

Czech Republic

The output of educational institutions and the impact of learning

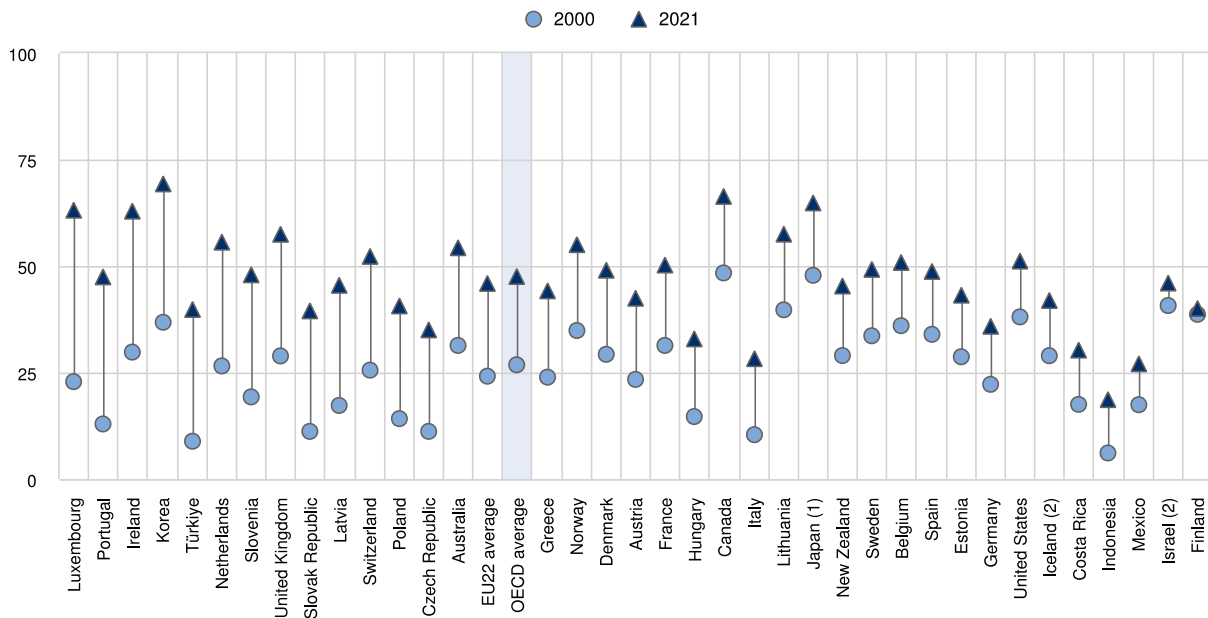
- Educational attainment has been increasing throughout the OECD, in particular at tertiary level. Between 2000 and 2021, the share of 25-34 year-olds with tertiary attainment increased on average by 21 percentage points. In the Czech Republic, the share increased at an even faster pace, by 24 percentage points (from 11% in 2000 to 35% in 2021) (Figure 1). The Czech Republic remains one of the 12 OECD countries where tertiary education is still less common than upper secondary or post-secondary non-tertiary education as the highest level of attainment among 25-34 year-olds.
- Upper secondary attainment is often seen as a minimum qualification for successful labour market participation. Although the general increase in educational attainment has seen a parallel decline in the share of 25-34 year-olds without upper secondary attainment, 14% of young adults across the OECD still left school without an upper secondary qualification. In the Czech Republic, the share is 7%, which is lower than the OECD average.
- Higher educational attainment is often associated with better employment prospects and the Czech Republic is no exception. In 2021 the employment rate among 25-34 year-olds with tertiary education in the Czech Republic was 22 percentage points higher than among those with below upper secondary attainment and 3 percentage points higher than among those with upper secondary or post-secondary non-tertiary attainment. On average across OECD countries, the employment rate among 25-34 year-olds with a tertiary qualification was 26 percentage points higher than among those with below upper secondary attainment and 8 percentage points higher than among those with upper secondary or post-secondary non-tertiary attainment. While the positive link between educational attainment and employment rates holds for both men and for women across the OECD, it is particularly strong for women. In the Czech Republic, 38% of women with below upper secondary attainment were employed in 2021, compared to 66% of those with tertiary attainment. In contrast, the figures were 73% and 94% for men.
- Across the OECD, the labour market benefits of tertiary attainment have proved especially strong during economic crises. However, this was not the case during the COVID-19 pandemic in the Czech Republic. Between 2019 and 2020, unemployment for 25-34 year-old workers with below upper secondary attainment fell by 0.6 percentage points, while it rose by 1.2 percentage points for workers with upper secondary attainment and by 1.1 percentage points for workers with tertiary attainment. In 2021, unemployment for workers with below upper secondary attainment increased by 0.9 percentage points, compared to 2020, by 0.1 percentage points for workers with upper secondary attainment and decreased by 1 percentage point for workers with tertiary attainment.
- Educational attainment affects not just employment prospects, but also wage levels. On average across the OECD, 25-64 year-old workers with upper secondary or post-secondary non-tertiary attainment earn 29% more than workers with below upper secondary attainment, while those with tertiary attainment earn about twice as much. In the Czech Republic, the earnings advantage of

