The State of Global Education

18 Months into the Pandemic

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OECD

BETTER POLICIES FOR BETTER LIVES

Acknowledgements

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Designed for government officials responsible for education, the survey collected information on national or regional education responses to school closures related to the COVID-19 pandemic. This spotlight is the fourth in a series that tracks developments throughout the pandemic, and analyses a range of topics, from lost learning opportunities and contingency strategies through the organisation of learning and the working conditions of teachers to issues around governance and finance.

Our special thanks go to members of the OECD Indicators of Education Systems (INES) Working Party, who provided guidance on the design of the questions, co-ordinated the national responses to the survey, and provided guidance and comments throughout the process.

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Editorial

As schools and universities in OECD countries are progressively resuming operations following the most serious disruption of their services for many decades, it is time to look forward to what could and should be the new normal. In an unprecedented crisis like the COVID-19 pandemic, it is difficult to derive lessons from the past. However, it can be instructive to look outwards to how other education systems are responding to similar challenges. To support this, the OECD has collected comparative education statistics to track developments throughout the pandemic, looking at aspects ranging from lost learning opportunities and contingency strategies to make up for these through the organisation of learning and the working conditions of teachers to issues around governance and finance.

This spotlight expands the picture from learning in educational institutions to the labour market opportunities of youths and their transition from education to work. Young workers typically bear the brunt of economic and employment crises, as they often have not acquired the skills and professional experience needed in the labour market and are more likely to have short-term and precarious contracts. In times of layoffs, they are also often the first to go, as they have not acquired sufficient seniority. This being said, and compared with earlier crises, government interventions such as job retention schemes were largely able to cushion the effect on employment, with unemployment even among poorly qualified 25-34-year-olds across OECD countries just 2 percentage points higher in 2020 than in 2019.

Furthermore, the impact of the pandemic on the labour market seems more evenly distributed across levels of education than during the last global financial crisis. This relates to the nature of this health crisis: while highly educated adults were often able to work remotely, those with lower educational attainment dominated many occupations that performed essential functions during the pandemic. Still, a closer look shows a less-even picture: Across the OECD, the year-on-year change in hours worked during the second quarter of 2020 fell only by 8.5% among the highly skilled, while it dropped by 24% among those without an upper secondary education. And while the number of hours worked recovered for highly educated adults that returned to work later in the year, they persisted for those with a lower level of education. The data also show gender differences for the poorly qualified: younger women without upper secondary attainment were more affected by unemployment than men. On average across OECD countries, the unemployment rate among women without upper secondary attainment was 12% in 2020, compared to 10% among men. In contrast, for those with higher educational attainment levels, unemployment levels were not only lower overall, but also similar between men and women. However, between 2019 and 2020, the rise in unemployment due to the pandemic was generally similar for women and men, across all levels of educational attainment. This is due partly to government and company policies to introduce flexible working measures, but also to the occupations allowed and encouraged to continue working during lockdowns, many of which tend to be over-represented by one gender or the other, such as nurses for women or construction workers for men.

While policy attention is naturally focused on young people at work or in their transition to work, since their immediate future is most directly affected by the crisis, the loss of learning opportunities for students in school or university deserves no less attention, as it could have serious implications for their future. As the OECD's Special Survey on COVID-19 shows, the extent of lost learning opportunities has been very significant in many countries. On average across the 30 countries with comparable data for all levels of education, pre-primary schools were closed for 55 days, primary schools for 78 days, lower secondary schools for 92 days and upper secondary schools for 101 days between 1 January 2020 and 20 May 2021. The number of days of school closure represents roughly 28% of total instruction days over a typical academic year at pre-primary and more than 56% at upper secondary level on average across OECD countries. While the Special Survey on COVID-19 highlights numerous contingency measures that countries put in place to keep learning going when schools were closed, national studies show significant learning losses, particularly for students from disadvantaged backgrounds and among students in secondary schools.

Recognising the serious impact of school closures on the learning and well-being of students, many countries adjusted their strategies concerning school closures as the pandemic evolved. As the Special Survey on COVID-19 shows, after a quasi-systematic closure of schools in most countries in mid-March 2020, approaches diverged significantly between September 2020 and the first part of 2021.

