

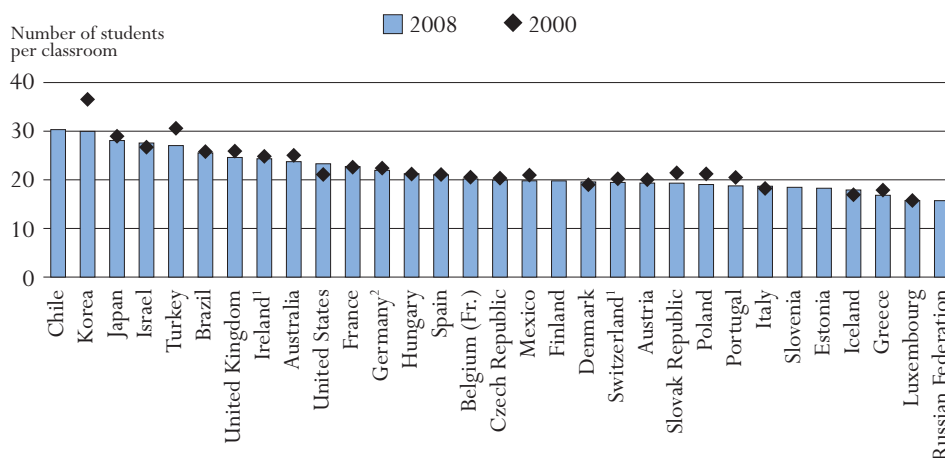
WHAT IS THE STUDENT-TEACHER RATIO AND HOW BIG ARE CLASSES?

This indicator examines the number of students per class at the primary and lower secondary levels, the ratio of students to teaching staff at all levels, including a breakdown by type of institutions. Class size and student-teacher ratios are much-discussed aspects of the education students receive and – along with students’ total instruction time (see Indicator D1), teachers’ average working time (see Indicator D4) and the division of teachers’ time between teaching and other duties – are among the determinants of the size of countries’ teaching force. Class size and the ratio of students to teaching staff, together with teachers’ salaries (see Indicator D3) and the age distribution of teachers (see Indicator D7 available on line), also have a considerable impact on the level of current expenditure on education (see Indicator B6).

Key results

Chart D2.1. Average class size in primary education (2000, 2008)

The average class size in primary education is about 22 students per class, but varies from 30 or more in Chile and Korea to nearly half that number in Luxembourg and the partner country the Russian Federation. From 2000 to 2008, the average class size within countries decreased slightly, and differences in class size among OECD countries seemed to diminish. In two-thirds of the countries with comparable data for 2000 and 2008, class sizes have tended to decrease, but most notably in countries that had relatively large class sizes in 2000 (such as Korea and Turkey). On the contrary, class sizes have tended to increase in countries that had relatively small class sizes in 2000 (such as Iceland).




1. Public institutions only.

2. Years of reference 2001 and 2008.

Countries are ranked in descending order of the average class size in primary education in 2008.

Source: OECD. 2008 data: Table D2.1. 2000 data: Table D2.4 available on line. See Annex 3 for notes (www.oecd.org/edu/eag2010).

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Other highlights of this indicator

- The average class size in lower secondary education is about 24 students per class, but varies from about 30 or more in Chile, Japan, Korea and the partner country Israel, to 20 or fewer in Denmark, Iceland, Luxembourg, Switzerland (public institutions), and the partner country the Russian Federation.
- Between primary and lower secondary education, the number of students per class increases by an average of more than two, whereas ratios of students to teaching staff tend to decrease owing to more annual instruction time, although this pattern is not uniform among countries.
- On average in OECD countries, the availability of teaching resources relative to the number of students in secondary education is more favourable in private than in public institutions. This is most striking in Mexico where, at the secondary level, there are around 14 more students per teacher in public institutions than in private ones. On average across OECD countries, at the lower secondary level, there is less than one student more per class in public than in private institutions.

INDICATOR D2

Policy context

Class size, education quality and education systems

Class size is a hotly debated topic and an important element of education policy in many OECD countries. Smaller classes are often perceived as allowing teachers to focus more on the needs of individual students and as reducing the amount of class time needed to deal with disruptions. Smaller class sizes may also influence parents when they choose schools for their children. In this respect, class size may be viewed as an indicator of the quality of the school system.

Yet evidence on the effects of differences in class size on student performance is mixed. In what has evolved as a contentious area of research, and one which has produced little in the way of consistent results, there is some evidence that smaller classes may have an impact upon specific groups of students (*e.g.* disadvantaged students) (Krueger, 2002).

A further reason for the mixed evidence on the impact of class size may be that class size does not vary enough to estimate the true effects of this variable on student performance. In addition, policies that group students who perform less satisfactorily into smaller classes in order to devote more attention to individual students may reduce the observed performance gains that might otherwise be expected from smaller classes. Finally, the fact that the relationship between class size and student performance is often non-linear makes the effects difficult to evaluate.

Many factors influence the interaction between teachers and students, and class size is only one of them. Other influences include the number of classes or students for which a teacher is responsible, the subject taught, the division of the teacher's time between teaching and other duties, the grouping of students within classes, the pedagogical approach employed and the practice of team teaching.

The ratio of students to teaching staff is also an important indicator of the resources devoted to education. A smaller ratio of students to teaching staff may have to be weighted against higher salaries for teachers, increased professional development and teacher training, greater investment in teaching technology, or more widespread use of assistant teachers and other paraprofessionals whose salaries are often considerably lower than those of qualified teachers. Moreover, as larger numbers of children with special educational needs are integrated into normal classes, more use of specialised personnel and support services may limit the resources available for reducing the ratio of students to teaching staff.

