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

## Highlights

- At primary level, the average class in OECD countries in 2019 had 21 students in public institutions and 20 in private institutions. The difference in class size between public and private primary institutions varies substantially across OECD countries.
- On average across OECD countries, there are 15 students for every teacher in primary education and 13 students per teacher in lower secondary education. The average school class has 21 students in primary education and 23 in lower secondary education.
- Between 2013 and 2019, the average class size remained constant at lower secondary level both in public and private institutions. However, while 8 out of 31 countries with available data experienced a decrease in the average class size by at least $5 \%$ in public lower secondary schools, this was only the case for 6 out of the 29 countries with available data in private lower secondary institutions.

Figure D2.1. Average class size in primary education, by type of institution (2019) In number of students per class


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## Context

Class sizes and student-teacher ratios are much-discussed aspects of education and are among the determinants of the demand for teachers, along with students' instruction time (see Indicator D1), teachers' working time, and the division of teachers' time between teaching and other duties (see Indicator D4). Together with teachers' salaries (see Indicator D3) and instruction time (see Indicator D1), class size and student-teacher ratios also have a considerable impact on the level of current expenditure on education through teacher salary costs (Box D2.3 in OECD ( $2020_{[11]}$ )).

The ratio of students to teaching staff is an indicator of how resources for education are allocated. Smaller student-teacher ratios often have to be weighed against measures such as higher salaries for teachers, investment in their professional development, greater investment in teaching technology or more widespread use of assistant teachers, whose salaries are often considerably lower than those of teachers.

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 (Bouguen, Grenet and Gurgand, $2017_{[2]}$ ), overall evidence of the effect of class size on student performance is mixed (OECD, 2016[3]). Changes in class size over periods of time may also reveal potential imbalances in the supply of teachers compared to student demand. Some countries face difficulties in recruiting new teachers to respond to a growing student base, while others face the opposite problem of adjusting the overall number of teachers to declining enrolments (OECD, 2019[4]).
In the COVID-19 context, critical disruptions to education systems have occurred across OECD and partner countries. As part of countries' responses to COVID-19, the inclusion of remote learning has been central to reduce learning losses (OECD, $2021_{[5]}$ ). Despite the virtual nature of this type of learning, the interactive aspect of online education remains vital and creating a teacher-student as well as student-content engagement is central. A major concern is finding the optimal class size that would allow at the same time interaction between students, students' involvement as well as teachers' ability to provide effective feedback.

As schools are progressively reopening, countries with a smaller class size are likely to find it easier to conciliate between social distancing and the opportunity for all students to benefit from face-to-face learning.

## Other findings

- Class size varies significantly across countries. The biggest classes in primary education are observed in Chile ( 31 students per classroom), while in Costa Rica, the average class size is 16 students.
- At primary level, there are 15 students for every teacher on average across OECD countries. Among OECD and partner countries, the student-teacher ratio ranges from 9 to 1 in Greece and Luxembourg to over 23 to 1 in Brazil, Mexico, India and the Russian Federation.
- On average across OECD countries, the average class size differs between public and private institutions by one student per class both, in primary and lower secondary education.


## Note

Class size 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. The calculation is made by dividing the number of students by the number of classes. The student-teacher ratio is calculated by dividing the number of full-time equivalent students by the number of full-time equivalent teachers at a given level of education.

The two indicators therefore measure very different characteristics of the educational system. Student-teacher ratios provide information on the level of teaching resources available in a country relative to its student population, whereas class size measures the average number of students that are grouped together in a classroom. Given the difference between student-teacher ratios and average class sizes, it is possible for countries with similar student-teacher ratios to have different class sizes.

## Analysis

## Class size

## Average class size in primary and lower secondary education

The indicator on class size is limited to primary and lower secondary education. At higher levels of education, class sizes are difficult to define and compare, as students are often split into several different classes at these levels, depending on the subject matter.

At the primary level, the average class in OECD countries is 21 pupils. There are fewer than 28 pupils per class in nearly all of the countries with available data, with the exception of Chile with 31 pupils (Table D2.1).

At lower secondary level, average class size in OECD countries is 23 students. Among all countries with available data, it varies from fewer than 20 students per class in Estonia, Finland, Latvia, Lithuania, Poland and the Russian Federation to more than 30 students per class in Costa Rica and Japan (Table D2.1).

The number of students per class tends to increase between primary and lower secondary education. In Costa Rica, it increases by 17 students. On the other hand, in the United Kingdom and, to a lesser extent Australia, Chile, Hungary and the Russian Federation, the number of students per class decreases between these two levels of education (Table D2.1).