tertiary-educated workers was even greater than the OECD average. In 2020, workers with upper secondary attainment earned 42% more than those with below upper secondary attainment and those with tertiary attainment earned more than twice as much.

- National averages provide only an incomplete picture of the situation in any given country. In most OECD countries, there are large differences in educational attainment across subnational regions. This is also the case in the Czech Republic. In 2021, the difference between the region with the highest share of 25-64 year-olds with tertiary attainment (Prague, at 50%) and that with the lowest share (Northwest, at 15%) was 35 percentage points. These subnational variations do not only reflect differences in education opportunities. To a large degree, they are due to economic conditions and internal migration patterns.

Figure 1. Trends in the share of tertiary-educated 25-34 year-olds (2000 and 2021)

In per cent



1. Data for tertiary education include upper secondary or post-secondary non-tertiary programmes (less than 5% of adults are in this group).

2. Year of reference differs from 2000: 2002 for Israel and 2003 for Iceland.

Countries are ranked in descending order of the difference in the share of tertiary-educated 25-34 year-olds between 2000 and 2021.

Source: OECD (2022), Education at a Glance Database, <http://stats.oecd.org/>. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-A.pdf).

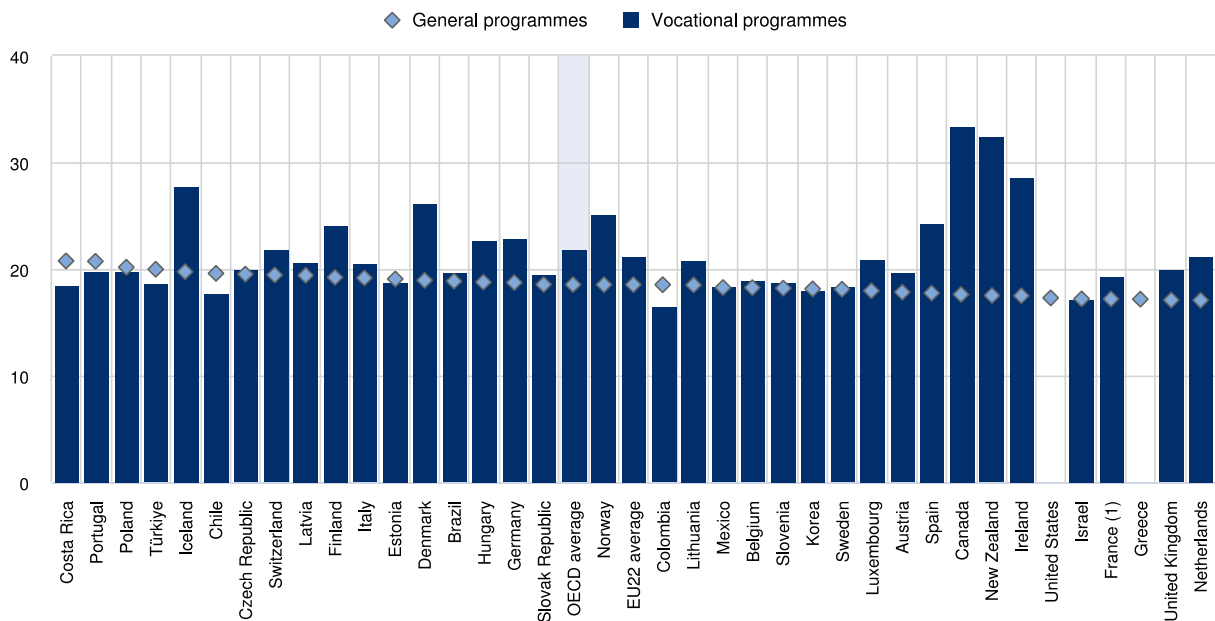
Access to education, participation and progress

- Compulsory education begins at the age of 5 and ends at the age of 15 in the Czech Republic. The range of ages for which at least 90% of the population are enrolled is longer than the period of compulsory education and goes from the age of 5 to the age of 17. This is similar to most other OECD countries, where more than 90% of the population are also enrolled for longer than the period of compulsory education.

