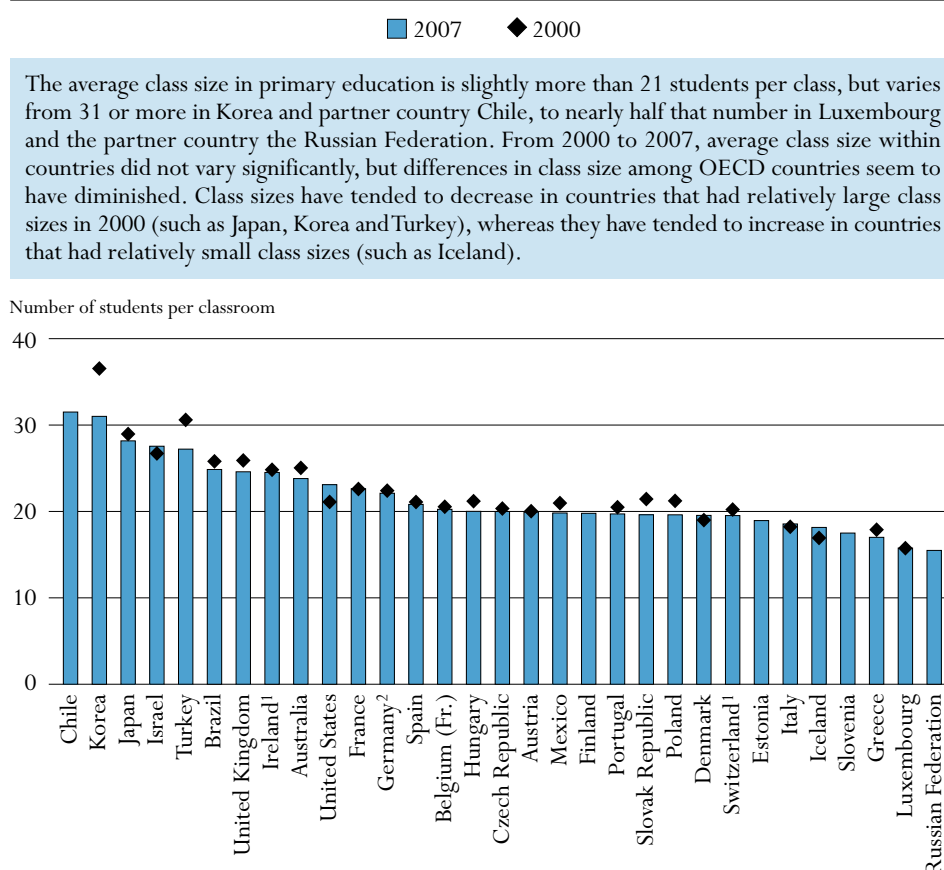


WHAT IS THE STUDENT-TEACHER RATIO AND HOW BIG ARE CLASSES?

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, and the breakdown of educational personnel between teaching and non-teaching staff. 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.

Key results

Chart D2.1. Average class size in primary education (2000, 2007)




1. Public institutions only.

2. Years of reference 2001 and 2007.

Countries are ranked in descending order of average class size in primary education in 2007.

Source: OECD. 2007 data: Table D2.1. 2000 data: Table D2.5, available on line. See Annex 3 for notes (www.oecd.org/edu/eqg2009).

StatLink  <http://dx.doi.org/10.1787/664810147180>

Other highlights of this indicator

- The average class size in lower secondary education is 24 students per class, but varies from about 30 or more in Japan, Korea and the partner countries Chile and Israel, to 20 or fewer in Denmark, Finland, Iceland, Luxembourg and Switzerland (public institutions) and the partner countries the Russian Federation and Slovenia.
- The number of students per class increases by an average of nearly three between primary and lower secondary education, but ratios of students to teaching staff tend to decrease with increasing levels of education 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 numbers 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 15 more students per teacher in public institutions than in private ones. On average across OECD countries, at the lower secondary level, there is one student more per class in public than in private institutions.
- There are on average more than 10 more educational personnel per 1 000 students in tertiary education than in primary and secondary education. Non-teaching staff represent on average 27% of the total teaching and non-teaching staff in primary and secondary schools and about 40% of the total teaching and non-teaching staff at the tertiary level.

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 reducing the amount of class time they spend dealing 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 upon 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) (*e.g.* 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 may 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 estimate.

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 instruction time compared to the length of a teacher's working day, nor how much time teachers spend teaching and therefore it cannot be interpreted in terms of class size (Box D2.1).

The number of teaching and non-teaching staff employed in education per 1 000 students is an indicator of the proportion of a country's human resources devoted to educating the population. The number of persons employed as either teachers or educational support personnel, and the level of compensation of educational staff (see Indicator D3), are both important factors affecting the financial resources that countries commit to education.

Evidence and explanations

Average class size in primary and lower secondary education

At the primary level, the average class size in OECD countries is slightly more than 21 students per class, but this number varies widely between countries. It ranges from 31 or more students per primary class in Korea and partner country Chile to fewer than 20 in Austria, the Czech Republic, Denmark, Finland, Greece, Iceland, Italy, Luxembourg, Mexico, Poland, Portugal, the Slovak Republic, and 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 24 students per class, although this number varies from nearly 36 students per class in Korea to 20 or fewer in Denmark, Finland, Iceland, Luxembourg and Switzerland (public institutions) and the partner countries the Russian Federation and Slovenia (Table D2.1).

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 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.