## Class size in public and private institutions

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

In most OECD countries, average class sizes do not differ between public and private institutions by more than one student per class at both primary and lower secondary level. However, in some countries (including Colombia, the Czech Republic, Latvia, Poland, the Russian Federation and Turkey), the average class in public primary schools has at least six students more than the average class in private schools (Table D2.1). However, with the exception of Brazil and Colombia, the private sector is relatively small in all of these countries, representing at most $5 \%$ of students at primary level (Education at a Glance Database). In contrast, in Chile, Greece, Korea and Spain the average class in private institutions is bigger than in public institutions by at least three students.

At lower secondary level, where private institutions are more prevalent, the comparison of class size between public and private institutions shows a more mixed picture. The average class in private lower secondary institutions is larger than in public institutions in 9 countries, smaller in 18 countries and the same in 6 countries. The differences, however, tend to be smaller than in primary education (Table D2.1).

## Trends in average class size

Between 2013 and 2019, class sizes remained constant at primary level and lower secondary level on average across OECD countries, but this average masks considerably substantial changes in individual countries. At primary level, class size decreased by three students in Brazil and increased by four students in Mexico, over the same period across countries with available data. At lower secondary level, the change is even more striking, where the average class size fell by seven students in Korea and increased by four in the United Kingdom between 2013 and 2019 (Table D2.1).

On average across OECD countries, class size remained constant in both public and private lower secondary institutions between 2013 and 2019 (Figure D2.1). This average masks more substantial changes in individual countries: in Estonia, for example, the average class sizes in both public and private institutions were among the lowest in 2013 and remained below the OECD average in 2019, despite an increase over the period. Interestingly, other countries such as Korea, with the highest average class size in 2013, experienced a decrease in class size between 2013 and 2019, both for public and private institutions (Table D2.1).

Figure D2.2. Change in the average class size in lower secondary education, by type of institution (2013 and 2019)

In per cent


Countries are ranked in descending order of average class size in public institutions.
Source: OECD/UIS/Eurostat (2021), Table D2.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021 Annex3 ChapterD.pdf).

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## Box D2.1. The complexity of defining an optimal class size for online classes

The online classroom may have considerable advantages for educational continuity when on-campus courses cannot take place. Indeed, online learning was one of the main responses to the COVID-19 crisis across countries (OECD, 2021[5]). However, there is concern about what happens to the class sizes when enrolment is not limited by the constraint of a physical classroom. Defining a class size that ensures at the same time high attendance, teacher-student interaction, instructor feedback and student involvement in class is challenging.

Class participation is a central aspect of student learning and instructor teaching. From the students' perspective, speaking up in class teaches them to express ideas and asking questions allows them to obtain information to enhance their own understanding. Students' questions then allow teachers to see what points need to be clarified and then adjust their instruction accordingly (Chin, 2008[6] $)$. Some other studies have revealed the high potential of participation and peer-topeer interaction to contribute to critical thinking (Frijters, ten Dam and Rijlaarsdam, 2008[7]).

Some research has focused on examining the ideal online class size with regards to interaction, but the results appear to be mixed. On the one hand, "large" classes (more than 30 students) allow more interactions between students and more potential points for discussion. On the other, they may lead to "information overload" and less instructor-student interaction (Parks-Stamm, Zafonte and Palenque, 2016[8]).

Hence, the solution is not to determine a "one-size-fits-all" optimal class size for online courses, as the choice of a particular online pattern depends on the characteristics of each educational system.

## Student-teacher ratios

## Student-teacher ratios across levels of education

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. It does not consider the amount of instruction time for students compared to the length of a teacher's working day, nor how much time teachers spend teaching.
At primary level, there are 15 students for every teacher on average across OECD countries. In OECD and partner countries, the student-teacher ratio ranges from 9 to 1 in Greece and Luxembourg to over 23 to 1 in Brazil, India, Mexico and the Russian Federation. Student teacher ratios vary even more at lower secondary level, from fewer than 10 students per teacher in Austria, Belgium, Finland, Greece, Latvia, and Portugal to more than 25 students per teacher in Colombia and Mexico (Figure D2.1).

On average, there are fewer students per teacher at secondary level (13) than at primary level (15) (Table D2.1). The lower student-teacher ratio at secondary level may result from higher instruction time (as instruction hours tend to increase with the education level, so does the number of teachers) or from lower teaching hours (teaching time decreases with the level of education as teacher specialisation increases).

