 13, 14 and 15 years 114 lessons are compulsory flexible curriculum.

Portugal: The First cycle 25 hours compulsory curriculum per week does not specify the amount of time allocated to each area. Such areas include: Physical education, music, drama and plastic education; environment studies; Portuguese language; mathematics. In the Second cycle of basic education (pupils aged 10-12), Technology comprises visual and technology education, taught by two different teachers.

Religion: students can attend either Religion or another subject called "Personal and Social Development".

Flexible Curriculum (students aged 12-14): Pupils may attend either Foreign Modern Language II, Technology or Music. Non-compulsory curriculum includes activities such as clubs (European club,

Health club, Art club, etc.). It is not possible to estimate the amount of hours schools allocate for the development of such activities.

Scotland: In primary schools, 15 per cent of instruction time is allocated to Environmental Studies, which refers to Science, Social subjects (History, Modern Studies etc.), Technical Education and Home Economics. Fifteen per cent of instruction time is allocated to 'Expressive Arts', which refers to Music, Art, Physical education and Drama. Fifteen per cent of instruction time is allocated to Religion, which includes religious and moral education, personal and social development and health education. In lower secondary education, the grouping and proportions of subjects is the same.

Spain: In "mother tongue" both Spanish language and the language of the community are included in those communities with another official language besides the Spanish.

The category "Other" refers -for every level- to the subject matter "Tutorial"; it consists of a class where the tutor teacher can work with the group in a wide variety of aspects as those related to social skills, class climate, effective study techniques, career counselling, civics, drugs prevention, etc. according to a plan designed together with the Department of Counselling.

15 year old students in the typical programme can choose two subjects out of Natural Sciences, Plastic and Visual Arts, Music and Technology. As it is an election of the students, the time devoted to these subjects was included as flexible part.

The non-compulsory curriculum consists of a non-compulsory elective subject students are entitled to above the compulsory hours of teaching. This possibility is only offered in some Autonomous Communities.

The less demanding programme for 15 year olds consists of the same programme with the same objectives as for the general students but with some relevant adaptations of the curriculum contents and methodology and smaller groups. It is devoted to those students who have presented learning difficulties or problems to follow the normal classes. The possibilities to choose among the different subjects of the compulsory core curriculum are higher, being this decision made by the teachers. This programmes lead to the same certification as the regular programme.

Interpretation

Australia: The non-compulsory curriculum estimate should be taken as a minimum. The main change even as last year is that many States and Territories have moved to an outcomes-based system, and therefore the flexible part of the curriculum has increased, while the compulsory core subject times have decreased.

Belgium (Flemish Community): In the Flemish Community of Belgium, the government prescribes the attainment targets that must be strived for and reached by the majority of pupils in the level and the discipline they are in. The teaching methods, the curricula and the timetables are the responsibility of the organizing bodies of the schools. The curricula, however, have to include the (subject-related) attainment targets whilst timetables in secondary education must respect a basic training composed of a certain number of general subjects. This part of the study package, the common part, is equal for all pupils of the same year. Next to that, pupils can select several specific subjects, depending on line of study; this is the optional part.

The hours spent on the (compulsory/ not compulsory) subjects are free. The time allocated must be sufficient to meet curriculum requirements. So it isn't possible to deliver data concerning the curriculum.

The column “15 years in least demanding programme”

The law of 29 juni 1983 relating to compulsory education provided for the creation of part-time vocational secondary education (DBSO). In DBSO, the timetable is reduced to 15 hours weekly (social-general/technical/vocational training) periods of 50 minutes. Part-time secondary education is provided by Centres for Part-time Vocational Education (Centra voor Deeltijds Beroepsonderwijs), of which there are 46 in the Flemish Community. They are linked to secondary schools that offer technical and vocational education. Pupils can also attend courses organised by the Flemish Institute for Entrepreneurship (Vlaams Instituut voor Zelfstandig Ondernemen) (VIZO). The Flemish Minister of Economics, Employment, Home Affairs and Agriculture is responsible for this category of education. From the age of at least 15 years old on, young people may enter an apprenticeship contract with an employer-instructor. The student gets the opportunity to learn the profession in the day-to-day practice of the enterprise, four days a week. The apprentice spends the fifth day in a VIZO training centre, where the pupil obtains an additional vocational training and a general and social education course.

Czech Republic: In the Czech Republic, pupils in primary education can attend schools with three different types of curricula. In lower secondary education (up to grade 9), students can attend two types of schools with four different curricula. More than 80 per cent of students in grades 6 to 8 and approximately 75 per cent in grade 9 attend the *Zakladni skola* curriculum. Although the school principal decides on the number of lessons per subject per grade; minimum figures per subject per week for grades 6 to 9 together (i.e., for lower secondary education), number of compulsory elected lessons per week for grades 7 to 9 together (i.e., flexible part of compulsory curriculum), and the total minimum number of lessons per week (i.e., total compulsory curriculum) for each grade are specified in the *Zakladni skola*.

15 years in typical programme (grade 10): School heads, however, are allowed to deviate from the official documents. They may alter their curriculum observing given rules usually by no more than 10 % of the total number of hours. The curriculum in individual subjects may be altered by up to 30 % of the total number of teaching hours. Schools may form their own curricula that can be used after an approval by the Ministry of Education.

15 years in least demanding programme (grade 10): Vocational educational program - pupils learn 32 lessons per week (total 1228,8 hours in this year), including 18 work-based learning lessons per week.

Denmark: The minimum number of lessons for each grade is regulated by law, but not the number of lessons for each subject, which is decided at the municipal level. The breakdown of figures in the table follows the national guidelines for the distribution of lessons.

Finland: National regulations define the minimum number of hours of instruction for compulsory subjects at the lower and upper stages of comprehensive school. Within these limits schools decide themselves how to distribute them during the six years at the lower stage and three years at the upper stage. The upper three years of the comprehensive school curriculum include a considerable amount of flexibility in the form of elective subjects.

Greece: The duration of one classroom session in minutes is an estimated figure in average. For 15 year olds we have the total number of compulsory, flexible and intended instruction hours per year. The first grade of Upper Secondary Education (in the age of 15 years old) is a grade of programme orientation, which will generally include lessons with total duration of 29 instructional hours per week and optional lessons as well. From the optional lessons the student is obliged to choose one two-hour duration lesson per week. That is, the students of the first grade of Upper Secondary Education will attend compulsory lessons which will have 31 hours duration per week. Additionally, every student, if s/he wants, can attend one more two-hour lesson per week of his choice (Ministerial Decision Γ2/5410/27-12-2000).

Hungary: Data at the 1st, 2nd, 3rd, and 7th and 8th grades refer to the average values of the instruction time according to the National Curriculum 1995.

Korea: In Korea, year 2001 was a transition period from the 6th national education curriculum to the 7th. More specifically, the 7th national education curriculum was implemented for Grade 2, 3, 4 and the 6th curriculum for Grade 5, 6, 8, 9 and 10.

New Zealand: In New Zealand all decisions about the allocation of time for curriculum (national or local curriculum) is decided at the level of the individual school, and this information is not collected centrally.

The national curriculum is specified through seven learning area statements. State and state integrated schools are required to provide programmes of learning based on the statements of all students in years 1-10. However how the schools do this is not prescribed either in terms of time allocations or programme/timetable arrangements.

In Year 11 (typically aged 15), 12 & 13 there are no compulsory curriculum. Generally students will set their own policies concerning compulsory subjects. These are typically English (or te Reo Maori) and Mathematics and in many cases Science and Physical Education.

Scotland: The organisation of the school day - such as the number of periods of instruction time and the length of those periods - is at the discretion of each school. For example, a school day which is made up of 5 periods of 60 minutes duration would have 25 hours instruction time per week, while a school day comprising 8 periods of 40 minutes per day would have 26 hours 40 minutes instruction time per week. In the absence of complete data or guidelines on the length of a school day, and the number of hours allocated to each subject area, the total number of hours has been estimated.

The curriculum in Scotland is not prescribed by statute and the responsibility for the management and delivery of the curriculum belongs to education authorities and head teachers. However, guidance is provided by the Scottish Executive Education Department and Learning and Teaching Scotland, which seek to ensure that the curriculum secures breadth, balance, continuity and progression for all pupils.

Slovak Republic: The management of the institution may decide how the compulsory flexible lessons will be used. It can be both strengthening of the teaching of compulsory subjects and transfer of non-compulsory subjects to compulsory core curriculum.

Spain: The regulations about the national core curriculum have not changed, however some Autonomous Communities have introduced some changes in the percentage of the curriculum they are responsible for. Besides, half of the Autonomous Communities got the power in education in the year

2000 and they regulated their own curriculum. This explains the changes with respect to last year's version.

The low number of hours of foreign languages of 7 year-old students is due to the fact that only a few Communities had incorporated this subject at this age in 2000 and the figure is the result of a weighted mean.

Turkey: Students at 10th grade in general secondary education start to take courses according to their choice of specified subject training programmes. The number of classroom sessions is calculated by taking average of these specified subject programmes (social weighted subject and science weighted subject). Therefore, the figure for 10th grade is higher than the figure for 6th grade. It is not different to spend time in school for students at 9th and 10th grades in terms of total compulsory curriculum

Methodology

Australia: The data are a weighted average of the data of all States and Territories. Methodology varies, depending on the State. Most Australian States and Territories are now focussed on outcomes, not inputs, so these data are indicative only. Session times usually differ between States and Territories, and between individual schools within States and Territories. Curriculum information is therefore given in hours, as it is not possible to combine and weight States and Territories without standardising the session duration between them.

Austria: One year is calculated as 37 weeks of instruction.

Czech Republic: Intended instruction time was computed by weighting figures for each curriculum by student enrolments, and then multiplying the minimum number of lessons per grade by the weight of the subject area in total lower secondary curriculum. Extremely small values for some subject areas appear when these subjects are included only in curricula with few enrolments.

England: Data are based on an annual sample survey of schools. The number of hours for the 'least demanding' programme at age 15 in Table D1.1 is an artefact and is based on the average hours in the least demanding options in the curriculum. In practice, no one would literally study for just that number of hours.

Finland: All the figures are estimates based on theoretical average.

Germany: Data are based on weighted means.

Greece: The number of lessons is based on 40 teaching weeks in primary education and 38 teaching weeks in secondary education (ISCED 2 and 3).

Iceland: Number of lessons per week x 35 weeks.

Ireland: In primary education, the duration of one lesson may vary. The average lesson unit is of 30 minutes duration. In lower secondary education, the allocation of instruction time represents an estimation of what is the general practice in schools. The yearly figures are calculated with reference to the Rules and Programme for Secondary Schools and on an estimate of their application in a typical school of 700/800 students. The flexible compulsory part of the curriculum is calculated by assuming

that all schools offer two additional subjects from the list of approved subjects and allocate four teaching periods of 40 minutes to each of these subjects.

Portugal: The number of classroom sessions per year was calculated on a basis of 35 weeks of intended instruction time for students aged 7-14, and 32 weeks for students aged 15.

Spain: All figures represent averages of the number of hours per year devoted to each subject in each Autonomous Community in 2000-2001, weighted by the number of students in each Community for each level of education to which the grade refers (data on the number of students by grade are not available). Time devoted to breaks, festivities and holidays has been deducted.

Sweden: Intended instruction time per year for each school subject is not regulated nationally and the duration of one classroom session may vary. It is decided locally. Thus, intended instruction time for students aged 7 to 15 has been estimated by dividing the total number of hours per required school subject over the nine years of compulsory education. This may mean that the intended instruction time for certain school subjects may be overestimated (e.g. Modern Foreign Languages in the lower grades) and underestimated in other grades and subjects (e.g. Science in the higher grades).

Sources and reference period

Australia: State and Territory Education Departments, relying on Education Acts; Curriculum Statistics; informal discussions and Policies and Guidelines. *School year:* 2000/2001.

Austria: Law or policy document based on law ("Lehrplan"). *School year:* 2000/2001.

Belgium (Flemish Community): Decrees and resolutions. *School year:* 2000-2001.

Belgium (French Community): Décret de la Communauté française du 13 juillet 1998, Directives pour l'année scolaire 1999-2000 du Ministre de l'enseignement secondaire. *School year:* 2000-2001.

Czech Republic: Curriculum specification documents, National statistics (data on enrolments). *School year:* 2000-2001.

Denmark: Act on the *folkeskole*.

England: School Sampling Project, Qualifications and Curriculum Agency (QCA). *School year:* 2000-2001.

Finland: Basic Education Act (1998/628); Decree (1998/852); Framework Curriculum for the Comprehensive school (1994); National Board of Education. *School year:* 2000-2001.

France: Law and policy documents based on law. *School year:* 2000-2001.

Germany: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany. *School year:* 2000-2001.

Greece: Law and policy documents (data based on formal arrangements). *School year:* 2000-2001.

Hungary: National Curriculum 1978., Public Education Act 1993., The Amendment of the Public Education Act 1996. *School year:* 2000-2001.

Iceland: Act on Compulsory Education no. 66/1995 and Regulation on Enforcement of National Curriculum in Compulsory Schools no. 437/1996. *School year:* 2000-2001

Ireland: Department of Education Circulars. *School year:* 20001.

Italy: Law and policy documents based on law. For primary education: D.P.R. 104/1985 "Programmi didattici per la scuola primaria" and L. 148/1990 "Riforma dell'ordinamento scuola elementare". *School year:* 2000-2001.

Japan: Shogakko-Gakushu-Shido-Yoryo (The Course of Study in Elementary Schools 1989), and Chugakko-Gakushu-Shido-Yoryo (The Course of Study in Lower Secondary Schools 1989), Ministry of Education, Science, Sports and Culture. *School year:* 2000-2001.

Korea: Grade2, 3, 4: The 7th Primary School Curriculum (1997), by the Ministry of Education. Grade5, 6: The 6th Primary School Curriculum (1995), by the Ministry of Education. Grade 7: The 7th Middle School Curriculum (1997), by the Ministry of Education. Grade 8, 9: The 6th Middle School Curriculum (1992), by the Ministry of Education. Grade10: The 6th High School Curriculum (1992), by the Ministry of Education. *School year:* 2001.

