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

- The average primary school class in OECD countries in 2016 has 21 students in public institutions and 20 students in private institutions. The difference between class sizes in public and private primary school varies substantially across OECD countries, but it is considerably larger in partner countries.
- The student-teacher ratio is about the same in upper secondary general and vocational programmes across OECD countries.
- On average across OECD countries, there are 15 students per teacher in primary education, 13 students per teacher in secondary education and 15 students per teacher in tertiary education.

Figure D2.1. Average class size in primary education, by type of institutions (2016)


1. Primary education includes pre-primary programmes.

Countries are ranked in descending order of the average class size in primary education public institutions.
Source: OECD / UIS / Eurostat (2018), Table D2.1. See Source for more information and Annex 3 for notes (http://dx.doi.org/10.1787/ eag-2018-36-en).
StatLink =.inst https://doi.org/10.1787/888933805306

## Context

Class sizes and student-teacher ratios are much-discussed aspects of education and, 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), these ratios are among the determinants of the demand for teachers. Together with teachers' salaries (see Indicator D3) and age distribution (see Indicator D5), class size and student-teacher ratios also have a considerable impact on the level of current expenditure on education (see Indicators C6 and C7).

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 (Piketty and Valdenaire, 2006 ${ }_{[1]}$ ), overall evidence of the effect of class size on student performance is mixed (Fredriksson, Öckert and Oosterbeek, 2012[2]) (OECD, 2016[3]).

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 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 teachers.

## $\square$ Other findings

- In almost all countries with available data, the student-teacher ratio decreases or stays the same 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 lower secondary education is slightly lower in private institutions than in public institutions. This is most striking in Mexico, where at the secondary level there are almost twice as many students per teacher in public institutions as in private institutions.
- Class size in primary education varies significantly across countries, ranging from 15 students per class in Costa Rica to 31 students per class in Chile.


## Analysis

## Class size

## Average class size in primary and lower secondary education

At the primary level, the average class in OECD countries has 21 pupils. There are fewer than 27 pupils per class in nearly all of the countries with available data, with the exception of Chile, Israel and Japan (Table D2.1).

At the lower secondary level, the average class in OECD countries has 23 students. Among all countries with available data on lower secondary education, that number varies from fewer than 20 students per class in Estonia, Latvia, Lithuania, the Slovak Republic 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, this increase is almost 18 students. On the other hand, in the United Kingdom and, to a lesser extent, Australia, Estonia, Hungary and Latvia, student numbers per class decrease between these two levels of education (Table D2.1).

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 split into several different classes, depending on the subject area.

## Class size in public and private institutions

Class size is one factor that parents may consider when deciding on 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 size does not differ between public and private institutions by more than two students per class in both primary and lower secondary education. However, in some countries (including Brazil, Colombia, the Czech Republic, Latvia, Poland and the Russian Federation), the average class in public primary schools is larger than the average class in private schools by more than five students (Table D2.1). But 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 the primary level (see Education at a Glance Database). In contrast, in Chile, Greece, Korea, and Spain, the average class in private institutions is larger than in public institutions by four students.

At the 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 lower secondary private institutions is larger than in public institutions in 10 countries, smaller in 16 countries and the same in 5 countries. The differences, however, tend to be smaller than in primary education.

## Trends in average class size

On average across OECD countries, class size decreased between 2005 and 2016 at both primary and lower secondary levels (Table D2.1). However, while 19 out of 26 countries with available data at the lower secondary level experienced a decrease in average class size, this was the case for only 12 out of the 26 countries at the primary level.

The most significant decrease occurred at the lower secondary level, where the average class size fell by $7 \%$ over the period. These averages mask considerably larger changes in individual countries. In Estonia and Korea, for example, the average class size in lower secondary education has decreased by $20 \%$ over the past decade. Also in Korea, classes at the primary level are, on average, $29 \%$ smaller than in 2005 - the largest decrease among OECD countries in the past decade. Other countries, however, saw an increase in average class sizes in primary schools: by $14 \%$ in Portugal, $17 \%$ in Mexico, and 26\% in the Russian Federation. At the lower secondary level, average class size has increased by $9 \%$ in Denmark, the largest increase among OECD countries.

## 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, or how much time teachers spend teaching. Therefore, it cannot be interpreted in terms of class size (Box D2.1).

At the primary level there are 15 students for every teacher on average across OECD countries. The student-teacher ratio ranges from 10 to 1 in Lithuania and Norway to more than 25 to 1 in Mexico, India and South Africa (Table D2.2).

A corrigendum has been issued for this page. See: http://www.oecd.org/about/publishing/Corrigendum_EAG_2018.pdf
Student-teacher ratios vary even more at the lower secondary level, from fewer than 10 students per teacher in Austria, Belgium, Finland, Latvia, Lithuania, Norway and Slovenia to more than 25 students per teacher in Colombia, India and Mexico. The average across OECD countries is about 13 students per teacher at the secondary level (Table D2.2).

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

At the upper secondary level, 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 almost equal ( 13 to 1 in general programmes and 14 to 1 in vocational programmes) (Figure D2.2). While the difference between the two is negligible in a few countries, there are in fact as many countries where the ratio is greater in vocational programmes as countries where it is lower. In Latvia, vocational programmes (16 to 1 ) have twice as many students per teacher as general programmes ( 8 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 the school. As a result, school need fewer teachers, which may translate into higher student-teacher ratios (OECD, 2017 ${ }_{[4]}$ ). In other countries such as Brazil, which has the largest difference between programmes of all countries with available data, the difference is inversed: there are 13 students per teacher in vocational programmes and 26 students per teacher in general programmes. Students in vocational education typically need greater 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 (Klein, 2001 ${ }_{[5]}$ ).

