

Sweden

The output of educational institutions and the impact of learning

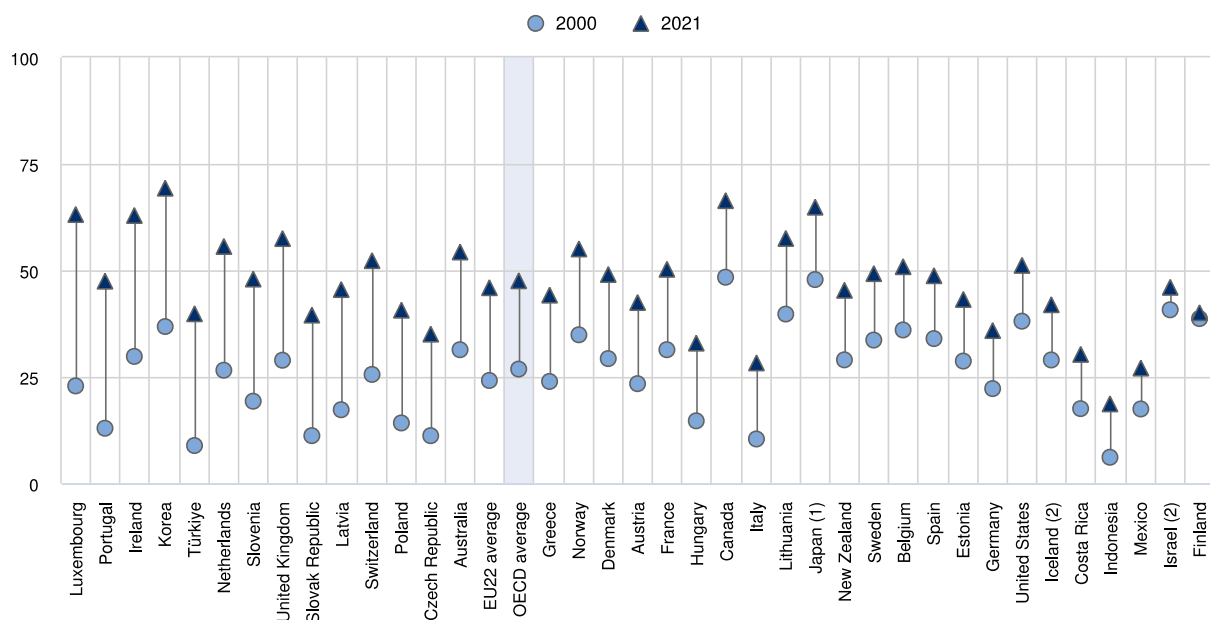
- Educational attainment has been increasing throughout the OECD, in particular at tertiary level. Between 2000 and 2021, the share of 25-34 year-olds with tertiary attainment increased on average by 21 percentage points. In Sweden, the share also increased albeit at a slower pace, by 16 percentage points (from 34% in 2000 to 49% in 2021) (Figure 1). Sweden is one of the 24 OECD countries where tertiary education is the most common 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 Sweden, the share is 16%, which is higher than the OECD average.
- Higher educational attainment is often associated with better employment prospects and Sweden is no exception. In 2021 the employment rate among 25-34 year-olds with tertiary education in Sweden was 26 percentage points higher than among those with below upper secondary attainment and 5 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 Sweden, 46% of women with below upper secondary attainment were employed in 2021, compared to 85% of those with tertiary attainment. In contrast, the figures were 71% 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 Sweden. Between 2019 and 2020, unemployment for 25-34 year-old workers with below upper secondary attainment increased by 6.7 percentage points, by 1.5 percentage points for workers with upper secondary attainment and by 2 percentage points for workers with tertiary attainment. In 2021, unemployment for workers with below upper secondary attainment increased by 1.7 percentage points, compared to 2020, by 0.1 percentage points for workers with upper secondary attainment and decreased by 0.6 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 Sweden, the earnings advantage of tertiary-educated workers was smaller than the OECD average. In 2020, workers with upper secondary or

post-secondary non-tertiary attainment earned 30% more than those with below upper secondary attainment and those with tertiary attainment earned 61% more.

