

# Luxembourg

## Ensuring equal opportunities for students across socio-economic backgrounds

- Socio-economic status may significantly impact students' participation in education, particularly at levels of education that rely, in many countries, most heavily on private expenditure, such as early childhood education and care and tertiary education. This is less the case in Luxembourg: private sources accounted for 2% of total expenditure in pre-primary institutions, lower than the OECD average of 17%. At tertiary level, 6% of expenditure comes from private sources in Luxembourg, compared to 30% on average across OECD countries.
- Across most OECD countries, socio-economic status influences learning outcomes more than gender and immigrant status. In Luxembourg, the proportion of children from the bottom quartile of the PISA index of economic, social and cultural status (ESCS) achieving at least PISA level 2 in reading in 2018 was 42% lower than that of children from the top ESCS quartile, a larger share than the OECD average of 29%.
- International student mobility at the tertiary level has risen steadily reaching about 3 500 students in Luxembourg and representing 49% of tertiary students in 2019. The largest share of international tertiary students studying in Luxembourg comes from France. Students from low and lower-middle income countries are generally less likely to study abroad. In 2019, they represented 29% of international students in OECD countries, compared to 13% in Luxembourg.
- Large differences in educational attainment may lead to starker earnings inequality in many countries. In Luxembourg, 19% of 25-64 year-old adults with below upper secondary attainment earned at or below half the median earnings in 2019, below the OECD average of 27%.

## Gender inequalities in education and outcomes

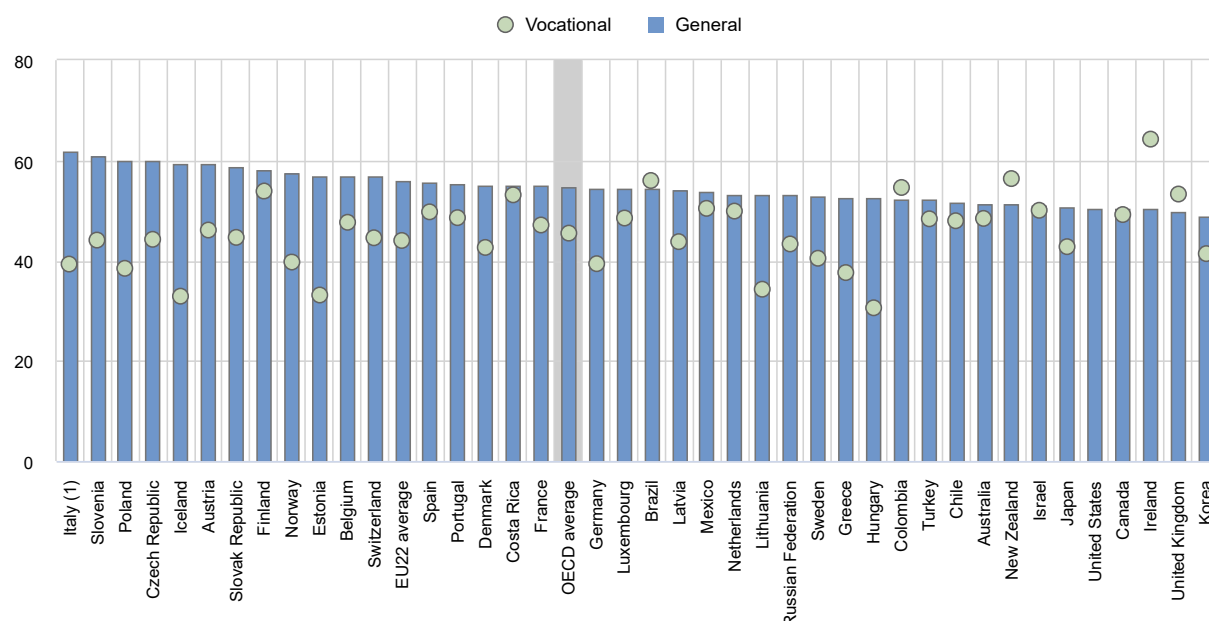
- In Luxembourg, 1.3% of students in lower secondary and 4.7% in upper secondary initial education repeated a grade in 2019, compared to 1.9% and 3% respectively on average across OECD countries. Boys are more likely to repeat a grade at lower secondary initial education than girls. In Luxembourg, 57% of repeaters at lower secondary level were boys, lower than the OECD average of 61%. At upper secondary level, the share of boys repeating a grade in Luxembourg decreases to 55%, compared to 57% on average across OECD countries.
- Men are more likely than women to pursue a vocational track at upper secondary level in most OECD countries. This is also the case in Luxembourg, where 51% of upper secondary vocational graduates in 2019 were men (compared to the OECD average of 55%). Women are generally more likely to graduate from upper secondary general programmes. This is also the case in Luxembourg, where women represent 54% of graduates from upper secondary general programmes, compared to 55% on average across OECD countries (Figure 1).
- Tertiary education has been expanding in the last decades, and, in 2020, 25-34 year-old women were more likely than men to achieve tertiary education in all OECD countries. In Luxembourg,

