Korea

The output of educational institutions and the impact of learning

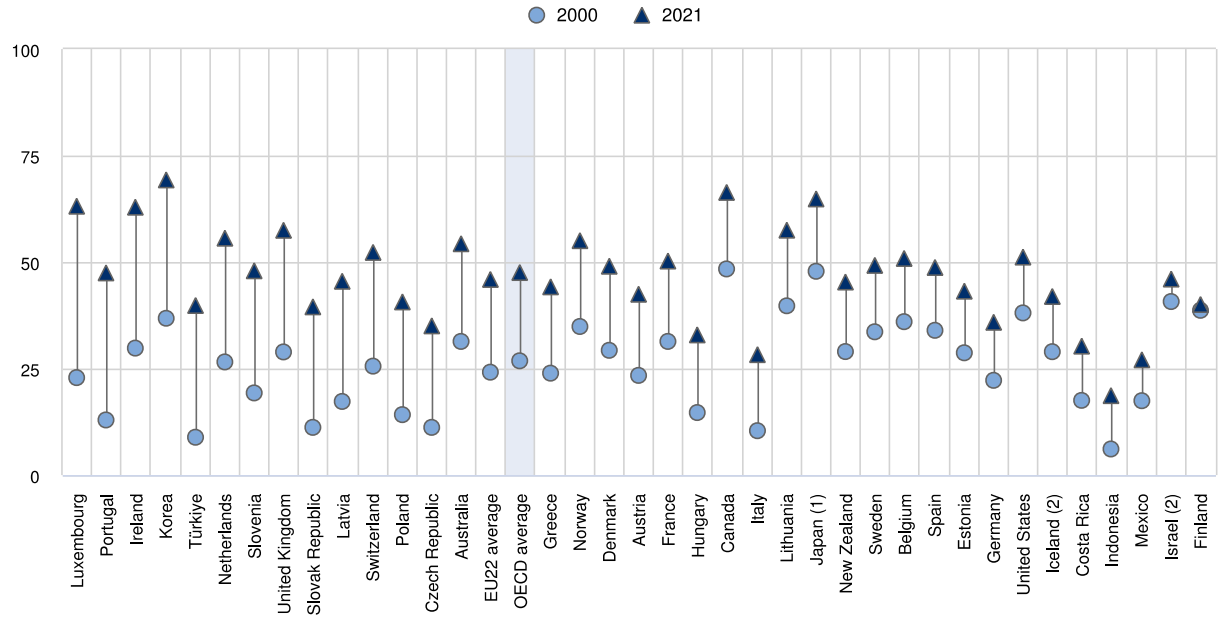
- Educational attainment has been increasing throughout the OECD, in particular at tertiary level. Between 2000 and 2021, the share of 25-34 year-olds with tertiary attainment increased on average by 21 percentage points. In Korea, the share increased at an even faster pace, by 32 percentage points (from 37% in 2000 to 69% in 2021) (Figure 1). Korea 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 Korea, the share is 2%, which is lower than the OECD average.
- Higher educational attainment is often associated with better employment prospects but Korea is an exception. In 2021 the employment rate among 25-34 year-olds with tertiary education in Korea was 12 percentage points higher than among those with below upper secondary attainment and 13 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. On average, across OECD countries the employment rate for women with below upper secondary attainment was 43%, compared to 82% of those with tertiary attainment. These figures were 69% and 88% for men, respectively. In Korea, 56% of women with below upper secondary attainment were employed in 2021, compared to 73% of those with tertiary attainment. In contrast, the figures were 75% and 80% 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 Korea. Between 2019 and 2020, unemployment for 25-34 year-old workers with below upper secondary attainment fell by 0.1 percentage points, while it rose by 0.2 percentage points for workers with upper secondary attainment and decreased by 0.1 percentage points for workers with tertiary attainment. In 2021, unemployment for workers with below upper secondary attainment increased by 0.2 percentage points, compared to 2020, while it fell by 0.6 percentage points for workers with upper secondary attainment and by 0.4 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 Korea, the earnings advantage of tertiary-educated workers was smaller than the OECD average. In 2020, workers with upper secondary attainment

earned 33% more than those with below upper secondary attainment and those with tertiary attainment earned 86% 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. However, this is not the case in Korea. Educational attainment is similar across most regions. In 2020, the difference between the region with the highest share of 25-64 year-olds with tertiary attainment (Sejong, at 73%) and that with the lowest share (Chungcheongnam-do, at 45%) was 29 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).