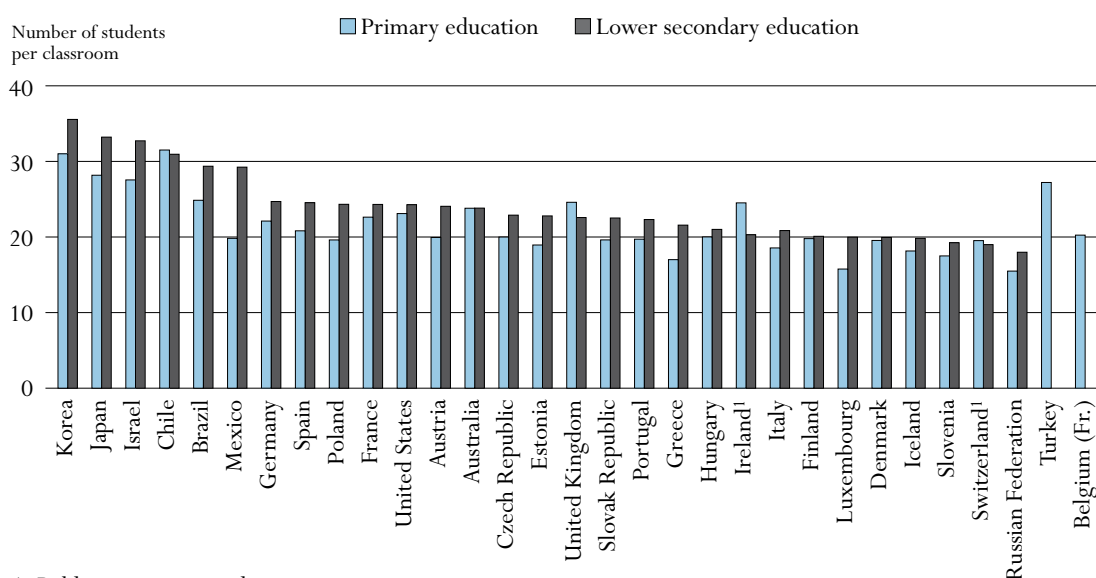
Using a different approach, the class size presented in Table D2.1 is defined as the division of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excludes teaching in sub-groups. Thus, the estimated class size will be 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, Austria and the United States have similar average class sizes (24.1 students in Austria and 24.3 in the United States – Table D2.1), but the ratio of students to teaching staff differs substantially, with 10.3 students per teaching staff in Austria compared to 14.7 in the United States (Table D2.2). The explanation may lie in the higher number of teaching hours required of teachers in the United States (607 in Austria and 1 080 in the United States – Table D4.1).

The number of students per class tends to increase, on average, by nearly three students between primary and lower secondary education. In Austria, Greece, Japan, Korea, Luxembourg, Mexico and Poland, and the partner countries Brazil and Israel, the increase in average class size exceeds four students, while Ireland (public institutions), the United Kingdom and, to a lesser extent, partner country Chile 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.

Between 2000 and 2007, average class size in primary education did not vary significantly (21.4 in 2007 as compared to 22.0 in 2000). However, among countries with comparable data, class size decreased in countries that had larger class sizes in 2000 (for example in Korea, Japan and Turkey), whereas class size increased (or stayed constant) in countries that had the smallest class sizes in 2000 (Iceland, Italy and Luxembourg). At the secondary level of education, variations in class sizes between 2000 and 2007 follow a similar trend, leading as well to a narrowing of the range of class sizes among countries (Table D2.1, and Table D2.5 available on line).

Chart D2.2. Average class size in educational institutions, by level of education (2007)



1. Public institutions only.

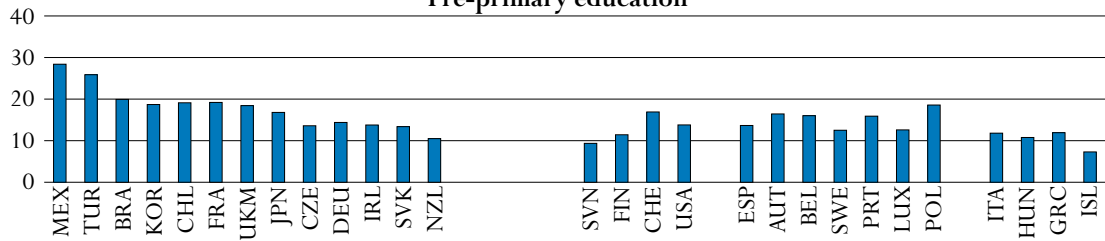
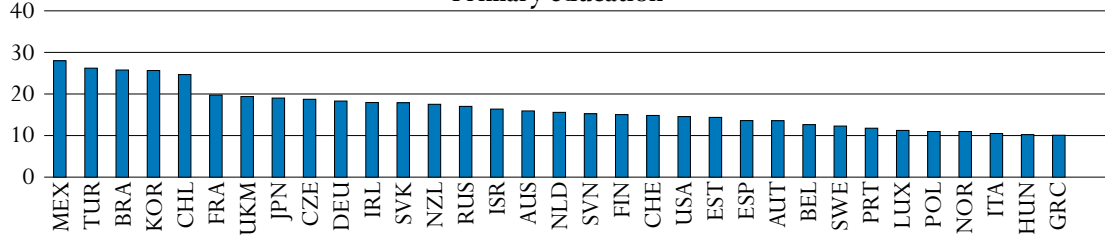
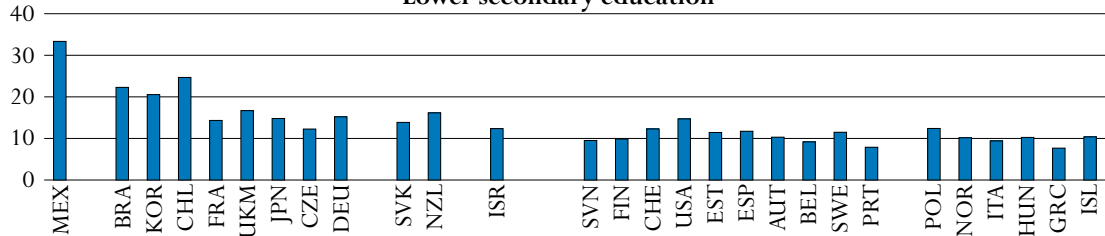
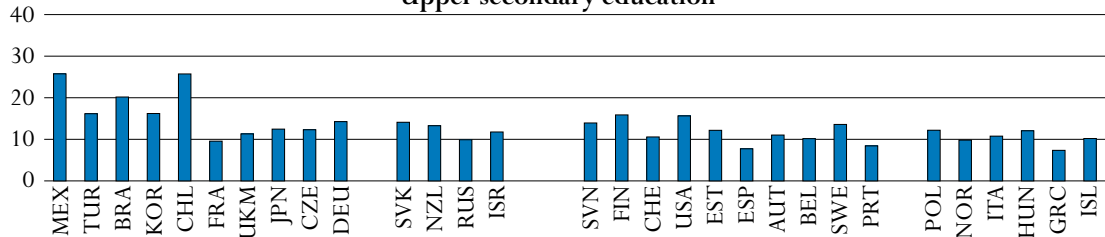
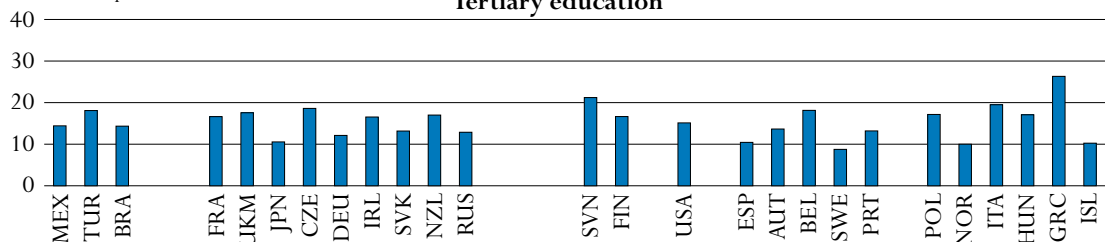
Countries are ranked in descending order of average class size in lower secondary education.

