

# **Education at a Glance 2014: OECD Indicators**

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# Indicator D2 What is the student-teacher ratio and how big are classes?

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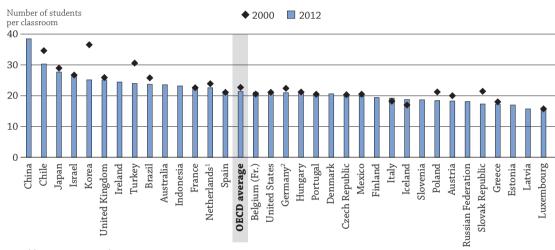
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# WHAT IS THE STUDENT-TEACHER RATIO AND HOW BIG ARE CLASSES?

- The average primary school class in OECD countries has more than 21 students, but classes are usually larger in partner countries.
- Primary school classes tended to become smaller between 2000 and 2012, especially in countries that had relatively large classes, such as Korea and Turkey.
- On average across OECD countries, the number of students per class grows by two students between primary and lower secondary education.
- Although teachers' job satisfaction is only weakly related to class size, it does diminish when the proportion of students with behavioural problems in a class exceeds 30%, according to TALIS (Teaching and Learning International Survey) 2013 results.

# Chart D2.1. Average class size in primary education (2000, 2012)



- 1. Public institutions only.
- 2. Year of reference 2001 instead of 2000.

Countries are ranked in descending order of average class size in primary education in 2012.

Source: OECD, 2012 data: Table D2.1, 2000 data: Table D2.4, available on line. See Annex 3 for notes (www.oecd.org/edu/eag.htm). StatLink http://dx.doi.org/10.1787/888933119758

# Context

Class size and student-teacher ratios are much-discussed aspects of education and, along with students' instruction time (see Indicator D1), teachers' 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. Together with teachers' salaries (see Indicator D3) and the age distribution of teachers (see Indicator D5), class size and student-teacher ratios also have a considerable impact on the level of current expenditure on education (see Indicators B6 and B7).

Smaller classes are often seen as beneficial because they allow teachers to focus more on the needs of individual students and reduce the amount of class time needed to deal with disruptions. Yet, while there is some evidence that smaller classes may benefit specific groups of students, such as those from disadvantaged backgrounds (Finn, 1998; Krueger, 2002 and Piketty and Valdenaire, 2006), overall, evidence of the effect of differences in class size on student performance is weak. According to recent findings from the 2013 OECD Teaching and Learning International Survey (TALIS), smaller classes are not necessarily related to greater job satisfaction, except in some cases (Box D2.1). However, there is also evidence that suggests a positive relationship between smaller classes and more innovative teaching practices (Hattie, 2009; OECD, 2014).

INDICATOR D2

The ratio of students to teaching staff indicates how resources for education are allocated. Smaller student-teacher ratios often have to be weighed against higher salaries for teachers, investing in their professional development, 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. As larger numbers of children with special needs are integrated into mainstream classes, more use of specialised personnel and support services may limit the resources available for reducing student-teacher ratios.

# Other findings

- With the exceptions of Chile, Iceland, Mexico and Norway, the student-teacher ratio decreases in all countries with available data between the primary and lower secondary levels, despite a general increase in class size between these levels.
- On average across OECD countries, the student-teacher ratio in secondary education is slightly more favourable in private than in public institutions. This is most striking in Mexico where, at the secondary level, there are at least 15 students per teacher more in public than in private institutions.
- Class size varies significantly within countries. The biggest classes in primary education are in Chile and China, with 30 or more students per classroom, whereas in Estonia, Latvia and Luxembourg classes have less than 17 students on average.

# Trends

From 2000 to 2012, the average class size in countries with available data for both years decreased by at both the primary and lower secondary levels, and the range of class size among OECD countries narrowed. At the lower secondary level, for example, class size ranged from 17 students (Iceland) to 38 (Korea) in 2000 and from 16 students (Estonia) to 33 (Korea) in 2012. However, class size has grown in some countries that had relatively small classes in 2000, most notably Denmark and Iceland.