Figure D2.3. Ratio of students to teaching staff in primary and lower secondary education (2019)


1. Primary includes pre-primary education.

Countries are ranked in descending order of the ratio of students to teaching staff in primary education.
Source: OECD/UIS/Eurostat (2021), Table D2.2. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021_Annex3_ChapterD.pdf).

At upper secondary level, the OECD average is about 13 students per teacher and the difference between general and vocational programmes in student-teacher ratios varies across countries. On average, the ratio of students to teaching staff in upper secondary vocational programmes and that in upper secondary general programmes are the same ( 13 to 1 in both types of programmes) (Table D2.1). While the difference between the two is negligible in a few countries, there are, in fact, around as many countries where the ratio is greater in vocational programmes as there are countries where it is lower. In

Latvia, vocational programmes (18 to 1) have twice as many students per teacher as general programmes (9 to 1). This may be due to the fact that in some countries, vocational programmes are significantly work-based, thus vocational students spend considerable time outside of school. As a result, schools need fewer teachers, which may translate into higher student teacher ratios (OECD, 2017[9]). In other countries such as Brazil,, the opposite is true: there are 13 students per teacher in vocational programmes and 25 students per teacher in general programmes, the largest difference among all countries with available data. Depending on the field of study selected, students in vocational education may require more instructor attention, especially as they have access to more sophisticated equipment. In fact, vocational students require more careful supervision as skill specificity rises. This may have important implications in terms of the cost of vocational instruction, as advanced vocational training requires both specialised machinery and a greater level of human resources (Astor, Guerra and Van Acker, $2010[10]$ ).

Although tertiary education may involve more self-learning than primary and secondary education, the number of students per teacher remains an important concern. The student-teacher ratio is considered to be a proxy of quality in education (OECD, $2013_{[11]}$ ). Students are more likely to receive more support and attention when the student-teacher ratio is low (Biddle, 2002[12]). At tertiary level, the student-teacher ratio ranges from 5 to 1 in Luxembourg and 9 to 1 in Norway to over 20 to 1 in Belgium, Brazil, Colombia, India, Ireland and Turkey. In Colombia, the student-teacher ratio in tertiary education reaches 27 to 1 (Table D2.2).

## Student-teacher ratios across types of institution

Differences between public and private institutions in student-teacher ratios are similar to those observed for class size. On average across countries for which data are available, the ratio of students to teaching staff is slightly higher in public institutions than in private institutions at lower and upper secondary level (Table D2.3).

At lower secondary level, large differences between public and private institutions are found in Colombia, Mexico and Turkey, where there are at least eight more students per teacher in public institutions than in private ones. In all these countries, however, less than $20 \%$ of lower secondary students are enrolled in private institutions (Education at a Glance Database). In contrast, the student-teacher ratio is lower in public institutions than in private institutions in some countries. This difference is most pronounced in Chile, where around $40 \%$ of students are enrolled in public institutions (Education at a Glance Database). In this country, the student-teacher ratio is 15 to 1 in public institutions, compared to 23 to 1 in private institutions (Table D2.3).

At upper secondary level, the student-teacher ratio is greater in public institutions than in private institutions in 17 countries, smaller in public institutions in 15 countries, and similar for both sectors in 4 countries. Mexico has the highest difference in student-teacher ratios at this level, with 25 students per teacher in public institutions and only 14 students per teacher in private institutions (Table D2.3). This mixed pattern in upper secondary education may, in part, reflect differences in the types of programmes offered in public and private institutions. For instance, in Norway, few private schools offer vocational programmes, in which the student-teacher ratio is typically lower than the ratio in general programmes (Education at a Glance Database).

## Definitions

There are two categories of instructional personnel (teachers):

- 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 to 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 include departmental chairs whose duties include some teaching, but exclude non-professional personnel who support teachers in providing instruction to students, such as teachers' aides and other paraprofessional personnel.


## Methodology

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 subgroups 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. At tertiary level, the student-teacher ratio is calculated using data on academic staff instead of teachers.

For the ratio of students to teachers to be meaningful, consistent coverage of personnel and enrolment data are needed. For instance, if teachers in religious schools are not reported in the personnel data, then students in those schools must also be excluded.

For more information, please see the OECD Handbook for Internationally Comparative Education Statistics 2018 (OECD, $2018_{[13]}$ ) and Annex 3 for country-specific notes (https://www.oecd.org/education/education-at-aglance/EAG2021 Annex3 ChapterD.pdf).

## Source

Data refer to the academic year 2018/19 and are based on the UNESCO-UIS/OECD/Eurostat data collection on education statistics administered by the OECD in 2020 (for details, see Annex 3 at: https://www.oecd.org/education/education-at-aglance/EAG2021 Annex3 ChapterD.pdf.