At the tertiary level, the student-teacher ratio ranges from 8 to 1 in Luxembourg and 10 to 1 in Norway and Sweden to over 20 to 1 in Belgium, Colombia, Ireland, India, Indonesia and Turkey. In Colombia, the student-teacher ratio in tertiary education reaches 31 to 1 .

Figure D2.2. Ratio of students to teaching staff in upper secondary education, by type of programmes (2016)


## Student-teacher ratios in public and private institutions

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 ratios of students to teaching staff are slightly higher in public institutions than in private institutions at the lower and upper secondary level (Table D2.3).

At the 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 institutions. 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 Luxembourg, where although over $80 \%$ of students are enrolled in public institutions (Education at a Glance Database), the student-teacher ratio is 9 to 1 in public institutions, compared to 23 to 1 in private institutions (Table D2.3).

At the upper secondary level, the student-teacher ratio is greater in public institutions than in private institutions in 15 countries, smaller in public institutions in 14 countries, and similar for both sectors in 5 countries. Turkey is the country with the highest difference in student-teacher ratios at this level, with 15 students per teacher in public institutions and only 6 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 studentteacher ratio is typically lower than the ratio in general programmes (Education at a Glance Database).

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 higher education (McDonald, $2013_{[6]}$. Students are more likely to receive more support and attention when the student-teacher ratio is low. On average across OECD countries, there are 15 students per teacher at the tertiary level, with very little difference between public and private institutions. In only a few OECD countries, such as Austria and Italy, there are over five more students per teacher in public institutions than in private institutions. In these countries, however, less than $20 \%$ of tertiary students are enrolled in private institutions (Education at a Glance Database).

Figure D2.3. Ratio of students to teaching staff in tertiary education, by type of institution (2016)


In contrast, the difference between public and private institutions in student-teacher ratios reaches 10 to 1 in Colombia and 23 to 1 in India, where over $50 \%$ of tertiary students are enrolled in private institutions. The largest difference across public and private institutions in terms of student-teacher ratio is in Brazil. Interestingly, the ratio is much higher in private institutions, which enrol $73 \%$ of tertiary students, than in public institutions, which are the most selective ones (Education at a Glance Database). In Brazil, students could either face a performance barrier in free but highly-selective public institutions, or a financial barrier in private institutions, which could limit their opportunities and raise significant equity concerns.

## Box D2.1. What is the relationship between class size and the student-teacher ratio?

Class size, as 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. The calculation is done by dividing the number of students by the number of classes. The studentteacher ratio, as presented in Tables D2.2 and D2.3, 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 and type of institution.
The two indicators, therefore, measure very different characteristics of the educational system. Studentteacher ratios provide information on the level of teaching resources available in a country, whereas class size measures the average number of students that are grouped together in classrooms.
Given the difference between student-teacher ratio and average class size, it is possible for countries with similar student-teacher ratios to have different class sizes. For example, at the primary level, Israel and the United States have similar ratios of students to teaching staff ( 15 students per teacher) (Table D2.2), but the average class size differs substantially ( 21 students per class in the United States and 27 in Israel). This can be explained by the fact that teaching time in the United States is considerably higher than in Israel, meaning that American teachers can teach more classes during the day and thus group students into smaller classes (see Indicator C7).

## Definitions

The educational personnel include 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 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. At the tertiary level, academic staff include personnel whose primary assignment is instruction or research. Teaching staff also include department chairpersons 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.
For more information, please see the OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications (OECD, 2018 ${ }_{[7]}$ ) and Annex 3 for country-specific notes (http:// dx.doi.org/10.1787/eag-2018-36-en).

Lithuania was not an OECD member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD members and is not included in the zone aggregates.

## Source

Data refer to the academic year 2015/16 and are based on the UNESCO-UIS/OECD/EUROSTAT data collection on education statistics administered by the OECD in 2017 (for details, see Annex 3 at http://dx.doi.org/10.1787/eag-2018-36-en).

## 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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## Indicator A1 Tables

StatLink त्ञाई
Table D2.1 Average class size by type of institution (2016) and index of change (2005, 2016)
Table D2.2 Ratio of students to teaching staff in educational institutions, by level of education (2016)
Table D2.3 Ratio of students to teaching staff, by type of institution (2016)
Cut-off date for the data: 18 July 2018. Any updates on data can be found on line at http://dx.doi.org/10.1787/eag-data-en. More breakdowns can also be found at http://stats.oecd.org/, Education at a Glance Database.