# INDICATOR D2

# **Analysis**

# Average class size in primary and lower secondary education

The average primary class in OECD countries had more than 21 pupils in 2012. When considering all countries with available data, that number varies widely and ranges from fewer than 16 pupils in Latvia and Luxembourg to more than 30 in Chile and China. There are fewer than 20 pupils per primary classroom in nearly half of the countries with available data: Austria, the Czech Republic, Estonia, Finland, Greece, Iceland, Italy, Mexico, Poland, the Russian Federation, the Slovak Republic and Slovenia.

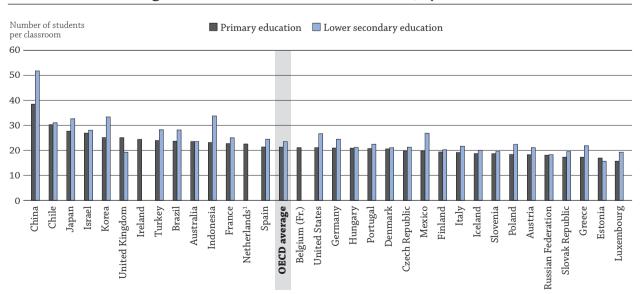
At the lower secondary level, in general programmes, the average class in OECD countries has nearly 24 students. Among all countries with available data on this level of education, that number varies from 20 students or less in Estonia, Finland, Iceland, Latvia, Luxembourg, the Russian Federation, the Slovak Republic, Slovenia, and the United Kingdom to around 33 students per class in Japan, Korea and Indonesia and almost 52 students in China (Table D2.1).

The number of students per class tends to increase between primary and lower secondary education. In Korea, Mexico, China and Indonesia, the increase in average class size exceeds seven students. Meanwhile, the United Kingdom and, to a lesser extent, Estonia and Latvia show a drop in the number of students per class between these two levels of education (Chart D2.2).

The size of the average primary school class decreased slightly between 2000 and 2012 in countries with available data for both years (21 students per class in 2012 as compared to 23 in 2000). Class size is more likely to have declined in countries in which enrolment numbers also declined. However, this is also partly the result of reforms on class size that some countries implemented during the period (see Indicator B7). Among countries with comparable data, class size decreased markedly – by more than four students – in countries that had the largest classes in 2000, such as Korea and Turkey. Class size increased or was unchanged in countries that had the smallest classes in 2000, such as Denmark, Iceland, Italy and Luxembourg (Chart D2.1). In lower secondary school, the gap between the smallest and largest classes narrowed between 2000 and 2012: among OECD countries with comparable data for both years, class size varied from 17 students (Iceland) to 38 (Korea) in 2000 and from 16 students (Estonia) to 33 (Korea) in 2012 (Table D2.1 and Table D2.4, available on line).

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

Chart D2.2. Average class size in educational institutions, by level of education (2012)



1. Public institutions only.

Countries are ranked in descending order of average class size in lower secondary education in 2012.

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

# Box D2.1. What is the impact of class size on teachers' job satisfaction?

There is discussion in many countries about the optimal class size for effective teaching and learning. Class sizes tend to vary across countries; and class size seems to have only a minimal impact on teachers' job satisfaction. The 2013 OECD Teaching and Learning International Survey (TALIS) data indicate that it is not so much the number of students but rather the type of students in a teacher's class that has the strongest association with teachers' self-efficacy and job satisfaction. An example of this is provided in Chart D2.a, where the minimal effect of class size on teachers' job satisfaction is contrasted with the stronger influence of teaching students with behavioural problems.