- The average age of graduation from general upper secondary programmes varies from 17 to 21 years across OECD countries and is 20 years in the Czech Republic. Differences in the average age of graduation from vocational upper secondary education are much larger and vary from 16 to 34 years across the OECD. These differences largely depend on whether vocational upper secondary students usually enrol in these programmes towards the end of their compulsory education or in mid-career. In the Czech Republic, the average age of graduation from vocational upper secondary education is 20 years, which is below the OECD average at 22 years (Figure 2).

Figure 2. Average age of first-time upper secondary graduates, by programme orientation (2020)

In years



1. Average age is based on all graduates instead of first-time graduates.

Countries are ranked in descending order of the average age of first-time upper secondary graduates in general programmes.

Source: OECD/Eurostat/UIS (2022), Tables B3.1 and B3.2. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-B.pdf).

- In almost all OECD countries, women make up the majority of those graduating from general upper secondary education. In the Czech Republic, the share is 60% (OECD average 55%). In contrast, men are overrepresented among graduates of vocational upper secondary programmes in most OECD countries, as is the case in the Czech Republic where they make up 56% of all vocational upper secondary graduates, slightly above the OECD average (55%).
- One significant difference across countries' education systems is on whether or not vocational upper secondary programmes provide access to tertiary education. In 12 OECD countries and other participants, all vocational upper secondary graduates have direct access to tertiary education. In the Czech Republic only 62% of graduates from vocational upper secondary programme have direct access to tertiary education.
- As is the case in all OECD countries, a majority of students enrolled at tertiary level in the Czech Republic are bachelor's students (60%). However, the next commonest enrolment level varies from country to country. In the Czech Republic, master's students make up the second

largest group of tertiary students at 33%. This is also the case in 25 other OECD countries, while in the remaining 14 countries with available data, short-cycle tertiary students form the second largest group.

- At 19%, business, administration and law was the most popular field of study among new entrants into tertiary education in the Czech Republic, which is the case in most OECD countries. Despite the growing need for digital skills and the good employment prospects of students with degrees in information and communication technologies (ICT), only a small fraction of entrants into tertiary education choose this field. In the Czech Republic, 96% of 25-64 year-olds with a tertiary ICT qualification are employed, but ICT students make up 7% of new entrants into tertiary education. However, this is above the OECD average of 6%.

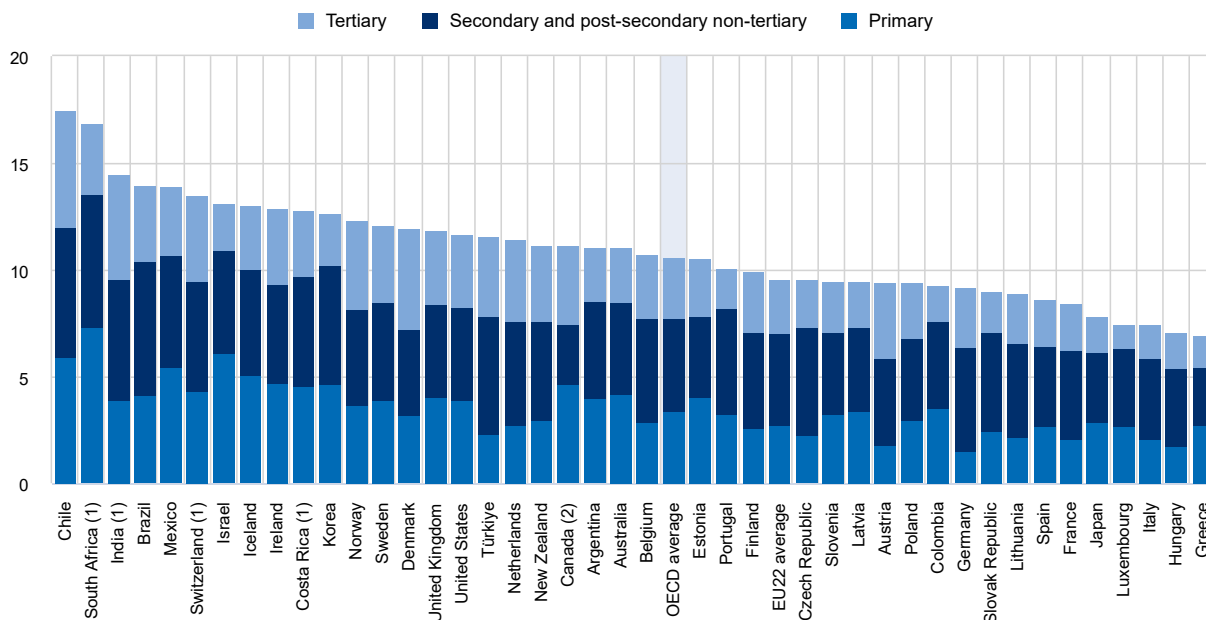
Financial resources invested in education

