

# Education at a Glance 2022

OECD Indicators



# United States

## Highlights

- **Tertiary education is prevalent among young adults in the United States.** In 2021, 51% of 25-34 year-olds held a tertiary qualification, and only 6% were without an upper secondary qualification.
- **Higher educational attainment and better employment prospects are strongly linked in the United States.** In 2021, the employment rate among 25-34 year-olds with a tertiary degree was 16 percentage points higher than among those with upper secondary or post-secondary non-tertiary attainment, which is twice the OECD average of 8 percentage points.
- **In the United States, a tertiary degree in engineering, manufacturing or construction yields on average the highest earnings compared to other fields of study.** In contrast, tertiary attainment in the field of education leads to the lowest earnings.
- **Among OECD countries, the United States is the most popular destination for tertiary education.** In 2020, 15% of all international students in the world enrolled in tertiary programmes in the United States.
- **The United States invests more per student than the OECD average across all levels of education.** However annual expenditure per student at primary and secondary levels varies widely across states, by as much as three times in 2019.
- **Public primary and secondary teachers in the United States earn less, on average, than other tertiary-educated workers.** In 2021, average actual salaries of lower secondary teachers were only 61% of the average earnings of other tertiary-educated workers, which was lower than the OECD average (90%).

## The output of educational institutions and the impact of learning

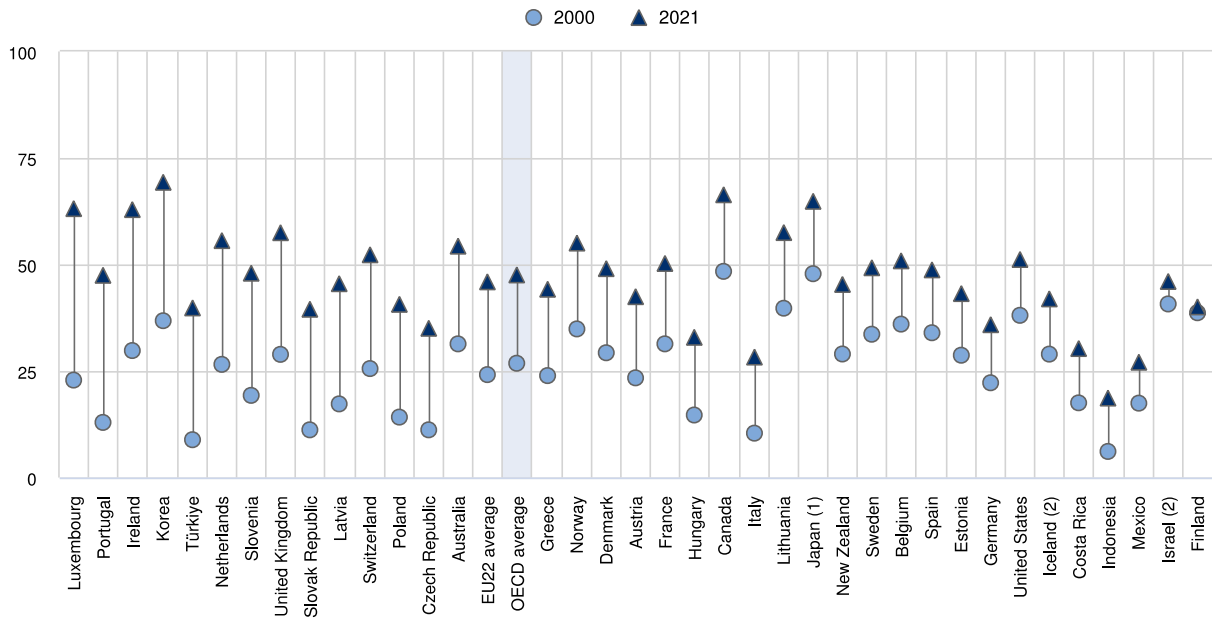
- Educational attainment has been increasing throughout the OECD, in particular at tertiary level. Between 2000 and 2021, the share of 25-34 year-olds with tertiary attainment increased on average by 21 percentage points. In the United States, the share also increased albeit at a slower pace, by 13 percentage points (from 38% in 2000 to 51% in 2021) (Figure 1). The United States is one of the 14 OECD countries where at least half of 25-34 year-olds have a tertiary education.
- 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 United States, the share is 6%, which is lower than the OECD average.
- Higher educational attainment is often associated with better employment prospects and the United States is no exception. In 2021, the employment rate among 25-34 year-olds with tertiary education in the United States was 31 percentage points higher than among those with

below upper secondary attainment and 16 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 United States, 38% of women with below upper secondary attainment were employed in 2021, compared to 81% of those with tertiary attainment. In contrast, the figures were 64% and 87% for men.