Source: OECD, Table D2.1. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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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 25 students or more per teacher in Korea, Mexico and Turkey and in the partner country Brazil to fewer than 11 in Greece, Hungary and Italy. The OECD average in primary education is 16 students per teacher (Chart D2.3).

Chart D2.3. Ratio of students to teaching staff in educational institutions, by level of education (2007)Number of students per teacher
in full-time equivalents**Pre-primary education**Number of students per teacher
in full-time equivalents**Primary education**Number of students per teacher
in full-time equivalents**Lower secondary education**Number of students per teacher
in full-time equivalents**Upper secondary education**Number of students per teacher
in full-time equivalents**Tertiary education**

Please refer to the Reader's Guide for the list of country codes for country names 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/eag2009).

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There is similar variation among countries in the ratio of students to teaching staff at the secondary level, ranging from 30 students per full-time equivalent teacher in Mexico to fewer than 11 in Austria, Belgium, Greece, Iceland, Italy, Luxembourg, Norway, Portugal and Spain and in the partner country the Russian Federation. On average among OECD countries, the ratio of students to teaching staff at the secondary level is 13, which is close to the ratios in Australia (12), the Czech Republic (12), Finland (13), France (12), Ireland (13), Japan (14), Poland (12), the Slovak Republic (14), Sweden (13), Switzerland (12) and the United Kingdom (14), and the partner countries Estonia (12), Israel (12) and Slovenia (12) (Table D2.2).

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 levels of education, despite a tendency for class sizes to increase. This was found to be true in all but five OECD countries (Hungary, Mexico, Poland, the United Kingdom and the United States), and the partner country Chile.

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. 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).

The ratios of students to teaching staff in pre-primary education are shown in Table D2.2. For the pre-primary level, information is also presented on the ratio of students to contact staff (teachers and teachers' aides). Some countries make extensive use of teachers' aides at the pre-primary level. Eight 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 countries such as the Czech Republic, Japan, the Slovak Republic and the United Kingdom and partner country Chile, this difference is not substantial. However, in Austria, Germany, Ireland and the United States, as well as in the partner country Brazil, there are larger numbers of teachers' aides. As a result, the ratios of students to contact staff are substantially lower than ratios of students to teaching staff, particularly in Ireland and in the partner country Brazil.

At the tertiary level, the ratio of students to teaching staff ranges from 26 students per teacher in Greece to 11 or fewer in Iceland, Japan, Norway, Spain and Sweden (Table D2.2). Such comparisons in tertiary education should be made with caution, however, since it is still difficult to calculate full-time equivalent students and teachers on a comparable basis at this level.

In 12 out of the 15 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). Turkey is the only country with a significantly higher ratio in tertiary-type B programmes.