In some countries, schools remained closed as viral transmission increased, while others kept them open even in a difficult pandemic context. Learning in upper secondary schools was disrupted (full or partial closures) by more than 200 days in Colombia, Costa Rica, the Czech Republic, Lithuania, Mexico, Poland and Turkey between January 2020 and May 2021, compared to less than 50 days in Norway, New Zealand and Spain. The Special Survey on COVID-19 also shows that the arrangements for keeping schools or classes open varied considerably. Germany, for example, implemented strict rules in 2021 such that all schools had to adopt hybrid learning protocols if incidence rates were higher than 100 in a region. Moreover, after 3 days with an incidence exceeding 165 per 100 000 inhabitants, schools had to switch to distance learning for all students. By contrast, Belgium, France, Spain and Switzerland did not fully close their upper secondary schools (or only for a few days) between January and May 2021 despite high cumulative numbers of COVID-19 cases.

It is also important to address the impact of the pandemic on adult learning. The shutdowns of economic activities decreased workers' participation in non-formal learning by an average of 18%, and in informal learning by 25%. Before the pandemic, workers across OECD countries spent on average 4.9 hours per week on informal learning and 0.7 hours on non-formal learning. According to estimates, during the pandemic, this dropped to 3.7 hours for informal learning and 0.6 hours per week for non-formal learning. This represents a notable amount of lost learning, which may not be easily recovered.

In sum, the disruptions of learning risk to cast long shadows over the economic and social well-being of people of all ages. This makes it so important to learn the right lessons from this crisis.

For a start, it has become abundantly clear how important it is during a pandemic to ensure reliability and predictability of educational services for learners and parents. Even during school closures, all students should have daily and dedicated contact with educators. Long phases of distant learning need to be avoided, and daily schedules for hybrid learning work better than weekly or monthly schedules.

Wherever possible, schools should remain open, with appropriate health measures that minimise risks for students, school staff and the rest of the population. It is important to combine transparent criteria for schools and education services – e.g. the use of bubbles and stable pods, masks, ventilation, testing, quarantine, vaccination, classroom or school closures – with flexibility to implement these at the frontline. Hybrid and remote learning should be second- and third-best options, and only be used when keeping schools open proves impossible to preserve collective health, or students' and staff's safety. Providing transparent criteria and guidelines based on infection levels and other relevant considerations for different modes of schooling is essential, as is the necessary flexibility to implement them effectively at the frontline. Beyond continued academic development, a holistic approach to education focusing on students' socio emotional learning and agency needs to be a central part of their education, with their physical development and mental health needs met by co-ordinated services liaising with schools. The best way of securing the most suitable conditions for learning, assessment, and social and emotional growth is through collaboration, with jurisdictions and education authorities working together with teachers and their organisations, parents, communities, and other education stakeholders to achieve them.

It is equally important that the crisis leads to a recovery which addresses inequity. Where school capacity is limited due to social distancing requirements, it is vital to prioritise young children and disadvantaged students for in-school learning. The early years are foundational for the social, emotional and cognitive development of children, and prolonged exposure to screens is neither feasible nor desirable at such a young age. Similarly, students from lower socio-economic backgrounds may find it more difficult to study from home, suffer from low Internet connectivity or lack parental support at home. Often, education, health and other social services need greater co-ordination to support disadvantaged students' learning. Resources should be aligned with needs and reflect the social and economic conditions of students and schools in a transparent way. Countries should make very deliberate efforts and commit resources to provide additional targeted student support to address the reduced learning opportunities experienced by students from some social groups. Targeted support can take different forms: the provision of in-school and after-school small group tutoring, summer schools, counselling for specific students according to their social and emotional needs, an enhanced emphasis on metacognitive and collaborative learning, on oral language interventions, but also on other forms of pedagogical interventions that are supported by evidence and seem appropriate in the local context. Such interventions need to take into account that schools are both social hubs that support the development of students' socioemotional skills and well being and centres of their local communities. New interventions and approaches can also be

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piloted with the engagement of schools within their communities.