The ratio of students to teaching staff is obtained by dividing the number of full-time equivalent students at a given level of education by the number of full-time equivalent teachers at that level and in similar types of institutions. However, this ratio does not take into account the amount of instruction time of students compared to the length of a teacher's working day nor how much time teachers spend teaching. It therefore cannot be interpreted in terms of class size (Box D2.1).

Evidence and explanations

Average class size in primary and lower secondary education

At the primary level, the average class size in OECD countries is about 22 students per class, but the number varies widely among countries. It ranges from 30 or more students per primary class in Chile and Korea to fewer than 20 in Austria, the Czech Republic, Denmark, Finland,

Greece, Iceland, Italy, Luxembourg, Mexico, Poland, Portugal, the Slovak Republic, Switzerland (public institutions) and the partner countries Estonia, the Russian Federation and Slovenia. At the lower secondary level (in general programmes), the average class size in OECD countries is about 24 students per class, although the number varies from more than 35 students per class in Korea to 20 or fewer in Denmark, Iceland, Luxembourg, Switzerland (public institutions) and the partner country the Russian Federation (Table D2.1). However there are between 22 and 25 students per classroom in one third of the OECD countries.

Box D2.1. Relationship between class size and ratio of students to teaching staff

The number of students per class results from a number of different elements: the ratio of students to teaching staff, the number of classes or students for which a teacher is responsible, the amount of instruction time of students compared to the length of teachers' working days, the proportion of time teachers spend teaching, the grouping of students within classes and team teaching.

For example, in a school of 48 full-time students and 8 full-time teachers, the ratio of students to teaching staff is 6. If teachers' working week is estimated to be 35 hours, including 10 hours teaching, and if instruction time for each student is 40 hours per week, then whatever the grouping of students in this school, average class size can be estimated as follows:

Estimated class size = 6 students per teacher * (40 hours of instruction time per student / 10 hours of teaching per teacher) = 24 students.

Using a different approach, the class size presented in Table D2.1 is defined as the division of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excludes teaching in sub-groups. Thus, the estimated class size will be close to the average class size of Table D2.1 where teaching in sub-groups is less frequent (as is the case in primary and lower secondary education).

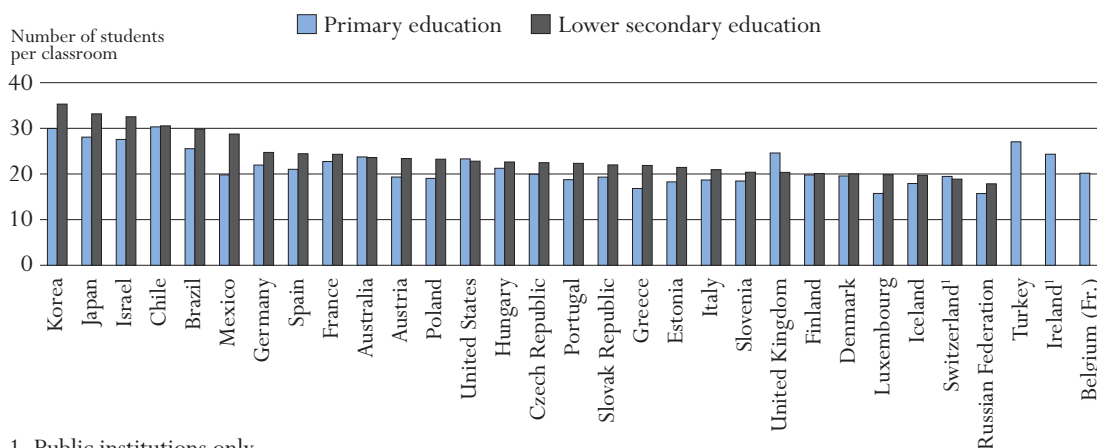
Because of these definitions, similar student-teacher ratios between countries can result in different class sizes. For example, in lower secondary education, France and Spain have similar average class sizes (24.3 students in France and 24.4 in Spain – Table D2.1), but the ratio of students to teaching staff differs substantially, with 14.6 students per teaching staff in France compared to 10.3 in the Spain (Table D2.2). The explanation may lie in the higher number of teaching hours required of teachers in Spain (644 in France and 713 in Spain – see Table D4.1) and lower instruction time for students in Spain (see Table D1.1).

The number of students per class tends to increase by an average of more than two students between primary and lower secondary education. In Austria, Greece, Japan, Korea, Luxembourg, Mexico, Poland and the partner countries Brazil and Israel, the increase in average class size exceeds four students, while the United Kingdom and, to a lesser extent, the United States, show a drop in the number of students per class between these two levels of education (Chart D2.2).

The indicator on class size is limited to primary and lower secondary education because class sizes are difficult to define and compare at higher levels, where students often attend several different classes, depending on the subject area.

Among OECD countries on average, between 2000 and 2008, average class size in primary education did not vary significantly (21.6 in 2008 as compared to 22.0 in 2000), even if there had been reforms on class sizes implemented in some countries in the last years (see Table B7.4). However, among countries with comparable data, class size decreased in countries that had larger class sizes in 2000 (for example in Korea and Turkey), whereas it increased (or stayed constant) in countries that had the smallest class sizes in 2000 (Iceland, Italy and Luxembourg). At the secondary level of education, the range of variations in class sizes between 2000 and 2008 similarly tended to narrow (Table D2.1 and Table D2.4 available on line).