Teaching resources in public and private institutions

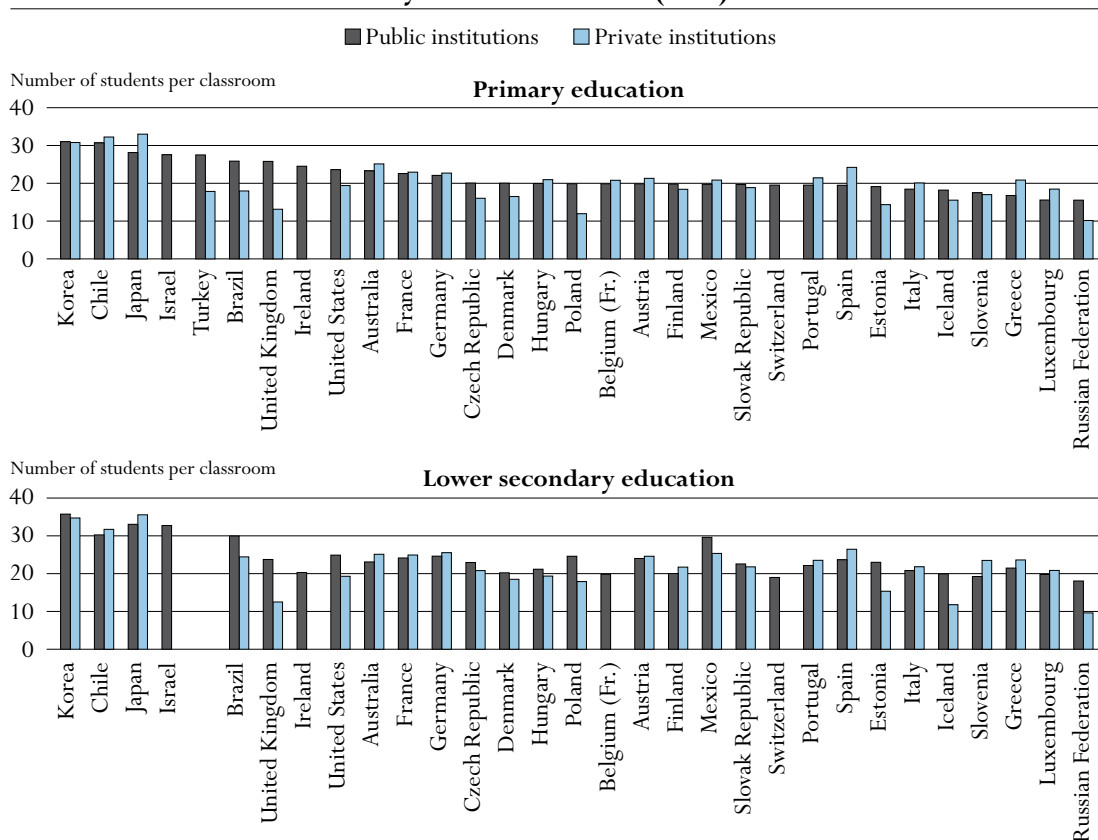
Table D2.3 focuses on the secondary level and illustrates teaching resources in public and private institutions by comparing the ratio of students to teaching staff for the two types of providers.

On average among OECD countries and partner countries for which data are available, the ratios of students to teaching staff are smaller in private institutions at both lower secondary and upper secondary levels, with 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 11 more students per teacher in public than in private institutions. The difference in Mexico at the upper secondary level is even larger.

In some countries, ratios of students to teaching staff are smaller in the public sector than in the private sector. This is most pronounced at the lower secondary level in Spain where there are some 16 students per teacher in private institutions compared with only 10 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, this disguises marked differences among countries. At the primary level, in the Czech Republic, Poland, Turkey, the United Kingdom and the United States, and in the partner countries Brazil, Estonia and the Russian Federation, for example, average class sizes in public institutions are higher by four students or more per class.

Chart D2.4. Average class size in public and private institutions, by level of education (2007)



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

Source: OECD, Table D2.1. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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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 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 a similar degree in Greece, 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 11 OECD and 2 partner countries, 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 such as Australia, Belgium (French Community), France, Korea (lower secondary level only), and Luxembourg and the partner country Chile (Table C1.5), there are, on average, only marginal differences in class size 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 where a substantial proportion of students and families have decided to choose private education institutions, class size is not a major determinant of their decisions.

Teaching staff and non-teaching staff employed in education

The size of teaching staff has an impact on the training of children and students, and also on expenditure on educational institutions (expenditure on compensation of teachers). However expenditure is also dependent on the size of non-teaching staff in the educational sector. There are significant differences in the distribution of educational staff between teaching and other categories, reflecting differences among countries in the organisation and management of schooling. These differences reflect the numbers of staff that countries employ in non-teaching capacities, *e.g.* principals without teaching responsibilities, guidance counsellors, school nurses, librarians, researchers without teaching responsibilities, bus drivers, janitors and maintenance workers, and also administrative and management personnel both inside and outside the school.

At primary, secondary and post-secondary non-tertiary levels of education, among the 11 OECD countries and 2 partner countries reporting data for the different categories, the teaching and non-teaching staff employed in primary and secondary schools ranges from about 90 persons or less per 1 000 students enrolled in France, Japan, Mexico and the partner country Chile to 120 persons or more per 1 000 students in the Czech Republic, Greece, Hungary, Norway and the United States and exceeds 150 persons per 1 000 persons in Iceland and Italy.

Among the 13 OECD and partner countries for which data are available for each category of personnel employed in education, the staff not classified as instructional personnel (staff other than teaching staff, teachers' aides and research assistants) represent on average slightly more than one-quarter of the total teaching and non-teaching staff in primary and secondary schools. The share of non-instructional staff is lowest in Greece at less than 10%. In five of these countries

(the Czech Republic, Iceland, Italy, the United States and the partner country Chile), these staff represent between 30% and 40% of total teaching and non-teaching staff and in Mexico, this proportion exceeds 40% (Table D2.4a). However, in some countries (*e.g.* the Czech Republic and Mexico) these large shares of non-teaching staff are not necessarily associated with higher than average expenditure per student; expenditure per student in these countries is below the OECD average (Table B1.2). This implies that the levels of salaries for the different categories are low enough to counterbalance the larger size of non-teaching categories within the educational personnel.