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## Indicator D2 tables

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

| Table D2.1 | Average class size, by type of institution and level of education (2013 and 2019) |
| :--- | :--- |
| Table D2.2 | Ratio of students to teaching staff in educational institutions, by level of education (2019) |
| Table D2.3 | Ratio of students to teaching staff, by type of institution (2019) |
|  | StatLink httins://stat.link/7gq4rf |

Cut-off date for the data: 17 June 2021. Any updates on data can be found on line at: http://dx.doi.org/10.1787/eag-dataen. More breakdowns can also be found at: http://stats.oecd.org, Education at a Glance Database.

See: https://www.oecd.org/about/publishing/Corrigendum_Education-at-a-Glance-2021.pdf

Table D2.1. Average class size, by type of institution and level of education (2013 and 2019)

|  | Primary |  |  |  |  | Lower secondary |  |  |  |  | 2013 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Private institutions |  |  |  |  | Private institutions |  |  |  | Primary |  |  | Lower secondary |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 岂 Australia | 23 | 24 | 24 | a | 23 | 22 | 24 | 24 | a | 22 | 23 | 25 | 24 | 23 | 25 | 24 |
| O Austria | 18 | 19 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 18 | 21 | 21 | x (7) | x (7) | 21 | 18 | 19 | 18 | 21 | 22 | 21 |
| Belgium | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Canada | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Chile | 29 | 32 | 34 | 25 | 31 | 29 | 31 | 33 | 25 | 30 | 29 | 31 | 30 | 31 | 31 | 31 |
| Colombia | 25 | 18 | a | 18 | 23 | 32 | 24 | a | 24 | 30 | 24 | 19 | 22 | 30 | 25 | 29 |
| Costa Rica | 16 | 16 | 25 | 16 | 16 | 36 | 19 | 29 | 17 | 33 | m | m | m | m | m | m |
| Czech Republic | 21 | 15 | 15 | a | 21 | 22 | 18 | 18 | a | 22 | 20 | 15 | 20 | 22 | 19 | 22 |
| Denmark | 20 | 17 | 17 | a | 20 | 21 | 19 | 19 | a | 20 | 21 | m | m | 21 | m | m |
| Estonia | 19 | 16 | 16 | 6 | 19 | 19 | 14 | 15 | 6 | 19 | 17 | 16 | 17 | 15 | 12 | 15 |
| Finland | 20 | 18 | 18 | a | 20 | 19 | 19 | 19 | a | 19 | 19 | 17 | 19 | 20 | 20 | 20 |
| France | 22 | 25 | 25 | a | 23 | 25 | 26 | 27 | 12 | 25 | 23 | 23 | 23 | 25 | 26 | 25 |
| Germany | 21 | 21 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 21 | 24 | 23 | x (7) | x (7) | 24 | 21 | 21 | 21 | 24 | 24 | 24 |
| Greece | 17 | 22 | a | 22 | 17 | 20 | 23 | a | 23 | 20 | 17 | 19 | 17 | 22 | 23 | 22 |
| Hungary | 22 | 20 | 21 | 16 | 22 | 21 | 21 | 22 | 17 | 21 | 21 | 20 | 21 | 21 | 20 | 21 |
| Iceland | 19 | 15 | 15 | a | 19 | 20 | 14 | 14 | a | 20 | 19 | 16 | 18 | 20 | 13 | 20 |
| Ireland | 24 | m | m | m | m | m | m | a | m | m | 25 | m | m | m | m | m |
| Israel | 27 | 25 | 25 | a | 26 | 29 | 24 | 24 | a | 28 | 28 | 24 | 27 | 29 | 24 | 28 |