Table D2.1. Average class size, by type of institution (2016) and index of change $(2005,2016)$ By level of education, calculations based on number of students and number of classes

|  | Primary |  |  |  |  | Lower secondary |  |  |  |  | Index of change between 2005 and 2016$(2005=100)$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Private institutions |  |  |  |  | Private institutions |  |  |  | Primary |  |  | Lower secondary |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| Q Australia | 23 | 25 | 25 | a | 24 | 21 | 24 | 24 | a | 22 | 98 | m | 99 | 88 | m | 89 |
| О Austria | 18 | 19 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 18 | 21 | 21 | $\mathrm{x}(7)$ | x (7) | 21 | 91 | m | 91 | 87 | m | 87 |
| French Comm. (Belgium) | 19 | 20 | 20 | a | 20 | m | m | m | a | 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 | 28 | 32 | 33 | 25 | 31 | 29 | 31 | 33 | 25 | 30 | 85 | 101 | 95 | 82 | 96 | 90 |
| Czech Republic | 21 | 15 | 15 | a | 21 | 22 | 19 | 19 | a | 22 | 103 | m | 102 | 93 | m | 93 |
| Denmark | 22 | 20 | 20 | a | 21 | 22 | 21 | 21 | a | 21 | 109 | m | 110 | 109 | m | 109 |
| Estonia | 19 | 15 | a | 15 | 19 | 19 | 15 | a | 15 | 18 | 96 | m | 96 | 81 | m | 80 |
| Finland | 20 | 18 | 18 | a | 20 | 20 | 20 | 20 | a | 20 | m | m | m | m | m | m |
| France | 23 | 24 | $\mathrm{x}(2)$ | x (2) | 23 | 25 | 26 | 26 | 12 | 25 | m | m | m | 106 | 105 | 106 |
| Germany | 21 | 21 | $\mathrm{x}(2)$ | $\mathrm{x}(2)$ | 21 | 24 | 24 | $\mathrm{x}(7)$ | x (7) | 24 | 94 | 90 | 94 | 98 | 92 | 97 |
| Greece | 17 | 21 | a | 21 | 17 | 20 | 22 | a | 22 | 20 | 88 | m | 88 | 83 | m | 83 |
| Hungary | 21 | 21 | 21 | 17 | 21 | 21 | 21 | 22 | 17 | 21 | 106 | 108 | 106 | 96 | 97 | 96 |
| Iceland | 19 | 14 | 14 | a | 19 | 20 | 13 | 13 | a | 20 | 103 | m | 102 | 102 | m | 102 |
| Ireland | 25 | m | a | m | m | m | m | a | m | m | 102 | m | m | m | m | m |
| Israel | 27 | 25 | 25 | a | 27 | 29 | 24 | 24 | a | 28 | 103 | m | 100 | 92 | m | 89 |
| Italy | 19 | 19 | a | 19 | 19 | 21 | 21 | a | 21 | 21 | 105 | m | 105 | 101 | m | 101 |
| Japan | 27 | 28 | a | 28 | 27 | 32 | 33 | a | 33 | 32 | 96 | 84 | 96 | 96 | 92 | 96 |
| Korea | 23 | 27 | a | 27 | 23 | 29 | 28 | 28 | a | 28 | 71 | 85 | 71 | 79 | 80 | 80 |
| Latvia | 16 | 10 | a | 10 | 16 | 15 | 12 | a | 12 | 15 | m | m | m | m | m | m |
| Luxembourg | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Mexico | 24 | 20 | a | 20 | 23 | 29 | 24 | a | 24 | 28 | 120 | 89 | 117 | 96 | 91 | 95 |
| Netherlands ${ }^{1}$ | $23^{\text {d }}$ | m | m | m | m | m | m | m | m | m | $106^{\text {d }}$ | m | m | m | m | m |
| New Zealand | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Norway | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Poland | 19 | 12 | 11 | 13 | 19 | 22 | 17 | 23 | 15 | 22 | 95 | 101 | 93 | 92 | 101 | 91 |
| Portugal | 21 | 21 | 24 | 20 | 21 | 22 | 24 | 25 | 22 | 22 | 116 | 96 | 114 | 98 | 101 | 98 |
| Slovak Republic | 18 | 17 | 17 | a | 18 | 19 | 18 | 18 | a | 19 | 91 | m | 91 | 84 | m | 83 |
| Slovenia | 20 | 20 | 20 | a | 20 | 20 | 22 | 22 | a | 20 | 108 | m | 108 | 97 | m | 97 |
| Spain | 21 | 24 | 25 | 21 | 22 | 25 | 26 | 27 | 22 | 26 | 107 | 101 | 105 | 106 | 99 | 104 |
| Sweden | 19 | 18 | 18 | a | 19 | 21 | 22 | 22 | a | 21 | m | m | m | m | m | m |
| Switzerland | 19 | m | m | m | m | 19 | m | m | m | m | m | m | m | m | m | m |
| Turkey | 21 | 18 | a | 18 | 21 | 24 | 17 | a | 17 | 24 | 77 | m | 78 | m | m | m |
| United Kingdom | 27 | a | 27 | 12 | 26 | 21 | a | 20 | 11 | 20 | 105 | m | 107 | 85 | m | 89 |
| United States | 21 | 18 | a | 18 | 21 | 27 | 20 | a | 20 | 26 | 102 | 99 | 102 | 101 | 95 | 100 |
| OECD average | 21 | 20 | m | m | 21 | 23 | 22 | m | m | 23 | m | m | m | m | m | m |
| Average for countries with available data for both reference years | 21 | 20 | m | m | 21 | 23 | 22 | m | m | 23 | 99 | 95 | 99 | 93 | 95 | 93 |
| EU22 average | 20 | 19 | m | m | 20 | 21 | 21 | m | m | 21 | m | m | m | m | m | m |
| y Argentina | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| E Brazil | 24 | 18 | a | 18 | 23 | 28 | 24 | a | 24 | 27 | 94 | m | 92 | 84 | m | 85 |
| ${ }_{c}^{\text {c. }}$ China | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Colombia | 25 | 19 | a | 19 | 23 | 31 | 24 | a | 24 | 29 | m | m | m | m | m | m |
| Costa Rica | 15 | 16 | x (2) | $\mathrm{x}(2)$ | 15 | 35 | 21 | x (7) | x (7) | 33 | m | m | m | m | m | m |
| India | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Indonesia | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Lithuania | 16 | 14 | a | 14 | 16 | 18 | 19 | a | 19 | 18 | 110 | 143 | 109 | 82 | 121 | 82 |
| Russian Federation | 20 | 13 | a | 13 | 20 | 19 | 12 | a | 12 | 19 | 126 | m | 126 | 103 | m | 103 |
| 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 | m | m | m | m | m | m |