- 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 Sweden. In 2021, the difference between the region with the highest share of 25-64 year-olds with tertiary attainment (Stockholm, at 56%) and that with the lowest share (North Middle Sweden, at 36%) was 21 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

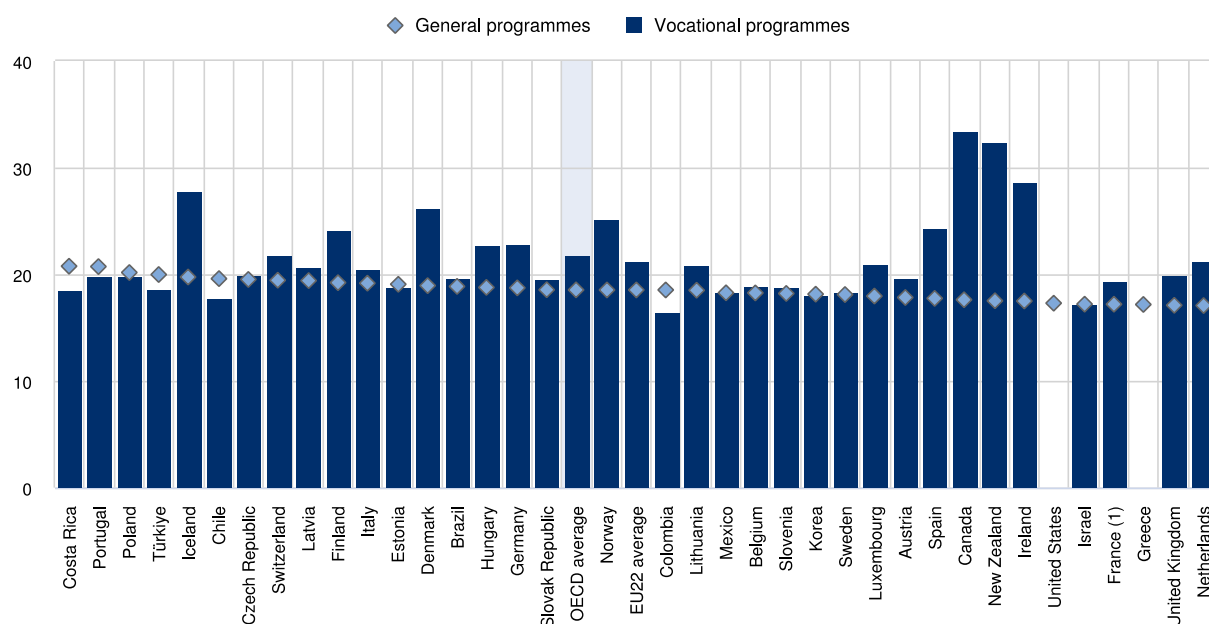
- Compulsory education begins at the age of 6 and ends at the age of 15 in Sweden. The range of ages for which at least 90% of the population are enrolled is longer than the period of compulsory education and goes from the age of 2 to the age of 18. This is similar to most other OECD countries, where more than 90% of the population are also enrolled for longer than the period of compulsory education.
- The age at which children enter early childhood education differs widely across countries. In Sweden, early childhood education starts offering intentional education objectives at age 1 and

48% of children under 3 are enrolled in early childhood education. Across OECD countries, the average enrolment rate among children below the age of 3 is 27%, but the rates range from less than 1% to 63%. The enrolment rate among 3-5 year-olds increases substantially in all OECD countries. In Sweden, 95% of all children of this age are enrolled in early childhood education, which is above the OECD average.

- The average age of graduation from general upper secondary programmes varies from 17 to 21 years across OECD countries and is 18 years in Sweden. 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 Sweden, the average age of graduation from vocational upper secondary education is 18 years, which is below the OECD average at 22 years (Figure 2).
- In almost all OECD countries, women make up the majority of those graduating from general upper secondary education. In Sweden, the share is 53% (OECD average 55%). In contrast, men are overrepresented among graduates of vocational upper secondary programmes in most OECD countries, as is the case in Sweden where they make up 60% of all vocational upper secondary graduates, above the OECD average (55%).
- In Sweden, 49% of 18-24 year-olds are still in full- or part-time education or training at either upper secondary or tertiary level (below the OECD average of 54%). A subset of these students (15% of 18-24 year-olds) combine their education or training with some form of employment in Sweden, compared to 17% on average across the OECD.
- 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 Sweden only 31% 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 Sweden are bachelor's students (57%). However, the next commonest enrolment level varies from country to country. In Sweden, master's students make up the second largest group of tertiary students at 32%. 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%, engineering, manufacturing and construction was the most popular field of study among new entrants into tertiary education in Sweden, in contrast to most OECD countries where the broad field of business, administration and law was most popular. 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 Sweden, 91% of 25-64 year-olds with a tertiary ICT qualification are employed, but ICT students make up 6% of new entrants into tertiary education. This is the same level as the OECD average.