Mexico: Law and policy documents based on law. Secretaría de Educación Pública, Normas de inscripción, reinscripción, regularización y certificación para escuelas primarias oficiales y particulares incorporadas al sistema educativo nacional periodo escolar 2000-20001, Agosto 2000, México. Secretaría de Educación Pública, Normas de inscripción, reinscripción, regularización y certificación para escuelas secundarias oficiales y particulares incorporadas al sistema educativo nacional periodo escolar 2000-20001, Agosto 2000, México. *School year:* 2000-2001.

Netherlands: Primary education is based on empirical data (PRIMA cohort) and lower secondary education is based on law (WVO). *School year:* 2000-2001.

New Zealand: *School year:* 2001

Norway: National Curriculum *School year:* 2000.

Portugal: Law/Policy document: i) Despacho Conjunto nº 25/SERE/SEAM/88, Despacho Normativo nº 24/2000, Despacho nº 12 110/2000 - Organization of the School Year; ii) Decreto-Lei nº 286/89 - Basic and Secondary National Curriculum. *School year:* 2000-2001.

Scotland: The structure and balance of the Curriculum 5-14. *School year:* 2000-2001.

Slovak Republic: Laws and other regulations. *School year:* 2000-2001.

Spain: Official regulations of the Autonomous Communities regarding instruction time in primary and lower secondary education (published in the respective official bulletins). The national official Orders of reference establishing the national core curriculum are: ORDER of April 27th, 1992, giving instructions on the implementation of Primary Education; and ORDER of February 28th, 1996, giving

instructions for the implementation of Lower Secondary Education. The publication date is different in each Autonomous Community. *School year: 2000-2001.*

Sweden: Law or policy document based on law (data on formal arrangements). *School year: 2001.*

Turkey: Regulations of Primary Education Institutions, 1992; Primary School Lesson Table weekly, 1998; General High Schools Lesson Tables weekly, 1998; Instructions and Regulations of Secondary Education, 2001 Institutions. *School year: 2000-2001.*

INDICATOR D2: Average class size and ratio of students to teaching staff

■ **Methodology**

Class sizes have been calculated by dividing the number of students enrolled by the number of classes. In order to ensure comparability among countries, special needs programmes have been excluded. Data include only regular programmes at primary and lower secondary levels of education and exclude teaching in sub-groups outside the regular classroom setting.

The ratio of students to teaching staff is calculated by dividing student numbers in full-time equivalents by the number of teaching staff in full-time equivalents.

Instructional personnel comprise:

Teaching staff refers to professional personnel directly involved in teaching students. The classification includes classroom teachers; special education teachers; and other teachers who work with a whole class of students in a classroom, in small groups in a resource room, or in one-to-one teaching situations inside or outside a regular classroom. Teaching staff also includes department chairpersons whose duties include some teaching, but excludes non-professional personnel who support teachers in providing instruction to students, such as teachers' aides and other paraprofessional personnel.

Teachers' aides and teaching/research assistants include non-professional personnel or students who support teachers in providing instruction to students. This type of personnel is not included in tables D2.1 and D2.2.

Non-instructional personnel comprises four categories:

Professional support for students includes professional staff who provide services to students that support their learning. In many cases, these staff originally qualified as teachers but then moved into other professional positions within the education system. This category also includes all personnel employed in education systems who provide health and social support services to students, such as guidance counsellors, librarians, doctors, dentists, nurses, psychiatrists and psychologists and other staff with similar responsibilities.

School and higher level management includes professional personnel who are responsible for school management and administration and personnel whose primary responsibility is the quality control and management of higher levels of the education system. This category covers principals, assistant principals, headmasters, assistant headmasters, superintendents of

schools, associate and assistant superintendents, commissioners of education and other management staff with similar responsibilities.

School and higher level administrative personnel includes all personnel who support the administration and management of schools and of higher levels of the education system. The category includes: receptionists, secretaries, typists and word processing staff, book-keepers and clerks, analysts, computer programmers, network administrators, and others with similar functions and responsibilities.

Maintenance and operations personnel includes personnel who support the maintenance and operation of schools, the transportation of students to and from school, school security and catering. This category includes the following types of personnel: masons, carpenters, electricians, maintenance repairers, painters and paperhangers, plasterers, plumbers and vehicle mechanics. It also includes bus drivers and other vehicle operators, construction workers, gardeners and ground staff, bus monitors and crossing guards, cooks, custodians, food servers and others with similar functions.

■ Notes on specific countries

Coverage

■ Table D2.2.

Belgium: In the case of personnel working in “hogescholenonderwijs” it is not possible to make a distinction between type A and type B programmes. However, all “hogescholenonderwijs” personnel are included in the total for higher education.

Finland: Upper secondary education *includes* teachers in all vocational and technical programmes. Teachers at post-secondary non-tertiary and tertiary-type B levels (ISCED 4 and 5B), and teachers in vocational programmes at tertiary-type A level (ISCED 5A), are included in upper secondary education.

Germany: As data on the work-based element of combined school and work-based programmes are not available, the number of students in combined school and work-based programmes is converted using a factor of 0.4 in the calculation of the ratio of students to teaching staff.

Data on advanced research programmes (ISCED 6) are not included in Table D2.2.

Ireland: Programmes at lower secondary, upper secondary and post-secondary non-tertiary levels are generally provided in the same institutions (i.e., secondary schools) and are taught by personnel who teach at more than one level and in many cases at all three levels. It is therefore not feasible to provide a breakdown for teachers by level of education. Thus, the distribution of teachers by age group in lower secondary education *includes* teachers in upper secondary and post-secondary non-tertiary education.

Italy: Teaching staff *excludes* teachers working in regional vocational education (Formazione professionale regionale) and those in tertiary type-B private institutions.

United Kingdom: Students to teaching staff ratios at upper secondary level only refer to upper secondary general education. Upper secondary vocational (further education) student data are based on a “whole-year count” (of students enrolled at any point in the year). Students enrolled for only part of the year, on “short courses” lasting a few weeks or months, are included in the further education student count. Including these students would distort calculations of students to teaching staff ratios at secondary level

INDICATOR D3: Teachers’ and students’ use of information and communications technologies in upper secondary education

■ **General note**

Data for this indicator are drawn from the OECD International Survey of Upper Secondary Education implemented in 15 countries during the school year 2001/2002.

■ **Definitions**

Computer includes computers capable of supporting other multimedia equipment such as a CDROM or a sound card and which are used for educational purposes in the school. Computers used only for recreation purposes are excluded.

Information and communication technology (ICT) represents the set of activities and technologies that involve the electronic display, processing and storage of information and communication technology. Global industry, international media and academics increasingly now use ICT to describe this set. ICT is characterized by unprecedented global flows in information, products, people, capital and ideas.

Educational purpose means the use of computers in planning, organising and evaluating student learning, and the use of computers as a teaching and learning tool by, for example, retrieving demonstration material from the Internet, editing information, preparing documentation material, preparing tasks and tests, correcting student work, etc.

Most serious obstacle to reaching a school’s goals related to information and communication technology is the obstacle that principals ranked as first from the three most serious obstacles they were asked about in the ISUSS questionnaire.

Data for Chart D3.5 were calculated from the mean ‘difficulty’ score of the various obstacles in each country. In the questionnaire, principals were asked to name the three most serious problems they see as obstacles to reaching goals of development of information and communication technology in their school. These responses were weighted by the order of difficulty, i.e. they were assigned a value of 3, 2, and 1 to the obstacles named as the most serious obstacles, the second more serious obstacle and the third most serious obstacle, respectively. These school level difficulty scores for each item were aggregated on the country level weighted by the enrolment of upper secondary students. The obstacles having the largest, second largest and third largest aggregate value in the country are shown in Table D3.5.

INDICATOR D4: Teacher training and professional development of teachers

■ General notes

Data on initial teacher training are from the system level data collection of Network C on Teachers and the Curriculum, data sheet

CURR 6: Pre-service training and licensing requirements for new teachers in public institutions.

Data on professional development are drawn from the OECD International Survey of Upper Secondary Education implemented in 15 countries during the school year 2001/2002.

■ Notes on specific countries

Coverage

Australia: *Percentage of the current stock of teachers at that level, who have followed the given training:* The estimated percentage of stock is less than 100% in part perhaps because data are missing for some States. *Duration of pre-service teacher training:* In some cases training duration requirements are practised, but have not yet been ratified in legislation.

Belgium (Flemish Community): *Estimated percentage of the current stock of the teachers at the ISCED level who have followed each training programme:* The data refer to the number of teachers on January; 15 2001. The data refer only to regular education (teachers working in special education have not been taken into account). The data included in ISCED 2, ISCED 3 general and ISCED 3 vocational subjects refer to the total number of teachers working in all secondary education (i.e. ISCED2, ISCED 3 and ISCED4). The division for the different ISCED levels and the division by type of education (general and vocational subjects) cannot be made without double-counting.

Interpretation

Austria: *Upper secondary education, vocational subjects:* Due to the high number of different subjects taught at part time vocational schools and at secondary technical and vocational schools and colleges, there are also different forms of pre-service training regarding the length of the study, the pedagogical studies and the required number of vocational experience. The figures refer to two cases: Teachers of business administration at technical and vocational schools, respectively colleges. Especially teachers of vocational practice in laboratories and workshops have partly a totally different education.

Belgium (Flemish Community)

Entry requirements in years of education: Students can enter the 'GPB, certificate of teaching competence' on 3 bases: the student has successfully completed lower secondary education and has professional experience in the courses he wants to teach; the student has successfully completed upper secondary education (no additional entrance requirements) or the student has successfully completed higher education (at a 'hogeschool' or at a university; no additional requirements).

Parts of the study consecutively or concurrently: The ‘GPB-opleiding’ comprises only pedagogical and practical training. Subject matter courses are not integrated in this study.

Course structure and duration of pre-service teacher training: The ‘hogescholen’ and universities decide autonomously on the training programme and attention they give to the different training subjects.

Total duration of teacher training: The ‘GPB-opleiding’ is a modular training,, which means that the student can decide on the duration of his study and he can spread his studies more or less as he wants to do. The minimum duration of the study is 2 years; the maximum duration of the study 4 years.

Length in years of eventual mandatory work experience, or further training to obtain licence and additional licence requirement: In the Flemish Community of Belgium there are no additional requirements to enter the teaching profession.

Year at which this type of teacher training became a requirement for new entrants in the teaching profession for public education: The data given refer to the last changes in the organisation of the teacher education. For higher education this date (1997-1998) refers to the reform of higher education (including the teachers training). For the ‘GPB- certificate of teaching competence’ the current legislation was introduced in the school year 1988-1989.

Educational programme ISCED 2 vocational subjects: The training course for teachers ‘Initiële lerarenopleiding secundair onderwijs - groep 1’ (initial teacher training secondary education - group 1) contains 3 weightings. Each training unit contains 1 or 2 weightings. Each student can compose his own training (= total 3 weightings) containing only general courses, only technical courses or a combination of both courses. Depending on this choice the student can teach general courses, technical courses or both.

Vocational teachers. The training for the “vocational teacher” consists of courses in Continuing Adult Education or of certain courses in the training programme for the “qualified lower secondary school teacher – group 1”. There are no specific entrance requirements for the courses in Continuing Adult Education. Depending on the certificates and work experience, which have been acquired, candidates are exempted from some modules of the programme. In the Continuing Adult Education, people are trained as teachers to teach vocational courses or certain technical courses for which there is no full-time training available. The courses focus both on theory and on practice, and are given in weekends or in the evenings. Depending on the certificates or degrees which candidates have, the course takes at least three to five part-time semesters. After following this course in Education for Social Promotion, the certificate they gain is the Certificate of Education (GPB).

Alternative licensing of teachers. In order to increase the availability of staff, the Certificate of Education (GPB), in combination with a basic degree, is also a required qualification to teach in upper secondary education. For people with a university degree, this training is an alternative for the academic initial teacher training (decision of the Government of Flanders of 14 June 1989 on qualifications, salary scales, the performance system and the salary regulations in secondary education).

Belgium (French Community): The data given refer to the common way of formation of teachers.

Czech Republic: The typical duration of assisted teacher practice is different for each training program and is defined in weeks per year.

Finland: Each local authority may decide whether to provide pre-school education at school, in a day-care or family day-care. Half of the pre-primary teachers have teacher qualifications (five years at ISCED 5A) and half kindergarten teacher qualifications (three years at ISCED 5A).

The subject teacher education (for levels ISCED 2 and 3) at universities can be incorporated into a Master's degree, but the pedagogical studies for teachers may also be completed separately after completion of a degree.

France: *Number of years of education required for entry into a program potentially leading to a teacher qualification:* The cumulative number of years required for entry into a program and the duration of the teacher training itself are based on an attainment level of ISCED 3.

Lower secondary education and upper secondary general education: Candidates for the CAPES, CAPET, CAPEPS are required to be holders of at least a first degree or a diploma with an equivalent level included in the list defined by decree, such as a diploma awarded for the successful completion of at least three years of post-secondary education issued by an EU member state other than France, or a diploma issued outside the EU after the successful completion of at least four years of post-secondary education. For the CAPEPS, the required diplomas must be awarded after the successful completion of post-secondary education in physical education and sports (decrees dated 7 July 1992 published in the Journal Officiel of 21/7/92). Candidates for the CAPLP2 examination are required to be holders of a diploma awarded after the successful completion of three years of post-secondary education (decree no. 92-1189 of 6 November 1992). Candidates for the 'agrégation' must be holders of either a master's degree maîtrise or one of the French diplomas on the list of required qualifications or diplomas, or a diploma awarded after the successful completion of at least four years of post-secondary education issued by another European Union country (decree of 21 July 1993, Journal Officiel of 21/08/93). For the future qualified (certifiés) teachers (CAPES teachers, physical education and sports teachers, grade 2 vocational Lycée teachers), the course includes - out of the two years spent in the IUFM - at least 300 hours of practical training, 400 to 750 hours of subject-matter training and 300 to 450 hours of general training.