Since teachers and schools continue to be at the centre of student learning, their working conditions and professional learning need to be fit for purpose in supporting their work in post-pandemic recovery. Clearly, teachers' job satisfaction, well-being, beliefs and professionalism are inter-related and can have an effect on student outcomes. Teachers also need to be able to support students' remote learning by regular personal communication with students (and families, when necessary) and should, in turn, be supported to do so effectively. Education systems and schools should aim to provide means and schedules of communication with students and families, the provision of training, opportunities for teachers to network with each other, and a variety of teaching and learning resources to support remote teaching and enable teachers to devote more time to bilateral interactions with students, particularly for those in greater need of support.

The pandemic has also shown that education systems need to have a strong digital learning infrastructure. This infrastructure is best developed and implemented in collaboration with the teaching profession. Effective and inclusive digital platforms should offer valuable resources for in-school and out-of-school learning experiences which can, in part at least, address the inequity that blights many learners' experience of education and improve learning effectiveness for all. Beyond learning management systems and platforms of quality educational resources supporting teaching and learning in school and at home, this infrastructure can benefit from the latest advances of digital technology. For example, intelligent tutoring systems can support the individualised acquisition of procedural knowledge in some subjects; digital resources could provide teachers with feedback on their teaching and students' learning and facilitate the continued learning engagement of students and learning interactions with peers and teachers. Enabling technology solutions that can easily work with other ones (interoperability), allowing teachers and other relevant stakeholders to contribute learning resources (crowdsourcing) and involving everyone in the curation of those resources (crowdcuration) will also be key to a strong digital infrastructure. The evaluation and quality assurance of this infrastructure should include transparent technology criteria for providers and have the feedback of teachers, students and school communities at its core.

The pandemic has led to a wealth of school- and teacher-led micro-innovations, experimentation and the development of new learning infrastructures. Education systems can learn from these developments so that they become more effective and equitable. Across societies, the pandemic has demonstrated the importance of frontline capacity and leadership of change at every layer of the system. Central to education recovery programmes should be a focus on supporting a teaching profession that is actively engaged in the design of learning environments and public policy, in the advancement of professional practice, and in creating a stronger professional work organisation. Many teachers have also responded to the pandemic by creating their own just-in-time professional development. A lesson from the pandemic is that teachers need to feel empowered to exert their professionalism in the use of technology as part of their teaching. This also involves the integration of technology in all teacher training courses, and more collaborative platforms and professional learning projects enabling teachers to develop their digital pedagogical competences through a peer learning process. Many education systems and teacher unions have provided virtual professional development for teachers during the pandemic reflecting a core activity, that of providing effective and highly valued learning.

Last but not least, much can be learnt from the innovative and collaborative partnerships between governments, the teaching profession at school level, and with its organisations and other education stakeholders which have emerged during the pandemic. The spirit of those partnerships should continue and should evolve into an innovation culture as a legacy of the crisis, with an open and constructive approach to improving educational outcomes and equity for all. A culture of innovation will always rely on learning at the individual, organisation and system levels and involves both bottom-up and top-down processes and purposeful collaboration and learning. Under an effective leadership, a combination of professional autonomy, supporting resources and collaboration can help ensure that rules become guidelines and good practice, and ultimately, that good practice becomes culture.

It is clear that the pandemic has seriously disrupted education systems. But the implications of these disruptions are not predetermined. We have agency, and it is the nature of our collective and systemic responses to these disruptions that will determine how we are ultimately affected by them.