| Italy | 19 | 19 | a | 19 | 19 | 21 | 21 | a | 21 | 21 | 19 | 20 | 19 | 22 | 22 | 22 |
| Japan | 27 | 28 | a | 28 | 27 | 32 | 33 | a | 33 | 32 | 27 | 30 | 27 | 32 | 34 | 33 |
| Korea | 23 | 27 | a | 27 | 23 | 26 | 25 | 25 | a | 26 | 24 | 29 | 24 | 33 | 32 | 33 |
| Latvia | 17 | 10 | a | 10 | 17 | 16 | 15 | a | 15 | 16 | 16 | 8 | 16 | 15 | 9 | 14 |
| Lithuania | 18 | 16 | a | 16 | 17 | 19 | 20 | a | 20 | 19 | 16 | 12 | 16 | 20 | 19 | 20 |
| Luxembourg | 15 | m | 19 | m | m | 18 | m | 19 | m | m | 15 | 19 | 15 | 19 | 18 | 19 |
| Mexico | 25 | 20 | a | 20 | 24 | 27 | 23 | a | 23 | 27 | 20 | 19 | 20 | 28 | 24 | 27 |
| Netherlands | 23 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| New Zealand | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Norway | a | a | a | a | a | a | a | a | a | a | a | a | a | a | a | a |
| Poland | 18 | 11 | 12 | 11 | 18 | 20 | 16 | 13 | 17 | 19 | 19 | 11 | 18 | 23 | 17 | 22 |
| Portugal | 21 | 20 | 22 | 20 | 21 | 22 | 23 | 24 | 23 | 22 | 21 | 21 | 21 | 22 | 23 | 22 |
| Slovak Republic | 18 | 18 | 18 | a | 18 | 20 | 19 | 19 | a | 20 | 18 | 17 | 18 | 19 | 18 | 19 |
| Slovenia | 19 | 19 | 19 | a | 19 | 20 | 19 | 19 | a | 20 | 19 | 22 | 19 | 20 | 19 | 20 |
| Spain | 21 | 24 | 25 | 20 | 22 | 25 | 27 | 27 | 21 | 25 | 21 | 24 | 22 | 25 | 26 | 25 |
| Sweden | 20 | 18 | 18 | a | 20 | 22 | 22 | 22 | a | 22 | m | m | m | m | m | m |
| Switzerland | 19 | m | m | m | m | 19 | m | m | m | m | m | m | m | m | m | m |
| Turkey | 23 | 17 | a | 17 | 23 | 26 | 17 | a | 17 | 25 | 23 | 20 | 23 | 28 | 20 | 28 |
| United Kingdom | 27 | 24 | 28 | 12 | 26 | 25 | 23 | 25 | 12 | 23 | 27 | a | 25 | 20 | a | 19 |
| United States | 21 | 16 | a | 16 | 20 | 26 | 18 | a | 18 | 25 | 22 | 18 | 21 | 28 | 20 | 27 |
| OECD average | 21 | 20 | 21 | 18 | 21 | 23 | 21 | 22 | 19 | 23 | 21 | 20 | 21 | 23 | 22 | 23 |
| Average for countries with available data for both reference years EU22 average | 21 20 | 20 18 | 19 | 15 | 21 19 | 23 21 | 21 20 | 19 | 17 | 23 21 | 21 19 | 20 18 | 21 19 | 23 21 | 22 20 | 23 21 |
| ¢ Argentina | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| $\stackrel{\text { ¢ }}{ \pm}$ Brazil | 21 | 17 | a | 17 | 20 | 27 | 23 | a | 23 | 26 | 25 | 18 | 23 | 28 | 24 | 28 |
| ¢0 China | m | m | m | m | m | m | m | m | m | m | 37 | 44 | 38 | 50 | 52 | 50 |
| India | m | m | m | m | m | m | m | m | m | m | X(13) | x(13) | 26 | $\mathrm{x}(16)$ | x(16) | 30 |
| Indonesia | m | m | m | m | m | m | m | m | m | m | 26 | 22 | 25 | 31 | 31 | 31 |
| Russian Federation | 20 | 14 | a | 14 | 20 | 19 | 12 | a | 12 | 19 | 18 | 13 | 18 | 19 | 11 | 18 |
| Saudi Arabia | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| South Africa | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| G20 average | m | m | m | m | m | m | m | m | m | m | 24 | 23 | 24 | 28 | 26 | 28 |