The Agrégation candidates generally prepare the competitive examination at the university, or in a training school for higher education teachers (Ecoles normales supérieures). Candidates who pass the competitive examination are required to take a one-year course at the IUFM.

Germany: Pre-primary education is not part of the public school system. For ISCED 1, option 2, a teacher career is possible for both primary and secondary level. For ISCED 2, option 1, a teacher career is possible for all school types, including particular school types. For ISCED 2, option 2, a teacher career is possible for both primary and secondary level. For ISCED 1-3 subject-related didactics and courses in education science are incorporated in subject specific studies.

Greece: *Pedagogical and practical training:* Because certain departments of universities (e.g. Departments of Mathematics, Physics, Chemistry, Philosophy, Literature, etc) include pedagogical lessons in their curriculum, the graduates of these departments are excluded from the obligation to attend pedagogical training programmes for one additional year when they want to be appointed as teachers. On the other hand, for the departments of universities which have not included pedagogical lessons in their curriculum, the graduates of these departments (e.g. teachers for Information

Technology, Mechanics, etc) are obliged to attend pedagogical training programmes in "Schools for teachers of Vocational and Technical Education" for one additional year (Reforming Law 2834/2000 and 2909/2001 art.21).

Ireland: Since 1975 teaching is an all-graduate profession in Ireland. The great majority of primary teachers qualify via a Bachelor of Education degree, obtained on the concurrent model. Both content and teaching methodology of teaching are covered for the subjects on the curriculum. In addition students take a small number of subjects for in-depth study. A small number of Arts and Science graduates are admitted for professional training following a degree. The professional course extends over 1.5 years.

Teaching practice is included during each year for a defined period. An extended period is taken at the end of the second year near the trainee's home. Success in teaching practice is certified by the College towards the end of the third year.

Trainees for secondary teaching (ISCED2), after graduation with a primary degree, follow a one-year course in a University, leading to a Higher Diploma in Education. This course includes Theories of Education, General and specific methods of teaching and teaching practice. In many instances the trainees are attached to a particular school for the first half of the day and lectures are arranged for the afternoon.

The Ministry of Education sets a quota for entry to primary teacher training which aims to balance supply and demand. The Universities administer their own quota systems, setting due store on the needs of the various curriculum areas.

Training for teachers of Arts is provided in a number of Schools of Art, following a 4-year concurrent model. They are trained alongside students studying Art for other avocations. Those destined for teaching follow a special module geared to teaching principles and methodology. Trainees for teaching Technology (Wood and Metal) and Physical Education follow a similar model at one University. Trainee teachers for Home Economics follow a concurrent course extending over four years.

Teachers for pre-primary and primary education follow the same type of course and are interchangeable.

Teachers at all levels are appointed on probation for one year initially, after which they become eligible for permanent employment.

Iceland: There are two teachers training models in Iceland, the concurrent model and the consecutive model. The concurrent model is a three-year general course (90 credits) leading to a Bachelor of Education degree. It is designed for teacher trainees who intend to teach at the compulsory level (primary and lower secondary level). This course is offered by two institutions: Iceland University of Education and the University of Akureyri. At the University of Iceland there is also a one year (consecutive) programme (30 credits) that qualifies teacher trainees who have as a minimum a B.A or a B.Sc. degree. The programme centres around courses on general educational theory, educational psychology, the educational theory of individual subjects, the sociology of education, developmental psychology, as well as studies relating to upper secondary schools, electives and practical training. The programme qualifies the students to teach both at the compulsory and the upper secondary levels. Their preparation as teacher trainees, however, is

geared to the last three years of compulsory school (lower secondary education) and to upper secondary school.

Japan: *Duration of pre-service teacher training:* The Educational Personnel Law and other relevant regulations only prescribe the number of credits for teaching and specialized subjects required for obtaining the teacher certificates. The number of years shows the years, which are generally considered required for completing the program of the corresponding teacher certificates. The typical duration of teacher practice is 3 weeks, except for the first class upper secondary teacher certificate, where it is 2 weeks.

National schoolteachers are national public officials, and appointed by the Ministry of Education, Culture, Sports, Science and Technology. Public School teachers are local, prefecture or municipal public officials and are appointed by the respective local, prefecture or municipal boards of education in which school located. National schoolteachers are employed through not only competition but also according to selective procedure (selection being based on teacher competence in aptitude and other necessary qualities). Appointed examinations for local public school teachers are generally composed of written tests in both teaching subjects and specialized and general subjects, an interview, practical exercise and so on.

Mexico: *Course structure:* All studies are in fact a mixture of the concurrent and consecutive model, with an accent on concurrent. In the first year of studies emphasis is on observation and in second and third years students start having 1 hour of practice per week. All programs end with one year of assisted teaching practice. The last year of the studies is exclusively for teaching practice.

Additional licensing requirements for all programs (except the training for Comunitary Instructor): Some states carry out a selection process through a competitive and psychometric examination.

Netherlands: Only for the “Eerstegraads lerarenopleiding voortgezet onderwijs” (University, ULO), the teacher qualification level regards as university study. For all other teaching training programs the teacher qualification level regards a HBO study.

Upper secondary general education: Candidates for teacher training courses must possess at least a HAVO or MBO certificate. Additional requirements regarding the subjects studied apply for some grade two courses. Applicants for grade one HBO training courses must have a grade two qualification (= ISCED 2 training program) in the subject to be studied. Applicants aged 21 or over, who do not possess the required qualifications may also be admitted after passing a viva voce entrance examination.

Postgraduate university teacher training courses are open to all those who have obtained their first degree, provided that their degree course included a two-month introduction to teaching (although it may also be possible to sit an extra examination instead). The subject of their first degree must also provide an adequate preparation for the subject they wish to teach.

Portugal: In the concurrent model of pre-primary and primary education, teacher trainees assist teaching practice for a period inferior to one-year time and the pedagogical studies last about 50 per cent of the time allocated to theoretical training.

Scotland: Teachers at pre-primary school undertake exactly the same training as those at primary school. Similarly, teachers at lower and upper secondary level undertake the same courses.

Course structure and duration: Post Graduate Certificate of Education (PGCE) may follow either a three-year Ordinary Degree, or a 4 year Honours Degree. The one-year PGCE consists of a minimum 18 weeks teaching practice and 18 weeks pedagogical study. The four-year Bachelor of Education (BEd.) contains a minimum of 30 weeks teaching practice. The split between subject specific and pedagogical studies is not defined.

The combined degree may either be an ordinary degree (3.5 years) or an Honours degree (4.5 years). It contains a minimum of 30 weeks teaching practice. The split between subject specific and pedagogical studies is not defined.

Mandatory work and additional licensing requirements: Each newly qualified teacher requires to pass a probation period to become fully qualified. This takes as long as is necessary to prove the standards have been met, with a minimum of one year. There is no competitive examination.

Year at which training became a requirement: Guidelines for courses for initial teacher education in Scotland were set out in 1993. However all three routes had been available prior to this date.

Spain: The probation period in Spain is, in fact, part of the requisites to become a civil servant teacher in public education. It takes place immediately after teachers have passed the competitive examinations. It consist of 1 school year when the new teacher has to teach in a school taking charge of real groups of pupils and has to prove his/her professional attitudes in the practice.

The initial training requisites for teachers in Primary, Lower and Upper Secondary Education are, in fact, the same since 1970, but the new law in 1990 changed the structure of the education system. This affected basically to the training requisites of vocational training teachers, but also to the type of teachers teaching in lower secondary education and to the specialization of pre-primary and primary teachers.

Sweden: On 1 July 2001 a new, integrated teaching degree was established, replacing eight of the previous 11 teaching degrees. The new structure means that all future teachers will have a common basic competence, combined with a chosen specialisation in particular subjects/subject areas and/or age groups. The new teaching degree comprises a program consisting of a minimum of 120 credits (equals three years of full time studies) and a maximum of 220 credits, depending on the chosen area and education level.

The teacher-training programme will consist of three well-integrated education areas: a general education area, common for all students, covering key topics such as learning, special pedagogy, socialisation, fundamental values as well as interdisciplinary subject studies (at least 60 credits); an education area covering the subject/subjects the future teacher intends to teach (at least 40 credits) and an education area with a specialisation, complementing earlier acquired knowledge (at least 20 credits). Some phases of the education involve practical activities. At least 10 credits (i.e. study weeks) in the general education area and at least 10 credits per orientation should be located at a school. Within the teacher-training programme there is an alternative route, where the student takes at least 60 credits of subject studies for teaching in a core or programme specific subject and then takes 60 credits in the general education area (see above). There is also a possibility to take at least 60 credits in vocational higher education studies. Substantial vocational experience is also required for this latter group. All data on duration states the minimum requirements.

In Sweden all university courses have a credit value determined by the workload for the student. This is essentially the same as the ECTS (European Community Course Credit Transfer System), but in ECTS one full academic year of studies is worth 60 credits, and in Sweden the same amount of study is worth 40 credit points (Swedish: "poäng"). Thus to get ECTS credits from points in syllabuses from Chalmers University of Technology, multiply the points by 1.5

Turkey: Except Vocational and Technical Secondary Education Teachers Training Programmes, mandatory work experience concerns one-year probation period.

The Subject specified teacher training programmes concerning ISCED 3 general, option 1 concern the courses Foreign Language, Arts, Physical education, Computer Training and Technology. The Subject specified teacher training programmes concerning ISCED 3 general, option 2 and 3 concern the courses Science, Mathematics, Social science

United States: The pre-service training is for teachers of kindergarten classes in public elementary schools. It does not include pre-service training of kindergarten teachers in private elementary schools, pre-schools or nursery schools.

Course structure of the concurrent model: The duration of assisted teaching practice is one year and generally occurs during the last year of a 4-year program of studies. The figures for subject specific studies and pedagogical studies vary from institution to institution. Besides that there may be overlap in the three areas. For some parts of the program credits may be given e.g. for both subject specific studies and pedagogical studies. Therefore the figures for the three areas are estimates and the sum is more than the total of 4 years.

For ISCED 0 and 1, state-approved programs of teacher education in colleges and universities differ in their requirements for subject area studies. A typical duration cannot therefore be determined for this level of education.

Mandatory work experience: Individuals who successfully complete a 4-year program of teacher education will generally obtain either a state or local teaching license. However, they usually have a probationary period of up to about 3 years before they obtain a permanent, tenured position.

Methodology

Australia: The data are a weighted average of the data of all States and Territories as far as possible. The duration data from some States were ignored, because they were incorrect. Some State data was difficult to interpret. When data were not available for a State or Territory, where possible they have been assumed to equal States and Territories for which data are available.

Czech Republic: The number of weeks has been converted to number of years, rounded to 1 decimal and presuming 38 teaching weeks per year.

Finland: The figures for the duration of studies are estimates calculated by converting the typical amount of credits into years.

Korea: Literature Review (on Elementary and Secondary Education Act) and interview with teacher-training specialist.

Slovak Republic: Data on percentages of teachers with various qualifications are estimates based on national research.

Spain: Data with regard to 'percentage of current stock of teachers who have followed the given training' are based on rough estimates.

Turkey: Information based on regulation and research publications.

United States: Sample survey of school districts, schools and teachers.

Sources, reference year

Australia: Education Acts, Recruitment Managers, and Policy documents. *Reference year:* 2001.

Austria: Law and policy documents. *Reference year:* 2001.

Belgium (Flemish Community): *Reference date:* January 15, 2001.

Belgium (French Community): *Reference period:* 2000-2001.

Czech Republic: *Source:* Government decree. *Reference period:* 2000-2001.

Denmark: National laws. *Reference year:* 2001.

England: National regulations. *Reference period:* 2000-2001.

Finland: Decree on Degrees in Education and Teacher Education (576/1995), Decree on the Qualifications of Educational Staff (986/1998). *Reference period:* 2000-2001.

Greece: National Legislation. *Reference period:* 2000-2001.

Hungary: 111./1997. Government Decree, 158./1994. Government Decree. *Reference date:* 1 January 2001. The estimated percentages of the current stock of teachers refer to the 2001/02 school year.

Iceland: Information from websites of teacher institutions. *Reference period:* 2000-2001.

Ireland: Department circulars. *Reference year:* 2002.

Italy: *Reference period:* 2000-2001.

Japan: The Educational Personnel Law and other relevant regulations. *Reference period:* 2000-2001.

Korea: Elementary and Secondary Education Act. *Reference year:* 2002.

Norway: Law and policy documents based on law. *Reference year:* 2000.

Portugal: Law/Policy document: i) Decreto-Lei 139-A/90 - Teachers' Career Statute; ii) Decreto-Lei n° 287/88, Decreto-Lei n° 344/89 - Initial Training of Teachers. *Reference period:* 2000-2001.

Scotland: Guidelines for Courses for Initial Teacher Education in Scotland (1993). *Reference period:* 2000-2001.

Slovak Republic: Laws and other regulations, study programmes. *Reference date:* April 25, 2001.

Spain: Superior Institute of Teachers Training (Ministry of Education, Culture and Sport). *Reference period:* 2000-2001.

Sweden: Government decree. *Reference year:* 2001.

Turkey: Regulation related to teachers' appointment and reallocation in educational institutions dependent MNE, 2000; National Education At The Beginning of 2002, MNE: 2001; Re-structuring of Teacher Training Programs of Faculties of Education, Higher Education Council: 1998. *Reference period:* School year 2000-2001.

United States: Schools and Staffing Survey 2000, *Reference period:* 1999-2000.