Chart D2.2. Average class size in educational institutions, by level of education (2008)



1. Public institutions only.

Countries are ranked in descending order of average class size in lower secondary education.

Source: OECD, Table D2.1. See Annex 3 for notes (www.oecd.org/edu/eag2010).

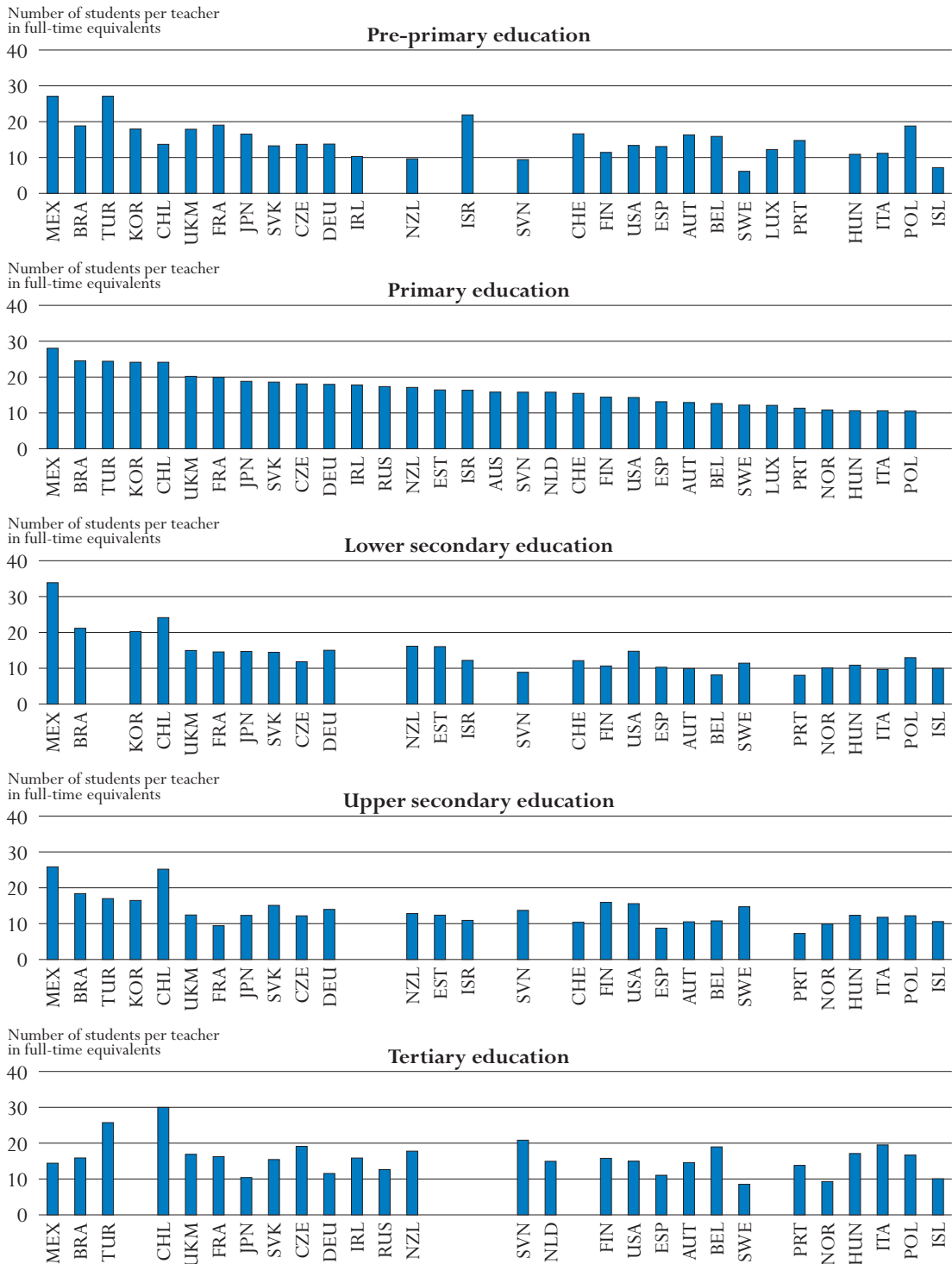
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Ratio of students to teaching staff

In primary education, the ratio of students to teaching staff, expressed in full-time equivalents, ranges from 24 students or more per teacher in Chile, Korea, Mexico, Turkey and the partner country Brazil, to fewer than 11 in Hungary, Italy, Norway and Poland. The OECD average in primary education is 16 students per teacher (Chart D2.3).

There is similar variation among countries in terms of the ratio of students to teaching staff at the secondary level. The range is from 30 students per full-time equivalent teacher in Mexico to fewer than 11 in Austria, Belgium, Iceland, Italy, Luxembourg, Norway, Portugal, Spain and the partner country the Russian Federation. On average among OECD countries, the ratio of students to teaching staff at the secondary level is 14, which is close to the ratio in 11 out of 29 OECD and 5 partner countries: Finland (14), Germany (15), Ireland (13), Japan (13), New Zealand (15), Poland (13), the Slovak Republic (15), Sweden (13), the United Kingdom (13), the United States (15) and the partner country Estonia (14) (Table D2.2).

Chart D2.3. Ratio of students to teaching staff in educational institutions, by level of education (2008)



Please refer to the Reader's Guide for the list of country codes used in this chart.