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.

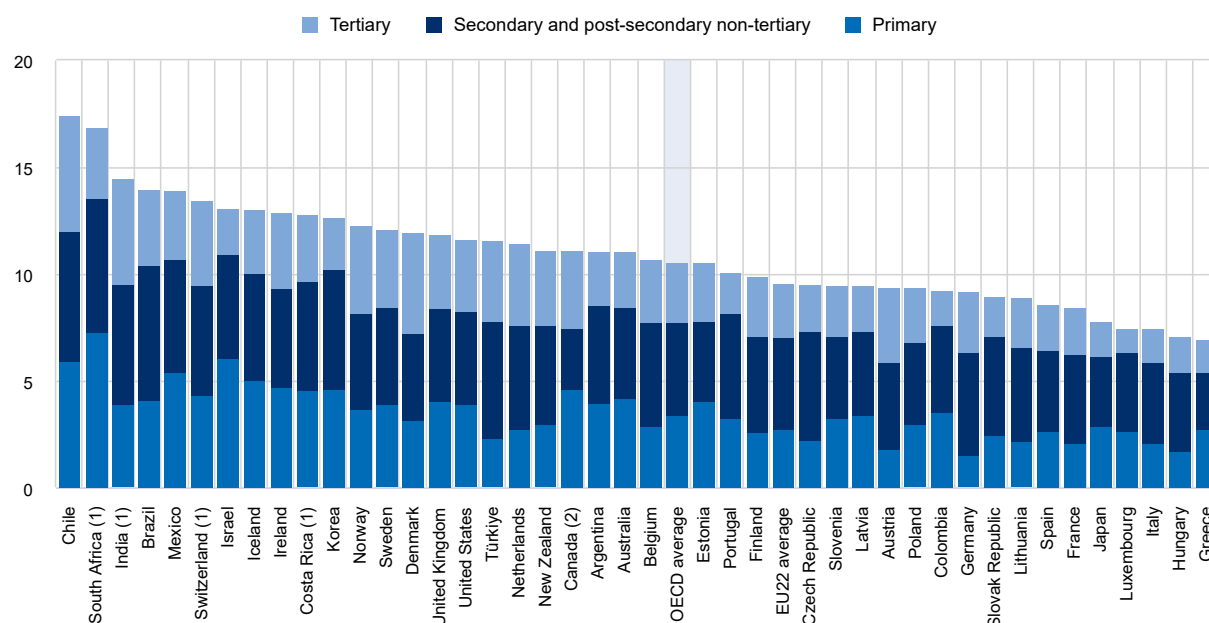
Source: OECD/Eurostat/UIS (2022), Tables B3.1 and B3.2. See *Source* section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2022_X3-B.pdf).

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 Sweden, the corresponding share was 5.5%. Between 2008 and 2019, funding for educational institutions from all sources grew by 28% in Sweden. Over the same period of time, the increase in GDP was lower with 23%. As a consequence, expenditure on educational institutions as a share of GDP grew by 0.2 percentage points over the same time period.
- Public spending on primary to tertiary education was 12.1% of total government expenditure in Sweden (Figure 3), higher than the OECD average (10.6%). Also, relative to GDP, public spending on primary to tertiary education (5.9%) 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, Sweden spent USD 15 337 per student in 2019. Its cumulative expenditure on educating a student from the age of 6 to 15 was USD 133 025, which was significantly above the OECD average of USD 105 502.

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).

- 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 Sweden, the values are USD 13 234 at primary and USD 13 311 per student at secondary level, which are among the highest across OECD countries.
- In contrast to lower levels of education, spending on tertiary education varies widely across OECD countries. Expenditure per student at tertiary level in Sweden is higher than at other levels of education, as is the case in almost all other OECD countries. The average expenditure per student in Sweden is USD 26 046 per year, which is about USD 12 800 higher than that of the primary level and USD 12 700 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 in a few countries, including in Sweden. At 54%, the share of research and development (R&D) expenditure makes up a larger fraction of expenditure on tertiary education in Sweden 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 0% in Sweden in 2019. In contrast, private expenditure at

tertiary level was higher in all OECD countries. In Sweden, the share of private expenditure at tertiary level reached 12%, which was significantly below the OECD average of 31%.

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 Sweden, actual salaries average USD 42 850 at pre-primary level and USD 51 531 at upper secondary level.
- 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 Sweden. Lower secondary (general programme) teachers in Sweden earn 16.2% less than other tertiary-educated workers. In contrast school head actual salaries in Sweden 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.
- Continuing professional development is compulsory for all teachers of general programmes in most countries with data, but Sweden is an exception. At secondary level, professional development activities are compulsory for teachers in some circumstances.