INDICATOR D5: Salaries of teachers in public primary and secondary schools

■ General notes

The indicator draws on data from the system level data collection of Network C on Teachers and the Curriculum datasheets

CURR 3: Annual statutory teacher compensation by level of education, programme orientation and number of years and level of teaching experience

CURR 4: Years to grow from minimum to maximum salary, by level of education and programme

CURR 5: Criteria for additional bonuses in public institutions

■ Notes on specific countries

■ Table D5.1

Coverage and methodology

Australia: The data from each State and Territory have been weighted according to the number of teachers at that level (as a proportion of all teachers in Australia), and then summed to obtain a figure for Australia. Data are based on level at which teachers commence, not on level at which they would theoretically commence if pre-service requirements were eliminated.

Teacher compensation: In Victoria's return, the cells for pre-primary education were blank, but in other States and Territories (generally) data for pre-primary education were the same as for primary education. Therefore, Victoria's pre-school teachers were presumed to have the same salary and bonuses as Victoria's primary school teachers. It is assumed that the distribution by State of pre-primary teachers is the same as for primary education (This assumption would only be incorrect if the proportion of pre-school teachers between States and Territories differed significantly from the proportion - and hence weighting - of primary teachers between the States and Territories.).

Years to grow from minimum to maximum salary: New South Wales, Qld, Western Australia, South Australia, Tasmania, Northern Territory and Australian Capital Territory had data on pre-primary public institutions, and in all cases the years (to grow from minimum to maximum salary) were the same as primary education public institutions. Therefore, the figure for pre-primary public institutions is assumed to be equal to the corresponding number for primary education. (This assumption would only be incorrect if the proportion of pre-school teachers between States and Territories differed significantly from the proportion - and hence weighting - of primary teachers between the States and Territories.)

Austria: At the beginning of their service Austrian teachers are allocated to remuneration or pay groups on the basis of their level of qualifications. As obviously "minimum level of training" refers to typical qualifications, the distribution of all pay groups within an ISCED level was examined and a weighted mean was determined. For teachers with maximum qualifications only the highest possible pay group was considered.

Belgium (Flemish community): The Flemish Community decided not to include the "haard- en standplaatsvergoeding" ("home and local allowance") in the gross salaries. These allowances are awarded under certain conditions if the index-linked gross salary does not exceed a fixed sum. Only the index-linked gross salaries of teachers in pre-primary, primary and lower secondary education at the beginning of their teaching careers are below the fixed sum. Consequently, only those teachers can receive a "haard- en standplaatsvergoeding". Depending on the family situation, the minimum allowance is 9.027 BEF, whereas the maximum allowance amounts to 18.054 BEF (January 2001).

Czech Republic: Additional bonuses to base salary refer not to maximum but to average amount. Gross annual salary refers only to the salary paid from public resources.

Denmark: Data on salaries include the teacher's contribution to the pension fund, but not the employer's contribution to the pension fund. This is a change from Education at a Glance 2001 and it is therefore not possible to compare data from previous editions of Education at a Glance with this and last year's edition. Data do not include the individual awarded part of the salaries (increments). The local cost of living allowance is included with the highest rate.

England: Allowances refer to the highest single allowance a teacher could get which in this case refers to 'management' but in principle a teacher could get multiple allowances e.g. £3,765 for recruitment and retention, £3,000 for teaching special needs pupils.

Finland: In pre-primary education kindergarten teachers reach maximum salary in 10 years and class teachers in 20 years. Both are eligible to teach pre-primary groups. Half of the pre-primary teachers have teacher qualifications (five years at ISCED 5A) and half kindergarten teacher qualifications (three years at ISCED 5A).

Greece: According to the Reform Act 2470/1997 salaries at various ISCED levels are the same from 1 January, 2000 onwards. As bonuses depend on the situation of every separate case it is impossible to give an estimate of maximum additional bonuses. For amounts of specific additional bonuses to base salary see the notes provided with the criteria on additional bonuses.

Hungary: The survey on teachers' earnings covers all employees in educational institutions maintained by municipalities. The data collection covers more than 90 per cent of teachers in the public sector. Data in Table D6.1 refer to the average values of teachers' salaries and include additional bonuses. Due to the low number of cases, salaries of teachers with maximum qualifications at top of salary scale cannot be given.

Iceland: Salary per month x 12. Not including any bonuses or possible extra payments. All figures are based on basic salaries only, in accordance with the salary scales in the wage contracts for appropriate unions in January 2001. Additional bonuses can vary. These payments are decided by the head master in each school.

New Zealand: Salary rates are as applied on 1 January 2001, additional "bonuses" are calculated on the basis of the maximum additional salary available under the terms of the relevant employment agreement. The additional bonuses for teachers (other starting teachers) include a notional maximum of 6 units for primary and 9 units for secondary based on a review of the highest number of units allocated to individual teachers in the respective sectors.

Portugal: Gross annual salary: 5 months 2000 + 9 months 2001. Annual salaries comprise 14 months, as Christmas and Summer Holidays are paid on a monthly basis.

Spain: Each Autonomous Community in Spain establishes its teachers' salaries (within the basic general guidelines for teachers' salaries in the National General Budget), which are paid from the Community Budget. The variations are, in many cases, quite substantial. For the salaries in public education, the average teachers' salaries for Spain have been calculated as weighted means of the salaries in the different Autonomous Communities according to the number of teachers in each Community by level of education. The salary for lower secondary teachers is a weighted mean of the Autonomous Communities and also of primary and secondary education teachers because some primary education teachers also teach at the first two years of ISCED 2 (25% of teachers teaching in lower secondary education are primary education teachers). Calculation method: Salary at lower secondary education = (primary education salary * 0,25) + (upper secondary salary * 0,75).

The number of hours of teaching time in primary education and secondary education are in practice more similar than the figures in Table D6.1 suggest because, for instance, breaks are counted as teaching time in primary education but are not in secondary education. This disparity also has an inflationary effect on the ratio of salary per teaching hour of upper secondary and primary teachers in Indicator D5.1.

Sweden: Since 1996, teachers in Sweden have been awarded individual salaries based upon collective agreements. There are no statutory salaries.

Salaries for teachers on pre-primary level: Data are based on salaries for those teachers in the ages 18 - 30 years. For teachers with minimum level of training and 15 years of experience it is based on salaries for ages 31 - 45 years and for teachers with minimum level of training at the top of the salary scale on salaries for ages 44 - 65 years. All teachers are included, also those without necessary (minimum) qualifications. The data given in the table is therefore not fully comparable with those for other education levels. Calculations equivalent to starting salaries from those in the Teachers Register shows that the average salary for qualified teachers, that teaches 6-years old should be higher.

Salaries in primary and secondary education: Data for starting salaries are based on salaries for teachers with maximum 2 years of experience. For teachers with minimum level of training and 15 years of experience it is based on salaries for teachers with between 13 and 20 years of experience and for teachers with minimum level of training at the top of the salary scale on salaries for teachers with minimum 31 years of experience.

Comment on years from minimum to maximum salary: No data available on a national level since salaries are regulated in local agreements and on an individual basis.

Switzerland: 1) Teacher with minimum level of training and 15 years of experience: the available data refer to the 11th year of experience, not to the 15th

2) Lower secondary education: without streams preparing for University entrance and starting at ISCED 2 ("Langzeitgymnasium")

3) Upper secondary education: including streams preparing for University entrance and starting at ISCED 2 ("Langzeitgymnasium")

Data are weighted national averages of cantonal data. No real Swiss teacher earns exactly the salary reported.

Turkey: Calculation based on Law and Regulation. In addition, because of the differences in salaries between classroom teachers (1-5 grade) and subject matter teachers (6-8 grade) in primary education, a weighted mean is calculated for primary education.

United States: Estimated salaries for 1999-2000 from the SASS were inflated by 3.8% based on NEA estimates of average teacher salaries 1999-2000 and 2000-2001.

Interpretation

Czech Republic: The gross annual salaries in 2000/2001 are higher than they were in the previous years because, for the first time, gross annual salaries for year 2000/2001 include also social security contribution, which is paid by employees. In previous years, these contributions were not included. In 2000/2001 the annual salaries increased by about 11 % in comparison to year 1999/2000.

Norway: The large salary rise is due to a special teacher salary package, which has given teachers a higher salary rise than other workers.

New Zealand: Schools are not divided into lower and upper secondary. Primary school is from Year 1 to 8 and secondary school is from year 9 to 13. Data for lower secondary education are the average of primary education and upper secondary education.

In New Zealand, any teacher who has been teaching for 15 years is considered to be at the top of the salary scale. Progression is on an annual basis subject to competent performance (a test situation against national professional standards), so a teacher would be expected to progress one step each year. Entry points differ according to the level of qualification upon entry into the service. In addition, the number of years it takes a teacher to progress to the maximum salary step is dependent upon their qualifications. A teacher with a Bachelors' degree would take seven years to progress to the top of the base scale, a four-year Degree would take six years, and five-year Masters' Degree or better would take five years. For a teacher with less than the formal degree qualification it takes ten years to reach the maximum salary.

Scotland: Scottish primary and secondary teachers are paid on a common eleven point yearly incremental scale and after 15 years in the job would be on the maximum of the salary scale. Salary increments are not dependent on the training received. The figure of £23,313 is the maximum point on the common scale: there are no additional incremental points beyond this figure.

Slovak Republic: The national salary scale is determined by salary tariffs (according to the level of training) and grades (according to the years of experience) as well as by the national classification of professional activities. In case, the level of training is lower than required, a teacher may be temporarily included into higher salary tariff, but his placement according to the experience is lowered. He has the duty to complete the required training in 2 years.

Maximum additional bonuses to base salaries are theoretically of the same magnitude as gross salaries. They depend on the budget allocated to the school. Additional bonuses typically amount to around 10 per cent of the gross salary.

Spain: Two kinds of salary supplements are common to all teachers in public education:

i) the "trienios" (a small salary supplement added to the salary of teachers after every three-year period). In pre-primary and primary education the maximum years of experience is 43 (teachers beginning their career at 22), i.e. 14 trienios. In upper secondary education, due to a longer initial training requirements, a maximum experience of 41 years is possible (teachers starting their career at 24), i.e. 13 trienios.

ii) the "sexenios", that are salary supplements added after each six-year period and related to the in-service training (a minimum of 100 hours of officially recognized in-service training activities). Typically, all teachers fulfil this in-service requirement to be awarded with a "sexenio". A maximum of 5 sexenios can be received.

Sources and reference period

Australia

Sources: Teacher compensation: New South Wales Crown Employees (Teachers in Schools and TAFE and Related Employees) Salaries and Conditions Award; Queensland Department of Education Teachers Determination 2000; South Australia Teachers MX Award Schedule 1 Wages and Salary Rates; Australian Capital Territory Certified Agreement; other State and Territory education departments.

Years to grow from minimum to maximum salary: NSW Crown Employees (Teachers in Schools and TAFE and Related Employees) Salaries and Conditions Award; Queensland Department of Education Teachers Determination 2000; South Australia Teachers MX Award which has salary steps 1 -12; Tasmanian Policy document; Australian Capital Territory's Certified Agreement; other States' and Territories' departments of education.

Reference year: Teacher compensation: 01.01.2001 (excepting Queensland and the Australian Capital Territory, for which the reference year is 2000-2001). Years to grow from minimum to maximum salary: 01.01.2001 (excepting Queensland, Tasmania and the Australian Capital Territory, for which the reference year is 2000-2001).

Austria

Sources: Legal documents.

Reference period: School year 2000-2001.

Belgium (Flemish Community)

Source: Budget and Data Management Division, Ministry of the Flemish Community.

Reference period: School year 2000-2001 (Gross salary on 01/01/2001, end-of year allowance 2000, holiday bonus 2001).

Belgium (French Community)

Source : Service général de l'Informatique et des statistiques.

Reference period: School year 2000-2001.

Czech Republic:

Source: Government decree.

Reference period: School year 2000-2001.

Denmark

Sources: Collective agreements with teacher-unions.

Reference year: 2001.

England

Sources: National regulations.

Reference period: October 2000 – September 2001.

Finland

Sources and reference period: Teacher compensation: Statistics Finland. *Reference year*: 2000.

Years to grow from minimum to maximum salary: Collective agreement for teachers 2000 and 2001-2002. General collective agreement for municipal civil servants 2000 and 2001-2002.

France

Nature of sources: Law and policy documents based on law, national statistics.

Reference period: School year 2000-2001?.

Germany

Source: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany.

Nature of sources: Law and policy documents based on law, national statistics.

Reference year: School year 2000-2001.

Greece

Teacher compensation: *Source:* Reform Act 2470/1997. *Reference year:* Fiscal Year 2000 (1 January to 31 December).

Years to grow from minimum to maximum salary: *Nature of sources:* Law and policy documents (data on formal arrangements). *Reference period:* School Year 2000/2001.

Hungary

Teacher compensation: *Source:* Annual statistical survey on individual earnings, carried out in May each year. *Reference period:* May 2001.

Years to grow from minimum to maximum salary: *Source:* Act on Public Employees 1992. *Reference period:* School year 2000-2001.

Iceland

Source: Wage contracts in effect 01.01.2001: a) between pre-school teachers and the Wage Committee of Municipalities, b) between the Teachers Union and the Wage Committee of Municipalities, c) between the Teachers Union and the State.

Reference date: 1 January 2001

Ireland

Sources: Official circulars.

Reference period: School year 2000-2001.

Italy

Sources: C.C.N.L. Comparto Scuola and CCNL Integrativo Comparto Cuola.

Reference period: School year 2000-2001.

Japan

Sources: Ippanshoku no shokuin no kyuyo ni kansuru houritsu (Law on salary of public official).

Reference period: School year 2000/2001.

Korea

Sources: 1) The presidential degree of public servant compensation and allowance, 2) the reference for compilation of the national budget.

Reference year: 2001.

Mexico

Sources: Teacher salaries were calculated on information from the Ministry of Public Education (Secretaría de Educación Pública) and the National Teachers' Union (Sindicato Nacional de Trabajadores de la Educación).

Reference period: School year: 2000-2001.

Netherlands

Source: Publicatie: Financiële arbeidsvoorwaarden Sector Onderwijs PO, VO en BVE. Van het Ministerie van OCenW.