Countries are ranked in descending order of students to teaching staff ratios in primary education.

Source: OECD, Table D2.2. See Annex 3 for notes (www.oecd.org/edu/eag2010).

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As the difference in the mean ratios of students to teaching staff between primary and secondary education indicates, there are fewer full-time equivalent students per full-time equivalent teacher at higher levels of education. The ratio of students to teaching staff decreases between primary and secondary education, despite a tendency for class sizes to increase. This was found to be true in all but eight OECD countries (Australia, Chile, Hungary, Italy, Mexico, Poland, the United Kingdom and the United States).

The decrease in the ratio of students to teaching staff from the primary to the secondary level reflects differences in annual instruction time, which tends to increase with the level of education. It may also result from delays in matching the teaching force to demographic changes, or from differences in teaching hours for teachers at different levels (which tends to decrease with level of education, whereas the subject specialism of teachers increases). The general trend is consistent among countries, but it is not obvious, from an educational perspective, why a smaller ratio of students to teaching staff should be more desirable at higher levels of education (Table D2.2).

Ratios of students to teaching staff in pre-primary education are shown in Table D2.2. For this level, information is also given on the ratio of students to contact staff (teachers and teachers' aides). Some countries make extensive use of teachers' aides at this level. Ten OECD countries and two partner countries reported smaller ratios of students to contact staff (Column 1 of Table D2.2) than of students to teaching staff. For the Czech Republic, Japan, the Slovak Republic, Sweden and the United Kingdom, this difference is not substantial. However, Austria, Chile, Germany, Ireland, the United States and the partner countries Brazil and Israel have larger numbers of teachers' aides. As a result, the ratios of students to contact staff are substantially lower than the ratios of students to teaching staff, particularly in Ireland and the partner country Israel.

At the tertiary level, the ratio of students to teaching staff ranges from 25 or more students per teacher in Chile and Turkey to fewer than 11 in Iceland, Japan, Norway and Sweden (Table D2.2). At this level, comparisons should be made with caution, however, since it is difficult to calculate full-time equivalent students and teachers on a comparable basis.

In 9 out of the 14 OECD and partner countries with comparable data, the ratio of students to teaching staff is lower in the more occupationally specific tertiary-type B programmes than in tertiary-type A and advanced research programmes (Table D2.2). Chile and Turkey are the only countries with a significantly higher ratio in tertiary-type B programmes.

Teaching resources in public and private institutions

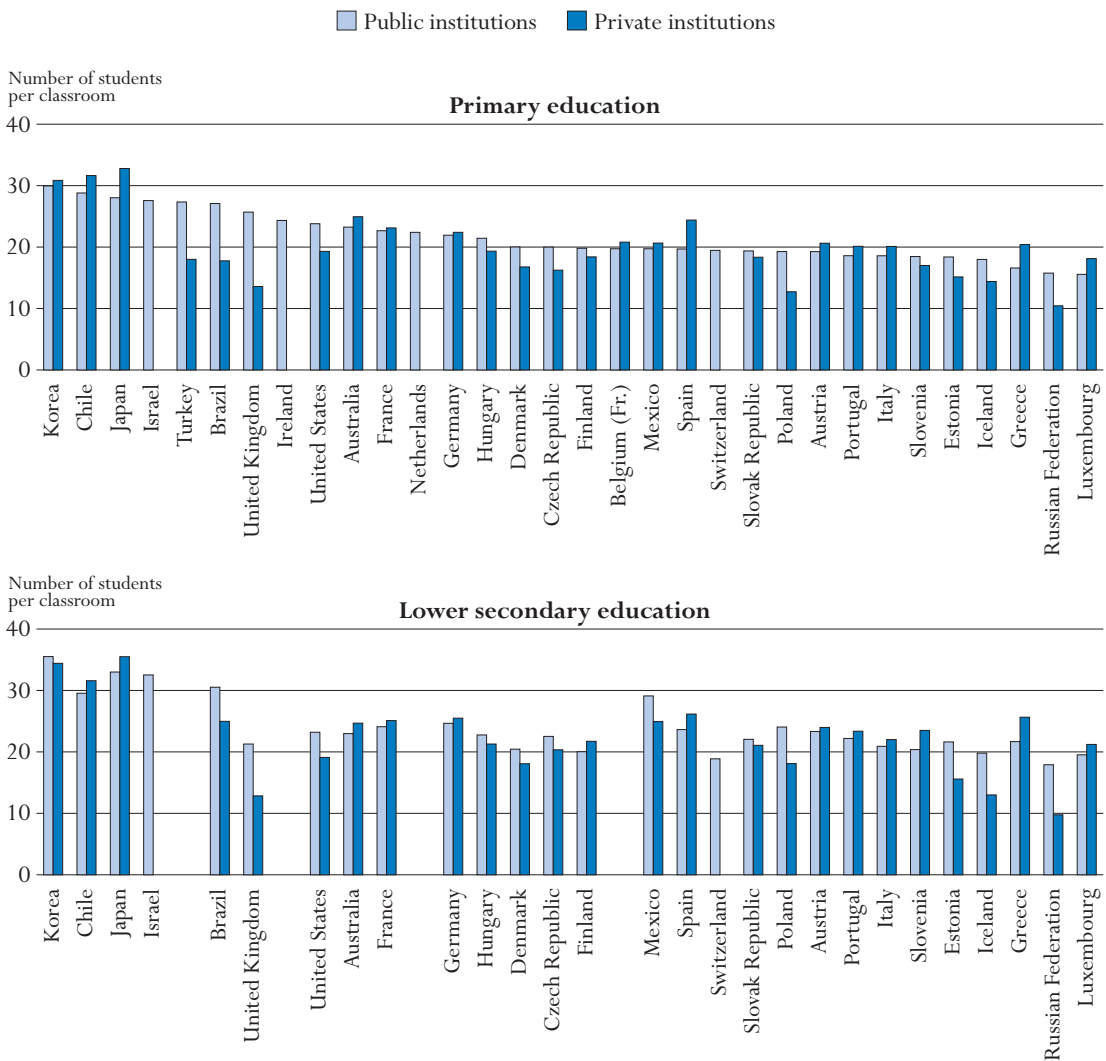
Table D2.3 focuses on the secondary level and presents teaching resources in public and private institutions by comparing the ratio of students to teaching staff for the two types of providers.