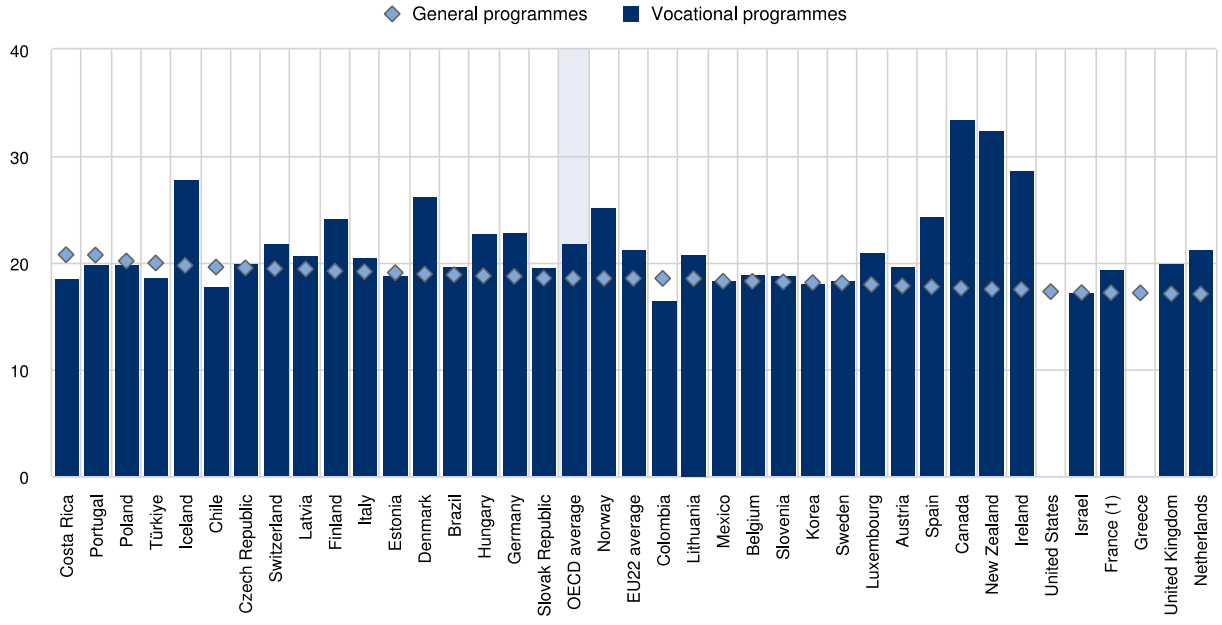
Access to education, participation and progress

- Compulsory education begins at the age of 6 and ends at the age of 14 in Korea. 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 16. 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 Korea, early childhood education starts offering intentional education objectives for children younger than 1 and 63% 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 Korea, 94% 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 Korea. 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 Korea, the average age of graduation from vocational upper secondary education is 18 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).

- 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, including Korea, all vocational upper secondary graduates have direct access to tertiary education.
- As is the case in all OECD countries, a majority of students enrolled at tertiary level in Korea are bachelor's students (69%). However, the next commonest enrolment level varies from country to