In Hungary, Iceland, Italy and the United States, maintenance and operations personnel working in primary, secondary and post-secondary non-tertiary schools represent more than 20 persons per 1 000 students enrolled in these schools. Administrative personnel represent between 4 and 10 persons per 1 000 students enrolled in primary and secondary schools in France, Hungary, Iceland, Japan and the United States and 18 persons or more per 1 000 students in Australia, the Czech Republic and Mexico, whereas the staff employed in school and higher level management exceed 6 persons per 1 000 students in Mexico, Norway and the Slovak Republic, and 10 persons in Greece and Iceland (Table D2.4a). Finally, the staff employed to provide professional support for students are relatively numerous in Italy and the United States (about 10 persons per 1 000 students enrolled in both primary and secondary schools).

At tertiary level of education, there are also significant differences in the distribution of educational staff between instructional and other categories in the 10 OECD countries and one partner country for which data are available: educational staff varies from less than 50 persons per 1 000 students in Greece to 150 or more in Austria, Iceland, Japan and the United States. Compared to the primary and secondary levels of education, there are more than 10 more teaching and non-teaching staff per 1 000 students in tertiary education, on average among countries with available data in the different levels of education. However, among the nine countries with available data for both tertiary education and primary, secondary and post-secondary non-tertiary education, the difference surpasses 20 persons in six of them.

In tertiary education, staff not classified as instructional personnel represents on average nearly 40% of the total teaching and non-teaching staff (among countries with available data for the different categories). In most of these countries, non-instructional staff represents between 30% and 40% of the total teaching and non-teaching staff, but it exceeds 50% in the Czech Republic, Hungary and the United States (Table D2.4b). In the Czech Republic, this is attributed to a larger proportion of administrative personnel, and in the United States, this is attributed to the larger proportions of both management personnel and professional support for students, in comparison to other countries. It is interesting to note that two (the Czech Republic and Hungary) out of these three countries have lower than average expenditure per student at the tertiary level (Table B1.2), thus showing that the size of non-instructional staff does not necessarily result in higher than average expenditure per student (as shown above for primary, secondary and post-secondary non-tertiary education).

Definitions and methodologies

Data refer to the academic year 2006/07 and are based on the UOE data collection on education statistics administered by the OECD in 2008 (for details see Annex 3 at www.oecd.org/edu/eag2009).

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 has been 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). In some countries the proportion of students in private institutions is small (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

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

StatLink  <http://dx.doi.org/10.1787/664810147180>

- *Table D2.5. Average class size, by type of institution and level of education (2000)*

Specific notes on definitions and methodologies regarding this indicator for each country are given in Annex 3 at www.oecd.org/edu/eqg2009.

Table D2.1.

Average class size, by type of institution and level of education (2007)*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	23.3	25.1	25.1	a	23.8	23.1	25.1	25.1	a	23.8
	Austria	19.9	21.3	x(2)	x(2)	19.9	24.0	24.6	x(7)	x(7)	24.1
	Belgium	m	m	m	a	m	m	m	m	a	m
	Belgium (Fr.)	19.9	20.8	20.8	a	20.2	19.8	m	m	a	m
	Canada	m	m	m	m	m	m	m	m	m	m
	Czech Republic	20.0	16.0	16.0	a	20.0	22.9	20.8	20.8	a	22.9
	Denmark	20.0	16.5	16.5	a	19.5	20.2	18.5	18.5	a	19.9
	Finland	19.8	18.4	18.4	a	19.8	20.0	21.7	21.7	a	20.1
	France	22.6	22.9	x(2)	x(2)	22.6	24.1	24.9	25.1	13.7	24.3
	Germany	22.1	22.7	22.7	x(3)	22.1	24.6	25.5	25.5	x(8)	24.7
	Greece	16.8	20.9	a	20.9	17.0	21.5	23.6	a	23.6	21.6
	Hungary	19.9	21.0	21.0	a	20.0	21.2	19.4	19.4	a	21.0
	Iceland	18.2	15.5	15.5	n	18.2	19.9	11.8	11.8	n	19.8
	Ireland	24.5	m	a	m	m	20.3	m	a	m	m
	Italy	18.4	20.1	a	20.1	18.6	20.8	21.8	a	21.8	20.9
	Japan	28.1	33.0	a	33.0	28.2	33.0	35.6	a	35.6	33.2
	Korea	31.0	30.8	a	30.8	31.0	35.8	34.7	34.7	a	35.6
	Luxembourg	15.6	18.5	18.2	18.5	15.8	19.8	20.8	20.8	21.0	20.0
	Mexico	19.7	20.9	a	20.9	19.8	29.6	25.3	a	25.3	29.2
	Netherlands	x(5)	x(5)	x(5)	a	m	m	m	m	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	19.9	11.9	11.8	12.0	19.6	24.6	17.9	25.5	16.0	24.3	
Portugal	19.5	21.4	24.0	20.7	19.7	22.2	23.5	23.8	23.1	22.3	
Slovak Republic	19.7	18.8	18.8	n	19.6	22.6	21.8	21.8	n	22.5	
Spain	19.5	24.2	24.3	23.5	20.8	23.7	26.5	26.7	24.7	24.5	
Sweden	m	m	m	m	m	m	m	m	m	m	
Switzerland	19.5	m	m	m	m	19.0	m	m	m	m	
Turkey	27.5	17.8	a	17.8	27.2	a	a	a	a	a	
United Kingdom	25.8	13.1	a	13.1	24.6	23.7	12.5	17.8	11.7	22.6	
United States	23.6	19.4	a	19.4	23.1	24.9	19.3	a	19.3	24.3	
OECD average		21.4	20.5	19.5	20.9	21.4	23.4	22.7	22.6	21.4	23.9
EU19 average		20.2	19.3	19.3	18.4	20.0	22.1	21.6	22.3	19.5	22.4
Partner countries	Brazil	25.9	18.0	a	18.0	24.9	30.0	24.4	a	24.4	29.4
	Chile	30.7	32.2	34.0	23.9	31.5	30.3	31.7	33.2	24.5	30.9
	Estonia	19.1	14.3	a	14.3	18.9	23.0	15.3	a	15.3	22.8
	Israel	27.6	a	a	a	27.6	32.7	a	a	a	32.7
	Russian Federation	15.5	10.2	a	10.2	15.5	18.1	9.6	a	9.6	18.0
	Slovenia	17.5	17.0	17.0	n	17.5	19.2	23.5	23.5	n	19.2