1. Primary education includes pre-primary programmes.

Source: OECD / UIS / Eurostat (2018). See Source section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
StatLink ज्ञात्रा https://doi.org/10.1787/888933805249

Table D2．2．Ratio of students to teaching staff in educational institutions（2016） By level of education，calculations based on full－time equivalents

|  | Primary | Lower secondary | Upper secondary |  |  | All secondary | Post－ secondary non－tertiary | Tertiary |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | General programmes | Vocational programmes | $\underset{\text { programmes }}{\text { All }}$ |  |  | Short－cycle tertiary | Bachelor＇s， master＇s， doctoral or equivalent level | All tertiary |
|  | （1） | （2） | （3） | （4） | （5） | （6） | （7） | （8） | （9） | （10） |
| O：Australia | 15 | x（3） | $12^{\text {d }}$ |  | 12 |  |  | m | 15 |  |
| О Austria | 12 | 9 | 10 | 10 | 10 | 9 | 12 | 8 | 17 | 14 |
| Belgium | 13 | 9 | 11 | 9 | 10 | 10 | 16 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 21 |
| Canada ${ }^{1}$ | $17^{\text {d }}$ | x （1） | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 12 | 12 | m | m | m | m |
| Chile | 20 | 21 | 22 | 22 | 22 | 22 | a | m | m | m |
| Czech Republic | 19 | 12 | 11 | 11 | 11 | 11 | 18 | 11 | 19 | 19 |
| Denmark | m | m | 12 | m | m | m | a | m | m | m |
| Estonia | 13 | 10 | 14 | 18 | $15^{\text {d }}$ | 13 | $\mathrm{x}(4)$ | a | 14 | 14 |
| Finland | 13 | 9 | 15 | 19 | 17 | 13 | 18 | a | 15 | 15 |
| France ${ }^{2}$ | 19 | 15 | 13 | 9 | 11 | 13 | m | 10 | m | m |
| Germany | 15 | 13 | 13 | 14 | 13 | 13 | 13 | 12 | 12 | 12 |
| Greece | m | m | m | m | m | m | 16 | a | m | m |
| Hungary | 11 | 10 | 11 | 13 | 11 | 11 | 14 | 13 | 14 | 14 |
| Iceland | 11 | 10 | m | m | m | m | m | m | m | m |
| Ireland ${ }^{3}$ | 16 | m | 14 | a | 14 | 14 | m | m | m | 21 |
| Israel ${ }^{3}$ | 15 | 12 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 11 | 11 | m | m | m | m |
| Italy | 11 | 11 | 12 | 9 | 10 | 11 | m | a | 20 | 20 |
| Japan | 17 | 13 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | $12^{\text {d }}$ | $13^{\text {d }}$ | $\mathrm{x}(5,10)$ | m | m | m |
| Korea | 16 | 15 | 14 | 12 | 14 | 14 | a | m | m | m |
| Latvia | 11 | 8 | 8 | 16 | 10 | 9 | 22 | 19 | 20 | 18 |
| Luxembourg | 11 | 11 | $7^{\text {d }}$ | $10^{\text {d }}$ | $9^{\text {d }}$ | 10 | m | $\mathrm{x}(3,4)$ | 8 | 8 |
| Mexico | 27 | 34 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 20 | 27 | a | 21 | 17 | 17 |
| Netherlands ${ }^{4}$ | 17 | 16 | 16 | 19 | 18 | 17 | a | 15 | 15 | 15 |
| New Zealand | 17 | 16 | 12 | 17 | 13 | 14 | 21 | 19 | 18 | 18 |
| Norway ${ }^{5}$ | 10 | 9 | 10 | 10 | 10 | 10 | 12 | 11 | 10 | 10 |
| Poland | 11 | 10 | 12 | 9 | 10 | 10 | 14 | 9 | 15 | 15 |
| Portugal | 13 | 10 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | $10^{\text {d }}$ | $10^{\text {d }}$ | $\mathrm{x}(5,10)$ | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | $14^{\text {d }}$ |
| Slovak Republic | 17 | 12 | 14 | 13 | 14 | 13 | 14 | 8 | 13 | 12 |
| Slovenia | 14 | 6 | 15 | 14 | 14 | 9 | a | 18 | 15 | 15 |
| Spain | 14 | 12 | 12 | 9 | 11 | 11 | a | 10 | 13 | 12 |
| Sweden | 13 | 12 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 14 | 13 | 10 | 9 | 10 | 10 |
| Switzerland ${ }^{4}$ | 16 | 12 | 11 | m | m | 12 | m | a | 15 | 15 |
| Turkey | 18 | 15 | 11 | 14 | 13 | 14 | a | 55 | 19 | 23 |
| United Kingdom | 17 | 15 | 14 | 22 | 16 | 16 | a | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 16 |
| United States | 15 | 15 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 15 | 15 | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | $14^{\text {d }}$ |
| OECD average | 15 | 13 | 13 | 14 | 13 | 13 | m | m | m | 15 |
| EU22 average | 14 | 11 | 12 | 13 | 12 | 12 | m | m | m | 15 |
| ム Argentina ${ }^{6}$ | m | m | m | m | m | m | a | m | m | m |
| S Brazil | 24 | 25 | 26 | 13 | 24 | 25 | 26 | 10 | 20 | 20 |
| ${ }_{c}^{\text {c．}}$ China | 17 | 12 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 15 | 13 | m | m | m | m |
| Colombia | 24 | 26 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 26 | 26 | 31 | 32 | 30 | 31 |
| Costa Rica | 12 | 13 | 14 | 10 | 13 | 13 | a | m | m | m |
| India | 35 | 27 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 30 | 28 | 8 | a | 24 | 24 |
| Indonesia | 14 | 14 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | 14 | 14 | a | 15 | 24 | 22 |
| Lithuania | 10 | 7 | 7 | 9 | 8 | 7 | 15 | a | 16 | 16 |
| Russian Federation | 21 | $11^{\text {d }}$ | x （2） | x （8） | $\mathrm{x}(2,8)$ | 11 | 41 | 11 | 11 | 11 |
| Saudi Arabia | 12 | m | m | m | m | m | a | $\mathrm{x}(10)$ | $\mathrm{x}(10)$ | 20 |
| South Africa ${ }^{6,7}$ | 30 | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | $\mathrm{x}(5)$ | $17^{\text {d }}$ | 28 | m | m | m | m |
| G20 average | 19 | 16 | m | m | 15 | 16 | 22 | m | 18 | 18 |