Source: OECD/UIS/Eurostat (2021). See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021 Annex3 ChapterD.pdf).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

Table D2.2. Ratio of students to teaching staff in educational institutions, by level of education (2019)

|  | Primary | Lower secondary | Upper secondary |  |  | All secondary | Postsecondary non-tertiary | Tertiary |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | General programmes | Vocational programmes | All programmes |  |  | Short-cycle tertiary | Bachelor's, master's and doctoral | All tertiary |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Q Countries |  |  |  |  |  |  |  |  |  |  |
| 夏 Australia | 15 | $\mathrm{x}(3)$ | 12 | m | 12 | m | m | m | 16 | m |
| ${ }^{\circ}$ Austria | 12 | 9 | 10 | 10 | 10 | 9 | 11 | 8 | 15 | 13 |
| Belgium | 13 | 9 | 11 | 9 | 10 | 9 | 15 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 21 |
| Canada ${ }^{1}$ | 16 | $\mathrm{x}(1)$ | x(5) | $\mathrm{x}(5)$ | 13 | m | m | m | m | m |
| Chile | 19 | 19 | 20 | 22 | 20 | 20 | a | m | m | m |
| Colombia | 23 | 27 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 24 | 26 | 68 | 24 | 28 | 27 |
| Costa Rica | 12 | 14 | 14 | 13 | 14 | 14 | a | m | m | m |
| Czech Republic | 19 | 13 | 11 | 11 | 11 | 12 | 15 | 11 | 17 | 17 |
| Denmark | 12 | 11 | 10 | 16 | 11 | 11 | a | 15 | 15 | 15 |
| Estonia | 13 | 10 | 14 | 18 | 15 | 12 | $\mathrm{x}(5)$ | a | 13 | 13 |
| Finland | 14 | 9 | 14 | 20 | 18 | 13 | 20 | a | 15 | 15 |
| France | 19 | 14 | 13 | 8 | 11 | 13 | 19 | 13 | 18 | 17 |
| Germany | 15 | 13 | 12 | 13 | 12 | 13 | 13 | 13 | 12 | 12 |
| Greece | 9 | 8 | 11 | 8 | 10 | 9 | m | a | m | m |
| Hungary | 10 | 11 | 11 | 12 | 11 | 11 | 8 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 11 |
| Iceland | 11 | 10 | m | m | m | m | m | m | m | m |
| Ireland ${ }^{2}$ | 15 | m | 13 | a | 13 | m | m | m | m | 23 |
| Israe\| ${ }^{2}$ | 15 | 13 | m | m | m | m | m | m | 16 | m |
| Italy ${ }^{3}$ | 11 | 11 | 12 | $9{ }^{\text {d }}$ | $10^{\text {d }}$ | $11^{\text {d }}$ | $\mathrm{x}(4)$ | a | 20 | 20 |
| Japan ${ }^{3}$ | 16 | 13 | x(5) | x(5) | 12 | 12 | X | m | m | m |
| Korea | 17 | 13 | 12 | 10 | 11 | 12 | a | m | m | m |
| Latvia | 12 | 9 | 9 | 18 | 11 | 10 | 25 | 13 | 18 | 17 |
| Lithuania | 14 | 10 | 9 | 10 | 9 | 10 | 11 | a | 15 | 15 |
| Luxembourg | 9 | x(5) | x(5) | $\mathrm{x}(5)$ | $9{ }^{\text {d }}$ | 9 | 9 | 9 | 5 | 5 |
| Mexico | 24 | 32 | 28 | 17 | 23 | 27 | a | 19 | 18 | 18 |
| Netherlands | 16 | 16 | 16 | 19 | 18 | 17 | a | 17 | 15 | 15 |
| New Zealand | 16 | 16 | 12 | 17 | 12 | 14 | 21 | 15 | 17 | 17 |
| Norway | 10 | 10 | 11 | 10 | 11 | 10 | 8 | 8 | 9 | 9 |
| Poland | 10 | 10 | 11 | 9 | 10 | 10 | 18 | 9 | 14 | 14 |
| Portugal | 12 | 9 | x(5) | x(5) | $9{ }^{\text {d }}$ | $9{ }^{\text {d }}$ | x(5) | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 15 |
| Slovak Republic | 17 | 13 | 14 | 13 | 13 | 13 | 13 | 8 | 11 | 11 |
| Slovenia ${ }^{1}$ | 11 | $\mathrm{x}(1)$ | 15 | 14 | 14 | m | a | 18 | 14 | 14 |
| Spain | 14 | 12 | 11 | 8 | 10 | 11 | a | 11 | 13 | 12 |
| Sweden | 13 | 11 | $\mathrm{x}(5)$ | x(5) | 13 | 12 | 10 | 10 | 10 | 10 |
| Switzerland ${ }^{2}$ | 15 | 12 | 11 | 13 | 12 | 12 | m | a | 14 | 14 |
| Turkey | 18 | 15 | 12 | 11 | 11 | 13 | a | 47 | 20 | 23 |
| United Kingdom | 20 | 16 | 16 | 25 | 18 | 17 | a | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 11 |
| United States | 15 | 15 | 15 | a | 15 | 15 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 14 |
| OECD average | 15 | 13 | 13 | 13 | 13 | 13 | 18 | 15 | 15 | 15 |
| EU22 average | 13 | 11 | 12 | 12 | 12 | 11 | 14 | 12 | 14 | 15 |
| 9 Argentina | m | m | m | m | m | m | a | m | m | m |
| $\stackrel{0}{0}$ Brazil | 24 | 25 | 25 | 13 | 23 | 24 | 30 | 3 | 24 | 24 |
| ¢ั๊ China | 16 | 13 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 14 | 13 | m | m | m | m |
| India | 28 | 19 | x(5) | $\mathrm{x}(5)$ | 24 | 21 | m | m | m | 25 |
| Indonesia | m | m | m | m | m | m | a | m | m | m |
| Russian Federation | 24 | $12^{\text {d }}$ | $\mathrm{x}(2)$ | x (8) | x(2, 8 ) | m | x (8) | $13^{\text {d }}$ | 13 | $13^{\text {d }}$ |
| Saudi Arabia | 15 | 13 | x(5) | x(5) | 14 | 14 | 1 | m | 17 | 20 |
| South Africa | m | m | m | m | 29 | m | 56 | m | m | m |
| G20 average | 18 | 16 | m | m | 16 | 16 | m | m | m | 18 |