- All OECD countries devote a substantial share of national output to educational institutions. In 2019, OECD countries spent on average 4.9% of their gross domestic product (GDP) on primary to tertiary educational institutions. In the Czech Republic, the corresponding share was 4.3%. Between 2008 and 2019, funding for educational institutions from all sources grew by 47% in the Czech Republic. Over the same period of time, the increase in GDP was lower with 22%. As a consequence, expenditure on educational institutions as a share of GDP grew by 0.8 percentage points over the same time period.
- Public spending on primary to tertiary education was 9.5% of total government expenditure in the Czech Republic (Figure 3), lower than the OECD average (10.6%). Also, relative to GDP, public spending on primary to tertiary education (3.9%) is lower than the OECD average (4.4%).
- Spending on educational institutions as share of GDP or public budgets are important measures of the importance that countries place on education in their budgeting decisions. However, they do not show the total amount of funding per student because GDP levels, public budgets and student numbers vary from country to country. Across primary to tertiary education, OECD countries spend an average of USD 11 990 per student (in equivalent USD converted using PPPs for GDP) on educational institutions each year. In comparison, the Czech Republic spent USD 11 605 per student in 2019. Its cumulative expenditure on educating a student from the age of 6 to 15 was USD 100 835, which was slightly below the OECD average of USD 105 502.
- Across OECD countries, the provision of education at primary and secondary levels in terms of curricula, teaching styles and organisational management leads, on average, to similar patterns of expenditure per student from primary to post-secondary non-tertiary levels. OECD countries as a whole spend on average around USD 9 923 per student at primary and USD 11 400 per student at secondary level. In the Czech Republic, the values are USD 7 520 at primary and USD 12 357 per student at secondary level.
- In contrast to lower levels of education, spending on tertiary education varies widely across OECD countries. Expenditure per student at tertiary level in the Czech Republic is higher than at other levels of education, as is the case in almost all other OECD countries. The average expenditure per student in the Czech Republic is USD 17 411 per year, which is about USD 9 900 higher than that of the primary level and USD 5 100 higher than that of the secondary level. It is below the OECD average, but similar to many other countries. The average expenditure at tertiary level (USD 17 559) is driven up by high values in a few countries. At 35%, the share of research and development (R&D) expenditure makes up a larger fraction of expenditure on tertiary education in the Czech Republic than on average across OECD countries (29%).
- Public funding dominates non-tertiary education (primary, secondary and post-secondary non-tertiary) in all OECD countries, even after transfers to the private sector. On average across the

OECD, private funding accounts for 10% of expenditure at primary, secondary and post-secondary non-tertiary levels, while this share was 7% in the Czech Republic in 2019. In contrast, private expenditure at tertiary level was higher in all OECD countries. In the Czech Republic, the share of private expenditure at tertiary level reached 17%, which was below the OECD average of 31%.

Figure 3. Composition of total public expenditure on education as a percentage of total government expenditure (2019)

Primary to tertiary education (including R&D), in per cent



1. Year of reference differs from 2019. Refer to the source table for more details.

2. Primary education includes pre-primary programmes.

Countries are ranked in descending order of total public expenditure on education as a percentage of total government expenditure.

Source: OECD/UIS/Eurostat (2022), Table C4.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-C.pdf).