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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


StatLink  <http://dx.doi.org/10.1787/664810147180>

Table D2.2.
Ratio of students to teaching staff in educational institutions (2007)
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	15.9	x(6)	x(6)	12.1	m	m	15.0	m
	Austria	14.1	13.6	10.3	11.0	10.6	9.6	7.0	14.6	13.7
	Belgium ³	16.0	12.6	9.2	10.2	9.8	x(5)	x(10)	x(10)	18.1
	Canada ²	m	x(6)	x(6)	x(6)	16.4	m	m	m	m
	Czech Republic	13.4	13.6	12.3	12.3	12.3	16.9	15.2	19.0	18.6
	Denmark	m	6.0	x(4)	11.2	m	m	m	m	m
	Finland	m	11.4	15.0	9.9	15.9	13.1	n	16.6	16.6
	France ³	19.2	19.2	14.3	9.6	11.9	x(8)	16.8	16.6	16.6
	Germany	11.1	14.4	18.3	15.2	14.3	14.9	11.8	12.2	12.1
	Greece	11.9	11.9	10.1	7.7	7.3	7.5	23.0	28.6	26.3
	Hungary	m	10.8	10.2	10.2	12.1	11.1	18.5	17.0	17.1
	Iceland	7.3	7.3	x(4)	10.4	10.2	10.3	x(5, 10)	x(10)	10.2
	Ireland ²	7.0	13.8	17.9	x(6)	x(6)	13.2	x(6)	x(10)	16.5
	Italy	11.8	11.8	10.5	9.4	10.8	10.2	m	9.3	19.6
	Japan	16.1	16.8	19.0	14.8	12.5	13.5	x(5, 10)	7.9	11.8
	Korea	18.7	18.7	25.6	20.5	16.2	18.2	a	m	m
	Luxembourg ²	m	12.6	11.2	x(6)	x(6)	9.0	m	m	m
	Mexico	28.4	28.4	28.0	33.3	25.7	30.3	a	12.3	14.5
	Netherlands	m	x(3)	15.6	x(6)	x(6)	15.7	x(6)	m	15.1
	New Zealand	10.5	10.5	17.5	16.2	13.3	14.7	16.6	15.5	17.5
	Norway ²	m	m	11.0	10.2	9.8	10.0	x(5)	x(10)	10.0
	Poland	m	18.6	11.0	12.4	12.2	12.3	13.2	12.8	17.2
	Portugal	m	15.9	11.8	7.9	8.4	8.1	x(5)	x(10)	13.2
	Slovak Republic	13.3	13.4	17.9	13.9	14.1	14.0	9.8	10.5	13.2
	Spain	m	13.7	13.6	11.7	7.7	10.0	a	8.0	11.1
	Sweden	m	12.5	12.3	11.5	13.6	12.5	12.2	x(10)	x(10)
	Switzerland ^{1,2}	m	16.9	14.8	12.3	10.6	11.9	m	m	m
	Turkey	m	25.9	26.2	a	16.2	16.2	a	58.1	13.8
	United Kingdom ¹	18.0	18.4	19.4	16.7	11.3	13.6	x(5)	x(10)	17.6
	United States	11.3	13.8	14.6	14.7	15.6	15.1	21.7	x(10)	15.1
	<i>OECD average</i>	<i>14.3</i>	<i>14.9</i>	<i>16.0</i>	<i>13.2</i>	<i>12.5</i>	<i>13.0</i>	<i>13.3</i>	<i>15.1</i>	<i>15.3</i>
	<i>EU19 average</i>	<i>13.6</i>	<i>13.9</i>	<i>14.4</i>	<i>11.5</i>	<i>11.4</i>	<i>11.7</i>	<i>11.9</i>	<i>13.3</i>	<i>16.7</i>
Partner countries	Brazil	14.7	19.9	25.8	22.3	20.2	21.4	a	x(10)	14.3
	Chile	17.7	19.1	24.7	24.7	25.7	25.3	a	m	m
	Estonia	m	m	14.4	11.4	12.2	11.8	x(5)	m	m
	Israel	m	m	16.4	12.4	11.8	12.0	m	m	m
	Russian Federation ^{2,4}	m	m	17.0	x(6)	x(6)	8.8	x(6)	10.7	13.7
	Slovenia	9.4	9.4	15.2	9.5	13.9	11.7	x(5)	x(10)	21.2

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 secondary level only; for the Russian Federation, at primary level only).