64% of 25-34 year-old women had a tertiary qualification in 2020 compared to 53% of their male peers, while on average across OECD countries the shares were 52% among young women and 39% among young men.

- Gender differences in the distribution of tertiary entrants across fields of study are significant. Women tend to be under-represented in certain fields of science, technology, engineering and mathematics (STEM) across most OECD countries. On average, 26% of new entrants in engineering, manufacturing and construction and 20% in information and communication technologies were women in 2019. In Luxembourg, women represented 23% of new entrants in engineering, manufacturing and construction programmes and 18% in information and communication technologies. In contrast, they represented 74% of new entrants to the field of education, a sector traditionally dominated by women. In Luxembourg, men represent 34% of teachers across all levels of education, compared to 30% on average across OECD countries.
- Young women are less likely to be employed than young men, particularly those with lower levels of education. Only 54% of 25-34 year-old women with below upper secondary attainment were employed in 2020 compared to 78% of men in Luxembourg. This gender difference is slightly smaller than the average across OECD countries, where 43% of women and 69% of men with below upper secondary attainment are employed.
- In nearly all OECD countries and at all levels of educational attainment, 25-64 year-old women earn less than their male peers: their earnings correspond to 76%-78% of men's earnings on average across OECD countries. This proportion varies more across educational attainment levels within countries than on average across OECD countries. Compared to other education levels, women with upper secondary or post-secondary non-tertiary education in Luxembourg have the lowest earnings relative to men with a similar education level, earning 82% as much, while those with below upper secondary education earn 85% as much.
- On average across countries with available data, 25-64 year-old women tend to participate slightly more in adult learning than men of the same age. In Luxembourg, 48% of both men and women participated in formal and/or non-formal education and training in 2016. Family reasons were reported as barriers to participation in formal and/or non-formal education and training by 37% of women compared to 25% of men.

**Figure 1. Share of women among upper secondary graduates, by programme orientation (2019)**

In per cent



1. Includes post-secondary non-tertiary level.

Countries are ranked in descending order of the share of women in general programmes.

**Source:** OECD (2021). Table B3.1. See *Source* section for more information and Annex 3 for notes ([https://www.oecd.org/education/education-at-a-glance/EAG2021\\_Annex3\\_ChapterB.pdf](https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterB.pdf)).

## Education and migration background

- On average across the OECD, foreign-born adults (25-64 year-olds) account for 22% of all adults with below upper secondary attainment, 14% of those attaining upper secondary or post-secondary non-tertiary attainment, and 18% of tertiary-educated adults. But in Luxembourg, the share of foreign-born adults among all adults with a given level of educational attainment is the highest among tertiary-educated adults (68% in 2020).
- Foreign-born adults have more difficulty finding a job than their native-born peers as they face various challenges, such as discrepancies in credential recognition, skills, and language. Thus, foreign-born workers are likely to have a lower reservation wage (the lowest wage rate at which a worker would be willing to accept a particular type of job). As a result, the employment rate for foreign-born adults with low educational attainment is higher than the rate for their native-born peers in many countries. On average across OECD countries, among adults without upper secondary attainment, 57% of native-born adults are employed compared to 61% of foreign-born adults. In Luxembourg, the employment rate of foreign-born adults without upper secondary attainment was 63% in 2020, higher than that of their native-born peers (57%).
- The likelihood of being employed increases with the level of educational attainment, but foreign-born adults with tertiary attainment generally have lower employment prospects than their native-born peers. On average across OECD countries, 86% of native-born tertiary-educated adults are employed compared to 79% for foreign-born tertiary-educated adults. In Luxembourg, among tertiary-educated adults, 86% of native-born adults and 84% of foreign-born adults are