1．Primary education includes pre－primary programmes．
2．Public and government－dependent private institutions only．
3．For Ireland，public institutions only for all levels．For Israel，public institutions only for upper secondary education and all secondary．
4．Public institutions only．
5．Public and government－dependent institutions only for primary，lower secondary and tertiary institutions．
6．Year of reference 2015.
7．Upper secondary education includes lower secondary．
Source：OECD／UIS／Eurostat（2018）．See Source section for more information and Annex 3 for notes（http：／／dx．doi．org／10．1787／eag－2018－36－en）．
Please refer to the Reader＇s Guide for information concerning symbols for missing data and abbreviations．
StatLink 唡列 https：／／doi．org／10．1787／888933805268

Table D2.3. Ratio of students to teaching staff, by type of institution (2016) By level of education, calculations based on full-time equivalents

|  | Lower secondary |  |  |  | Upper secondary |  |  |  | All secondary programmes |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & H \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | Private institutions |  |  |  | Private institutions |  |  |  | Private institutions |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| $\begin{aligned} & \text { Q Australia }{ }^{1} \\ & \text { O Austria } \end{aligned}$ | $\begin{gathered} \mathrm{x}(5) \\ 9 \end{gathered}$ | $\begin{gathered} x(6) \\ 10 \end{gathered}$ | $\begin{aligned} & x(7) \\ & x(2) \end{aligned}$ | $\begin{gathered} a \\ x(2) \end{gathered}$ | $\begin{aligned} & 13^{\mathrm{d}} \\ & 10 \end{aligned}$ | $\begin{aligned} & 12^{\mathrm{d}} \\ & 10 \end{aligned}$ | $\begin{aligned} & 12^{\mathrm{d}} \\ & \mathrm{x}(6) \end{aligned}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{x}(6) \end{gathered}$ | $\begin{array}{r} \mathrm{m} \\ 9 \end{array}$ | $\begin{gathered} m \\ 10 \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{x}(10) \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{x}(10) \end{gathered}$ |
| Belgium Canada | $\begin{gathered} 9 \\ m \end{gathered}$ | $\begin{gathered} 9 \\ m \end{gathered}$ | $\begin{gathered} 9 \\ m \end{gathered}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & 10 \\ & 12 \end{aligned}$ | $\begin{aligned} & 10 \\ & 13 \end{aligned}$ | $\begin{gathered} 10 \\ x(6) \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{x}(6) \end{gathered}$ | $\begin{aligned} & 10 \\ & 12 \end{aligned}$ | $\begin{array}{r} 9 \\ 13 \end{array}$ | $\begin{gathered} 9 \\ \times(10) \end{gathered}$ | $\begin{gathered} m \\ x(10) \end{gathered}$ |
| Chile <br> Czech Republic | $\begin{aligned} & 17 \\ & 12 \end{aligned}$ | $\begin{aligned} & 25 \\ & 11 \end{aligned}$ | $\begin{aligned} & 26 \\ & 11 \end{aligned}$ | $20$ | $\begin{aligned} & 20 \\ & 11 \end{aligned}$ | $\begin{aligned} & 24 \\ & 12 \end{aligned}$ | $\begin{aligned} & 26 \\ & 12 \end{aligned}$ | $\begin{array}{r} 16 \\ a \end{array}$ | $\begin{aligned} & 19 \\ & 11 \end{aligned}$ | $\begin{aligned} & 24 \\ & 12 \end{aligned}$ | $\begin{aligned} & 26 \\ & 12 \end{aligned}$ | $\begin{array}{r} 17 \\ \text { a } \end{array}$ |
| Denmark <br> Estonia ${ }^{2}$ | $\begin{array}{r} \mathrm{m} \\ 10 \end{array}$ | $\begin{array}{r} \mathrm{m} \\ 8 \end{array}$ | $\begin{array}{r} \mathrm{m} \\ \mathrm{a} \end{array}$ | $\begin{aligned} & \text { a } \\ & 8 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 15 \end{array}$ | $\begin{array}{r} \mathrm{m} \\ 12 \end{array}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{a} \end{aligned}$ | $\begin{array}{r} \text { a } \\ 12 \end{array}$ | $\begin{gathered} \mathrm{m} \\ 13 \end{gathered}$ | $\begin{array}{r} \mathrm{m} \\ 10 \end{array}$ | $\begin{array}{r} \mathrm{m} \\ \mathrm{a} \end{array}$ | $\begin{array}{r} \text { a } \\ 10 \end{array}$ |