3. Excludes independent private institutions.

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

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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 (2007)*By level of education, calculations based on full-time equivalents*

		Lower secondary education				Upper secondary education				All secondary education			
		Public	Total private institutions	Private		Public	Total private institutions	Private		Public	Total private institutions	Private	
				Government-dependent private institutions	Independent private institutions			Government-dependent private institutions	Independent private institutions				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
OECD countries	Australia ¹	x(9)	x(10)	x(11)	a	x(9)	x(10)	x(11)	a	12.3	11.7	11.7	a
	Austria	10.2	11.5	x(2)	x(2)	11.0	11.0	x(6)	x(6)	10.5	11.3	x(10)	x(10)
	Belgium ²	8.9	m	9.4	m	10.5	m	10.0	m	9.9	m	9.8	m
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Czech Republic	12.3	10.7	10.7	a	12.0	14.3	14.3	a	12.2	13.7	13.7	a
	Denmark ³	11.2	11.1	11.1	a	m	m	m	a	m	m	m	a
	Finland ⁴	9.9	9.8	9.8	a	15.2	20.8	20.8	a	12.6	18.1	18.1	a
	France	14.2	m	15.0	m	9.4	m	10.3	m	11.7	m	12.7	m
	Germany	15.3	14.6	14.6	x(3)	14.3	13.7	13.7	x(7)	15.0	14.3	14.3	x(11)
	Greece	7.6	6.9	a	6.9	7.4	6.3	a	6.3	7.5	6.6	a	6.6
	Hungary	10.3	10.1	10.1	a	12.2	11.3	11.3	a	11.2	10.9	10.9	a
	Iceland ^{3,4}	10.4	9.5	9.5	n	10.1	11.6	11.6	n	10.3	11.0	11.0	n
	Ireland ²	x(9)	x(10)	a	x(12)	x(9)	x(10)	a	x(12)	13.2	m	a	m
	Italy	9.5	6.9	a	6.9	11.7	4.3	a	4.3	10.7	5.0	a	5.0
	Japan ⁴	14.9	13.1	a	13.1	11.8	14.2	a	14.2	13.4	14.0	a	14.0
	Korea	20.5	20.7	20.7	a	15.7	16.8	16.8	a	18.4	17.8	17.8	a
	Luxembourg	x(9)	m	m	m	x(9)	m	m	m	9.0	m	m	m
	Mexico	35.8	22.6	a	22.6	30.8	15.5	a	15.5	34.1	18.8	a	18.8
	Netherlands	m	m	m	a	m	m	m	a	m	m	m	a
	New Zealand	16.3	15.3	16.2	13.5	13.2	13.5	15.6	9.5	14.8	14.2	15.8	11.1
Norway	10.2	m	m	m	9.8	m	m	m	10.0	m	m	m	
Poland	12.5	10.2	12.3	9.6	12.4	9.7	14.3	9.1	12.4	9.8	13.4	9.2	
Portugal	7.7	9.5	9.6	9.3	9.0	6.6	11.2	5.7	8.2	7.6	10.2	6.5	
Slovak Republic	13.9	13.2	13.2	n	14.4	19.6	19.6	n	14.1	16.6	16.6	n	
Spain	10.3	16.2	16.2	15.9	7.1	10.0	9.9	10.3	8.9	13.9	14.5	11.8	
Sweden	11.4	12.3	12.3	n	13.4	15.4	15.4	n	12.4	14.0	14.0	n	
Switzerland ⁵	12.3	m	m	m	10.6	m	m	m	11.9	m	m	m	
Turkey	a	a	a	a	16.9	6.7	a	6.7	16.9	6.7	a	6.7	
United Kingdom ¹	18.1	7.3	25.0	6.3	12.2	6.6	5.1	6.7	14.7	6.9	13.9	6.5	
United States	15.6	9.3	a	9.3	16.4	10.6	a	10.6	15.9	9.9	a	9.9	
OECD average		13.3	12.0	13.5	8.7	12.8	11.9	13.3	7.1	13.0	12.0	13.7	7.6
EU19 average		11.4	10.7	13.0	9.1	11.5	11.5	13.0	7.1	11.4	11.4	13.5	7.6
Partner countries	Brazil	24.0	12.8	a	12.8	22.6	11.8	a	11.8	23.4	12.2	a	12.2
	Chile	25.3	24.1	25.6	17.3	26.0	25.5	28.8	14.3	25.7	25.0	27.7	15.1
	Estonia	11.5	8.5	a	8.5	12.3	9.5	a	9.5	11.9	9.2	a	9.2
	Israel	12.4	a	a	a	11.8	a	a	a	12.0	a	a	a
	Russian Federation	m	m	a	m	m	m	a	m	m	m	a	m
	Slovenia ²	9.5	4.3	4.3	n	14.0	13.4	x(6)	x(6)	11.7	12.6	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. See Annex 3 for notes (www.oecd.org/edu/eqg2009).

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


StatLink  <http://dx.doi.org/10.1787/664810147180>

Table D2.4a.

Teaching staff and non-teaching staff employed in primary and secondary educational institutions (2007)
Teaching staff and non-teaching staff in primary and secondary schools per 1000 students, calculation based on full time equivalents