Reference date: 1 January, 2001.

Norway

Sources: Agreements between the Ministry of Education and the Teachers' unions on working hours and teaching conditions.

Reference year: 2000.

New Zealand

Sources: Relevant National Employment Agreements: Secondary Teachers Collective Employment Contract 1998-2001; Primary Teachers Collective Employment Contract 1998-2001.

Reference year: 2001.

Portugal

Sources: Office for Financial Management, Law/Policy document: Decreto-Lei n.º 312/99.

Reference year: School year 2000-2001.

Scotland

Source: 'Scheme of Salaries and Conditions of Service' document.

Reference year: School year 2000-2001.

Slovak Republic

Source: Laws and other regulations as well as actual data.

Reference period: 1 January, 2001 to 30 June, 2001.

Spain

Sources: Education Departments and Official Bulletins of the Autonomous Communities.

Reference year: 2000.

Sweden

Sources: The main source is national statistics on salaries from Statistics Sweden (SCB). The source for all data except pre-primary education is The National Agency's for Education Register of Teachers (managed by SCB) combined with data on salaries from SCB (originally from the Swedish Association of Local Authorities). Data from the two registers are combined with the help of the personal code for each individual. SCB has calculated a mean of the salaries for all teachers in the Register of Teachers. Teachers in pre-primary education have only two years ago been included in the Register of Teachers and not even all of them. Therefore data on pre-primary education is calculated by SCB based on the occupational code (SSYK) for pre-school and youth teachers (331) and the individuals age (instead of years of experience) as stated in the register from the Swedish Association of Local Authorities.

Reference year: 2000.

Switzerland

Sources: i) Lehrkräfte 1998/99, Bundesamt für Statistik; LCH Dachverband Schweizer Lehrerinnen und Lehrer, ii) LCH, Dachverband Schweizer Lehrerinnen und Lehrer.

Nature of sources: i) Law or policy document based on law; national statistics (data on populations), ii) law or policy documents (data on formal arrangements).

Reference year: i) 1998-1999, ii) 2001.

Turkey

Sources: The Law Numbered 657 of Public Staff - MNE Fundamental Principals Related to Salaried Teaching Hours of Teachers and Administrators.

Methodology: Calculation based on Law and Regulation. In addition, because of the differences in salaries between classroom teachers (1-5 grade) and subject matter teachers (6-8 grade) in primary education, a weighted mean is calculated for primary education.

Reference year: Fiscal year 2000.

United States

Sources: Schools and Staffing Survey; National Education Association (NEA) Rankings and Estimates

Methodology: Estimated salaries for 1999-2000 from the SASS were inflated by 3.8% based on NEA estimates of average teacher salaries 1999-2000 and 2000-2001.

Reference period: School year 2000-2001.

■ Table D5.2

Interpretation

Australia

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Teachers with higher than minimum qualifications have a higher base salary.

Management responsibilities in addition to teaching duties: Management responsibilities may be undertaken by promotion, or may attract a special payment or moderation allowance, or may be allocated additional management time. The authority depends on the State/Territory

Holding a higher than minimum level of teacher certification or training obtained during professional life: Remuneration varies by State and Territory.

Special tasks: Supervising or training student teachers, mainly, though it varies by State and Territory. Also the authority varies between and within States/Territories.

Family status: Location allowance is higher if a teacher has dependents, e.g. spouse or children.

Other: Some other criteria exist in different States, but as per the methodology, the teachers covered by these bonuses constitute less than a third of Australia's teachers

Austria

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: In a limited number of subjects different scales may apply depending on the level of educational qualification.

Holding an initial educational qualification in multiple: The multiple subjects qualification is a standard requirement.

Management responsibilities in addition to teaching duties: Appointments to management positions are decided by the regional or national authorities depending on the type of school involved; the appointee has a statutory right to a reduction of the teaching load (or exemption from teaching obligation) and to an allowance depending on the salary scale, seniority and the size of the school (with a supplement for long term exercise of the function). Teachers entrusted with more limited administrative or coordinating functions are remunerated by a flat rate compensation or a reduction of teaching load which are fixed centrally and apply whenever such a function is assigned (normally by the principal). There is a certain pool of extra pay (flat rate remuneration) for extra duties available for

assignment by the principal. For specific projects the Ministry for Education, Science and Culture may grant a reduction of the teaching load.

Outstanding performance in teaching: Outstanding performance or involvement in a particular successful project may be rewarded with a lump sum bonus if means are available.

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): Statutory bonus for regular over time teaching assignments and for substituting for absent colleagues.

Special activities (e.g. sports and drama clubs, homework clubs, Summer school etc.): Statutory bonus only for specific out of school activities complementing the curriculum.

Special tasks (e.g. training student teachers, guidance counselling): Statutory allowance for training student teachers.

Family status (e.g. married, number of children): Statutory allowance for each dependent child.

Age (independent of years of teaching experience): Supplement to the allowance for principals for long-term exercise of the function.

Other: Some other criteria exist, i.e. statutory allowance for teaching classes with pupils of different grades, statutory allowance for teaching pupils of different performance groups and statutory bonus for special counselling duties.

Belgium (Flemish Community)

Management responsibilities in addition to teaching duties (e.g. serving as a head of department or co-ordinator of teachers in a particular class / grade): A school head who is charged with the general director's mandate (of a group of schools operating under a joint administrative structure) or with the coordinating director's mandate (of a school cluster: group of schools providing secondary education in a particular geographical area) can be entitled to a bonus (248.680 BEF or 348.152 BEF January 2001). The Flemish government lays down the criterions and the amount of the bonus. The group of schools or the school cluster appoint the general director or the coordinating director (Decree of the Flemish government of 26 January 2001).

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): The hours achieved above the maximum hours of a duty are paid in the same way as the hours within the duty. This regulation applies only on the total number of periods allocated by the Flemish Community for funding purposes. The school head or the group of school divides the total number of periods allocated for funding purposes among the teaching staff. This regulation applies to all the teachers of secondary education and those of primary education with a duty of education at home (Flemish parliament act of 8 June 2000 laying down various urgent measures concerning the teaching profession).

Other (Family status combined with gross salary): The Flemish Community decided not to include the "haard- en standplaatsvergoeding" ("home and local allowance") in the gross salaries. These allowances are awarded under certain conditions if the index-linked gross salary does not exceed a fixed sum. Only the index-linked gross salaries of teachers in pre-primary, primary and lower secondary education at the beginning of their teaching careers are below the fixed sum. Consequently,

only those teachers receive a "haard- en standplaatsvergoeding". Depending on the family situation, the minimum allowance is 9.027 BEF, whereas the maximum allowance amounts to 18.054 BEF (January 2001).

Other (Specific diploma or certificate): There are specific bonuses for teachers who have a specific diploma (for instance Diploma of Higher Educational Studies or a Certificate of Advanced Educational Studies).

Other (Specific diploma or certificate in special education): Teachers with a specific diploma or certificate who have a teaching job in the special education receive a bonus.

Belgium (French Community)

Other: The French Community provides young teachers with a supplementary allowance (allowance of home or residence) according to the family situation provided that his gross income doesn't pass a fixed sum.

Czech Republic

Reaching high scores in the qualification examination: No official examination system is used in Czech Republic.

Management responsibilities in addition to teaching duties: This bonus is awarded to deputy school principal. Law states the range of the amount of this bonus, however only as a range.

Teaching students with special educational needs: This bonus is paid to teachers of special classes within regular schools.

Teaching more classes or hours than required by full-time contract: Law states the amount of this bonus.

Age: The head teacher decides if a single bonus is awarded to a teacher when he/she reaches 50 years-of-age or retires.

Denmark

Management responsibilities in addition to teaching duties: Teachers' teaching hours will be reduced and sometimes an extra payment over the period of work will be given for serving as a member of the school-management team.

England

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Starting teachers with a 2.2 class Honours degree or above commence on point 2 of the pay scale. This is an automatic entitlement, so no-one 'decides'.

Management responsibilities in addition to teaching duties: From 1 September 2000 additional points on the scale for responsibility were replaced by flat-rate allowances for taking on significant specified

management responsibilities beyond those common to the majority of classroom teachers. There were separate pay scales for head teachers and deputy heads.

Holding a higher than minimum level of teacher certification or training obtained during professional life: Teachers can apply for a position as an Advanced Skills Teacher. Teachers are assessed against national standards by an independent assessor and, if successful, are put on a different pay scale. The pay range was decided by the governing body, advised by the head teacher.

Outstanding performance in teaching: Extra points on the scale are awarded for excellent teaching performance. Experienced teachers are also able to apply for the performance threshold, in which they are assessed against national standards. If successful, they move to the 'upper pay scale' with the prospect of further pay increases based on performance.

Teaching courses in a particular field: Schools have discretion to give extra points on the pay scale for recruitment and retention. This might include payment for teachers in shortage subjects. From 1 September 2000, extra points on the pay scale were replaced by flat rate allowances.

Teaching students with special educational needs: Extra points on the scale are awarded to special needs teachers. From 1 September 2000, extra points on the pay scale were replaced by flat rate allowances.

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): Schools can make unspecified extra payments for "out-of-school" learning activities.

Special activities: Schools can make unspecified payments for 'out-of-school' learning activities.

Teaching in a disadvantaged, remote or high cost area: Extra allowances are payable to those who work in London. Schools have discretion to give extra points on the pay scale for recruitment and retention.

Finland

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Only applies to teachers in general upper secondary education (ISCED 3).

Reaching high scores in the qualification examination: A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Successful completion of professional development activities: A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Holding a higher than minimum level of teacher certification or training obtained during professional life (e.g. master teacher; holding an advanced certificate rather than an ordinary certificate): A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Outstanding performance in teaching (e.g. based on higher student achievement, independent assessment of teaching skills, etc.): A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Teaching courses in a particular field (e.g. mathematics or science): A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Teaching students with special educational needs (in regular schools): A discretionary merit-based increase can be awarded for this or other reasons at school or local level.

Other: Teachers are entitled to an additional bonus in case of responsibility for library/school collections, AV equipment, Language lab etc.

Note: Most bonuses are agreed on nationally in the Collective agreement for teachers, which the local authorities must follow. The awarding authority is local or school level, even if they only have a formal function.

France

Management responsibilities in addition to teaching duties: Every teacher in pre-primary and primary education with extra management responsibilities earns adjustments to their base salary.

Teaching students with special educational needs (in regular schools): teachers who teach to handicapped children earn special bonuses.

Teaching more classes or hours than required by full-time contract (e.g., overtime compensation): Teachers in secondary education who teach more hours than the legal requirement receive money for "supplementary hours".

Special activities: A teacher who leads a club can receive, if the principal decides it, additional bonuses.

Special tasks: Bonuses are awarded to teachers who participate in the training of a trainee-teacher.

Teaching in a disadvantaged, remote or high cost area (location allowance): A teacher who works in a school situated in a "ZEP/REP" (zone d'éducation prioritaire) receives special bonuses.

Family status: A teacher who has one or more children receives a special bonus, depending on the number of children.

Germany

Management responsibilities in addition to teaching duties: Teachers with management responsibilities can enter a higher salary group or receive allowances as part of the basic salary

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): Bonuses are awarded only for teaching more hours

Family status: Family allowance is included in the salary. The family allowance varies according to the salary group and the family circumstances of the civil servant (e.g., married and widowed civil servants without children fall under level 1, while married and widowed teachers with one child fall under level 2).

Age: The basic salary depends on the salary group and the seniority grade. The seniority grade is based on the age of the teacher at the time that he/she became a civil servant, with the teacher's training period also being taken into account.

Note: Teachers are entitled to have a reduction in the number of periods for performing certain duties, such as administrative work in the case of head teachers or their deputies. The number of periods is also reduced for members of staff carrying out special tasks, such as teacher training, preparation of timetables and running of libraries.

Greece

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: All teachers must have acquired a university degree, with the exception of some categories of teachers in Technological and Vocational Schools (ISCED 3) in which they may have degrees from Technological Education Establishments (ISCED 5B).

Holding a higher than minimum level of teacher certification or training obtained during professional life (e.g. master teacher; holding an advanced certificate rather than an ordinary certificate): There is a salary adjustment for teachers with a master's degree or Ph.D. If a teacher has a master's degree s/he takes an additional benefit of 120.000 drs/year and if s/he has a Ph.D degree s/he takes 216.000 drs/year.

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): There is overtime compensation when a teacher teaches more hours than required in a normal situation.

Special tasks: Teachers receive additional bonuses for teaching seminars or training programmes, depending on the time and the subject.

Teaching in a disadvantaged, remote or high cost area (location allowance): There are three categories of location allowances for teachers in Greece. (a) Disadvantaged regions of category B : 108.000 drs/year (b) Disadvantaged regions of category A : 144.000 drs/year and (c) Disadvantaged and borderland regions : 240.000 drs/year.

Family status: Teachers receive additional bonuses, depending on marital status and the number of children: marriage 144.000 drs/year, first child 72.000 drs/year, second child 72.000 drs/year, third child 144.000 drs/year, fourth child 192.000 drs/year and above the fifth child 300.000 drs/year.

Hungary

Successful completion of professional development activities: Participation in in-service training is compulsory for teachers once every seven years. Teachers who have met this requirement can increase by one category in the salary scale a year earlier.

Management responsibilities in addition to teaching duties: Teachers are entitled to this additional bonus by the Government Decree (138/1992.). However, the school principals take a decision about the amount of additional bonuses within the given financial category.

Outstanding performance in teaching: This additional bonus is awarded only for the definite period of time.

Teaching courses in a particular field: This additional bonus is awarded only for the definite period of time.

Teaching students with special educational needs (in regular schools): Teachers are entitled to this additional bonus by the Government Decree (138/1992.). However, the school principals take a decision about the amount of additional bonuses within the given financial category.

Special activities: This additional bonus is awarded only for the definite period of time.