| Finland <br> France | $\begin{array}{r} 9 \\ 14 \end{array}$ | $\begin{gathered} 9 \\ m \end{gathered}$ | $\begin{array}{r} 9 \\ 17 \end{array}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{aligned} & 17 \\ & 11 \end{aligned}$ | $\begin{gathered} 17 \\ \mathrm{~m} \end{gathered}$ | $\begin{aligned} & 17 \\ & 13 \end{aligned}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{aligned} & 13 \\ & 13 \end{aligned}$ | $\begin{gathered} 16 \\ \mathrm{~m} \end{gathered}$ | $\begin{aligned} & 16 \\ & 15 \end{aligned}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ |
| Germany <br> Greece | $\begin{gathered} 13 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 13 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{x}(2) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} \mathrm{x}(2) \\ \mathrm{m} \end{gathered}$ | $\begin{gathered} 13 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 12 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{x}(6) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} \mathrm{x}(6) \\ \mathrm{m} \end{gathered}$ | $\begin{gathered} 13 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 12 \\ \mathrm{~m} \end{gathered}$ | $x(10)$ | $\begin{gathered} x(10) \\ m \end{gathered}$ |
| Hungary Iceland | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | $\begin{array}{r} 11 \\ 3 \end{array}$ | $\begin{array}{r} 12 \\ 3 \end{array}$ | $9$ | $\begin{gathered} 11 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 12 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 11 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 12 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 11 \\ \mathrm{~m} \end{gathered}$ | $\begin{array}{r} 12 \\ \mathrm{~m} \end{array}$ | $\begin{array}{r} 12 \\ \mathrm{~m} \end{array}$ | $\begin{array}{r} 12 \\ \mathrm{~m} \end{array}$ |
| Ireland <br> Israel | $\begin{gathered} \mathrm{x}(5) \\ 12 \end{gathered}$ | $\begin{gathered} m \\ 8 \end{gathered}$ | $\begin{aligned} & \text { a } \\ & 8 \end{aligned}$ | $\begin{gathered} m \\ 0 \end{gathered}$ | $\begin{aligned} & 14^{\mathrm{d}} \\ & 11 \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{a} \end{gathered}$ | $\begin{aligned} & 14 \\ & 11 \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ 0 \end{gathered}$ |
| Italy <br> Japan ${ }^{3}$ | $\begin{aligned} & 11 \\ & 14 \end{aligned}$ | $\begin{aligned} & 11 \\ & 12 \end{aligned}$ | a | $\begin{aligned} & 11 \\ & 12 \end{aligned}$ | $\begin{aligned} & 11 \\ & 11^{\mathrm{d}} \end{aligned}$ | $\begin{gathered} 7 \\ 14^{\mathrm{d}} \end{gathered}$ | a | $\begin{gathered} 7 \\ 14^{\mathrm{d}} \end{gathered}$ | $\begin{aligned} & 11 \\ & 12^{\mathrm{d}} \end{aligned}$ | $\begin{gathered} 8 \\ 13^{\mathrm{d}} \end{gathered}$ | a | $\begin{gathered} 8 \\ 13^{\mathrm{d}} \end{gathered}$ |
| Korea <br> Latvia | $\begin{array}{r} 14 \\ 8 \end{array}$ | $\begin{array}{r} 16 \\ 5 \end{array}$ | $\begin{array}{r} 16 \\ a \end{array}$ | $\begin{aligned} & \mathrm{a} \\ & 5 \end{aligned}$ | $\begin{aligned} & 13 \\ & 10 \end{aligned}$ | $\begin{array}{r} 15 \\ 8 \end{array}$ | $15$ | $\begin{aligned} & a \\ & 8 \end{aligned}$ | $\begin{array}{r} 14 \\ 9 \end{array}$ | $\begin{array}{r} 15 \\ 7 \end{array}$ | $15$ | $\begin{aligned} & \text { a } \\ & 7 \end{aligned}$ |
| Luxembourg <br> Mexico | $\begin{array}{r} 9 \\ 38 \end{array}$ | $\begin{aligned} & 23 \\ & 18 \end{aligned}$ | $\begin{gathered} \mathrm{x}(2) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} x(2) \\ 18 \end{gathered}$ | $\begin{array}{r} 9 \\ 22 \end{array}$ | $\begin{array}{r} 8 \\ 15 \end{array}$ | $\begin{array}{r} 11 \\ \text { a } \end{array}$ | $\begin{array}{r} 6 \\ 15 \end{array}$ | $\begin{array}{r} 9 \\ 30 \end{array}$ | $\begin{aligned} & 11 \\ & 16 \end{aligned}$ | $\begin{array}{r} 23 \\ a \end{array}$ | $\begin{aligned} & 12 \\ & 16 \end{aligned}$ |