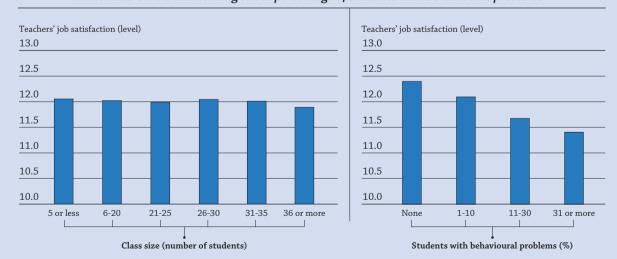
These two graphs demonstrate that lower secondary education teachers reported a decreasing level of job satisfaction when the proportion of students with behavioural problems increases. Teachers reported being most satisfied with their job when they have no students with behavioural problems in their classroom and they are least satisfied with their job when the proportion of students with behavioural problems in their classroom reaches more than 30%. Evidence from TALIS shows that in all participating countries except Iceland, the Netherlands and Norway, this negative relationship is statistically significant and particularly strong in Croatia, Denmark, France, Romania, Spain, Abu Dhabi (United Arab Emirates) and England (United Kingdom).

A similar decrease in job satisfaction is not seen when classes are larger. As shown in Chart D2.a, the average level of job satisfaction remains relatively constant as class size varies. The only countries where class size shows a significant negative association with job satisfaction are Estonia, Malaysia and England. For all other countries, the relationship is not significant except in Latvia, where results show a positive relationship.

These findings from TALIS 2013 suggest that priority should be given to ensuring that teachers are wellequipped to teach diverse and challenging classrooms. This is especially important when considering that more than one in five lower secondary teachers, on average, reported that they need professional development in order to teach students with special needs and another 13% reported a need for professional development in the area of student behaviour and classroom management.

# Chart D2.a. Teachers' job satisfaction and class composition (2013)

Teachers' job satisfaction level in lower secondary education according to the number of students in the classroom and according to the percentage of students with behavioural problems<sup>1</sup>



1. Data on class size and students with behavioural problems are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

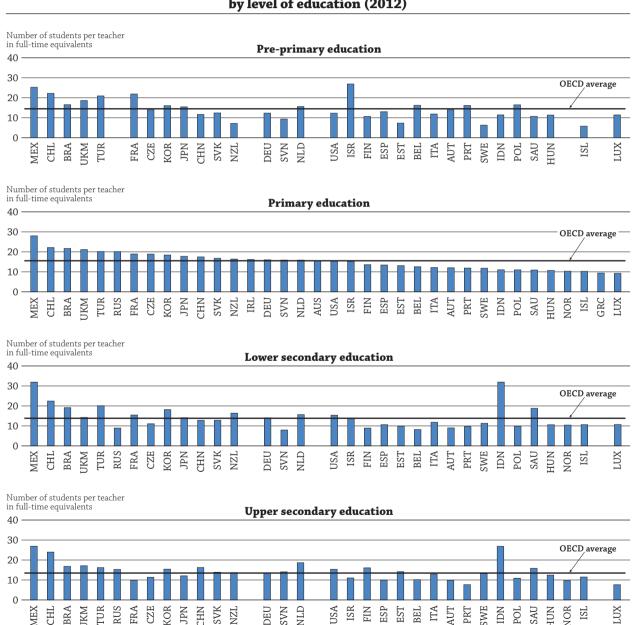
Source: OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, TALIS, OECD Publishing. StatLink http://dx.doi.org/10.1787/888933042276

#### Student-teacher ratios

The ratio of students to teaching staff compares the number of students (full-time equivalent) to the number of teachers (full-time equivalent) at a given level of education and in similar types of institutions. However, this ratio does not take into account the amount of instruction time for students compared to the length of a teacher's working day, nor how much time teachers spend teaching. Therefore, it cannot be interpreted in terms of class size (Box D2.2).

At the primary level, there are fewer than 16 students for every teacher, on average across OECD countries. The student-teacher ratio ranges from more than 28 students per teacher in Mexico and more than 22 students per teacher in Chile to 11 or fewer in Hungary, Iceland, Indonesia, Luxembourg, Norway, Poland and Saudi Arabia (Chart D2.3).

Chart D2.3. Ratio of students to teaching staff in educational institutions, by level of education (2012)



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/eag.htm).