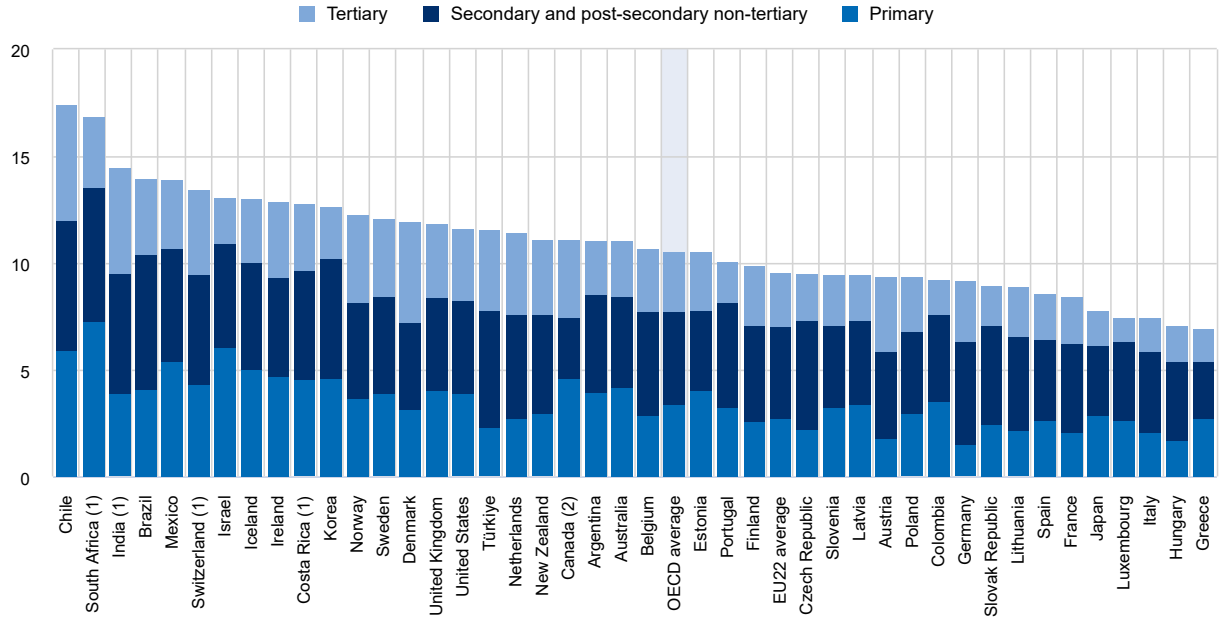
country. In Korea, short-cycle tertiary students make up the second largest group of tertiary students at 21%. This is also the case in 13 other OECD countries, while in the remaining 26 countries with available data, master's students form the second largest group.

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 Korea, the corresponding share was 5.3%.
- Public spending on primary to tertiary education was 12.7% of total government expenditure in Korea (Figure 3), higher than the OECD average (10.6%). In contrast, relative to GDP, public spending on primary to tertiary education (4.3%) 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, Korea spent USD 13 819 per student in 2019. Its cumulative expenditure on educating a student from the age of 6 to 15 was USD 144 485, 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. 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 Korea, the values are USD 13 341 at primary and USD 17 078 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 Korea is lower than at other levels of education, in contrast to almost all other OECD countries. The average expenditure per student in Korea is USD 11 287 per year, which is about USD 2 100 lower than that of the primary level and USD 5 800 lower than that of the secondary level. It is among the lowest across OECD countries. The average expenditure at tertiary level (USD 17 559) is driven up by high values in a few countries. At 21%, the share of research and development (R&D) expenditure makes up a smaller fraction of expenditure on tertiary education in Korea 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, the same share observed in Korea in 2019. In contrast, private expenditure at tertiary level was higher in all OECD countries. In Korea, the share of private expenditure at tertiary level reached 62%, which was above the OECD average of 31%, after public-to-private transfers. These latter accounted for 16% of expenditure on educational institutions at this level.