- Across the OECD, the labour market benefits of tertiary attainment have proved especially strong during economic crises. This was also the case during the COVID-19 pandemic in the United States. Between 2020 and 2021, unemployment for workers with below upper secondary attainment increased by 2.3 percentage points and by 2.2 percentage points for workers with upper secondary attainment, but only by 0.9 percentage points 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 United States, the earnings advantage of tertiary-educated workers was even greater than the OECD average. In 2020, workers with upper secondary attainment earned 44% 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 United States. In 2019, the difference between the region with the highest share of 25-64 year-olds with tertiary attainment (District of Columbia, at 67%) and that with the lowest share (West Virginia, at 32%) was 35 percentage points. These subnational variations not only reflect differences in education opportunities, but also 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 (link tbc).

## Access to education, participation and progress

- In almost all OECD countries, women make up the majority of those graduating from general upper secondary education. However, in the United States, men and women are equally represented.
- In the United States, 45% of 18-24 year-olds are still in full- or part-time education or training at either upper secondary or tertiary level (substantially below the OECD average of 54%). A subset of these students (18% of 18-24 year-olds) combine their education or training with some form of employment in the United States, compared to 17% on average across the OECD.
- As is the case in all OECD countries, a majority of students enrolled at tertiary level in the United States are bachelor's students (52%). However, the next commonest enrolment level varies from country to country. In the United States, short-cycle tertiary students make up the second largest group of tertiary students at 32%. This is also the case in 13 other OECD countries, while in the remaining 26 countries with available data, master's students form the second largest group.

## Financial resources invested in education

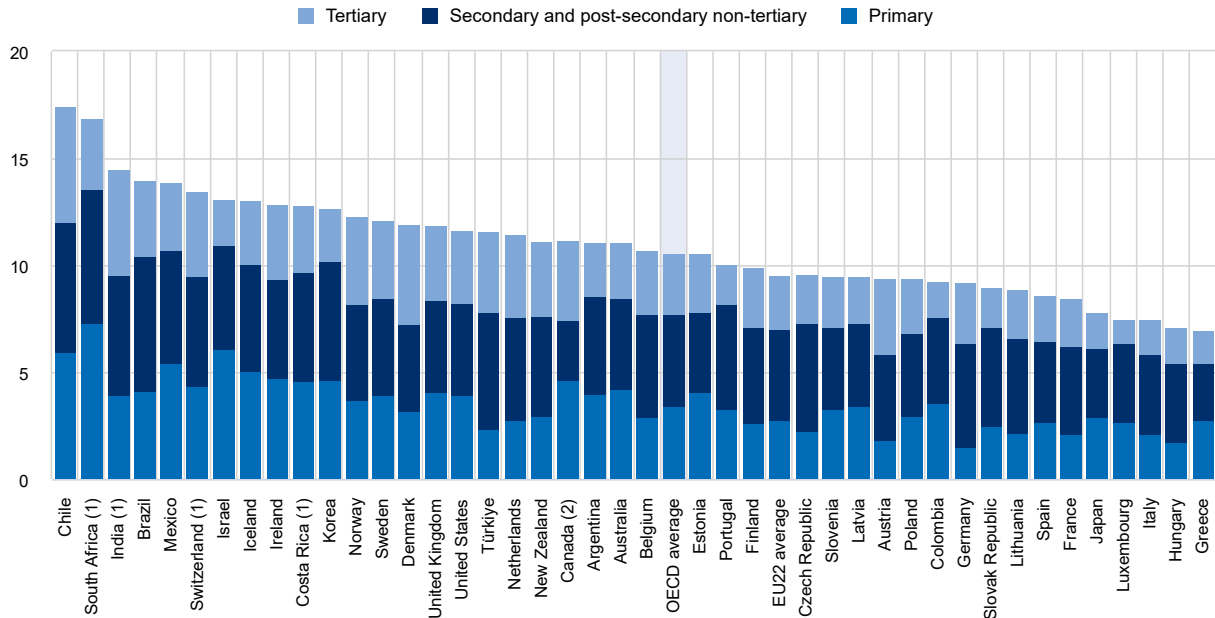
- All OECD countries devote a substantial share of national output to educational institutions. In 2019, OECD countries spent on average 4.9% of their gross domestic product (GDP) on primary