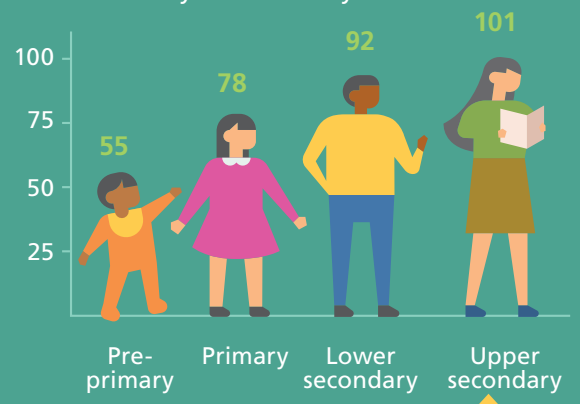
Andreas Schleicher

Director for the OECD Directorate of Education and Skills and Special Advisor on Education Policy to the Secretary-General

School closure during the pandemic

Generally, the higher the education level, the longer schools were closed

Average days of full school closure from 1 January 2020 to May 2021



Schools at upper secondary level experienced an additional **57 days** of partial opening during the same period

This closure represents:

28% of total instruction days at the **pre-primary level***

56% of total instruction days at **upper secondary level***

All data refer to the average for OECD countries
*Over a typical academic year

A focus on Early Childhood Education and Care (ECEC)

In 5 countries, ECEC settings did not close at all during the pandemic

Provision of online learning was lower at this level. The share of countries providing online learning:

62% for pre-primary

>90% for higher levels of education

All data refer to the average for OECD countries

Governments were less likely to shut down pre-primary schools for a number of reasons:

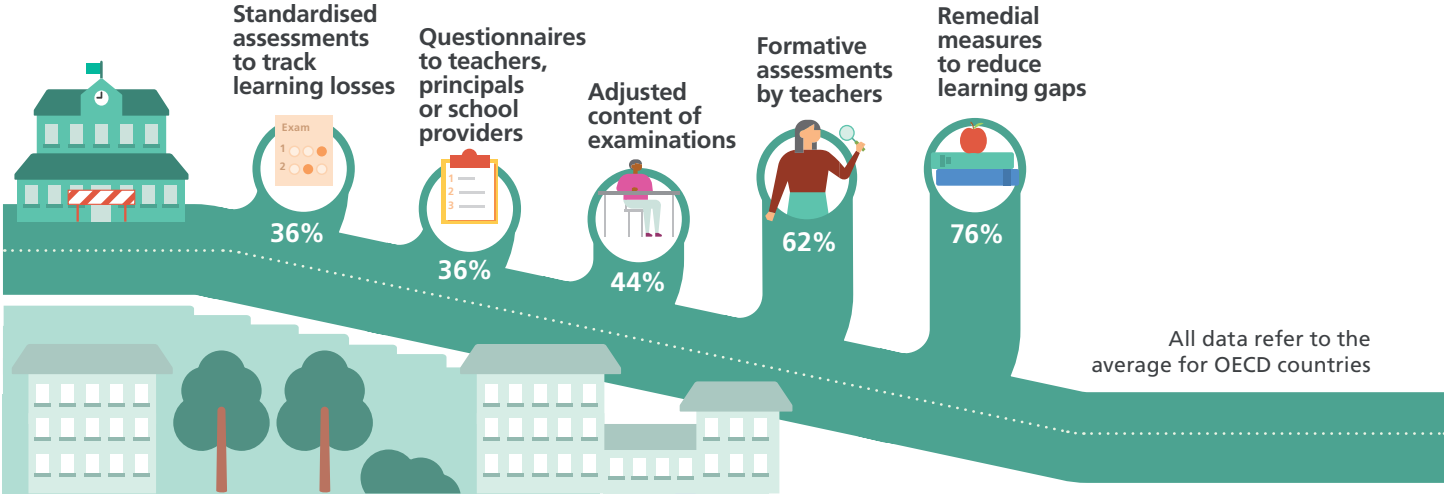
The early years are critical for the cognitive and emotional development of children

Setting up effective remote learning strategies is particularly difficult for young children

ECEC provides childcare support to parents returning to work after confinement

Impact of COVID-19 on learning outcomes

A number of countries have taken steps to **assess learning losses and address learning gaps:**



All data refer to the average for OECD countries

Support for teachers during the pandemic

Before the pandemic, teachers reported that:

43% felt 'well prepared' or 'very well prepared' to use ICT in their own teaching