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

Student-teacher ratios also vary, and to a larger extent, at the secondary school level, ranging from 30 students per full-time equivalent teacher in Mexico to fewer than 10 in Austria, Belgium, Indonesia, Luxembourg, and Portugal. On average across OECD countries, there are about 13 students per teacher at the secondary level (Table D2.2).

As the differences in student-teacher ratios indicate, there are fewer full-time equivalent students per full-time equivalent teacher at the secondary level than at the primary level of education. In most countries, the studentteacher ratio decreases between primary and lower secondary school, despite an increase in class size. This is true in all but four OECD countries: Chile, Iceland, Luxembourg and Mexico.

This reduction in the student-teacher ratio reflects differences in annual instruction time, which tends to increase with the level of education (see Indicator D1). 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 of education (the number of teaching hours tends to decrease with the level of education, as teacher specialisation increases). The general trend is consistent among countries, but evidence is mixed as to whether smaller student-teacher ratios are more desirable, from an education perspective, at higher levels of education.

For the pre-primary level (see also Indicator C2), Table D2.2 shows the ratio of student to teaching staff and also the ratio of students to contact staff (teachers and teachers' aides). Some countries make extensive use of teachers' aides at the pre-primary level. Twelve OECD countries (and three partner countries) reported smaller ratios of students to contact staff than of students to teaching staff. However, few countries have large 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 (at least two fewer pupils) in Austria, Brazil, France, Germany, Indonesia, the Netherlands, the United Kingdom and the United States. The difference is particularly large in Chile and Israel, where there are at least 10 fewer pupils per contact staff than per teaching staff.

At the tertiary level, the student-teacher ratio ranges from 20 or more students per teacher in Belgium, Brazil, the Czech Republic, Turkey, the Russian Federation, Saudi Arabia and the United Kingdom to fewer than 10 in Norway (Table D2.2). However, comparisons at this level should be made with caution since it is difficult to calculate full-time equivalent students and teachers on a comparable basis. In 8 of the 14 countries with comparable data at the tertiary level, the ratio of students to teaching staff is lower in more vocationally oriented programmes (tertiary-type B) than in academic (tertiary-type A) and advanced research programmes. Turkey is the only country with a significantly higher student-teacher ratio in vocational programmes at the tertiary level (53 to 1) than in academic (tertiary-type A) and advanced research programmes (16 to 1) (Table D2.2).

# Box D2.2. What is the relationship between class size and the student-teacher ratio?

The number of students per class is calculated using 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 compared to the length of teachers' working days, the proportion of time teachers spend teaching, how students are grouped within classes, and team-teaching arrangements.

For example, in a school of 48 full-time students and 8 full-time teachers, the student-teacher ratio is 6 to 1. If teachers' work week is estimated to be 35 hours, including 10 hours teaching, and if instruction time for each student is 40 hours per week, then regardless of how students are grouped in the school, average class size can

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 number of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excluding teaching in subgroups. Thus, the estimated class size will be close to the average class size in Table D2.1 where teaching in subgroups is less frequent, such as in primary and lower secondary education.

Because of these definitions, similar student-teacher ratios between countries can result in different class sizes. For example, at the primary level, Israel and the United States have similar ratios of student to teaching staff (15 students per teacher - Table D2.2), but the average class size differs substantially (21 students in the United States and 27 in Israel – Table D2.1).

# Class size in public and private institutions

Class size is one factor that parents may consider when deciding on a school for their children; and the difference in average class size between public and private schools (and between different types of private institutions) could influence enrolment.

Among OECD and partner countries for which data are available, average class size generally does not differ between public and private institutions by more than two students per class in both primary and lower secondary education (Table D2.1). However, there are marked differences among countries. For example, in Brazil, the Czech Republic, Iceland, Israel, Latvia, Poland, the Russian Federation, Turkey, the United Kingdom and the United States, the average primary school class in public institutions is larger by four or more students per class than the average class in a private school. However, with the exception of Brazil and Israel, the private sector is relatively small in all of these countries, representing at most 5% of students at the primary level (see Table C1.5, available on line). In contrast, in Spain (where more than 30% of pupils are enrolled in private institutions), the average class in private institutions is larger than that in public institutions by four or more students.