On average among OECD countries and partner countries for which data are available, ratios of students to teaching staff are slightly lower in private institutions at both lower secondary and upper secondary levels, with less than one more student per teacher in public institutions than in private institutions at the overall secondary level. The largest differences are in Mexico, the United Kingdom and the partner country Brazil where, at the lower secondary level, there are at least nine more students per teacher in public than in private institutions. The difference in Mexico at the upper secondary level is even larger.

Conversely, in some countries, ratios of students to teaching staff are lower in public institutions than in private institutions. This is most pronounced at the lower secondary level in Spain which has some 16 students per teacher in private institutions but only 9 in public institutions.

Among OECD countries for which data are available, average class sizes do not differ between public and private institutions by more than one student per class for both primary and lower secondary education (Chart D2.4 and Table D2.1). However, there are marked differences among countries. At the primary level, in Poland, Turkey, the United Kingdom, the United States and the partner countries Brazil and the Russian Federation, for example, average class sizes in public institutions are larger by four students or more per class.

Chart D2.4. Average class size in public and private institutions, by level of education (2008)



Countries are ranked in descending order of the average class size in public institutions in primary education.

Source: OECD. Table D2.1. See Annex 3 for notes (www.oecd.org/edu/eqg2010).

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However, with the exception of the United States and the partner country Brazil, the private sector is relatively small in all of these countries (at most 5% of students at the primary level). In contrast, class sizes in private institutions exceed those in public institutions to at least four students in Japan and Spain.

The comparison of class sizes between public and private institutions shows a mixed picture at the lower secondary level, where private education is more prevalent. Lower secondary average class sizes are larger in private institutions than in public institutions in twelve OECD and one partner country, although differences tend to be smaller than in primary education.

Countries encourage and provide resources for public and private schools for various reasons. In many countries, one reason is to broaden the choices of schooling available to students and their families. Considering the importance of class size in discussions of schooling in many countries, differences in class sizes between public and private schools and institutions may be a driver of differences in enrolment. It is interesting that in countries with a substantial private sector in primary and lower secondary education – Australia, Belgium (French Community), Chile, France, Korea (lower secondary level only) and Luxembourg (see Table C1.5) – there are, on average, only marginal differences in class sizes between public and private institutions. Where large differences do exist, they tend to show that private institutions have more students per class than public ones. This indicates that in countries in which a substantial proportion of students and families choose private educational institutions, class size is not a determining factor in their decision.

Definitions and methodologies

Data refer to the academic year 2007-08 and are based on the UOE data collection on education statistics administered by the OECD in 2009 (for details see Annex 3 at www.oecd.org/edu/eq2010).

Class sizes are calculated by dividing the number of students enrolled by the number of classes. In order to ensure comparability among countries, special needs programmes are 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 the number of full-time equivalent students at a given level of education by the number of full-time equivalent teachers at that level and in the specified type of institution.

The breakdown of the ratio of students to teaching staff by type of institution distinguishes between students and teachers in public institutions and in private institutions (government-dependent private institutions and independent private institutions). Some countries have a small proportion of students in private institutions (see Table C1.5).

Instructional personnel comprises:

- 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 class. 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.

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 include 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 staff, repairers, painters and paperhangers, plasterers, plumbers and vehicle mechanics. It also includes bus drivers and other vehicle operators, construction workers, gardeners and grounds staff, bus monitors and crossing guards, cooks, custodians, food servers and others with similar functions.

Further references

Krueger, A.B. (2002), "Economic Considerations and Class Size", *National Bureau of Economic Research Working Paper*: 8875.

For more information on the gender breakdown of teachers and the age breakdown of teachers, see Indicator D7 available on line (*StatLink*  <http://dx.doi.org/10.1787/888932310586>).

Specific notes on definitions and methodologies regarding this indicator for each country are given in Annex 3 at www.oecd.org/edu/eqq2010.