Focus on tertiary education

- Among 25-64 year-olds in Sweden, bachelor's degrees are the most common tertiary attainment at 19% of the population followed by master's degrees with 16% and short-cycle tertiary qualifications with 10%. 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 Sweden.
- 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 Sweden were highest among tertiary-educated individuals who studied nursing and associate fields with 94% and lowest among those who studied arts at 80%. Among 25-64 year-olds with tertiary attainment in the field with the lowest employment rate, this was 5.1 percentage points lower than among those with upper secondary attainment (all fields combined).
- Wages also differ according to the field of study. In Sweden, tertiary attainment in medical and dental fields generates the highest earnings. Full-time full-year workers aged 25-64 with a tertiary degree in this field earn on average 68% more than workers with upper secondary attainment (all fields combined). In contrast, tertiary attainment in the field of education leads to the lowest wages. Workers with this educational background earn on average 1% more than the wage of workers with upper secondary attainment (all fields combined).
- Despite the labour market advantages of a tertiary degree, many tertiary students do not graduate on time or do not graduate at all. In Sweden, 33% 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 somewhat narrower. In Sweden, 61% of bachelor's students have graduated within three years after the end of the theoretical programme duration, compared to 68% on average across the OECD.

- In all OECD countries, tertiary completion rates are higher for women than for men. In Sweden, 69% of women graduated within three years after the end of the theoretical programme duration at bachelor's level, compared to 49% of men. On average across the OECD, there is little systematic difference between the completion rates of public and private institutions, but the figures differ from country to country. In Sweden, 60% of bachelor's students graduate from public institutions within three years after the end of the theoretical programme duration, while the share is 72% for private institutions.
- In most OECD countries including in Sweden, 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, 35% of 25-64 year-olds with tertiary attainment in Sweden had participated in non-formal education and training in the four weeks prior to being surveyed, compared to 16% of their peers with below upper secondary attainment.
- 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. However, public policies on tuition fees and financial support for students differ greatly across countries. In Sweden, no tuition fees are combined with high levels of financial support for students. Public institutions do not charge tuition fees for national students.
- 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 Sweden, 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, public financial support is targeted on selected groups of students, such as those from socio-economically disadvantaged families.
- 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 Sweden is 43%, above the OECD average (22%). Compared to 2013, it has decreased by 4 percentage points.
- Staff at tertiary level tend to start their careers relatively late due to the length of the education they need to qualify. In Sweden, only 5% of academic staff are aged under 30, below the OECD average (8%). In contrast, the share of academic staff aged 50 or over is 43%, which is above the OECD average by 3 percentage points.

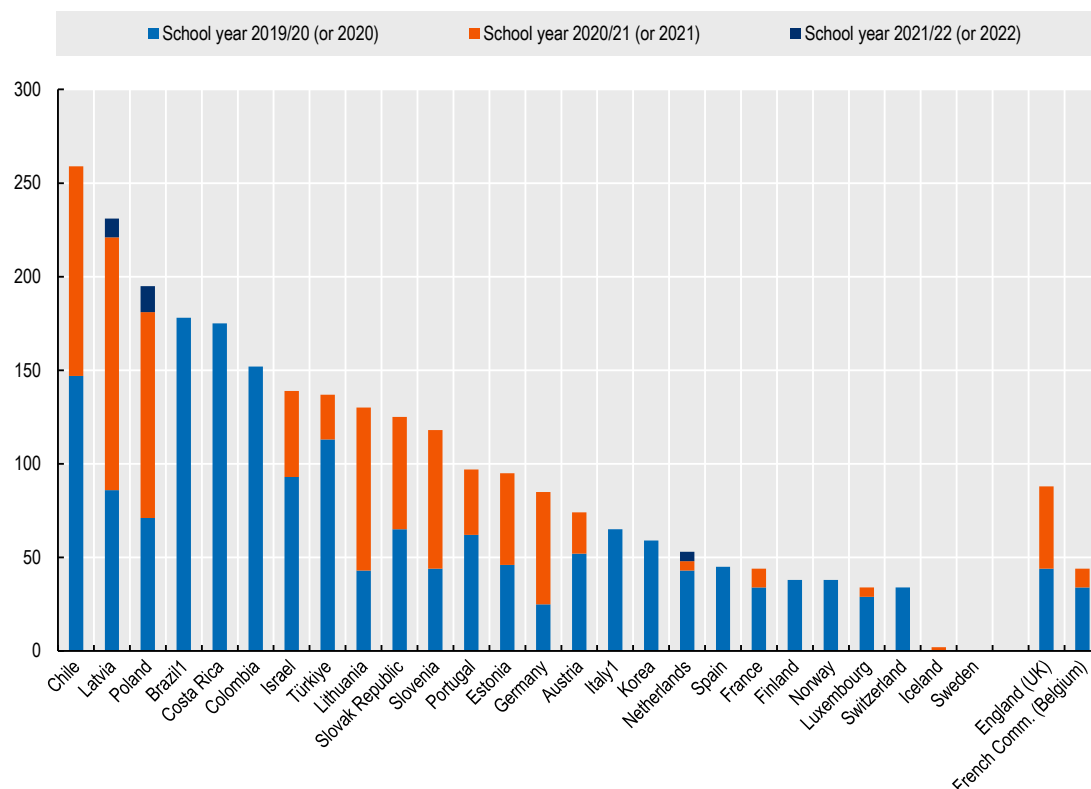
COVID-19: The second year of the pandemic