The comparison of class size between public and private institutions shows a mixed picture at the lower secondary level, where private institutions are more prevalent. The average class size in lower secondary schools is larger in private institutions than in public institutions in 12 countries, although the differences tend to be smaller than in primary education.

In countries where private (including both government-dependent and independent) institutions are more prevalent at the primary and lower secondary levels (i.e. countries where more than 10% of students at these levels are enrolled in these institutions), such as Argentina, Australia, Belgium (French Community), Brazil, Chile, Denmark, France, Indonesia, Portugal and Spain, there may be large differences in class size between public and private institutions. However, in Spain, one of the two countries where differences are large (a difference of four students or more at the primary level, and at both levels in Brazil), private institutions tend to have more students per class than public schools (Table D2.1 and see Table C1.4). This suggests that in countries in which a substantial proportion of students and families choose private schools, class size is not a determining factor in their decision.

Comparing the number of student to teaching staff shows a similar picture. On average across countries for which data are available, ratios of students to teaching staff are slightly lower in private institutions than in public institutions at the lower secondary and upper secondary levels (Table D2.3). The largest differences between public and private institutions are in Brazil, Mexico and Turkey where, at the lower secondary level, there are at least seven more students per teacher in public institutions than in private institutions. At the upper secondary level in Mexico, the difference in student-teacher ratios between public and private institutions (a difference of more than 17 students per teacher) is even larger than that at the lower secondary level (15 students per teacher).

However, in some countries, the student-teacher ratio is lower in public institutions than in private institutions. This is most pronounced at the lower secondary level in the United Kingdom, which has some 22 students per teacher in private institutions, compared to fewer than 11 students per teacher in public institutions.

# **Definitions**

**Instructional personnel** (teaching staff) includes two categories:

- Teachers' aides and teaching/research assistants include non-professional personnel or students who support teachers in providing instruction to students.
- 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.

#### Methodology

Data refer to the academic year 2011-12 and are based on the UOE data collection on education statistics administered by the OECD in 2012 (for details see Annex 3 at www.oecd.org/edu/eag.htm).

Class size is 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 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.

Notes on definitions and methodologies for each country are provided in Annex 3, available at www.oecd.org/edu/ eag.htm.

# Note regarding data from Israel

The statistical data for Israel are supplied by and are under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

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#### **Tables of Indicator D2**

StatLink http://dx.doi.org/10.1787/888933119682									
Table D2.1	Average class size, by type of institution and level of education (2012)								
Table D2.2	Table D2.2 Ratio of students to teaching staff in educational institutions (2012)								
Table D2.3	D2.3 Ratio of students to teaching staff by type of institution (2012)								
WEB 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 (2012)