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

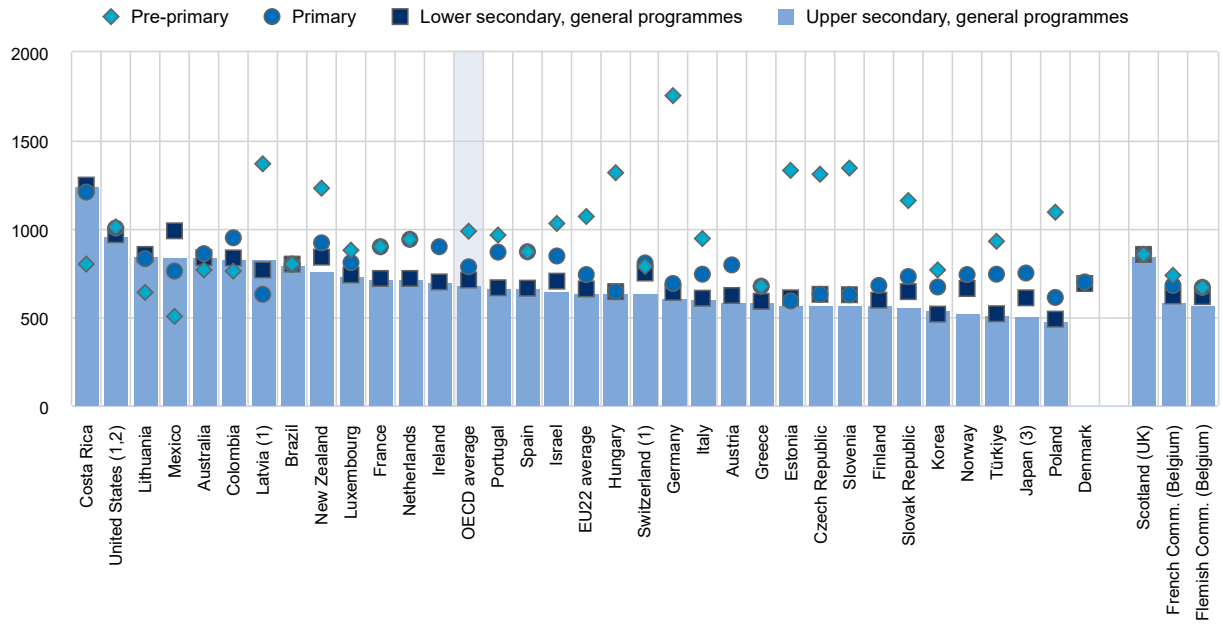
- Between 2015 and 2021, on average across OECD countries, the statutory salaries of teachers at lower secondary level (general programmes) with 15 years of experience and the most prevalent qualifications increased by 6% in real terms. In Korea, salaries increased by 7%.
- The average number of teaching 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 Korea.
- Based on official regulations or agreements, annual teaching hours in Korea are 767 hours per year at pre-primary level, 672 hours at primary level, 517 hours at lower secondary level (general programmes) and 544 hours at upper secondary level (general programmes) (Figure 4).
- 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, 64% of teachers' working time is formally dedicated to non-teaching activities in Korea, compared to an average of 56% across OECD countries.
- The duration of initial teacher education for primary and lower secondary teachers ranges from 2.5 years to 6.5 years across OECD countries. In Korea, initial teacher education typically lasts 4 years for prospective lower secondary teachers (general programmes). It is the same length for

prospective primary teachers. As is the case in almost all OECD countries, a tertiary degree is awarded to prospective teachers of all levels of education upon completion of their initial teacher training.

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

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).

Focus on tertiary education

- Among 25-64 year-olds in Korea, bachelor's degrees are the most common tertiary attainment at 33% of the population followed by short-cycle tertiary qualifications at 14% and master's and doctoral degrees with 4%. 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%).
- In most OECD countries including in Korea, tertiary-educated adults have higher rates of participation in non-formal education and training than those with a lower level of educational attainment. In 2012, 70% of 25-64 year-olds with tertiary attainment in Korea had participated in non-formal education and training in the twelve months prior to being surveyed, compared to 21% 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 Korea, 80% 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.
- Staff at tertiary level tend to start their careers relatively late due to the length of the education they need to qualify. In Korea, only 1% of academic staff are aged under 30, below the OECD average (8%). In contrast, the share of academic staff aged 50 or over is 50%, which is above the OECD average by 10 percentage points.