	Instructional personnel		Professional support for students	Management/Quality control/Administration		Maintenance and operations personnel	Total teaching and non-teaching staff	
	Classroom teachers, academic staff & other teachers	Teacher aides and teaching/research assistants		School- and higher-level management	School- and higher-level administrative personnel			
	(1)	(2)		(3)	(4)			(5)
OECD countries	Australia	71.3	x(5)	2.3	m	20.5	2.9	97.0
	Austria	88.2	m	m	m	m	m	m
	Belgium ¹	92.6	m	m	4.2	m	m	m
	Canada ²	61.2	m	m	m	m	m	m
	Czech Republic	71.8	1.1	7.6	4.3	19.5	16.8	121.2
	Denmark	89.4	m	m	m	m	m	m
	Finland ¹	72.6	9.6	m	3.0	m	m	m
	France ²	69.8	2.4	m	4.7	5.3	8.3	90.5
	Germany	63.3	m	m	m	m	m	m
	Greece	117.4	0.4	a	10.7	1.4	0.3	130.3
	Hungary ³	92.0	m	2.5	x(1, 5)	9.5	22.8	126.8
	Iceland ^{1, 3}	96.9	7.7	5.7	11.7	4.8	24.6	151.4
	Ireland	64.3	m	m	m	m	m	m
	Italy ^{1, 3}	97.1	3.2	10.8	2.7	14.0	28.6	156.4
	Japan ^{1, 3}	63.5	m	5.5	5.6	4.9	5.8	85.3
	Korea ¹	47.0	a	m	2.8	m	m	m
	Luxembourg ²	100.0	m	m	m	m	m	m
	Mexico ^{1, 3}	34.5	0.2	1.1	6.3	18.0	5.9	66.1
	Netherlands	63.9	m	m	m	m	m	m
	New Zealand	63.3	m	m	m	m	m	m
	Norway ^{1, 2}	95.6	8.1	4.4	8.3	m	5.7	122.2
	Poland ^{1, 2}	84.5	m	4.9	5.5	m	m	m
	Portugal	104.0	m	m	m	m	m	m
	Slovak Republic ¹	67.4	1.2	0.2	6.8	m	m	m
	Spain	86.9	m	m	m	m	m	m
	Sweden	80.5	m	m	m	m	m	m
	Switzerland ²	75.1	m	m	m	m	m	m
	Turkey	43.4	a	m	m	m	m	m
United Kingdom	65.8	m	m	m	m	m	m	
United States	67.2	13.3	9.7	5.2	10.0	27.1	132.5	
	OECD average	76.4	4.7	5.0	5.8	10.8	13.5	116.3
	EU19 average	82.7	3.0	5.2	5.3	10.0	15.4	125.0
Partner countries	Brazil	43.4	m	m	m	m	m	m
	Chile	40.0	a	0.5	4.3	1.2	16.3	62.4
	Estonia	78.8	m	m	m	m	m	m
	Israel	70.7	m	m	m	m	m	m
	Russian Federation	95.3	m	m	m	m	m	m
	Slovenia ^{1, 3}	78.4	7.9	9.4	4.5	m	m	100.2

1. School- and higher-level management excludes higher-level management.

2. Public institutions only.

3. School- and higher-level administrative personnel excludes higher-level administrative personnel.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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


StatLink  <http://dx.doi.org/10.1787/664810147180>

Table D2.4b.

Teaching staff and non-teaching staff employed in tertiary educational institutions (2007)*Teaching staff and non-teaching staff in tertiary educational institutions per 1000 students, calculation based on full time equivalents*

	Instructional personnel		Professional support for students	Management/Quality control/Administration		Maintenance and operations personnel	Total teaching and non-teaching staff
	Classroom teachers, academic staff & other teachers	Teacher aides and teaching/research assistants		School- and higher-level management	School- and higher-level administrative personnel		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
OECD countries	Australia ^{1, 2}	66.8	5.0	m	m	m	m
	Austria ^{2, 3, 4}	73.2	34.3	2.1	1.2	44.9	4.8
	Belgium	55.1	m	m	m	m	m
	Canada	m	m	m	m	m	m
	Czech Republic	53.7	1.8	8.6	1.5	33.4	13.3
	Denmark	m	m	m	m	m	m
	Finland	60.1	m	m	m	m	m
	France ^{1, 5}	61.7	a	1.0	6.5	7.7	14.0
	Germany	82.6	m	m	m	m	m
	Greece	38.0	a	a	1.1	7.8	1.0
	Hungary ^{3, 4, 6}	58.6	m	x(5)	x(5)	87.0	x(5)
	Iceland ^{3, 4}	97.6	3.2	3.2	10.5	24.8	12.2
	Ireland	60.5	m	m	m	m	m
	Italy ^{3, 4}	51.3	8.6	3.6	0.4	28.8	3.3
	Japan ^{3, 4}	94.8	m	24.8	0.5	26.0	4.3
	Korea	m	m	m	m	m	m
	Luxembourg	m	m	m	m	m	m
	Mexico ^{3, 4}	69.4	m	m	6.2	n	n
	Netherlands	66.2	m	m	m	m	m
	New Zealand ^{1, 4}	58.8	15.9	5.9	4.1	35.1	5.4
	Norway	m	m	m	m	m	m
	Poland	58.3	m	12.5	30.1	m	m
	Portugal	75.8	m	m	m	m	m
	Slovak Republic ³	75.9	m	m	0.9	m	m
	Spain	95.8	m	m	m	m	m
	Sweden	114.2	m	m	m	m	m
	Switzerland	m	m	m	m	m	m
	Turkey	55.3	a	m	m	m	m
	United Kingdom	56.9	m	m	m	m	m
	United States	66.1	7.9	44.8	14.4	40.9	19.5
	<i>OECD average</i>	<i>68.6</i>	<i>11.0</i>	<i>11.8</i>	<i>6.5</i>	<i>33.6</i>	<i>8.6</i>
	<i>EU19 average</i>	<i>66.9</i>	<i>14.9</i>	<i>5.5</i>	<i>6.0</i>	<i>34.9</i>	<i>7.3</i>
Partner countries	Brazil	69.7	m	m	m	m	m
	Chile	m	m	m	m	m	m
	Estonia	m	m	m	m	m	m
	Israel ¹	81.4	m	m	m	m	m
	Russian Federation	77.7	m	m	m	m	m
	Slovenia ^{3, 4}	47.1	33.4	21.0	3.5	13.6	4.7

1. Public institutions only.

2. Excludes tertiary-type B education.

3. School- and higher-level management excludes higher-level management.


4. School- and higher-level administrative personnel excludes higher-level administrative personnel.

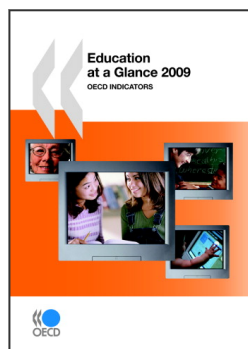
5. School- and higher-level management excludes school-level management.

6. Tertiary-type B is partially included with upper secondary education.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2009).

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

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