Calculations based on number of students and number of classes

			Pr	imary educati	on		Lower secondary education (general programmes)						
			Pri	ivate institutio	ons			Pri					
		Public institutions	Total private institutions	Government- dependent private institutions	Independent private institutions	Total Public and private institutions	Public institutions	Total private institutions	Government- dependent private institutions	Independent private institutions	Total Public and private institutions		
_		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
ECD	Australia Austria	23	25	25	a	24	23	25	25	a (T)	24		
0	Belgium	18 m	19 m	19 m	x(3) m	18 m	21 m	22 m	22 m	x(7)	21 m		
	Belgium (Fr.)	21	22	22	a	21	m	m	m	a	m		
	Canada	m	m	m	m	m	m	m	m	m	m		
	Chile	29	31	32	24	30	31	31	33	25	31		
	Czech Republic	20	15	15	a	20	21	19	19	a	21		
	Denmark	21	18	18	x(3)	21	21	20	20	x(8)	21		
	Estonia	17	15	a	15	17	16	12	a	12	16		
	Finland	19	18	18	a	19	20	22	22	a	20		
	France	23	23	x(2)	x(2)	23	25	26	26	14	25		
	Germany	21	21	21	x(3)	21	25	24	24	x(8)	24		
	Greece	17 21	20 20	a 20	20	17 21	22 21	24 20	a 20	24	22 21		
	Hungary Iceland	19	15	15	a a	19	20	13	13	a a	20		
	Ireland	24	m	a	m	24	m	m	m	m	m		
	Israel	28	24	24	a	27	29	23	23	a	28		
	Italy	19	20	a	20	19	22	22	a	22	22		
	Japan	28	30	a	30	28	33	34	a	34	33		
	Korea	25	29	a	29	25	34	33	33	a	33		
	Luxembourg	15	20	17	20	16	19	20	20	20	19		
	Mexico	20	19	a	19	20	27	24	a	24	27		
	Netherlands <sup>1</sup>	x(5)	x(5)	x(5)	x(5)	23	m	m	m	m	m		
	New Zealand	m	m	m	m	m	m	m	m	m	m		
	Norway Poland	19	a 12	a 11	a 12	18	a 23	a 18	a 23	16	a 22		
	Portugal	21	21	23	20	21	22	25	24	26	22		
	Slovak Republic	17	16	16	a	17	20	18	18	a	20		
	Slovenia	19	22	22	a	19	20	18	18	a	20		
	Spain	20	24	24	22	21	24	25	26	22	24		
	Sweden	m	m	m	m	m	m	m	m	m	m		
	Switzerland	m	m	m	m	m	m	m	m	m	m		
	Turkey	24	20	a	20	24	29	20	a	20	28		
	United Kingdom United States	26 22	17 18	26 a	15 18	25 21	20 28	18 20	20 a	11 20	19 27		
						1							
	OECD average	21	21	21	20	21	24	22	22	21	24 21		
_	EU21 average	20	19	19	18	20	21	21	21	18	21		
1ers	Argentina Brazil China	m	m	m	m	m	m	m	m	m	m		
artı	Brazil	25	18	a(2)	18	24	29	25	a(7)	25	28		
-	Colombia	38 m	44 m	x(2) m	x(2) m	38 m	52 m	52 m	x(7) m	x(7) m	52 m		
	India	m	m	m	m	m m	m	m	m	m	m m		
	Indonesia	24	21	a	21	23	36	31	a	31	34		
	Latvia	16	9	a	9	16	15	8	a	8	15		
	Russian Federation	18	12	a	12	18	18	11	a	11	18		
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m		
	South Africa	m	m	m	m	m	m	m	m	m	m		
	G20 average	24	23	~	~	24	28	26	~	~	28		

<sup>1.</sup> Excluding special needs programmes and partially including ISCED 0.

Sources: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

 $<sup>{\</sup>it Please \ refer \ to \ the \ Reader's \ Guide \ for \ information \ concerning \ the \ symbols \ replacing \ missing \ data.}$ 

StatLink http://dx.doi.org/10.1787/888933119701

Table D2.2. Ratio of students to teaching staff in educational institutions (2012)