- The COVID-19 pandemic disrupted traditional schooling in 2020 and the first half of 2021, leading to school closures across all OECD countries. While most shut down their premises entirely in the wake of the pandemic in 2020, by 2021 the situation had improved and returned to normal in most countries in 2022. In Sweden, primary and lower secondary schools stayed open while upper secondary schools were entirely closed for up to 69 days during the school year 2019/20, for up to 10 days in 2020/21 and stayed open in 2021/22 (Figure 4). Partial closures reached up to 43 days in 2020/21.

- Teacher absences also affected the regular operation of schools during the pandemic, whether due to COVID-19 infections or because of precautionary quarantine. However, only approximately half of countries collected information on teacher absenteeism. Sweden collected such data. In contrast to many other countries, teacher absenteeism increased strongly (by more than 5%) between 2019/20 and 2021/22.
- National examinations have also been affected by the pandemic. At general upper secondary level, 18 OECD countries postponed their national examinations during the school year 2019/20, while 10 countries even cancelled them entirely. In 2020/21, national examinations were postponed in 9 countries and cancelled in 6 countries. Sweden cancelled its national examinations in spring terms 2019/20 and in 2020/21.
- Most countries conducted assessments of the impact of school closures on learning outcomes at various levels of education and along several dimensions. Sweden has conducted studies to evaluate the effects of the pandemic on the impact on primary, lower secondary, upper secondary general and vocational education. The assessments covered mathematics, reading and science. Like many other countries, Sweden also evaluated dimensions such as the effectiveness of distance-learning strategies during school closures as well as the mental health and well-being of students and teachers.
- In school year 2022, national programmes to support students affected by the pandemic were implemented in Sweden at pre-primary, primary, lower secondary, upper secondary general and vocational level. At primary to upper secondary education, measures to address the effects of the COVID-19 pandemic included, psychosocial and mental health support to students, increased instruction time through summer schools, extended school days or the school week or academic year. The government does not plan to assess the effectiveness of these programmes.
- 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 pre-primary to tertiary level in Sweden increased slightly (by between 1% and 5%, in nominal terms).
- 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 Sweden, a similar pattern emerged. From 2019 to 2020, the share of adults participating in a formal or non-formal education and training activity fell by 6 percentage points. From 2020 to 2021, it increased by 6 percentage points and has thus increased above pre-pandemic levels.
- 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 during the COVID-19 pandemic in 2020, the share of 18-24 year-olds who are NEET in Sweden declined in 2021. The share of NEET among young adults was 12% in 2021, at pre-COVID levels.

Figure 4. School closures due to COVID-19 (2020, 2021 and the first quarter of 2022)

Number of instruction days of full closure of lower secondary schools excluding school holidays, public holidays and weekends



Note: The data underlying this report were produced through the Survey on Joint National Responses to COVID 19, a collaborative effort conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), the World Bank (WB), and the Organisation for Economic Co-operation and Development (OECD). Data for other levels of education are available at <https://www.oecd.org/education/Results-4th-wave-COVID-Survey-OECD-database.xlsx>.

1. Data for 2021 and 2022 are missing.

Countries and other participants are ranked in descending order of the total number of days lower secondary schools were fully closed during the school years 2019/20 (2020), 2020/21 (2021) and 2021/22 (2022).

Source: OECD/UIS/UNESCO/UNICEF/WB (2022).

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

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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_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, 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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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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