The following additional material relevant to this indicator is available on line at:

StatLink  <http://dx.doi.org/10.1787/888932310491>

- *Table D2.4. Average class size, by type of institution and level of education (2000)*

Table D2.1.
Average class size, by type of institution and level of education (2008)
Calculations based on number of students and number of classes

	Primary education					Lower secondary education (general programmes)				
	Public institutions	Private institutions			Total: Public and private institutions	Public institutions	Private institutions			Total: Public and private institutions
		Total private institutions	Government-dependent private institutions	Independent private institutions			Total private institutions	Government-dependent private institutions	Independent private institutions	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
OECD countries										
Australia	23.2	24.9	24.9	a	23.7	23.0	24.7	24.7	a	23.6
Austria	19.3	20.6	x(2)	x(2)	19.3	23.3	24.0	x(7)	x(7)	23.4
Belgium	m	m	m	m	m	m	m	m	m	m
Belgium (Fr.)	19.7	20.8	20.8	a	20.2	m	m	m	a	m
Canada	m	m	m	m	m	m	m	m	m	m
Chile	28.8	31.6	33.3	23.8	30.3	29.5	31.6	33.0	24.6	30.5
Czech Republic	20.0	16.2	16.2	a	19.9	22.5	20.3	20.3	a	22.5
Denmark	20.0	16.8	16.8	a	19.6	20.4	18.1	18.1	a	20.0
Finland	19.8	18.4	18.4	a	19.8	20.0	21.7	21.7	a	20.1
France	22.7	23.1	x(2)	x(2)	22.7	24.1	25.1	25.3	13.3	24.3
Germany	21.9	22.4	22.4	x(3)	21.9	24.7	25.5	25.5	x(8)	24.7
Greece	16.6	20.4	a	20.4	16.8	21.7	25.6	a	25.6	21.9
Hungary	21.4	19.3	19.3	a	21.2	22.8	21.3	21.3	a	22.6
Iceland	18.0	14.4	14.4	n	17.9	19.8	13.0	13.0	n	19.7
Ireland	24.3	m	a	m	m	m	m	a	m	m
Italy	18.6	20.1	a	20.1	18.7	20.9	22.0	a	22.0	21.0
Japan	28.0	32.8	a	32.8	28.1	33.0	35.5	a	35.5	33.2
Korea	29.9	30.9	a	30.9	30.0	35.5	34.4	34.4	a	35.3
Luxembourg	15.6	18.1	20.1	18.0	15.7	19.5	21.2	20.9	21.6	19.8
Mexico	19.7	20.7	a	20.7	19.8	29.1	24.9	a	24.9	28.7
Netherlands ¹	22.4	m	a	m	m	m	m	a	m	m
New Zealand	m	m	m	m	m	m	m	m	m	m
Norway	a	a	a	a	a	a	a	a	a	a
Poland	19.3	12.7	14.4	12.1	19.0	24.0	18.1	25.1	16.3	23.2
Portugal	18.6	20.1	24.3	19.1	18.8	22.2	23.4	23.6	23.0	22.3
Slovak Republic	19.4	18.3	18.3	n	19.3	22.0	21.1	21.1	n	22.0
Spain	19.7	24.4	24.3	24.8	21.0	23.6	26.2	26.3	24.9	24.4
Sweden	m	m	m	m	m	m	m	m	m	m
Switzerland	19.5	m	m	m	m	18.9	m	m	m	m
Turkey	27.3	18.0	a	18.0	27.0	a	a	a	a	a
United Kingdom	25.7	13.6	25.7	13.5	24.6	21.3	12.8	21.3	11.2	20.4
United States	23.8	19.3	a	19.3	23.3	23.2	19.1	a	19.1	22.8
<i>OECD average</i>	21.6	20.8	20.9	21.0	21.6	23.7	23.2	23.5	21.8	23.9
<i>EU19 average</i>	20.3	19.1	20.1	18.3	19.9	22.2	21.8	22.5	19.7	22.2
Partner countries										
Brazil	27.1	17.8	a	17.8	25.5	30.5	25.0	a	25.0	29.8
China	36.6	41.8	x(2)	x(2)	36.8	55.5	51.6	x(7)	x(7)	55.2
Estonia	18.4	15.1	a	15.1	18.3	21.6	15.6	a	15.6	21.4
India	m	m	m	m	m	m	m	m	m	m
Indonesia	27.4	22.8	a	22.8	26.6	37.7	33.1	a	33.1	35.9
Israel	27.6	a	a	a	27.6	32.5	a	a	a	32.5
Russian Federation	15.8	10.4	a	10.4	15.7	17.9	9.8	a	9.8	17.8
Slovenia	18.5	17.0	17.0	n	18.5	20.4	23.5	23.5	n	20.4

1. Year of reference 2006.

Source: OECD, India, Indonesia: UNESCO Institute for Statistics (World Education Indicators Programme). China: Based on the *Educational Statistics Yearbook in China 2008*. See Annex 3 for notes (www.oecd.org/edu/eag2010).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


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Table D2.2.
Ratio of students to teaching staff in educational institutions (2008)
By level of education, calculations based on full-time equivalents