By level of education, calculations based on full-time equivalents

	Pre-primar	y education	п	Sec	ondary educat	tion		Tertiary education			
	Students to contact staff (teachers and teachers' aides)	Students to teaching staff	Primary education	Lower secondary education	Upper secondary education	All secondary education	Post-secondary non-tertiary education	Tertiary-type B	Tertiary-type A and advanced research programmes	All tertiary education	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Australia <sup>1, 2</sup> Austria	m	m	16	x(6)	x(6)	12	m	m	14	m	
Austria Belgium <sup>3</sup>	10 16	14 16	12 13	9	10 10	9	10	n (10)	17	17	
Canada <sup>2, 4</sup>		x(4)	x(4)	8 16	14	14	x(5)	x(10)	x(10) 14	21	
Chile	m 11	22	22	22	24	23	m a	m m	m m	m m	
Czech Republic	14	14	19	11	11	11	18	17	22	21	
Denmark	m	m	x(4)	12	m	m	m	m	m	m	
Estonia	m	7	13	10	14	12	x(5)	m	m	m	
Finland	m	11	14	9	16	13	x(5)	n	14	14	
France <sup>3</sup>	14	22	19	15	10	13	x(8)	17	15	16	
Germany	10	12	16	14	14	14	13	14	11	12	
Greece	m	m	9	m	m	m	m	m	m	m	
Hungary	m	11	11	11	12	12	14	21	15	15	
Iceland	6	6	10	11	11	11	x(5, 10)	x(10)	x(10)	11	
$Ireland^2$	m	m	16	x(6)	x(6)	15	x(6)	x(10)	x(10)	19	
Israel	13	27	15	14	11	12	m	m	m	m	
Italy <sup>2</sup>	m	12	12	12	13	12	m	10	19	19	
Japan	15	15	18	14	12	13	x(5, 10)	m	m	m	
Korea	16	16	18	18	15	17	a	m	m	m	
Luxembourg	m	11	9	11	8	9	m	m	m	m	
Mexico	25	25	28	32	27	30	a	16	15	15	
Netherlands	14	16	16	16	19	17	21	15	15	15	
New Zealand	m	7	16	16	14	15	22	17	18	18	
Norway	m	m	10	10	10	10	x(5)	x(10)	x(10)	9	
Poland	m	16	11	10	11	10	16	8	15	15	
Portugal	m 10	16 12	12 17	10 13	8	9	x(5, 10)	x(10)	x(10)	15	
Slovak Republic Slovenia	12 9	9	16	8	14 14	13 11	11 x(5)	9 x(10)	14 16	14 18	
Spain	m	13	13	11	10	10	a a	10	12	12	
Sweden	6	6	12	11	13	12	30	x(10)	11	11	
Switzerland	m	m	m	m	m	m	m	m	m	m	
Turkey	m	21	20	20	16	18	a	53	16	20	
United Kingdom	12	19	21	14	17	16	a	x(10)	x(10)	20	
United States	10	12	15	15	15	15	16	x(10)	x(10)	16	
OFOR	13	14	15	1.4	1.4	10	17	15	15	14	
OECD average EU21 average	11	13	14	14 11	14 13	13 12	17 17	15 13	15 15	16	
	111	13	1.1	11	13	12	11	15	15	10	
Argentina Brazil China	m	m	m	m	m	m	a	m	m	m	
Brazil	12	17	22	19	17	18	a	x(10)	x(10)	27	
	m	m	17	13	16	14	m	m	m	m	
Colombia India	m	m	m	m	m	m	m	m	m	m	
	m m	m 11	m 11	m 8	m 11	m 9	m 17	m 20	20	m 20	
Indonesia Latvia	m 23	26	25	22	23	22		x(10)	x(10)	31	
Russian Federation <sup>2</sup>	m 25	m	20	9	15	10	a x(6)	11	13	12	
Saudi Arabia	m	11	11	10	11	10	a a	x(10)	x(10)	21	
South Africa	m	m	m	m	m	m	a	m m	m m	m	
G20 average	15	17	19	16	16	15	~	~	~	~	

 $<sup>1. \</sup> Includes \ only \ general \ programmes \ in \ upper \ secondary \ education.$ 

Sources: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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

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

<sup>3.</sup> Excludes independent private institutions.

<sup>4.</sup> Year of reference 2011.

Table D2.3. Ratio of students to teaching staff by type of institution (2012)