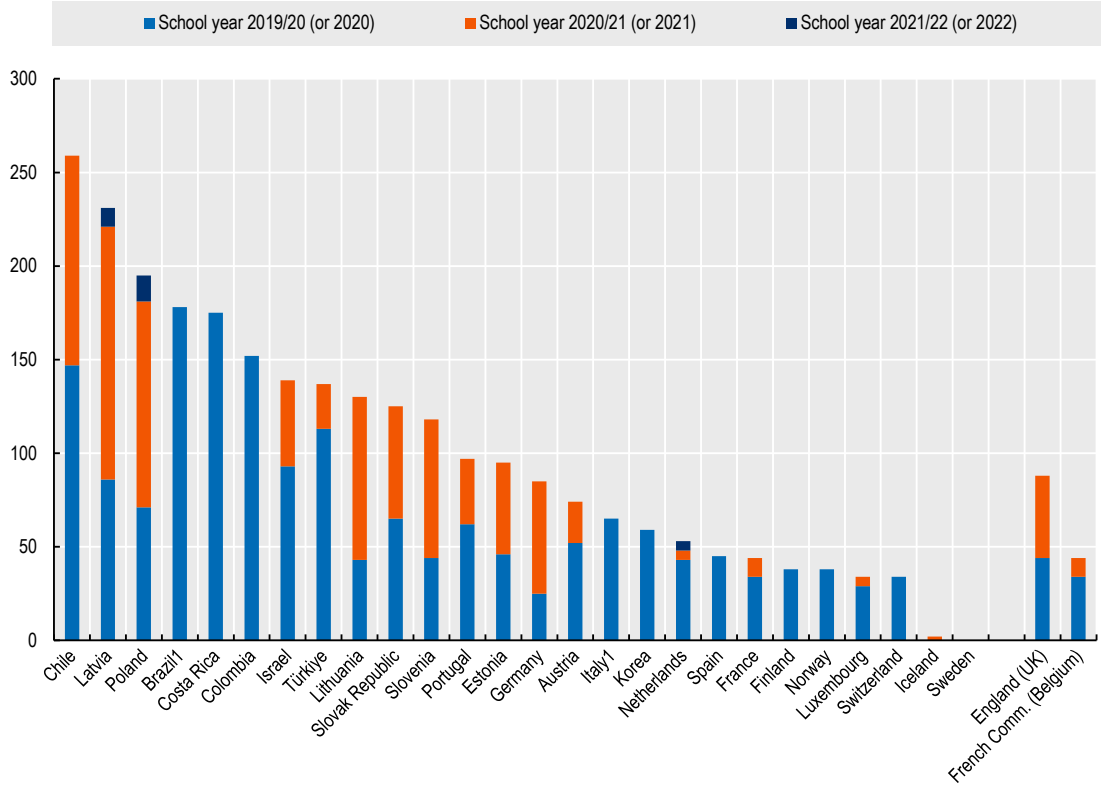
COVID-19: The second year of the pandemic

- 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 Korea, primary and secondary schools were entirely closed for 54-59 days in 2020 and stayed open in 2021 and 2022 (Figure 5).
- 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. Korea rescheduled its national examinations in 2020.
- Most countries conducted assessments of the impact of school closures on learning outcomes at various levels of education and along several dimensions. Korea has conducted studies to evaluate the effects of the pandemic and its impact on primary, lower secondary, upper secondary general and vocational education. Standardised national assessments were conducted for lower and upper secondary students, covering the subjects of mathematics, reading and science. Like many other countries, Korea also evaluated dimensions such as the effectiveness of distance-learning strategies during school closures, non-cognitive skills as well as the mental health and well-being of students.
- As was the case for the 2021 school year, in 2022 national programmes to support students affected by the pandemic were implemented in Korea 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 accelerated education or catch-up programmes for students who dropped out of school, cash transfers to increase enrolment among students from disadvantaged families, early warning systems to identify students at risk of dropping out, targeted instruction to students' level by grouping students according to proficiency rather than age, psychosocial and mental health support to students, individualised self-learning programmes, tutoring programmes or financial support for tutoring to address learning losses and additional water, sanitation and hygiene services. The government has already assessed the effectiveness of these programmes.
- The increased digitalisation of education has been a major consequence of the COVID-19 pandemic in many OECD countries. At primary to upper secondary level, Korea has responded to the pandemic with an enhanced provision of digitalised assessments/exams, digital tools at school, distance learning, hybrid learning, in-service and pre-service digital training to teachers and digital training to students.
- 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 upper secondary level in Korea increased strongly (by more than 5%, in nominal terms), while it increased slightly (by between 1% and 5%) at the tertiary level.

Figure 5. 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_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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