to tertiary educational institutions. In the United States, the corresponding share was 6%. Between 2008 and 2019, funding for educational institutions from all sources grew by 12% in the United States. However, over the same period of time, the increase in GDP was higher with 20%. As a consequence, expenditure on educational institutions as a share of GDP fell by 0.5 percentage points over the same time period.

- Public spending on primary to tertiary education was 11.7% of total government expenditure in the United States (Figure 2), higher than the OECD average (10.6%). Also, relative to GDP, public spending on primary to tertiary education (4.6%) is higher 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 United States spent USD 19 382 per student in 2019. Its cumulative expenditure on educating a student from the age of 6 to 15 was USD 143 383, which was significantly above 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. In 2019, OECD countries as a whole spent on average USD 9 923 per student at primary and USD 11 400 per student at secondary level. In comparison, the United States, spent USD 13 780 per student at primary and USD 15 538 at secondary level, which were among the highest across OECD countries.
- However, annual expenditure per student at primary and secondary levels combined varies greatly across regions of the United States. In 2019, the region with the highest value (District of Columbia, USD 28 210) spent about three times as much per student as the region with the lowest value (Idaho, USD 9 103).
- In contrast to lower levels of education, spending on tertiary education varies widely across OECD countries. Expenditure per student at tertiary level in the United States 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 United States in 2019 was USD 35 347 per year, which was USD 21 567 higher than that of the primary level and USD 19 809 higher than that of the secondary level. It is among the highest across OECD countries. The average expenditure at tertiary level (USD 17 559) is driven up by high values such as these in a few countries. At 12%, the share of research and development (R&D) expenditure makes up a smaller fraction of expenditure on tertiary education in the United States 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 8% in the United States in 2019. In contrast, private expenditure at tertiary level was higher in all OECD countries. In the United States, the share of private expenditure at tertiary level reached 64%, which was significantly above the OECD average of 31%.

**Figure 2. 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](https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-C.pdf)).

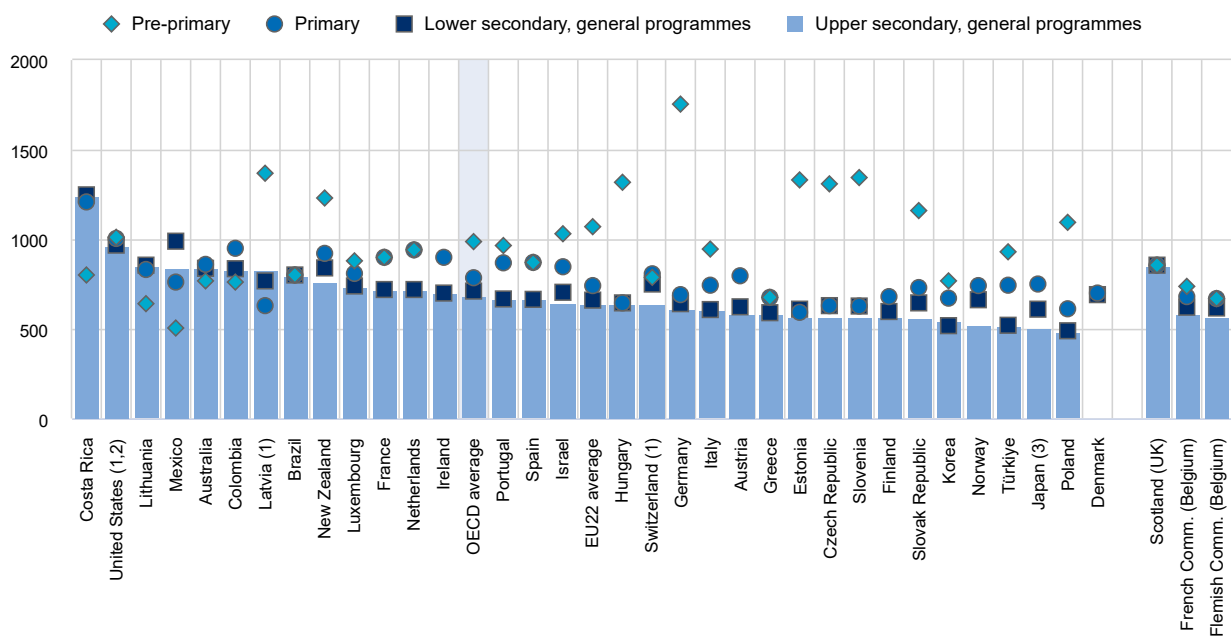
## Teachers, the learning environment and the organisation of schools