By level of education, calculations based on full-time equivalents

		Lower secondary education			Uŗ	per second	lary educatio	on	All secondary education				
			Private				Private				Private		
		Public	Total private institutions	Government- dependent private institutions	Independent private institutions	Public	Total private institutions	Government- dependent private institutions	Independent private institutions	Public	Total private institutions	Government- dependent private institutions	Independent private institutions
_	Australia <sup>1</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Austria	x(9) 9	x(10) 10	x(11) 10	a x(2)	x(9) 10	x(10) 8	x(11) 8	a x(6)	12 9	12 9	12 9	a x(9)
0	Belgium <sup>2</sup>	8	9	9	m	11	10	10	m	10	9	9	m
	Canada <sup>3, 4, 5</sup>	m	m	m	m	14	12	x(6)	x(6)	14	12	x(10)	x(10)
	Chile	21	24	25	17	23	24	26	15	22	24	26	16
	Czech Republic	11	9	9	a	11	13	13	a	11	12	12	a
	$Denmark^4$	12	12	12	m	m	m	m	m	m	m	m	m
	Estonia	10	9	a	9	14	13	a	13	12	11	a	11
	Finland <sup>6</sup>	9	9	9	a	16	18	18	a	12	17	17	a
	France	15	17	17	m	9	12	12	m	12	14	14	m
	Germany	14	13	13	x(3)	14	13	13	x(7)	14	13	13	x(11)
	Greece	m 11	m 10	m 10	m	m 10	m 12	m 10	m	m 10	m 10	m 10	m
	Hungary Iceland <sup>6</sup>	11 11	10 4	10	a n	12 11	13 12	13 12	a	12 11	12 11	12 11	a n
	Ireland <sup>2</sup>	x(9)	m	a a	m	x(9)	m	a	n m	15	m	a	m
	Israel	14	7	7	a	11	a	a	a	12	7	7	a
	Italy	12	m	a	m	13	m	a	m	12	m	a	m
	Japan <sup>6</sup>	14	12	a	12	11	14	a	14	13	14	a	14
	Korea	18	19	19	a	15	16	16	a	16	17	17	a
	Luxembourg	10	18	10	x(12)	9	4	7	3	9	7	8	6
	Mexico	35	19	a	19	32	15	a	15	34	17	a	17
	Netherlands	16	15	a	15	19	19	a	19	17	18	a	18
	New Zealand	17	13	a	13	14	12	16	10	15	12	16	11
	Norway	10	m	m	m	10	m	m	m	10	m	m	m
	Poland	10	9	11	8	11	11	12	11	10	10	12	10
	Portugal <sup>7</sup>	9	13	13	13	8	7	11	6	9	9	12	7
	Slovak Republic Slovenia <sup>2</sup>	13 8	12 4	12 4	n	14 14	12 14	12 11	n 28	13 11	12 13	12 10	n 28
	Spain	9	15	15	n 16	9	14	15	13	9	15	15	14
	Sweden	11	12	12	n	13	15	15	n	12	14	14	n
	Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
	Turkey	21	9	a	9	17	7	a	7	19	8	a	8
	United Kingdom	11	22	47	5	10	28	38	7	11	26	40	6
	United States	16	11	a	11	16	11	a	11	16	11	a	11
	OECD average	13	13	14	9	13	13	15	10	13	13	14	10
	EU21 average	11	12	14	11	12	13	14	12	12	13	14	12
- 0	Augontina	m	m	m	m	m	m	m	m	m	m	m	m
ner	Argentina Brazil	21	13	a	13	18	12	a a	12	19	12	a	12
Part	China	m	13	x(2)	x(2)	m	15	x(6)	x(6)	m	14	x(10)	x(10)
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	21	23	a	23	19	28	a	28	20	25	a	25
	Latvia	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	9	4	a	4	15	20	a	20	10	6	a	6
	Saudi Arabia	10	11	x(2)	x(2)	10	15	x(6)	x(6)	10	13	x(10)	x(10)
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	13	15	~	~	13	15	~	~	13	15	~	~

 $<sup>1. \</sup> Includes \ only \ general \ programmes \ in \ lower \ and \ upper \ secondary \ education.$ 

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

<sup>2.</sup> Upper secondary includes post-secondary non-tertiary education.

<sup>3.</sup> Year of reference 2011.

 $<sup>{\</sup>it 4. Lower secondary includes primary education.}$ 

<sup>5.</sup> Lower secondary includes pre-primary education.

 $<sup>6.\</sup> Upper\ secondary\ education\ includes\ programmes\ from\ post-secondary\ education.$ 

 $<sup>7.\</sup> Data\ refer\ to\ teachers\ (head\ count)\ in\ primary,\ secondary\ and\ post-secondary\ non-tertiary\ education.$ 

Sources: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/edu/eag.htm).