Special tasks: Teachers are entitled to this additional bonus by the Government Decree (138/1992.). However, the school principals take a decision about the amount of additional bonuses within the given financial category.

Teaching in a disadvantaged, remote or high cost area (location allowance): The local authorities ensure the sum of money for the additional bonus within the framework defined by the central budget.

Other (non-compulsory adjustments, e.g. catching up, teaching in merged class, dormitory teachers): Teachers are entitled to this additional bonus by the Government Decree (138/1992.). However, the school principals take a decision about the amount of additional bonuses within the given financial category.

Other: (Financial aid for purchasing professional literature):

Ireland

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: All teachers have a common basic salary scale; point of entry is determined by number of years training.

Management responsibilities in addition to teaching duties: Additional payments are paid to principals, deputy principals, holders of posts of responsibility.

Holding a higher than minimum level of teacher certification or training obtained during professional life: Extra payments are made for additional academic qualifications e.g. Master's or doctorate degree. Additional recognised diplomas, level of degree award, ordinary or honours.

Teaching in a disadvantaged, remote or high cost area (location allowance): Question of additional payments for teachers in disadvantaged areas under consideration.

Japan

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: An allowance of 200 yen per day is allocated to chief teachers, who are in charge of management.

Teaching students with special educational needs: This allowance is allocated to teachers who are in charge of special classes or who work in Special Education Schools (about 6 per cent of salary).

Teaching more classes or hours than required by full-time contract: A special allowance is paid to all teachers (about 4 per cent of total salary) for overtime work.

Special activities: This allowance is allocated to teachers who take emergency work in case of disaster (3,200 yen/time).

Teaching in a disadvantaged, remote or high cost area (location allowance): Allowances are paid to teachers living in areas with a high cost of living.

Family status: This allowance is allocated to teachers with dependants.

Other: An additional salary is paid to all teachers, which is equivalent to 4.75 months' salary. An allowance is available for teachers who commute from a distance over 2 km or remote area work or take posts in a city that is more than 60 km from home; a housing allowance is provided to teachers if their rent is more than 12,000 yen; an allowance is allocated to the teachers of multi-grade classes (2 grades: 290 yen per day, 3 grades: 350 yen per day); four per cent of a teachers' salary is awarded to teachers in compulsory education; a cold area allowance is provided and an allowance is provided to teachers on day and night duty.

Mexico

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Teachers receive additional bonuses for academic level, or the maximum level of studies attained by the teacher, and seniority, or the years of performance in the Basic Education teaching service.

Reaching high scores in the qualification examination: This corresponds to the knowledge required by the teacher to perform his/her duties. It is evaluated by means of an instrument designed and applied by educational authorities.

Successful completion of professional development activities: This corresponds to the knowledge required by the teacher to perform his/her duties. It is evaluated by means of an instrument designed and applied by educational authorities.

Holding a higher than minimum level of teacher certification or training obtained during professional life: Additional bonuses are provided for completing modernisation courses and professional development, which are run at state and national levels.

Outstanding performance in teaching: Bonuses to teachers are based on evaluations of learning achievement of students in the class or subject.

Teaching in a disadvantaged, remote or high cost area (location allowance): Teachers working in areas of low development are awarded additional bonuses.

Other: Remuneration are provided for teachers involved in educational support, which refers to the research, updating and material preparation activities that contribute to improving the teaching-learning process and procedures.

Netherlands

Teaching students with special educational needs (in regular schools): These teachers are placed on a higher salary scale.

New Zealand

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Higher starting salaries are available to teachers with higher than the minimum required level of teacher training qualification.

Management responsibilities in addition to teaching duties: Schools are able to allocate a certain number of "units" dependent upon size and level of the school to recognise management responsibilities. Each unit is worth \$2,750 p.a. (as at 1/1/2001) to the teacher. Teachers can receive a multiple number of units.

Holding a higher than minimum level of teacher certification or training obtained during professional life: Teachers who improve their qualifications may be entitled to progress to a higher qualifications maximum salary. Teachers in upper secondary education (and some primary teachers) can receive the Service Increment Allowance under some circumstances if they have improved their qualifications since entering the service.

Outstanding performance in teaching: Units may be awarded to reward individual teachers for performance.

Teaching courses in a particular field: Teachers of an approved Maori language immersion programme who teach a minimum of 31% of their classes in Te Reo Māori, are entitled to the Maori Immersion Teacher Allowance (\$1,500 p.a.).

Teaching students with special educational needs: Designated teachers of students with special educational needs may receive the Special Duties Increment Allowance at the value of one salary step (variable) or \$995 p.a. when the teacher is at their qualifications maximum.

Special activities: Teachers may be awarded one or more Units in recognition of their undertaking specific activities related to extra-curricular or pastoral duties.

Special tasks: An associate teacher allowance (\$3.19 per hour) is available to secondary teachers who are responsible for overseeing trainee teachers on placement. A Careers Adviser Allowance (\$1,054 p.a.) is payable to secondary teachers appointed as a careers adviser.

Teaching in a disadvantaged, remote or high cost area (location allowance): A location allowance (up to \$3,032 p.a.) is available to primary teachers employed in remote schools. The Staffing Incentive Allowance (\$966 p.a. in Secondary/\$995 in Primary) is available to teachers in schools able to demonstrate difficulties in attracting staff.

Other: Teachers in Normal or Model Schools (i.e., primary schools that have a relationship to a specific teacher--training provider) are eligible for the Normal School Allowance \$1,636 p.a.

Norway

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Teachers can gain one or more increments.

Management responsibilities in addition to teaching duties: Teachers may gain one or more increments and obtain a reduction in working hours.

Holding a higher than minimum level of teacher certification or training obtained during professional life: Teachers may gain one or more increments.

Teaching more classes or hours than required by full-time contract: Teachers are paid at an hourly rate.

Special tasks: Teachers who are training student teachers are given a reduction in teaching hours.

Teaching in a disadvantaged, remote or high cost area (location allowance): Teachers in certain areas, particularly in northern Norway, receive a fixed amount in addition to their salary.

Other: Teachers may gain one or more increments and have reduced working hours.

Portugal

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Teachers' career is structured in ten levels. Undergraduate teachers begin their career in level one, while graduate teachers begin in level three.

Successful completion of professional development activities: Teachers must complete a certain amount of professional development credits in order to progress in their careers.

Management responsibilities in addition to teaching duties: Principals receive an increase in salary for the duration of the period, while educational guidance managers (heads of curriculum departments, class tutors' co-ordinators and tutors) receive a reduction of their teaching time. The school board defines the criteria to distribute the statutory available amount of time among the educational guidance structures.

Holding a higher than minimum level of teacher certification or training obtained during professional life: In addition to the requirement of a university degree (4 to 5 years of study), a master's degree (2 to 3 years of study) adds a bonus corresponding to four years of career progression; a doctorate adds a bonus corresponding to 6 years of career progression.

Outstanding performance in teaching: After 15 years of teaching and after receiving an appraisal of "good" by the school, teachers may apply for a special appraisal of their *curriculum vitae* and receive an increase of two years in their career progression. However, teachers apply seldom to this bonus possibility.

Teaching students with special educational needs (in regular schools): Teachers holding a certified qualification in special needs teaching receive an increase in salary when teaching.

Teaching more classes or hours than required by full-time contract: Teachers are paid extra for the classes/hours taught beyond teachers' statutory working time. In general, this situation occurs due to the difference between individual teaching load and the curriculum hours to teach. The first extra hour is paid 25 per cent above the cost of the ordinary hour and each of the following extra hours is paid 50 per cent above the ordinary one.

Special activities: Teachers in charge of school non-curricular activities can be given a reduction in the teaching time. The Pedagogic Council defines the criteria for the distribution of the global time credit among the teachers in charge of these activities.

Special tasks: Teachers teaching trainee teachers receive a salary increase and a reduction in teaching time.

Family status: Family status is not specific to teachers, but corresponds to a social allowance to every family with children.

Scotland

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Only graduates are eligible to enter the teaching profession. Local education authorities, as employers, are responsible for carrying out a salary review prior to placement on the common scale. This review takes into account age, qualifications and relevant experience, and determines which point on the scale a teacher should be placed. Any teacher who possesses a qualification above the minimum entry requirements, such as an Honours degree, is automatically placed on the entry point for Honours graduates within the common scale. This would, however, be the only occasion that a teacher's salary would be increased beyond the base salary level to reflect additional qualifications.

Management responsibilities in addition to teaching duties: Teaching staff who assume management responsibilities would normally do so through promotion. This would then place the individual on a different

Teaching in a disadvantaged, remote or high cost area (location allowance): Within the Scheme of Salaries and Conditions of Service document for teachers employed in education authority schools, there is provision for such allowances to be made in respect of remote schools (£813 per annum or £1,524 per annum) and distant islands (i.e., any of the Orkney Islands, of the Shetland Islands, or of the Outer Hebrides and the islands of Colonsay, Tiree, Coll, Muck, Eigg, Rhum, Canna and Soay - £1,263 per annum).

Spain

Successful completion of professional development activities: For public schools' teachers a supplement called "sexenio" does exist. It is a salary supplement added after each period of six years of experience and related to in-service training (teachers must complete 100 hours of in-service training courses during each six-year period to receive this supplement). Typically, all teachers fulfil this

requirement to be awarded with a "sexenio", so that these supplements were computed to calculate the statutory salaries. A maximum of 5 sexenios are recognized.

Management responsibilities in addition to teaching duties: In lower and upper secondary education there is a Head in each Didactical Department. In case there is a teacher with a recognized senior teaching position (Catedrático condition), he/she is the Head of the Department. In case there are more than a "catedrático", the Department may suggest to the school principal one of these teachers to be the Head but, in any case, the school principal makes the definitive nomination and the high local education authority makes the final decision. In case there isn't any teacher with the "catedrático condition" in a certain Department, any of the other teachers can become Head of Department (usually teachers rotate in this position). All the Department Heads receive a fixed salary supplement during the time they have that responsibility. The standard duration of each "mandate" as Department Head is four years. In primary education any teacher can be the co-ordinator of the teachers in the cycle, but this position is not awarded with any salary supplement.

Teaching in a disadvantaged, remote or high cost area: These location allowances are a fixed amount paid to all teachers in Canary Islands, Balearic Islands and North African cities (Ceuta and Melilla). Location allowances are sometimes paid also to teachers in some rural schools or working with disadvantaged population (itinerary population, immigrants, gypsies...) in public education.

Family status: Only in the Autonomous Community of Navarra teachers receive a salary supplement when they are married or have children or handicapped children. The teachers in this Community represent the 1,36% of the total. All over the country, people with children have a reduction in taxes.

Note: The criteria for additional bonuses are the same in all the Autonomous Communities (except for the location allowances and the family status), but the amount of the bonuses vary among Communities.

Sweden

In Sweden, teachers are awarded individual salaries and there is no fixed salary scale. Additional bonuses in the true sense of the concept are difficult to isolate because of the individual setting of salaries. Bonuses are given to teachers for management responsibilities in addition to teaching duties; teaching more hours or classes than are required under a full-time contract (overtime pay); and "special activities" such as organising a drama group. Other bonuses, which are awarded to teachers less frequently, act as significant criteria for the setting of individual salaries. These bonuses are additional educational qualifications and teaching certification; professional development activities; outstanding performance in teaching; teaching more than one subject; teaching courses in a particular field; teaching students with special educational needs; special tasks; and teaching in a remote rural or disadvantaged area.

Switzerland

Management responsibilities in addition to teaching duties: This criterion does not apply in all cantons.

Teaching students with special educational needs (in regular schools): This criterion does not apply in all cantons.

Teaching more classes or hours than required by full-time contract (e.g. overtime compensation): This criterion does not apply in all cantons.

Special activities: This criterion does not apply in all cantons.

Special tasks: This criterion does not apply in all cantons.

Family status: This criterion applies in all cantons.

Note: The salary scale - determined by the years of experience - is not applied. Teachers receive less than the base salary for a given number of years of experience. This criterion does not concern all cantons

Turkey

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: A teacher who holds a Masters' or PhD qualification from any department of the faculty of education is placed on the upper degree of the first-year salary scale. In addition, teachers with a master's degree are awarded an additional 25 per cent per teaching hour if they teach additional hours, and an extra 40 per cent per teaching hour for teachers with a PhD.

Successful completion of professional development activities: A teacher reaching a level (A, B, C) from National Public Staff Foreign Language Exam, gets additional bonus according to the level.

Outstanding performance in teaching: Teachers who achieve high levels of success in their profession are evaluated by the Provincial Directorate of National Education and by the Ministry, and are awarded an additional bonus.

Teaching more classes or hours than required by full-time contract: Teachers must teach more hours than that which is stated in the full-time contract if it is required by the school administration. Any additional teaching hours are paid to the teachers per teaching hour/lesson hour.

Special activities: In grades six to eight in primary and secondary education, teachers are paid for three additional teaching hours if involved in special activities.

Special tasks: Teacher trainers are paid per teaching hour if appointed as a lecturer in courses or seminars, although these take place outside of education and training time.

Teaching in a disadvantaged, remote or high cost area (location allowance): Additional bonuses are paid to teachers working in areas that have been given priority with regard to development.

Family status: An additional bonus is paid to a teacher if the teachers' wife or husband is unemployed or has children (maximum of two children who are less than 18-years-old).

Other: A teacher who doesn't live in a flat belonging to government takes contribution to live in a rented flat monthly

United States

Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession: Teachers with a master's degree or Ph.D would have higher base salary schedules than teachers with a bachelor's degree.

Successful completion of professional development activities: Teachers may take professional development courses that count as credits towards an advanced degree. Some school districts provide bonuses if teachers complete a certain number of additional credits (e.g., 15 or 30), even if they do not obtain an advanced degree (e.g., a master's degree or Ph.D).

Outstanding performance in teaching: This is not a common practice in most school districts, but there may be some cases where school districts do award a bonus for outstanding performance.

Teaching courses in a particular field: This is not a common practice, but it could occur in isolated cases.