| Netherlands <br> New Zealand | $\begin{aligned} & 16 \\ & 17 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 13 \end{array}$ | $\begin{aligned} & a \\ & 0 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 13 \end{array}$ | $\begin{aligned} & 18 \\ & 13 \end{aligned}$ | $\begin{gathered} \mathrm{m} \\ 10 \end{gathered}$ | $\begin{array}{r} \text { a } \\ 10 \end{array}$ | $\begin{gathered} \mathrm{m} \\ 10 \end{gathered}$ | $\begin{aligned} & 17 \\ & 15 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 11 \end{array}$ | $\begin{array}{r} a \\ 10 \end{array}$ | $\begin{array}{r} \mathrm{m} \\ 12 \end{array}$ |
| Norway <br> Poland | $\begin{array}{r} 9 \\ 10 \end{array}$ | $\begin{gathered} \mathrm{m} \\ 9 \end{gathered}$ | $\begin{array}{r} 8 \\ 11 \end{array}$ | $\begin{gathered} \mathrm{m} \\ 8 \end{gathered}$ | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | $\begin{aligned} & 11 \\ & 11 \end{aligned}$ | $\begin{aligned} & 11 \\ & 12 \end{aligned}$ | $\begin{array}{r} \text { a } \\ 11 \end{array}$ | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | $\begin{gathered} \mathrm{m} \\ 10 \end{gathered}$ | $\begin{aligned} & 10 \\ & 11 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 10 \end{array}$ |
| Portugal ${ }^{3}$ <br> Slovak Republic | $\begin{array}{r} 9 \\ 12 \end{array}$ | $\begin{aligned} & 15 \\ & 11 \end{aligned}$ | $\begin{aligned} & 14 \\ & 11 \end{aligned}$ | $\begin{array}{r} 15 \\ a \end{array}$ | $\begin{gathered} 9^{d} \\ 14 \end{gathered}$ | $\begin{aligned} & 10^{\mathrm{d}} \\ & 12 \end{aligned}$ | $\begin{aligned} & 12^{\mathrm{d}} \\ & 12 \end{aligned}$ | $\begin{gathered} 10^{\mathrm{d}} \\ a \end{gathered}$ | $\begin{gathered} 9^{\mathrm{d}} \\ 13 \end{gathered}$ | $\begin{aligned} & 12^{\mathrm{d}} \\ & 12 \end{aligned}$ | $\begin{aligned} & 13^{\mathrm{d}} \\ & 12 \end{aligned}$ | $\begin{gathered} 11^{\mathrm{d}} \\ \mathrm{a} \end{gathered}$ |
| Slovenia Spain | $\begin{array}{r} 6 \\ 11 \end{array}$ | $\begin{array}{r} 4 \\ 15 \end{array}$ | $\begin{array}{r} 4 \\ 15 \end{array}$ | $\begin{array}{r} \text { a } \\ 14 \end{array}$ | $\begin{aligned} & 14 \\ & 10 \end{aligned}$ | $\begin{aligned} & 16 \\ & 14 \end{aligned}$ | $\begin{aligned} & 26 \\ & 15 \end{aligned}$ | $\begin{aligned} & 12 \\ & 13 \end{aligned}$ | $\begin{array}{r} 9 \\ 10 \end{array}$ | $\begin{aligned} & 13 \\ & 15 \end{aligned}$ | $\begin{aligned} & 15 \\ & 15 \end{aligned}$ | $\begin{aligned} & 12 \\ & 14 \end{aligned}$ |
| Sweden <br> Switzerland | $\begin{aligned} & 12 \\ & 12 \end{aligned}$ | $\begin{array}{r} 17 \\ \mathrm{~m} \end{array}$ | $\begin{array}{r} 17 \\ \mathrm{~m} \end{array}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{array}{r} 14 \\ \mathrm{~m} \end{array}$ | $\begin{gathered} 14 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 14 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 13 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 15 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 15 \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ |
| Turkey <br> United Kingdom | $\begin{aligned} & 16 \\ & 16 \end{aligned}$ | $\begin{array}{r} 7 \\ 14 \end{array}$ | $\begin{array}{r} \text { a } \\ 16 \end{array}$ | $\begin{aligned} & 7 \\ & 8 \end{aligned}$ | $\begin{aligned} & 15 \\ & 16 \end{aligned}$ | $\begin{array}{r} 6 \\ 17 \end{array}$ | $\begin{array}{r} \text { a } \\ 19 \end{array}$ | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | $\begin{aligned} & 16 \\ & 16 \end{aligned}$ | $\begin{array}{r} 6 \\ 16 \end{array}$ | $\begin{array}{r} \text { a } \\ 18 \end{array}$ | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ |
| United States | 16 | 11 | a | 11 | 16 | 11 | a | 11 | 16 | 11 | a | 11 |