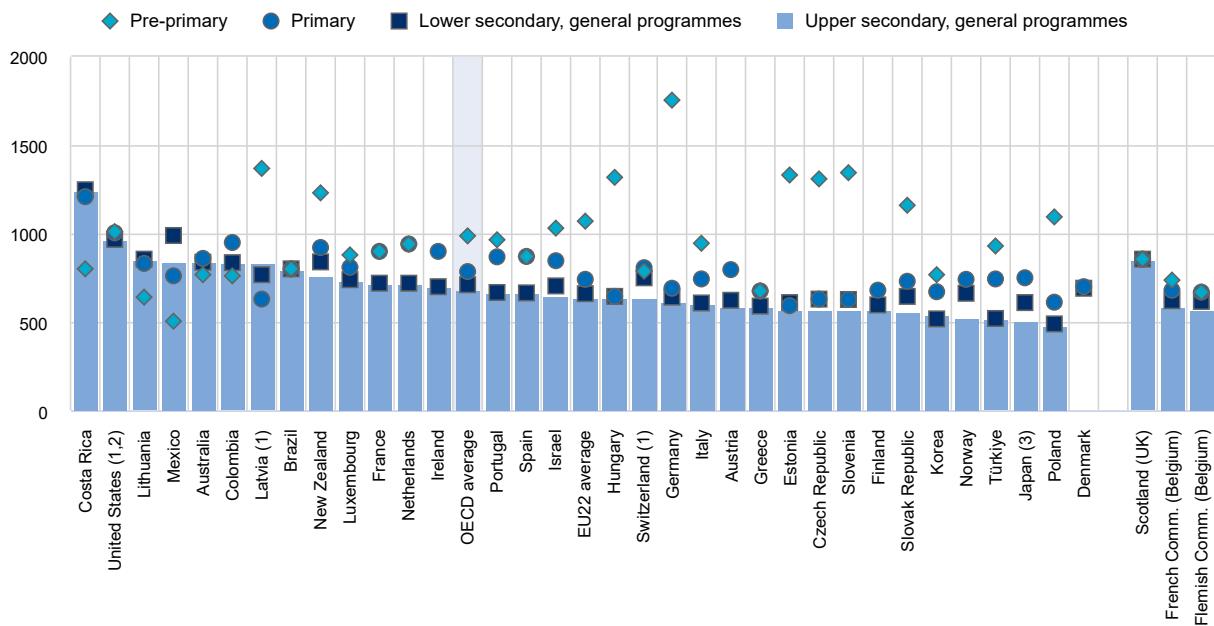
Teachers, the learning environment and the organisation of schools

- The salaries of teachers and school heads are an important determinant of the attractiveness of the teaching profession, but they also represent the single largest expenditure item in formal education. In most OECD countries, the statutory salaries of teachers (and school heads) in public educational institutions increase with the level of education they teach, and also with experience. Actual salaries also increase with the level of education. On average across OECD countries, actual salaries range from USD 41 941 at the pre-primary level to USD 53 682 at the upper secondary level. In the Czech Republic, actual salaries average USD 28 082 at pre-primary level and USD 36 282 at upper secondary level.
- Between 2015 and 2021, on average across OECD countries, the statutory salaries of teachers at lower secondary level (general programmes) with 15 years of experience and the most prevalent qualifications increased by 6% in real terms. In the Czech Republic, salaries increased more than the OECD average, by 37%.

- Teachers' average actual salaries remain lower than earnings of tertiary-educated workers in almost all OECD countries, and at almost all levels of education. This is also the case in the Czech Republic. Lower secondary (general programme) teachers in the Czech Republic earn 26.2% less than other tertiary-educated workers. School head actual salaries in the Czech Republic are only slightly higher than the earnings of other tertiary educated workers. This is different from most OECD countries, where school heads tend to earn well above the average earnings of tertiary educated workers.
- The average number of teaching hours per year required from a typical teacher in public educational institutions in OECD countries tends to decrease as the level of education increases. This is also the case in the Czech Republic.
- Based on official regulations or agreements, annual teaching hours in the Czech Republic are 1 308 hours per year at pre-primary level, 630 hours at primary level, 630 hours at lower secondary level (general programmes) and 573 hours at upper secondary level (general programmes) (Figure 4).

Figure 4. Teaching time of teachers, by level of education (2021)

Net statutory teaching time in hours per year, in public institutions



1. Actual teaching time (in Latvia except for pre-primary level).
2. Reference year differs from 2021. Refer to the source table for details.
3. Average planned teaching time in each school at the beginning of the school year.

Countries and other participants are ranked in descending order of the number of teaching hours per year in general upper secondary education.