	Pre-primary education		Primary education	Secondary education			Post-secondary non-tertiary education	Tertiary education		
	Students to contact staff (teachers and teacher aides)	Students to teaching staff		Lower secondary education	Upper secondary education	All secondary education		Tertiary-type B	Tertiary-type A and advanced research programmes	All tertiary education
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD countries										
Australia ^{1, 2}	m	m	15.8	x(6)	x(6)	12.0	m	m	15.2	m
Austria	12.0	16.3	12.9	9.9	10.5	10.2	10.6	x(10)	x(10)	14.6
Belgium ³	15.9	15.9	12.6	8.1	10.8	9.9	x(5)	x(10)	x(10)	19.0
Canada ²	m	x(6)	x(6)	x(6)	x(6)	16.3	m	m	m	m
Chile	11.9	13.7	24.1	24.1	25.2	24.8	a	74.2	21.6	30.0
Czech Republic	13.5	13.7	18.1	11.8	12.2	12.0	18.2	16.2	19.4	19.1
Denmark	m	6.2	x(4)	10.1	m	m	m	m	m	m
Finland	m	11.4	14.4	10.6	15.9	13.6	x(5)	n	15.8	15.8
France ³	19.0	19.0	19.9	14.6	9.4	11.9	x(8)	16.7	16.1	16.2
Germany	10.7	13.8	18.0	15.0	14.0	14.7	14.8	12.0	11.5	11.5
Greece	m	m	m	m	m	m	m	m	m	m
Hungary	m	10.9	10.6	10.9	12.3	11.6	13.1	19.5	17.0	17.1
Iceland	7.2	7.2	x(4)	10.0	10.6	10.2	x(5, 10)	x(10)	x(10)	10.1
Ireland ²	4.7	10.3	17.8	x(6)	x(6)	12.8	x(6)	x(10)	x(10)	15.9
Italy ²	11.2	11.2	10.6	9.7	11.8	10.8	m	7.5	19.7	19.5
Japan	15.8	16.5	18.8	14.7	12.3	13.4	x(5, 10)	7.5	11.8	10.4
Korea	17.9	17.9	24.1	20.2	16.5	18.2	a	m	m	m
Luxembourg ²	m	12.2	12.1	x(6)	x(6)	9.1	m	m	m	m
Mexico	27.1	27.1	28.0	33.9	25.8	30.7	a	13.3	14.5	14.4
Netherlands ²	m	x(3)	15.8	x(6)	x(6)	15.8	x(6)	n	14.9	14.9
New Zealand	9.6	9.6	17.1	16.2	12.8	14.5	17.1	17.3	17.9	17.8
Norway ²	m	m	10.8	10.1	9.9	10.0	x(5)	x(10)	x(10)	9.3
Poland	m	18.8	10.5	12.9	12.2	12.5	14.1	11.5	16.8	16.7
Portugal	m	14.7	11.3	8.1	7.3	7.7	x(5, 10)	x(10)	x(10)	13.8
Slovak Republic	13.2	13.3	18.6	14.5	15.1	14.8	9.3	10.5	15.5	15.4
Spain	m	13.1	13.1	10.3	8.7	9.8	a	8.8	11.6	11.1
Sweden	6.1	6.1	12.2	11.4	14.7	13.1	12.5	x(10)	x(10)	8.5
Switzerland ^{1, 2}	m	16.6	15.4	12.1	10.4	11.7	m	m	m	m
Turkey	m	27.1	24.4	a	17.0	17.0	a	80.8	20.0	25.7
United Kingdom	16.8	17.9	20.2	15.0	12.4	13.4	x(5)	x(10)	x(10)	16.9
United States	11.0	13.4	14.3	14.8	15.6	15.1	14.7	x(10)	x(10)	15.0
<i>OECD average</i>	<i>13.1</i>	<i>14.4</i>	<i>16.4</i>	<i>13.7</i>	<i>13.5</i>	<i>13.7</i>	<i>13.8</i>	<i>19.7</i>	<i>16.2</i>	<i>15.8</i>
<i>EU19 average</i>	<i>12.3</i>	<i>13.2</i>	<i>14.6</i>	<i>11.5</i>	<i>12.0</i>	<i>12.0</i>	<i>13.2</i>	<i>12.8</i>	<i>15.8</i>	<i>15.4</i>
Partner countries										
Brazil	14.0	18.8	24.5	21.2	18.4	20.0	a	x(10)	x(10)	15.9
China	m	22.4	17.9	16.0	17.5	16.7	m	10.1	m	m
Estonia	m	m	16.4	16.0	12.4	13.8	x(5)	m	m	m
India	m	m	m	m	m	m	m	m	m	m
Indonesia	m	14.9	21.4	15.4	18.1	16.4	a	x(10)	x(10)	17.6
Israel ²	11.1	21.9	16.3	12.2	10.9	11.4	m	m	m	m
Russian Federation ^{2, 4}	m	m	17.3	x(6)	x(6)	8.7	x(6)	10.2	13.5	12.6
Slovenia	9.4	9.4	15.8	8.9	13.7	11.3	x(5)	x(10)	x(10)	20.8

1. Includes only general programmes in upper secondary education.

2. Public institutions only (for Australia, for tertiary-type A and advanced research programmes only; for Ireland, at pre-primary and secondary levels only; for Italy, from pre-primary to secondary level; for Israel, at pre-primary level only; for the Russian Federation, at primary level only).

3. Excludes independent private institutions.

4. Excludes part-time personnel in public institutions at lower secondary and general upper secondary levels.

Source: OECD. India, Indonesia: UNESCO Institute for Statistics (World Education Indicators Programme). China: Based on the *Educational Statistics Yearbook in China 2008*. See Annex 3 for notes (www.oecd.org/edu/eag2010).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


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Table D2.3.
Ratio of students to teaching staff, by type of institution (2008)
By level of education, calculations based on full-time equivalents