1. Primary includes pre-primary education.
2. For Ireland and Switzerland, public institutions only for all levels. For Israel, public institutions only for lower secondary, upper secondary education and all secondary. 3. Upper secondary education includes a part of post-secondary non-tertiary education.

Source: OECD/UIS/Eurostat (2021). See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021_Annex3_ChapterD.pdf).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

See: https://www.oecd.org/about/publishing/Corrigendum_Education-at-a-Glance-2021.pdf

Table D2.3. Ratio of students to teaching staff, by type of institution (2019)

|  | Lower secondary |  |  |  | Upper secondary |  |  |  | All secondary programmes |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\frac{\stackrel{0}{\circ}}{\substack{0}}$ | Private institutions |  |  | $\frac{\stackrel{\circ}{\circ}}{0}$ | Private institutions |  |  |  | Private institutions |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| - Countries |  |  |  |  |  |  |  |  |  |  |  |  |
| 吕 Australia ${ }^{1}$ | x(5) | $\mathrm{x}(6)$ | $\mathrm{x}(7)$ | a | $13^{\text {d }}$ | $11^{\text {d }}$ | $11^{\text {d }}$ | m | m | m | m | m |
| Austria | 8 | 10 | $x(2)$ | x(2) | 10 | 10 | $\mathrm{x}(6)$ | $\mathrm{x}(6)$ | 9 | 10 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ |
| Belgium | 9 | 9 | 9 | a | 9 | 10 | 10 | a | 9 | 9 | 9 | a |
| Canada ${ }^{2}$ | m | m | m | m | 13 | 15 | $\mathrm{x}(6)$ | x(6) | m | m | m | m |
| Chile | 15 | 23 | 24 | 20 | 17 | 22 | 24 | 16 | 16 | 22 | 24 | 17 |
| Colombia | 29 | 21 | a | 21 | 25 | 23 | a | 23 | 28 | 22 | a | 22 |
| Costa Rica | 15 | 8 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 14 | 9 | $\mathrm{x}(6)$ | $\mathrm{x}(6)$ | 14 | 8 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ |
| Czech Republic | 13 | 12 | 12 | a | 10 | 11 | 11 | a | 12 | 11 | 11 | a |
| Denmark | 11 | 10 | 11 | 4 | 12 | 6 | 6 | 13 | 11 | 10 | 10 | 5 |
| Estonia ${ }^{3}$ | 10 | 8 | 8 | 4 | 16 | 12 | 11 | 15 | 13 | 10 | 9 | 11 |
| Finland | 9 | 11 | 11 | a | 18 | 17 | 17 | a | 13 | 16 | 16 | a |
| France | 14 | 16 | 16 | m | 11 | 12 | 12 | m | 13 | 14 | 14 | m |
| Germany | 13 | 13 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 12 | 11 | x (6) | x (6) | 13 | 12 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ |
| Greece | 8 | 9 | a | 9 | 10 | 9 | a | 9 | 9 | 9 | a | 9 |
| Hungary | 11 | 12 | 13 | 11 | 11 | 12 | 11 | 14 | 11 | 12 | 12 | 13 |
| Iceland | 10 | 6 | 6 | m | m | m | m | m | m | m | m | m |
| Ireland | $\mathrm{x}(5)$ | m | a | m | $13^{\text {d }}$ | m | a | m | x(5) | m | a | m |
| Israel | 13 | 1 | 1 | a | 11 | m | m | a | 12 | m | m | a |
| Italy ${ }^{3}$ | 11 | 11 | a | 11 | 10 | 7 | a | 7 | 11 | 8 | a | 8 |
| Japan ${ }^{3}$ | 13 | 11 | a | 11 | 11 | 14 | a | 14 | 12 | 13 | a | 13 |
| Korea | 13 | 14 | 14 | a | 11 | 12 | 12 | a | 12 | 13 | 13 | a |
| Latvia | 9 | 7 | a | 7 | 11 | 12 | a | 12 | 10 | 10 | a | 10 |
| Lithuania | 10 | 9 | a | 9 | 9 | 8 | a | 8 | 10 | 9 | a | 9 |