employed. Foreign-born adults who arrived in the country at an early age have spent some years in their host country's education system and gained nationally recognised credentials. As a result, their labour-market outcomes are generally better than that of those who arrived at a later age with a foreign qualification. In Luxembourg, however among foreign-born adults with tertiary attainment, 79% of those who arrived by the age of 15 are employed, compared to 84% of those who arrived in the country at age 16 or later.

- In many OECD countries, foreign-born adults earn less than native-born adults. This pay gap may narrow with higher levels of educational attainment. On average across OECD countries, foreign-born adults with below secondary attainment working full-time earn 89% as much as their native-born peers, while this gap disappears among tertiary-educated adults. In Luxembourg, in 2019, among adults with below upper secondary attainment, the earnings of foreign-born full-time workers represented 69% that of their native-born peers, 78% among adults with upper secondary or post-secondary non-tertiary attainment, and 97% among those with a tertiary-education.

## COVID-19: 18 months into the pandemic

- The spread of COVID-19 has continued to impede access to in-person education in many countries around the world in 2021. By mid-May 2021, 37 OECD and partner countries had experienced periods of full school closure since the start of 2020.
- The number of instructional days when schools were fully closed since the start of 2020 due to the pandemic (excluding school holidays, public holidays and weekends) varies significantly between countries and increases with the level of education. Luxembourg is an exception. In Luxembourg, pre-primary schools were fully closed for an average of 48 days between 1 January 2020 and 20 May 2021. Meanwhile primary schools closed for 48 days, lower secondary for 34 days and upper secondary general schools for 34 days. In comparison, respective closures were 55, 78, 92 and 101 days on average across the OECD.
- In many countries, schools did not fully close but remained open with reduced capacity. Schools at upper secondary (general) level in Luxembourg for instance experienced 116 days of partial opening between January 2020 and May 2021, 43 of which occurred in 2020 and 73 in 2021. In total, this was higher than the number of days of partial opening in the OECD on average (57 days), where there were 27 days of partially open instruction in 2020, and 30 days in 2021. When adding both the number of days where schools were fully and partially closed, learning in upper secondary general education was disrupted by 150 days in Luxembourg between January 2020 and May 2021.
- During periods of full school closure in 2020, 21 OECD and partner countries have opted to keep upper secondary general schools virtually open as a national level strategy, including Luxembourg. However, in 4 countries, excluding Luxembourg, each day of remote learning was not considered equivalent to a full day of in-person instruction. The way that online platforms have operated during school closures has varied between countries. In Luxembourg, a hybrid approach was adopted from pre-primary to upper secondary education levels, including a blend of both asynchronous and synchronous online learning.
- The impact of COVID-19 and school closures on educational equity has been a concern for many countries. 30 out of the 36 OECD and partner countries surveyed, including Luxembourg, declared that additional measures were taken to support the education of children who might face additional barriers to learning during the pandemic. 22 of these countries, although not Luxembourg, stated that they had subsidised devices for students to help them access education. Measures to encourage disadvantaged or vulnerable students to return to school after closures were also implemented in 29 OECD and partner countries, including in Luxembourg.