Teaching students with special educational needs: This is not a common practice, but it could occur in isolated cases.

Teaching more classes or hours than required by full-time contract: This is not a common practice, but it could occur in isolated cases.

Special tasks: Some personnel, e.g., guidance counsellors, may have a separate salary schedule than teachers, who could have higher base pay. However, other functions such as training student teachers would probably not receive additional compensation.

Teaching in a disadvantaged, remote or high cost area: Some school districts in remote locations may use higher salary schedules to try to attract teachers to these places, but a typical school district would not pay teachers more to teach in a disadvantaged school.

Methodology

Australia: A weighted Australia estimate was manually calculated using teacher numbers in each State/Territory secondary school system to weight the estimate. If half or more of the teachers, as measured by their State/Territory of origin, answered "yes" to a question, the Australia estimate was considered to be "yes".

INDICATOR D6: Teaching time and teachers' working time

■ General note

The indicator draws on data from the annual system level data collection of Network C on Teachers and the curriculum, data sheet

CURR 2: Teaching and working time of teachers by level of education

■ Table D6.1

Interpretation

Australia: It should be noted that many teachers have to spend a certain number of hours at school which includes teaching and non-teaching activities, however there are other (additional) non-teaching duties undertaken outside these specified hours, and the hours to be spent on these (additional) duties are not defined. Therefore most Australian teachers work longer hours than those reported.

Austria: The Education Act governing teachers only stipulates teaching hours (20 to 24 periods of 50 minutes per week). Provisions concerning teaching time are based on the assumption that the duties that a teacher performs (including preparing lessons and tests, marking and correcting papers, examinations, and administrative tasks) amount to a total working time of 40 hours per week.

Belgium (Flemish Community): Only hours of teachers are formally set. The additional non-teaching hours within the school are set at the school level. There are no regulations regarding lesson preparation, correction of tests and marking students' papers, etc. The government defines the minimum and maximum number of teaching periods (of 50 minutes each) per week at each level of education. Teaching time consists of a minimum of 24 and a maximum of 28 lessons per week in pre-primary and primary education, 22 to 24 lessons per week in lower secondary education, 21 to 23 lessons in the first two years of upper secondary education, and 20 to 22 lessons in the last two years of upper secondary education.

Belgium (French Community): The data on teaching time refer to the maximum numbers of lessons of 50 minutes each: 28 lessons in pre-primary education and in primary education, 24 lessons in lower secondary education, and 22 lessons in upper secondary education (general subjects).

Czech Republic: Teachers are public employees and their working time is set accordingly. Teachers are supposed to work 42 hours a week (excluding lunch breaks) over 40.2 weeks, of which only teaching time is further specified. Teachers in pre-primary education teach 31 hours a week. In primary education, teachers teach 22 lessons, and in secondary education 21 lessons per week (lesson duration is 45 minutes). The teaching duties of school principals and deputies are reduced according to school size and vary between 13 and 24 hours in pre-primary education, 5 to 16 lessons in primary and lower secondary education and 2 to 6 lessons in upper secondary education.

Denmark: Within the formal demands of 37 working hours per week in primary and lower secondary education, for every hour of teaching there is one hour of preparation time and an average of 30 minutes of non-teaching time was calculated in the reference year. In upper secondary education

(general programmes), a collective agreement between the county authorities and the teachers' union defines lesson preparation time as 75 per cent of the number of lessons * 1.33 hours, and the hours to be used for examinations as an average of 110 hours per annum. Remaining duties are defined at the local level. In upper secondary education (vocational programmes), agreement has to be reached between the management of the school and the teachers' representative on the principles for allocation of working hours for preparation, etc. in accordance with the collective agreement between the teachers' union and the Ministry of Finance. The limits for preparation time are between 13 and 126 minutes per 60 minutes of teaching. Norms for correction of written work, examination work, etc., are regulated by the collective agreement or by local agreement within the school. As a minimum, each teacher is allowed 50 hours per year for pedagogical, theoretical and skills development.

England: Statutory working hours comprise 1265 hours a year. Teachers are required to work 195 days a year, of which 190 must be spent in school and available to teach; the other 5 are training days and can be worked in school or elsewhere. No statutory teaching hours or contact time is established on the national level.

Finland: In pre-primary education the minimum number of hours of teaching is 700 hours (à 45 minutes) per school year; in general upper secondary education the minimum teaching load has been defined as 75 courses (one course=approx. 38 lessons).

In primary and lower secondary education teachers are, in addition to their compulsory teaching load, required to do two hours of planning, meetings or cooperation with the homes. Teachers in general upper secondary education are required to reserve 2-5 hours per two weeks for meetings etc.

France: Of the 27 working hours for teachers in primary and lower secondary education, one hour per week is spent liaising with other teachers and co-ordinating teaching. In secondary education, the amount of working time varies according to the subject taught. Non-teaching time in secondary education is calculated as 60 minutes for every net hour of teaching.

Germany: The number of periods that teachers are required to teach varies from school to school and *Land* to *Land*. Teaching time also differs according to teaching qualifications and subjects. The weighted average number of lessons per week (of 45 minutes each) is 27.76 in primary education, 26 in lower secondary education, 24.8 in lower secondary education (general programmes), and 24.65 in lower secondary education (vocational and pre-vocational programmes).

Greece: The maximum mandatory number of lessons taught per week is 25 (of 48 minutes each) in pre-primary and primary education, and 21 lessons in secondary education.

There is a reduction of teaching hours. When the teachers are appointed the teaching time is 21 teaching hours per week. After 6 years the teaching time is 19 teaching hours per week. After 12 years the teaching time is 18 teaching hours per week and finally after 20 years the teaching time is 16 teaching hours per week. However, the remaining hours of the working time of teachers' obligation have to be spent within school (The legislation is: Degree 1566/85 and 2413/96).

Hungary: The mandatory number of working hours (40 hours) conforms to that of public employees and is a formal requirement for teachers. Most preparation takes place outside school. School-related activities (e.g., staff meetings, meetings with parents, preparation for school festivities, etc.) are specified at the school level. Teachers are required to teach 32 lessons per week (of 60 minutes each) in preprimary education, 21 lessons (of 45 minutes each) in primary education, and 20 lessons (also 45

minutes each) in secondary education in order to earn a full-time salary. Teachers in primary education are required to stay with their class during breaks. Overtime teaching is paid and is often required as part of the job.

Iceland: Teachers in primary education work 40 hours per week, four hours of which are allocated for preparation, planning, meeting parents, preparing field trips, staff meetings, etc. In primary and secondary education, the total annual workload is 1 800 hours over 181 days, of which 170 days are teaching days. A full-time teacher under age 55 is required to teach 28 lessons per week in primary and lower secondary education and up to 24 lessons per week in upper secondary education. This teaching load is reduced with age and experience and can be as low as 19 lessons per week in primary and lower secondary education, and 17 lessons per week in upper secondary education for a 60-year-old teacher with at least 10 years' service. A teacher's workload in primary and lower secondary education is divided into three categories: teaching (K), preparing lessons (U), and other work (Ö). If other work is increased for a particular teacher, the teacher can either choose to do less teaching or to receive overtime pay, and in the case of a part-time teacher, is entitled to a higher percentage of a full-time job. In upper secondary education, the teacher's workload is divided into five categories: work at school under the supervision of the head-teacher (130 hours), teaching and teaching-related work (1 177 hours), work during the six examination weeks (258 hours), preparation and follow-up at the beginning and end of the school year (32 hours), and professional development. For teachers in lower and upper secondary education there are at least 150 hours assigned for professional development each year.

Ireland: Primary education is organised on the basis that each teacher is responsible for a defined group of pupils for all subjects. Primary teachers are required to be in attendance while the school is open. Their working conditions specify that they are responsible for teaching and supervisory duties.

Secondary teachers are timetabled for attendance for teaching activities for a maximum of 22 hours per week. Traditionally they have performed non-teaching duties on a voluntary basis. They have also substituted for colleagues who are absent on a short-term basis. Negotiations are at present in train to provide payment for these duties, which will be performed on a non-compulsory basis.

Italy: Instruction time and teachers' teaching time don't correspond: instruction time, i.e. time pupils attend lessons, is usually spread over 6 days per week, while teachers' teaching time is spread over 5 days per week.

20% of pupils in primary education and 29% of pupils in lower secondary education have a curriculum of 40 hours per week instead of 30 hours. This means that there are more teachers involved in these groups.

Only teaching time is prescribed by law. Working time includes extra-teaching duties to be accomplished at school (meetings, etc.) as well as home duties concerning reports, corrections etc. It is not measurable.

Korea: There is no policy on how many hours teachers should teach in a week or a month or a year. The data on teaching time is based on the annual administrative data collection and refer to the time teachers usually teach per week during the school year. Teachers are civil servants and their working time is regulated within that framework. Whereas there are national regulations on the length of the school year and on the working hours of civil servants, which apply to teachers during the school year

period, during the summer and winter vacations teachers work on self-regulated schedules of professional developmental training, was excluded.

Mexico: In pre-primary, primary and lower secondary education, teaching time comprises 12.5 hours, 20 hours and 20.8 hours, respectively, per week. The remaining working hours must be devoted to non-teaching activities, such as meetings, general school tasks, examination marking and lesson preparation, whether inside or outside school.

Netherlands: Ten per cent of the total annual required working hours are available for professional development. In pre-primary and primary education, the total number of annual working hours is 1 659, of which 930 are teaching hours. In lower secondary and upper secondary (general programmes) education, in addition to 868 teaching hours per year (26 lessons of 50 minutes per week), 173 hours per year are allowed for preparation, 166 hours for professional development, and 452 hours for other tasks. In upper secondary education (vocational programmes), teachers' annual working hours are 1 710, 843 hours being allocated for teaching and student guidance and 171 hours for professional development.

Norway: Teachers are required to work 1 717.5 hours per annum over 39 weeks, of which 38 are teaching weeks. In primary, lower secondary and upper secondary (general programmes) education and three (vocational programmes), out of the 44 hours of working time per week, 18.8 hours, 16.7 hours, 13.3 hours and 15.5 hours per week, respectively, are devoted to teaching. The remaining working time and the 39th week are devoted to non-teaching activities.

As all other civil servants work approximately 46 weeks per year and 37.5 hours per week while teachers work 39 weeks per year, the high number of working hours per week for teachers can be accounted for by a compressed working year.

Portugal: In upper secondary education teachers taught 3 weeks less, due to national examinations starting in the middle of June. Pre-school and First cycle teachers have a teaching load of 25 hours per week, while Second cycle teachers have twenty-two 50 minute-sessions and Secondary school teachers twenty.

The calculation of the number of instruction days resulted from the intended 36 weeks of instruction for pre-primary, primary and lower secondary education and 33 weeks for upper secondary education (November, Christmas, Carnival and Easter holidays were not considered), minus five days schools were closed for festivities. The total working hours per annum was calculated on a basis of 218 working days, common for all education levels.

Scotland: The working hours of teachers, under the overall direction of the head teacher, include 27.5 hours per week in school, of which the maximum class contact time is 25 hours in primary education, 23.5 hours in secondary education and 22.5 hours in special schools. The balance of time for teachers, except for those in special schools and units, between the specified class contact time and the 27.5 hours are available to the teachers for work relevant to individual teaching duties. Only in exceptional circumstances can any of this time be utilised by the head teacher for any other purpose. The hours of part-time teachers include not only class contact time, but also a pro-rata element for non-class contact time. The school is open for 39 weeks per year, but each teacher undertakes 5 days of in-service training per year. The working hours of teachers also include an additional maximum of up to 30 hours in the school year for the purpose of parent meetings, stipulated as the total including preparatory work and provision of travelling time up to a maximum of 6 meetings within the pupil year. There will

also be annual provision of an additional maximum of up to 50 hours within the working year, for planned activities related to the wider educational needs of the school, including for example; curricular development; in-service training; inter-school liaison; professional development and participation in meetings with colleagues. Many teachers work well beyond the total working time as stated. In recognition of this, changes in teachers' pay and working conditions are currently being phased in. On 1 August 2001, a 35-hour week was introduced for teachers. By 1 August 2006, a maximum class contact time of 22.5 hours per week should be in place, with the removal of other restrictions on the use of the working week.

Slovak Republic: In the reference year, teachers' working time was set by the general Code of Labour as 42,5 hours per week including lunch breaks. The Regulation of the Slovak Government specifies only teaching time. The assumption is that teachers use the remaining time for other duties, e.g. preparation for lessons, correction of papers, professional development, etc. There are no formal provisions concerning how much time teachers have to spend in the school executing non-teaching duties.

Spain: In pre-primary and primary education, teachers are required to work for 37.5 hours per week, of which 22.5 hours comprise net contact time, and 7.5 additional hours are to be devoted to activities at school (breaks, meetings and pedagogical activities). The remaining 7.5 hours may be spent out of school in preparation for classes, professional development, etc. In secondary education, teachers are required to teach 18 lessons (of 55 minutes each) per week (up to 21 lessons in exceptional cases). Teachers must teach a minimum of two and a maximum of five lessons per day, and are expected to be available at school for 30 hours (25 hours teaching classes plus other pedagogical activities). All teachers are required to spend at least four hours per day in school.

The number of hours of teaching time in primary education and secondary education are in practice more similar than the figures in Table D6.1 suggest because, for instance, breaks are counted as teaching time in primary education but are not in secondary education. This disparity also has an inflationary effect on the ratio of salary per teaching hour of upper secondary and primary teachers in Indicator D5.1.

Sweden: Working time is regulated in formal agreements between the Swedish Association of Local Authorities and teachers' unions. According to the Teacher Agreement 2000 working time is regulated for 1360 hours per school year. Teachers themselves are responsible for when they spend the remaining working time. Teaching time in hours is not regulated in order to allow for the teaching of non-compulsory subjects.