| Luxembourg | 9 | $\mathrm{x}(6)$ | 9 | x(8) | 9 | $11^{\text {d }}$ | 10 | $11^{\text {d }}$ | 9 | 11 | 10 | 11 |
| Mexico | 36 | 16 | a | 16 | 25 | 14 | a | 14 | 31 | 15 | a | 15 |
| Netherlands | 16 | 16 | a | 16 | 18 | 18 | a | 18 | 17 | 18 | a | 18 |
| New Zealand | 16 | 13 | a | 13 | 13 | 11 | 10 | 11 | 15 | 11 | 10 | 12 |
| Norway | 10 | 10 | 11 | 6 | 11 | 11 | 11 | a | 10 | 11 | 11 | 6 |
| Poland | 10 | 10 | 10 | 10 | 10 | 12 | 10 | 12 | 10 | 11 | 10 | 11 |
| Portugal ${ }^{3}$ | 9 | 13 | 11 | 14 | 9 | 10 | 12 | 9 | 9 | 11 | 11 | 11 |
| Slovak Republic | 13 | 12 | 12 | a | 14 | 12 | 12 | a | 13 | 12 | 12 | a |
| Slovenia | m | m | m | a | 14 | 14 | 24 | 10 | m | m | m | 10 |
| Spain | 10 | 16 | 16 | 14 | 9 | 14 | 15 | 13 | 10 | 15 | 15 | 13 |
| Sweden | 11 | 12 | 12 | a | 13 | 14 | 14 | a | 12 | 13 | 13 | a |
| Switzerland ${ }^{3}$ | 12 | m | m | m | 12 | m | m | m | 12 | m | m | m |
| Turkey | 16 | 8 | a | 8 | 12 | 8 | a | 8 | 14 | 8 | a | 8 |
| United Kingdom ${ }^{3}$ | 16 | 16 | 18 | 8 | 16 | 19 | 21 | 8 | 16 | 18 | 20 | 8 |
| United States | 16 | 10 | a | 10 | 16 | 10 | a | 10 | 16 | 10 | a | 10 |
| OECD average | 13 | 12 | 12 | 11 | 13 | 12 | 13 | 12 | 13 | 12 | 13 | 11 |
| EU22 average | 11 | 11 | 12 | 9 | 12 | 11 | 12 | 11 | 11 | 11 | 12 | 10 |
|  | m | m | m | m | m | m | m | m | m | m | m | m |
|  | 26 | 20 | a | 20 | 24 | 18 | a | 18 | 25 | 19 | a | 19 |
|  | 12 | 17 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 14 | 18 | $\mathrm{x}(6)$ | $\mathrm{x}(6)$ | 13 | 17 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ |
| India | 21 | 17 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 23 | 25 | $\mathrm{x}(6)$ | $\mathrm{x}(6)$ | 22 | 21 | x (10) | x (10) |
| Indonesia | m | m | m | m | m | m | m | m | m | m | m | m |
| Russian Federation | 12 | 5 | a | 5 | $\mathrm{x}(1)$ | $\mathrm{x}(2)$ | a | $\mathrm{x}(4)$ | 12 | 5 | a | m |
| Saudi Arabia | 13 | 11 | $\mathrm{x}(2)$ | x(2) | 14 | 15 | $\mathrm{x}(6)$ | $\mathrm{x}(6)$ | 14 | 13 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ |
| South Africa | m | m | m | m | m | 33 | m | m | m | m | m | m |
| G20 average | 17 | 13 | m | m | 15 | 15 | m | m | 16 | 13 | m | m |

1. Includes only general programmes in lower and upper secondary education.
2. Lower secondary is included in primary education.
3. Upper secondary includes programmes outside upper secondary level. See Annex 3 for further details.

Source: OECD/UIS/Eurostat (2021). See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021_Annex3_ChapterD.pdf).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

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[^0]:    Compare your country: https://www.compareyourcountry.org/education-at-a-glance-2021/en/6/all/default
    Countries are ranked in descending order of class size in primary education public institutions.
    Source: OECD/UIS/Eurostat (2021), Table D2.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-aglance/EAG2021 Annex3 ChapterD.pdf).