- Countries have faced difficult decisions on how to best manage their resources to ensure that students can continue to access quality education in the safest possible conditions and to minimise disruption to learning. Before the pandemic, total public expenditure on primary, secondary and post-secondary non-tertiary education in Luxembourg reached 2.8% of gross domestic product (GDP) in 2018, which was lower than the OECD average of 3.2%. About two-thirds of OECD and partner countries reported increases in the funding allocated to primary and secondary schools to help them cope with the crisis in 2020. Compared to the previous year, Luxembourg reported an increase in the fiscal year education budget for primary and lower secondary general education in both 2020 and 2021.
- 20 OECD and partner countries, including Luxembourg, stated that the allocation of additional public funds to support the educational response to the pandemic in primary and secondary schools was based on the number of students or classes. At the same time, 16 countries targeted additional funds at socio-economically disadvantaged students as a way to ensure that resources targeted those that needed them the most, though this was not the case in Luxembourg.
- Countries' approach to prioritise teachers in vaccination campaigns against COVID-19 has varied. In total, 19 OECD and partner countries, excluding Luxembourg, have prioritised at least some teachers as part of the government's plans to vaccinate the population on a national level (as of 20 May 2021).
- At the same time, the number of adults participating in formal and/or non-formal education and training decreased by 27% on average in the OECD between the second quarter of 2019 and the second quarter of 2020 (i.e. during the peak of the first wave of COVID-19 in many OECD countries). In Luxembourg, the participation of adults in formal and/or non-formal education and training in this period decreased by 24% in Luxembourg.
- Despite the impact of the crisis on employment, the share of NEETs among 18-24 year-olds did not greatly increase in most OECD and partner countries during the first year of the COVID-19 pandemic. On average, the share of 18-24 year-old NEETs in OECD countries rose from 14.4% in 2019 to 16.1% in 2020. In Luxembourg, the share of 18-24 year-old NEETs was 8.3% in 2019, which increased to 10.3% in 2020.

## Investing in education

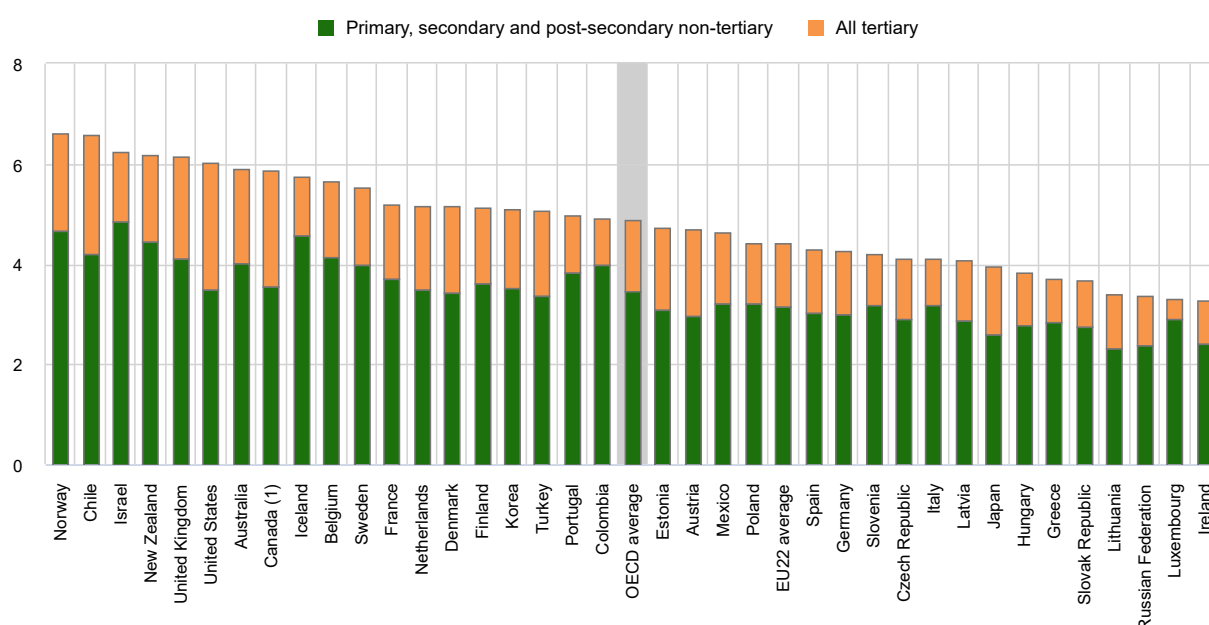
- Annual expenditure per student on educational institutions provides an indication of the investment countries make on each student. After accounting for public-to-private transfers, public expenditure on primary to tertiary educational institutions per full-time student in Luxembourg was USD 23 457 in 2018 (in equivalent USD converted using PPPs for GDP) compared to USD 10 000 on average across OECD countries.
- Expenditure on core educational services such as instruction and teaching make up the largest share of education expenditure. However, ancillary services (such as student welfare) and research and development (R&D) activities also influence the level of expenditure per student. In primary to tertiary education, 89% of institutions' expenditure per student is devoted to core educational services in Luxembourg (compared to 89% on average across OECD countries). This share is generally lower at the tertiary level due to expenditure on research and development, including in Luxembourg where 56% of total expenditure is devoted to core educational services.
- The provision of education across public and private institutions influences the allocation of resources between levels of education and types of institution. In 2018, Luxembourg spent USD 23 376 per student at primary, secondary and post-secondary non-tertiary education, USD 12 922 higher than the OECD average of USD 10 454. At tertiary level, Luxembourg invested USD 47 694 per student, USD 30 629 more than the OECD average. Expenditure per student on public educational institutions is higher than on private institutions on average across