Turkey: Teaching time is laid down at the national level, while non-teaching time is specified at the school level. The only formal requirement states that teachers shall attend workshops and prepare for the school year for 40 hours preceding and 40 hours following each school year. Teaching time per week is 18 lessons (of 50 minutes each) in pre-primary education, 18 lessons (of 40 minutes) in primary and lower secondary education, 15 lessons in upper secondary education (general programmes) and 20 lessons per week in upper secondary education (vocational/pre-vocational programmes) (also 40 minutes each). Twelve compulsory but additionally paid classes are required in pre-primary and primary education, six classes in lower secondary education, and 20 classes in upper secondary education.

United States: Teaching time and working time include the amount of time for which teachers are required to be at school but do not include the work completed outside the school setting. For children

in full-day kindergarten, the hours of teaching would be similar to the teaching time in primary education. However, while some schools offer full-time kindergarten, others only offer part-time kindergarten. Teachers' working time is not collected through administrative records but from individual teachers' reports of the number of hours they are required to be at school. The 1999-2000 data are considerably higher than data collected previously and may reflect actual hours spent at school rather than the contracted number of hours of work.

Coverage and methodology

Australia: The data are a weighted average of the data of all States and Territories.

The working time at school for SA has been set to zero, as it was 'not applicable'. Where more than half of Australia's teachers are 'not applicable' (i.e. total working time and the civil servants' working time), the cell has been set to 'not applicable'.

The distribution of teachers between States and Territories in ISCED 0 public institutions is assumed to be equal to the corresponding distribution for primary education (This assumption would only be incorrect if the proportion of pre-school teachers between States and Territories differed significantly from the proportion - and hence weighting - of primary teachers between the States and Territories.)

Austria: Both ISCED 2 and 3 consist of different school types with different legal compulsory teaching loads. A weighted mean was determined at these two levels on the basis of the numbers of teachers working at the different school types.

Data for ISCED 1 differ from previous years; short breaks now are included in teaching time when teachers are responsible for the classes.

Belgium: *Pre-primary and primary education:* Teaching time consists of minimum 24 and maximum 28 lessons of 50 minutes per week. The school assignment consists of maximum 26 hours (60 minutes) per week. Teaching time = (maximum lesson hours (23.33 * 60 minutes) * (37.2 teaching weeks – 1.6 weeks of festivities). *Lower secondary education:* Teaching time consists of minimum 22 and maximum 24 lessons of 50 minutes per week. Teaching time is calculated as the (maximum lesson hours (20* 60 minutes) * (37 teaching weeks – 1.2 weeks of festivities). *Upper secondary programmes (general programmes):* Teaching time consists of minimum 21 and maximum 23 lesson hours (50 minutes) per week in the first two years of general upper secondary education (the so called "second stage"). In the last two years ("third stage") teaching time consists of minimum 20 and maximum 22 lesson hours (50 minutes) per week. The numbers 21/23 in the second stage become 20/22 when the person involved has at least a half assignment in the third stage.

Finland: The figure for number of weeks is calculatory (the statutory number of school days 190 has been divided by the number of days (5) of instruction per week. The numbers of instruction days are absolute numbers stated in the decree. The number of hours a teacher teaches per week (for lower and upper secondary education) is the median of the different weekly teaching loads (The compulsory weekly teaching load depends on the subject taught). The teaching loads range from 12.75 to 16.5 (lower secondary education) and 11.25 to 17.25 (upper secondary education).

The number of hours taught per year is also calculatory, the weekly teaching load that is based on the collective agreement has been multiplied by the calculatory number of weeks (38).

France: National statistics.

Germany: Data are based on computation of weighed means

Japan: Number of hours a teacher teaches per annum is the number based on the number of hours a teacher teaches per week by "Survey Report on School Teachers" and the additional numbers of hours of Moral Education and Special Activities. Short breaks are not included in teaching time.

Computation of civil servants' working time: the work hours a day is eight hours, the work days a week is five days (Monday through Friday). One year equals to 52 weeks. Regular service government employees do not have to work on national holidays and December 29, 30, 31, January 2, 3. When a national holiday is on Sunday, there is no compensatory day off. Eventually, work hours a year is supposed to be about; $8 \times 5 \times 52 - 8 \times (17 \sim 18) = 1940$

Greece: According to the legislation every teacher (in pre-primary, primary and secondary education) must work 37.5 working hours per week and must teach 25 teaching hours per week for (pre-) primary education and 21 teaching hours per week for secondary education. The examinations period (about 2 weeks for lower and upper secondary education), Christmas and Easter holidays (about 4 weeks), are not included in the number of weeks of instruction.

Italy: The number of instruction days corresponds to an estimated average calculated on the basis of the actual legislation, which foresees a minimum of 200 days of instruction.

Korea: Since there is no formal policy on how many hours teachers should teach in a week or a month or a year, the data on teaching time was prepared on the basis of the annual administrative data collection which was designed for the entire teaching staff in Korea and refers to the actual time teachers usually teach per week during the school year.

For the working hours of teachers, only the working hours during the school year were included. The calculation of working hours during the school year was based on the national regulations on the length of the school year and the working hours of civil servants, which apply to teachers during this period. The working hours during the summer and winter vacations was excluded because teachers work on the self-regulated schedules of professional developmental training during this period, making it very hard to estimate the exact working time in this period.

New Zealand: Data reported are based on the translation of the number of half-days on which schools are required by law to be open for instruction. One half day represents 2.5 hours (under the Education Act a half-day is a minimum of 2 hours, but in practice it is usually 2.5 hours). Schools are closed on public holidays ("festivities") so these are not included as days on which the school is open for instruction.

Twenty-five hours per week is the most common number of timetabled hours for teachers - though it is up to individual school boards to develop school and teacher timetables and they do not have to be based on a 25-hour week.

There is no data available on the number of non-teaching hours.

New Zealand schools are not divided into lower and upper secondary - primary school is from Year 1 - 8 and secondary school is from years 9-13. Therefore the midpoint between primary and upper secondary has been used for lower secondary data.

Scotland: The figures shown are approximations based on the assumption that teachers teach for close to their maximum number of hours, as specified in the Scheme of Salaries and Conditions of Service document.

Slovak Republic: In primary education 15 minutes morning breaks are included in teaching time.

Spain: Teachers of all levels are required to be at school for 30 hours per week from September 1st to June 30th (excluding the holiday periods and the days the schools are closed for festivities); in total, 38 weeks per year. Calculation of working time: 38 weeks*37,5 hours per week= 1425 working hours per year.

The information provided is based on the general national regulations. The Autonomous Communities may have made some adaptations to these regulations for their own teachers.

United States: Sample survey of school districts, schools and teachers.

Comment: Teachers' working time is collected from individual teachers' reports of the number of hours they are required to be at school. The 1999-2000 data are considerably higher than data collected previously and may reflect actual hours spent at school rather than the contracted number of hours of work.

Sources and reference period

Australia

Sources: Queensland Teachers' Award State; South Australian Staffing Allocation Document, cited in Industrial Agreement; Australian Capital Territory Policy Documents Legislation; other State and Territory education departments.

Reference year: 2000-2001 for Queensland and the Australian Capital Territory, and in SA as the 2001 school (i.e. calendar) year.

Austria

Sources: Legal documents.

Reference period: School year 2000-2001.

Belgium

Sources: Decrees and resolutions of the education government of the Flemish Community, Décret du gouvernement de la Communauté française du 13/08/98-Memento de l'Enseignement 2000-2001, Kluwer, Diegem.

Nature of sources: Policy documents based on law.

Reference period: 2000-2001.

Czech Republic

Nature of source: Government decree.

Reference year: 2000-2001.

Denmark

Sources: Kvalitet i uddannelsessystemet, Finansministeriet 1998.

Methodology: The data were calculated by the Ministry of Finance in cooperation with the Ministry of Education based on collective agreements for teachers and on national statistics.

Reference year: 1997.

England

Sources: National regulations.

Reference period: October 2000 – September 2001.

Finland

Sources: Basic Education Act (1998/628); Decree (1998/852). Upper Secondary Schools Decree (1998/810). Collective agreement for teachers 2000 and 2001-2002.

Reference period: School year 2000-2001.

France

Nature of the sources: Law and policy document based on law; national statistics.

Reference period: School year 2000-2001.

Germany

Sources: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany.

Reference period: School year 1999-2000.

Greece

Nature of sources: Law and policy documents based on law, data on formal arrangements.

Reference period: School year 2000-2001.

Hungary

Sources: Public Education Act 1993; The Amendment of the Public Education Act 1996., Act XXXIII of 1992 on Public Employees; The order of the school year 1999-2000.

Reference period: School year 2000-2001.

Iceland

Source: Wage contracts in effect 01.01.2001: a) between pre-school teachers and the Wage Committee of Municipalities, b) between the Teachers Union and the Wage Committee of Municipalities, c) between the Teachers Union and the State.

Reference date: 1 January, 2001

Ireland

Sources: Official Circulars.

Reference year: 2001.

Italy

Sources: D.P.R. 14/74 - L. 476/86 - D.P.R. 399/88 - C.C.N.L. 21/07/95-12/07/96.

Nature of the sources: Law and policy document based on law.

Reference year: School year 2000-2001.

Japan

Sources: Number of weeks a teachers teaches per annum: Shogakko-Gakushu-Shido-Yoryo(The Course of Study in Elementary Schools 1989), and Chugakko-Gakushu-Shido-Yoryo (The Course of Study in Lower Secondary Schools 1989), and Kotogakko-Gakushu-Shido-Yoryo (The Course of Study in Upper Secondary Schools 1989), Ministry of Education, Science, Sports and Culture. Civil servants' working time: Law concerning Working Hours, Leave of Absence, etc of Regular Service Employees

Reference year: Net teaching time: 1998. Teachers' working time: 2000/2001.

Korea

Sources: Ministry of Education & Human Resources Development Republic of Korea & Korean Educational Development Institute (2001). Statistical Yearbook of Education/Korean Educational Statistics Database System.

Reference year: 2001.

Mexico

Sources: Teaching time: Secretaría de Educación Pública, Calendario escolar 2000-2001, Agosto 2000, México.

Reference year: School year 2000-2001.

Netherlands

Source: CAO 1998.

Nature of source: Formal agreement.

Reference year: School year 2000-2001.

Norway

Sources: Agreements between the Ministry of Education and the Teachers' Unions on working hours and teaching conditions.

Reference year: 2000.

New Zealand

Sources: Education Act 1989, Secondary Teachers' Collective Agreement 2001, Primary Teachers' Collective Agreement 2001.

Reference year: 2001.

Portugal

Sources: Law/Policy document: i) Decreto-Lei n° 139-A/90 and Decreto-Lei n° 1/98- Teachers' Career Statute; ii) Despacho n° 12 110, Despacho Normativo n° 24/2000 - Organization of the Schoolyear; Decreto-Lei 100/99 - public servants' holidays.

Reference period: School year 2000-2001.

Scotland

Source: 'Scheme of Salaries and Conditions of Service' document.

Reference period: School year 2000-2001.

Slovak Republic

Sources: Laws and other regulations.

Reference period: School year 2000-2001.

Spain

Sources: RESOLUTION of April 27, 1995 of the Secretary of State for the Public Administration, giving instructions about the working time and time schedules of the civil servants of the National General Administration (National Official Bulletin, May 10, 1995). // ORDERS of June 29, 1994, giving instructions which regulate the organization and functioning of pre-primary, primary and secondary education schools (National Official Bulletin, July 5, 1994). // ORDER of February 29, 1996, which modifies the Orders of June 29, 1994. (National Official Bulletin, March 9, 1996).

Reference period: School year 2000-2001.

Sweden

Sources: Formal agreements between the Swedish Association of Local Authorities and teachers' unions.

Reference year: 2001.

Turkey

Sources: Working Calendar for Formal and Non-Formal Educational Institutions, 2000; Regulations Related Secondary Education, 1983; Regulations Related Primary Education Institutions, 1992; Regulations Related Pre-Primary Education Institutions, 1999, The Law Numbered 657 of Public Staff, MNE Fundamental Principals Related to Salaried Teaching Hours of Teachers and Administrators.

Reference period: School year 2000-2001.

United States

Source: Schools and Staffing Survey 2000.

Reference year: 1999-2000.

■ **Table D6.2**

Interpretation

Belgium (Flanders): The change of -1 per cent is not the result of real change, but only the consequence of some festivity days being in weekends or not.

INDICATOR D7: Teacher Supply and Demand

■ General note

Data for the indicators on teacher supply and demand are drawn from the OECD International Survey of Upper Secondary Education implemented in 15 countries during the school year 2001/2002.

■ Definitions

School in this indicator refers to ‘school site’ i.e. the education unit where service is provided. In the majority of cases school and school site is the same. However, in countries where schools as administrative units have several school sites, school refers only to one sampled school site within the school as an administrative unit.

Shortage of teachers in different study areas. ISUSS respondents (school principals) participants were asked to indicate whether they perceive difficulties in hiring fully qualified teachers in the following study areas: language of instruction, mathematics, foreign languages, sciences, computer science and information technology, technology, business studies, social studies, the arts, and physical education.

Temporary employment. Fixed term employment not extended longer than one school year.

Teacher with less than a full qualification. Full qualification means that a teacher has fulfilled all the training requirements for teaching a certain subject at the upper secondary level and meets all other administrative requirements.

Vacant posts were calculated as full-time post, since no distinction could be made between full-time and part-time vacancies. This may mean an overestimation of the proportion of vacancies in countries where part-time posts are customary.

■ Notes on specific countries

■ Table D7.2

Belgium (Flanders): Teachers’ absence is probably overestimated because during the reference period there was a major teacher strike in Flanders.

INDICATOR D8: Age and gender distribution of teachers and staff employed in education

■ General note

Data on age and gender derive from the UOE Questionnaire 2002, reference year 2000/2001. Characteristics are measured as the percentage of teachers in each of the five age groups, by level of

education. Data for 1998 included in Chart D8.1 derive from the UOE Questionnaire 2001 and refer to the school year 1997/1998.