| OECD average EU22 average | $\begin{aligned} & 13 \\ & 11 \end{aligned}$ | $\begin{aligned} & 12 \\ & 11 \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & 13 \\ & 12 \end{aligned}$ | $\begin{aligned} & 12 \\ & 12 \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & 13 \\ & 12 \end{aligned}$ | $\begin{aligned} & 12 \\ & 12 \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ | $\begin{aligned} & \mathrm{m} \\ & \mathrm{~m} \end{aligned}$ |
| $\begin{aligned} & \text { n Argentina } \\ & \text { St Brazil } \end{aligned}$ | $\begin{aligned} & m \\ & 26 \end{aligned}$ | $\begin{aligned} & m \\ & 20 \end{aligned}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} \mathrm{m} \\ 20 \end{gathered}$ | $\begin{aligned} & \mathrm{m} \\ & 25 \end{aligned}$ | $\begin{array}{r} \mathrm{m} \\ 19 \end{array}$ | $\begin{gathered} \mathrm{m} \\ \mathrm{a} \end{gathered}$ | $\begin{array}{r} m \\ 19 \end{array}$ | $\begin{gathered} \mathrm{m} \\ 26 \end{gathered}$ | $\begin{array}{r} \mathrm{m} \\ 20 \end{array}$ | m | $\begin{aligned} & \mathrm{m} \\ & 20 \end{aligned}$ |
| china Colombia | $\begin{aligned} & 12 \\ & 28 \end{aligned}$ | $\begin{aligned} & 17 \\ & 20 \end{aligned}$ | $\begin{gathered} \mathrm{x}(2) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} x(2) \\ 20 \end{gathered}$ | $\begin{aligned} & 15 \\ & 27 \end{aligned}$ | $\begin{aligned} & 18 \\ & 22 \end{aligned}$ | $\begin{gathered} \mathrm{x}(6) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} x(6) \\ 22 \end{gathered}$ | $\begin{aligned} & 13 \\ & 28 \end{aligned}$ | $\begin{aligned} & 17 \\ & 21 \end{aligned}$ | $\begin{gathered} \mathrm{x}(10) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} x(10) \\ 21 \end{gathered}$ |
| Costa Rica India | $\begin{aligned} & 13 \\ & 27 \end{aligned}$ | $\begin{array}{r} 9 \\ 27 \end{array}$ | $\begin{aligned} & x(2) \\ & x(2) \end{aligned}$ | $\begin{aligned} & x(2) \\ & x(2) \end{aligned}$ | $\begin{aligned} & 13 \\ & 28 \end{aligned}$ | $\begin{array}{r} 9 \\ 32 \end{array}$ | $\begin{aligned} & x(6) \\ & x(6) \end{aligned}$ | $\begin{aligned} & x(6) \\ & x(6) \end{aligned}$ | $\begin{aligned} & 13 \\ & 27 \end{aligned}$ | 9 30 | $\begin{aligned} & x(10) \\ & x(10) \end{aligned}$ | $\begin{aligned} & x(10) \\ & x(10) \end{aligned}$ |
| Indonesia <br> Lithuania | $\begin{array}{r} 15 \\ 7 \end{array}$ | $\begin{array}{r} 13 \\ 9 \end{array}$ | $\begin{gathered} x(2) \\ a \end{gathered}$ | $\begin{gathered} \mathrm{x}(2) \\ 9 \end{gathered}$ | $\begin{array}{r} 15 \\ 8 \end{array}$ | $\begin{array}{r} 14 \\ 5 \end{array}$ | $\begin{gathered} \mathrm{x}(6) \\ \mathrm{a} \end{gathered}$ | $\begin{gathered} x(6) \\ 5 \end{gathered}$ | $\begin{array}{r} 15 \\ 7 \end{array}$ | $\begin{array}{r} 13 \\ 8 \end{array}$ | $x(10)$ a | $\begin{gathered} \mathrm{x}(10) \\ 8 \end{gathered}$ |
| Russian Federation Saudi Arabia | $\begin{gathered} 11^{\mathrm{d}} \\ \mathrm{~m} \end{gathered}$ | $\begin{aligned} & 5^{\mathrm{d}} \\ & \mathrm{~m} \end{aligned}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} 5^{\mathrm{d}} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} x(1) \\ m \end{gathered}$ | $\begin{gathered} x(2) \\ m \end{gathered}$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $\begin{gathered} \mathrm{x}(4) \\ \mathrm{m} \end{gathered}$ | $\begin{gathered} 11 \\ \mathrm{~m} \end{gathered}$ | $5$ | $\begin{gathered} \mathrm{a} \\ \mathrm{~m} \end{gathered}$ | $5$ |
| South Africa | m | m | m | m | m | m | m | m | m | m | m | m |
| G20 average | 17 | 14 | m | m | 15 | 14 | m | m | 16 | 14 | m | m |

## D2

1. Includes only general programmes in lower and upper secondary education.
2. Upper secondary education includes lower secondary and post-secondary non-tertiary vocational programmes.
3. Upper secondary education includes programmes from post-secondary non-tertiary education.

Source: OECD/UIS/Eurostat (2018). See Source section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
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## OECD Indicators

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