56% felt ICT* for teaching was included in their training

The COVID-19 crisis has resulted in significant changes in the working conditions and recruitment of teachers:

50% of countries changed their school calendars and curriculum

40% of countries recruited temporary staff

2/3 of countries prioritised teachers for COVID-19 vaccination

All data refer to the average for OECD countries
*Information and Communication Technologies

Financing of primary to tertiary education during the pandemic

In response to the pandemic, a growing share of OECD countries increased their education budgets

Countries that increased education budgets:

2020 — about **66%** of countries

2021 — about **75%** of countries

The rise in the share of countries reporting increased funding between 2020 and 2021 was most striking at tertiary level:

2020 — **63%** of countries

2021 — **81%** of countries

All data refer to the average for OECD countries

Impact of COVID-19 on labour market outcomes

Unemployment increased for all adults from 2019 to 2020, and the rise has been similar across:

- Educational attainment
- Gender

In 2020, the share of adults enrolled in formal and/or non-formal education decreased by 27% compared to 2019

However, the share of young adult NEETs* has not changed remarkably between 2019 and 2020:

14.6% in 2019

16.4% in 2020

All data refer to the average for OECD countries
*Not in Education, Employment or Training

1

School closures and distance education during the pandemic

Although school closures were still ongoing after the first quarter of 2021 in some countries, the situation improved in most countries during the second quarter

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 countries shut down their premises entirely in the wake of the pandemic in 2020, the situation has improved in 2021.

Between February and May 2021, an increasing number of countries reopened schools across the OECD. This was particularly marked for the lower levels of education (pre-primary, primary and lower secondary education), while upper secondary schools and tertiary institutions were still often only partially open on 20 May 2021 (Figure 1). While only 40% of countries had opened their primary schools and 30% their lower secondary schools by 1 February 2021, schools at both levels were fully open in two-thirds of countries on 20 May 2021, with the others operating mostly on a part-time basis. The exceptions are Mexico and Turkey, where primary and secondary schools were still fully closed by 20 May 2021. The return to full-time schooling offered most countries the opportunity to assess learning losses over the end of the 2020/21 school year and to implement remedial activities if needed (see Section 3).

With schools fully or partially closed, in-person schooling was often combined with distance learning. This has raised questions on the effectiveness of learning as students and teachers alternate between these two modes of delivery. Low quality, diversity and availability of teaching materials on line, as well as the lack of pedagogical continuity, particularly for the most disadvantaged students, risks undermining learning during this period. School closures will also impact transitions between levels of education, with disrupted examinations between secondary and higher education for example, but also between higher education and the labour market.

Tertiary institutions also reopened progressively during the first half of 2021. While more than half of the 30 responding countries reported their tertiary institutions were fully closed on 1 February 2021, only 6 had not reopened them by 20 May 2021 (Austria, Canada, Germany, Lithuania, Mexico and Poland). Despite the full closure of tertiary institutions in these six countries, some exceptions were made. In Germany, for instance, laboratory classes, courses for beginners or exams could still be conducted in hybrid or face-to-face formats. In Poland, onsite learning was maintained for practical classes, such as in laboratories. Students in their final years were also offered the possibility to take part in classes on school premises. In Austria, while most instruction took place on line, exceptions were granted in specific circumstances for person-to-person meetings, teaching and examinations on campus.