OECD countries. This is also the case in Luxembourg, where total expenditure on primary to tertiary public institutions amounts to USD 26 385 per student, compared to USD 16 897 on private institutions.

- Luxembourg was among the ten OECD countries that spent the lowest proportion of GDP on primary to tertiary educational institutions. In 2018, Luxembourg spent 3.3% of GDP on primary to tertiary educational institutions, which is 1.6 percentage points lower than the OECD average. Across levels of education, Luxembourg devoted a lower share of GDP than the OECD average at both non-tertiary and tertiary levels (Figure 2).
- The share of capital costs on total expenditure on educational institutions is higher than the OECD average at primary to tertiary level in Luxembourg. At primary, secondary and post-secondary non-tertiary level, capital costs account for 10% of total spending on educational institutions, 2 percentage points above the OECD average (8%). At the tertiary level, capital costs represent 7%, lower than the average across OECD countries of 11%.
- Compensation of teachers and other staff employed in educational institutions represents the largest share of current expenditure from primary to tertiary education. In 2018, Luxembourg allocated 81% of its current expenditure to staff compensation, compared to 74% on average across OECD countries. Staff compensation tends to make up a smaller share of current expenditure on tertiary institutions due to the higher costs of facilities and equipment at this level. In Luxembourg, staff compensation represents 67% of current expenditure on tertiary institutions compared to 84% at non-tertiary levels. On average across OECD countries, the share is 68% at tertiary level and 77% at non-tertiary level.

**Figure 2. Total expenditure on educational institutions as a percentage of GDP (2018)**

In per cent



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1. Primary, secondary and post-secondary non-tertiary education includes pre-primary programmes.

*Countries are ranked in descending order of total expenditure on educational institutions as a percentage of GDP.*

**Source:** OECD (2021), Table C2.1. See *Source* section for more information and Annex 3 for notes ([https://www.oecd.org/education/education-at-a-glance/EAG2021\\_Annex3\\_ChapterC.pdf](https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterC.pdf)).

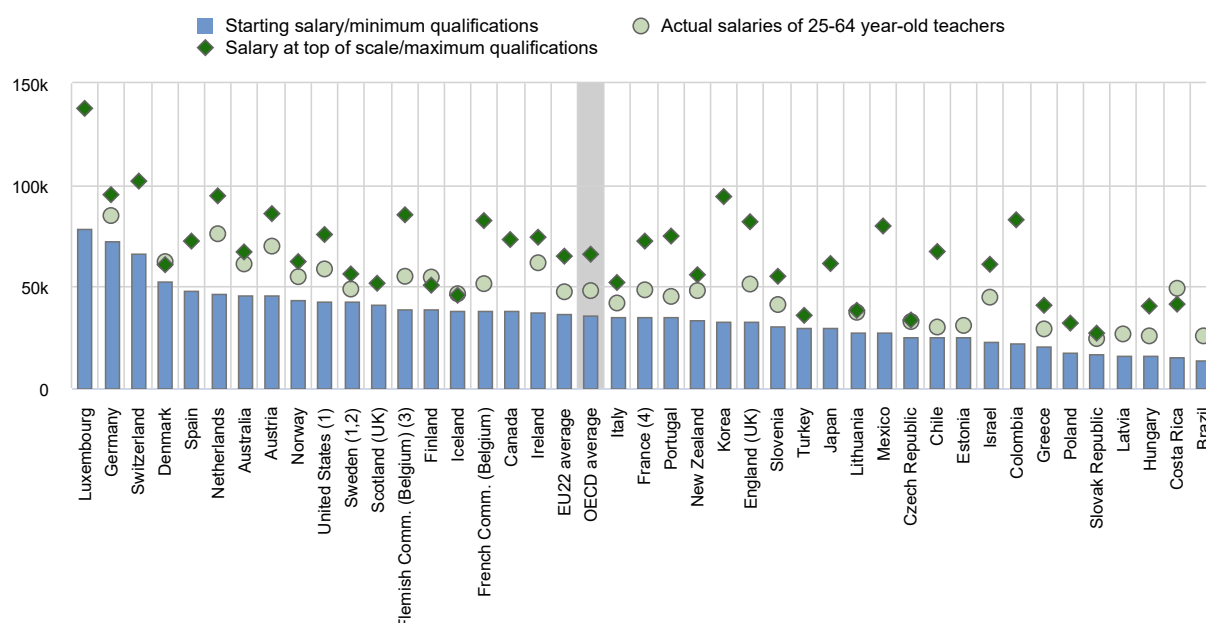
## Working conditions of school teachers