- 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 taught. 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 United States, actual salaries averaged USD 56 199 at the pre-primary level and USD 62 569 at the upper secondary level in 2021.
- Teacher and school head salaries vary widely across the United States. For example, in 2021, salaries of teachers with 15 years of experience at primary and secondary levels were over USD 80 000 in California, but below USD 50 000 in Arizona. For both teachers and school heads, the subnational variation in the actual salaries was greater at the primary level than at lower and upper secondary levels.
- 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 constant dollars. In the United States, salaries remained fairly stable between the years.

- 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 United States. In 2021, lower secondary teachers in the United States earned 38.7% less than other tertiary-educated workers. In contrast, school head actual salaries in the United States were 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 United States. In the latest year available, annual teaching hours in the United States were 1 011 hours per year at pre-primary level, 1 004 hours at primary level, 966 hours at lower secondary level (general programmes) and 966 hours at upper secondary level (general programmes) (Figure 3).

**Figure 3. 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](https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-D.pdf)).

### Focus on tertiary education

- Among 25-64 year-olds in the United States, bachelor’s degrees are the most common tertiary attainment at 25% of the population followed by master’s degrees with 12% and short-cycle tertiary qualifications with 11%. This is similar to 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 2% in the United States.

- In the United States, the shares of 25-64 year-olds with a tertiary qualification in the fields of arts or humanities, social sciences, journalism and information (30%) and in natural sciences, mathematics and statistics (10%) were the highest among OECD countries. On average across OECD countries, the shares are 18% and 5% respectively.
- 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 United States were highest among tertiary-educated individuals who studied engineering, manufacturing and construction with 88% and lowest among those who studied education at 80%. However, these differences need to be put into perspective. Even among 25-64 year-olds with tertiary attainment in the field with the lowest employment rate, this was 13.4 percentage points higher than among those with upper secondary attainment.
- Wages also differ according to the field of study. In the United States, tertiary attainment in engineering, manufacturing and construction generates the highest earnings. Full-time full-year workers aged 25-64 with a tertiary degree in this field earn on average more than twice as much as workers with upper secondary attainment. In contrast, tertiary attainment in the field of education leads to the lowest wages. Workers with this educational background only earn on average 26% more than the wage of workers with upper secondary attainment.
- Despite the labour market advantages of a tertiary degree, many tertiary students do not graduate on time or do not graduate at all. In the United States, 49% of bachelor's students graduate within the theoretical programme duration. Across the OECD, the completion rate within the theoretical programme duration ranges from 12% to 69%. Completion rates three years after the theoretical programme duration are significantly higher in most countries and the differences between OECD countries are somewhat narrower. In the United States, 77% of bachelor's students have graduated within two years after the end of the theoretical programme duration, compared to 68% on average across the OECD (within three years after the end of the theoretical programme duration).
- In all OECD countries, tertiary completion rates are higher for women than for men. In the United States, 53% of women graduated within the theoretical programme duration at bachelor's level, compared to 45% of men. On average across the OECD, the completion rate of students in public institutions is lower than that of private institutions, but the figures differ from country to country. In the United States, 42% of bachelor's students graduate from public institutions within the theoretical programme duration, while the share is 62% for private institutions.
- In the United States, only 12% of students who enter a full-time short-cycle programme graduate from any tertiary programme within the theoretical duration (OECD average is 44%). However, the completion rate three years after the theoretical programme duration reaches 43%. It can partly be explained by intentional fluidity between short-cycle tertiary and bachelor's programmes.
- Entering tertiary education often means costs for students and their families, in terms of tuition fees, foregone earnings and living expenses, although they may also receive financial support to help them afford it. Public policies on tuition fees and financial support for students differ greatly across countries. In the United States, comparatively high levels of tuition fees are combined with high levels of financial support for students. However, over one-third of expenditure on tertiary institutions still comes from households. Public institutions in the United States charge average tuition fees of USD 9 212 for national in-state students at bachelor's level and USD 12 171 at master's level.
- OECD countries have different approaches to providing financial support to students enrolled in tertiary education, but in general countries with the highest level of public transfers to the private sector are those that also tend to have the highest tuition fees. In six OECD countries and other participants, including the United States, at least 80% of national students receive public financial