	Lower secondary education				Upper secondary education				All secondary education			
	Public	Private			Public	Private			Public	Private		
		Total private institutions	Government-dependent private institutions	Independent private institutions		Total private institutions	Government-dependent private institutions	Independent private institutions		Total private institutions	Government-dependent private institutions	Independent private institutions
		(1)	(2)	(3)		(4)	(5)	(6)		(7)	(8)	(9)
OECD countries												
Australia ¹	x(9)	x(10)	x(11)	a	x(9)	x(10)	x(11)	a	12.3	11.6	11.6	a
Austria	9.8	11.4	x(2)	x(2)	10.6	10.1	x(6)	x(6)	10.1	10.7	x(10)	x(10)
Belgium ²	7.5	m	8.6	m	11.1	m	10.6	m	9.8	m	9.9	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	24.8	23.5	24.9	17.1	25.3	25.1	28.1	14.4	25.1	24.6	27.0	15.1
Czech Republic	11.9	10.4	10.4	a	11.9	13.9	13.9	a	11.9	13.4	13.4	a
Denmark ³	10.1	10.1	10.1	a	m	m	m	a	m	m	m	a
Finland ⁴	10.6	12.9	12.9	a	15.6	18.5	18.5	a	13.2	17.4	17.4	a
France	14.3	m	15.7	m	9.2	m	10.3	m	11.7	m	12.9	m
Germany	15.1	14.2	14.2	x(3)	14.2	12.5	12.5	x(7)	14.8	13.5	13.5	x(11)
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	10.9	10.6	10.6	a	12.4	11.8	11.8	a	11.6	11.4	11.4	a
Iceland ^{3,4}	10.0	9.4	9.4	n	10.3	13.3	13.3	n	10.1	11.9	11.9	n
Ireland ²	x(9)	x(10)	a	x(12)	x(9)	x(10)	a	x(12)	12.8	m	a	m
Italy	9.7	m	a	m	11.8	m	a	m	10.8	m	a	m
Japan ⁴	14.8	13.1	a	13.1	11.7	14.0	a	14.0	13.3	13.8	a	13.8
Korea	20.2	20.4	20.4	a	16.0	17.1	17.1	a	18.4	18.0	18.0	a
Luxembourg	x(9)	m	m	m	x(9)	m	m	m	9.1	m	m	m
Mexico	36.0	24.7	a	24.7	30.8	15.4	a	15.4	34.1	19.7	a	19.7
Netherlands ²	x(9)	m	a	m	x(9)	m	a	m	15.8	m	a	m
New Zealand	16.4	15.2	16.1	13.3	13.2	11.8	12.6	10.5	14.8	13.2	14.0	11.6
Norway	10.1	m	m	m	9.9	m	m	m	10.0	m	m	m
Poland	13.1	10.0	12.0	9.4	12.3	11.4	15.8	10.7	12.6	10.9	14.0	10.3
Portugal	7.9	9.8	9.5	10.1	7.6	6.1	9.2	5.4	7.8	7.2	9.4	6.4
Slovak Republic	14.5	14.0	14.0	n	15.3	13.5	13.5	n	14.9	13.7	13.7	n
Spain	8.7	15.8	15.7	16.6	7.8	13.1	13.3	12.8	8.4	15.0	15.3	14.1
Sweden	11.4	12.0	12.0	n	14.6	15.2	15.2	n	13.0	13.9	13.9	n
Switzerland ⁵	12.1	m	m	m	10.4	m	m	m	11.7	m	m	m
Turkey	a	a	a	a	17.7	7.0	a	7.0	17.7	7.0	a	7.0
United Kingdom ²	17.3	8.3	11.1	5.2	12.7	12.0	13.3	7.4	14.8	11.1	12.9	6.4
United States	15.1	11.8	a	11.8	16.3	10.7	a	10.7	15.7	11.3	a	11.3
<i>OECD average</i>	<i>13.8</i>	<i>13.6</i>	<i>13.4</i>	<i>10.1</i>	<i>13.7</i>	<i>13.3</i>	<i>14.3</i>	<i>8.3</i>	<i>13.8</i>	<i>13.5</i>	<i>14.1</i>	<i>8.9</i>
<i>EU19 average</i>	<i>11.5</i>	<i>11.6</i>	<i>12.1</i>	<i>10.3</i>	<i>11.9</i>	<i>12.6</i>	<i>13.2</i>	<i>9.1</i>	<i>12.0</i>	<i>12.6</i>	<i>13.1</i>	<i>9.3</i>
Partner countries												
Brazil	22.9	12.3	a	12.3	20.3	11.7	a	11.7	21.8	12.0	a	12.0
China	m	m	m	m	m	m	m	m	m	m	m	m
Estonia	16.1	14.5	a	14.5	12.7	6.6	a	6.6	14.1	8.4	a	8.4
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	18.4	12.2	a	12.2	20.3	16.4	a	16.4	19.0	13.9	a	13.9
Israel	12.2	a	a	a	10.9	a	a	a	11.4	a	a	a
Russian Federation	m	m	a	m	m	m	a	m	m	m	a	m
Slovenia ²	8.9	4.5	4.5	n	13.7	14.8	x(6)	x(6)	11.2	13.8	x(10)	x(10)

1. Includes only general programmes in lower and upper secondary education.

2. Upper secondary includes post-secondary non-tertiary education.


3. Lower secondary includes primary education.

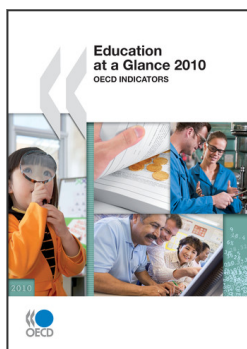
4. Upper secondary education includes programmes from post-secondary education.

5. Includes only general programmes in upper secondary education.

Source: OECD. China, India, Indonesia: UNESCO Institute for Statistics (World Education Indicators Programme). See Annex 3 for notes (www.oecd.org/edu/eag2010).

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