- The salaries of school staff, and in particular teachers and school heads, represent the largest single expenditure in formal education. Their salary levels also have an impact on the attractiveness of the teaching profession. In most OECD countries and economies, statutory salaries of teachers (and school heads) in public educational institutions increase with the level of education they teach, and also with experience. On average, statutory salaries of teachers with maximum qualifications at the top of their salary scales (maximum salaries) were between 86% and 91% higher than those of teachers with the minimum qualifications at the start of their career (minimum salaries) at pre-primary (ISCED 02), primary and general lower and upper secondary levels in 2020. In Luxembourg, maximum salaries were 75% to 77% higher than minimum salaries at each level of education (Figure 3). However, most teachers were paid between these minimum and maximum salaries.
- Between 2005 and 2020, the statutory salaries of teachers with 15 years of experience and the most prevalent qualifications increased (at constant prices) by 2% to 3% at primary and general lower and upper secondary levels, on average across OECD countries with data for all reference years, despite a decrease of salaries following the 2008 financial crisis. In Luxembourg, teachers' salaries at these levels increased by 3%-25%.
- In primary and secondary education, about 35% of teachers are at least 50 years old on average across OECD countries and may reach retirement age in the next decade, while the size of the school-age population is projected to increase in some countries, putting many governments under pressure to recruit and train new teachers. In 2019, 17% of primary teachers in Luxembourg were at least 50 years old, which was lower than the OECD average of 33%. On average across OECD countries, the proportion of teachers aged at least 50 years old increases with higher levels of education taught, to 36% in lower secondary education and 40% in upper secondary education. In Luxembourg, this proportion varies from 25% at lower secondary level to 26% at upper secondary level.



**Figure 3. Lower secondary teachers' average actual salaries compared to the statutory starting and top of the scale salaries (2020)**

Annual statutory salaries of teachers in public institutions, in equivalent USD converted using PPPs



**Compare your country:** <https://www.compareyourcountry.org/education-at-a-glance-2021/en/7/all/default>

**Note:** Actual salaries include bonuses and allowances.

1. Actual base salaries.
2. Salaries at the top of the scale and the minimum qualifications, instead of the maximum qualifications.
3. Salaries at the top of the scale and the most prevalent qualifications, instead of the maximum qualifications.
4. Includes the average of fixed bonuses for overtime hours.

Countries and economies are ranked in descending order of starting salaries for lower secondary teachers with the minimum qualifications.

**Source:** OECD (2021), Table D3.3 and 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/EAG2021\\_Annex3\\_ChapterD.pdf](https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterD.pdf)).

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## More information

**For more information on Education at a Glance 2021 and to access the full set of Indicators, see:**

<https://doi.org/10.1787/b35a14e5-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/EAG2021\\_Annex3.pdf](https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3.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, 2021). 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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The data on educational responses during COVID-19 were collected and processed by the OECD based on the Survey on Joint 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.

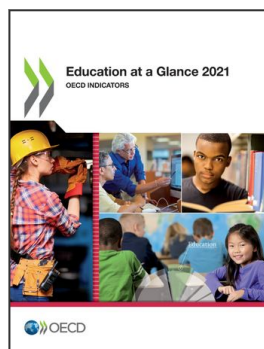
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