Source: OECD (2022), Table D4.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-D.pdf).

- During their working hours, teachers also perform various non-teaching tasks such as lesson planning and preparation, marking students' work and communicating or co-operating with parents or guardians. At the upper secondary level, 66% of teachers' working time is formally dedicated to

non-teaching activities in the Czech Republic, compared to an average of 56% across OECD countries.

- Continuing professional development is compulsory for all teachers of general programmes in most countries with data, and the Czech Republic is no exception. At secondary level, professional development activities are compulsory for all teachers.

Focus on tertiary education

- Among 25-64 year-olds in the Czech Republic, master's degrees are the most common tertiary attainment at 19% of the population followed by bachelor's degrees at 7% and short-cycle tertiary qualifications with less than 1%. This is different from the OECD average, where bachelor's degrees are most common (19%), followed by master's degrees (14%) and short cycle tertiary qualifications (7%). As in all OECD countries and other participants, only a small fraction of the population holds a doctoral degree: the share is 1% in the Czech Republic.
- On average, tertiary attainment generates a wide range of labour-market benefits, including high employment rates. Yet, there are significant differences depending on the field of study. In 2021, employment rates in the Czech Republic were highest among tertiary-educated individuals who studied information and communication technologies with 96% and lowest among those who studied business, administration and law at 64%. Among 25-64 year-olds with tertiary attainment in the field with the lowest employment rate, this was 19.2 percentage points lower than among those with upper secondary attainment (all fields combined).
- In most OECD countries including in the Czech Republic, tertiary-educated adults have higher rates of participation in non-formal education and training than those with a lower level of educational attainment. In 2021, 8% of 25-64 year-olds with tertiary attainment in the Czech Republic had participated in non-formal education and training in the four weeks prior to being surveyed, compared to 1% of their peers with below upper secondary attainment.
- Over the decades, independent private institutions have been established to meet increased demand for tertiary education. On average across the OECD, 17% of students are enrolled in independent private institutions, but this figure masks large differences between countries. In the Czech Republic, 9% of tertiary students are enrolled in such institutions. Independent private institutions charge higher annual tuition fees on average than public institutions for master's programmes in all OECD countries and other participants with available data, except in Chile and Lithuania.
- Enabling students to enrol on a part-time basis is an important way to facilitate access to tertiary education. Many part-time students would not be able to study full time, for example because they have child-care responsibilities or have to work to fund their studies. The share of part-time students at the tertiary level in the Czech Republic is 2%, below the OECD average (22%). Compared to 2013, it has decreased.

COVID-19: The second year of the pandemic

- The COVID-19 pandemic had a significant impact on adult learning in most OECD countries. In 2020, the share of adults who participated in a formal or non-formal education and training activity in the four weeks prior to being surveyed decreased by 2 percentage points on average across OECD countries compared with 2019. However, in 2021, participation in non-formal education and training returned to pre-pandemic levels in most countries. In the Czech Republic, a different pattern emerged. From 2019 to 2020, the share of adults participating in a formal or non-formal

education and training activity fell by 3 percentage points. From 2020 to 2021, it remained unchanged and has thus remained below pre-pandemic levels.

References

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More information

For more information on Education at a Glance 2022 and to access the full set of indicators, see: <https://doi.org/10.1787/3197152b-en>

For more information on the methodology used during the data collection for each indicator, the references to the sources and the specific notes for each country, See Annex 3 (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3.pdf).

For general information on the methodology, please refer to the OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications (<https://doi.org/10.1787/9789264304444-en>).

Updated data can be found on line at <http://dx.doi.org/10.1787/eag-data-en> and by following the StatLinks  under the tables and charts in the publication.

Data on subnational regions for selected indicators are available in the *OECD Regional Statistics (database)* (OECD, 2022). When interpreting the results on subnational entities, readers should take into account that the population size of subnational entities can vary widely within countries. For example, regional variation in enrolment may be influenced by students attending school in a different region from their area of residence, particularly at higher levels of education. Also, regional disparities tend to be higher when more subnational entities are used in the analysis.

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<https://gpseducation.oecd.org/>

The data on educational responses during COVID-19 were collected and processed by the OECD based on the Joint Survey on National Responses to COVID-19 School Closures, a collaborative effort conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO); the UNESCO Institute for Statistics (UIS); the United Nations Children's Fund (UNICEF); the World Bank; and the OECD.

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