support in the form of student loans, scholarships or grants. In another six countries and other participants, less than 25% of students receive financial support. In these countries and other participants, public financial support is targeted on selected groups of students, such as those from socio-economically disadvantaged families.

- Over the decades, independent private institutions have provided an alternative to help meet the increasing 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 United States, 27% 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 study part time 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 United States is 38%, above the OECD average (22%). Compared to 2013, it has remained constant.
- The United States is the top OECD destination country for mobile tertiary students: 957 000 foreign students were enrolled in the United States in 2020, representing 15% of international education market share. However, this is only 5% of the total tertiary enrolment in the country. In comparison, its closest neighbour, Canada, holds 5% of international education market share, but foreign students make up 18% of the total tertiary enrolment.

### COVID-19: The second year of the pandemic

- In the United States, the U.S. Department of Education reinstated the accountability rules of the Every Student Succeeds Act (ESSA) in the school year 2021/22, mandating each state implement annual state-wide standardised tests in reading and math in grades 3-8, and once in high schools. In the spring of 2022, a standardised national assessment (National Assessment of Education Progress) was administered at the primary and secondary levels to observe the impact of school closures on learning outcomes during the pandemic.
- The United States has conducted studies to evaluate the effects of the pandemic on students, parents, and teachers, such as the School Pulse Panel which includes information on topics such as mental health and well-being, instructional mode, learning recovery, student absenteeism and school staffing.
- In the school year 2021/22, national programmes to support students affected by the pandemic were implemented in the United States at the primary and secondary levels. The U.S. Department of Agriculture supported free meals to all students during the school year and continuation of providing meals and meal supplements to students during COVID-19 related school closures.
- The challenges related to the COVID-19 pandemic have created additional costs for education systems. Preliminary budget estimates for 2021 suggest that, compared to 2020, the education budget at primary to tertiary level in the United States increased strongly (by more than 5%, in nominal terms). Through the Elementary and Secondary School Emergency Relief (ESSER) Fund, the U.S. government dispersed USD 189.5 billion in grants throughout the pandemic to school districts at the discretion of individual states. ESSER funds have been used for various needs, such as strengthening the use of digital/online learning and academic programmes during summer vacation (National Conference of State Legislatures, 2022<sup>[1]</sup>).
- Young adults who are not in employment, education or training (NEET) for prolonged periods are at risk of adverse economic and social outcomes in both the short and the long term. After

increasing from 15% in 2019 to 19% during the COVID-19 pandemic in 2020, the share of 18-24 year-olds who were NEET in the United States declined to 17% in 2021.

## References

OECD (2022), *Education at a Glance 2022: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/69096873-en>.

OECD (2022), "Regional education", *OECD Regional Statistics (database)*, <https://dx.doi.org/10.1787/213e806c-en>.


National Conference of State Legislatures (2022), Elementary and Secondary School Emergency Relief Fund Tracker, <https://www.ncsl.org/ncsl-in-dc/standing-committees/education/cares-act-elementary-and-secondary-school-emergency-relief-fund-tracker.aspx> (accessed on 19 August 2022).

## 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](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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### Questions can be directed to:

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