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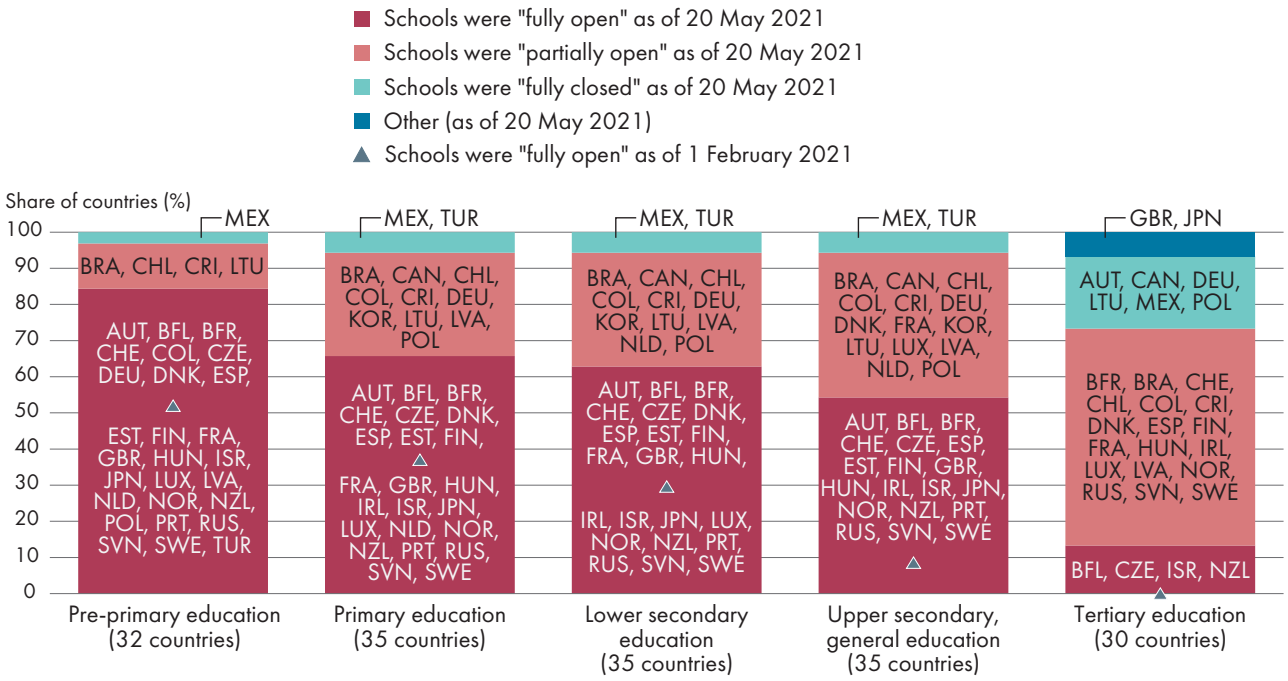
Figure 1 • Status of education institution closures due to COVID-19 (2021)
By level of education



Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

Institutions were still only partially open in a third of countries at upper secondary level and in 60% of countries at tertiary level by 20 May 2021

Although the situation improved between the first and second quarters of 2021, partially open schools were still the norm as of 20 May 2021, especially at upper secondary level for more than a third of OECD and partner countries (14 out of 35) and at tertiary level for about 60% of countries (18 out of 30). However, the arrangements for opening schools on a part-time basis varied from country to country.

Of the 14 countries whose upper secondary general schools were only partially open in May 2021, 4 of them (Costa Rica, France, Luxembourg and the Netherlands) only reduced the number of students per classroom, employing a combination of distance education strategies and in-person classes. In Luxembourg, for example, all schools were fully operational and all students attended class regularly except for those in Grades 4, 5 and 6 of secondary education (general and vocational), where a hybrid learning arrangement was deployed: half of the class attended in remote learning mode and the other half in the classroom. These groups alternated on a weekly or daily basis; it was left to the school's discretion. Other countries adapted strategies based on regional infection rates. For example, in the 15 regions in France where COVID-19 infection rates were the highest between 3 May and 30 May, in-person instruction was delivered fully in the classroom for 6th and 7th graders, while a hybrid learning arrangement was deployed for 8th and 9th graders.

The remaining ten countries applied stricter measures. Schools were "fully open" only for certain grades (or age groups) and in certain areas/regions in Canada and Korea; in certain areas/regions and with a reduced number of students per classroom in Chile (with an attendance rate of about 25%), Colombia and Germany; and for certain grades (or age groups) with a reduced number of students per classroom in Poland. In Germany, for instance, specific regulations applied from 23 April based on 7-day incidences per 100 000 inhabitants. Schools had to work in hybrid learning (one-half of the class at school, the other at home) if incidence rates were higher than 100. Moreover, after 3 days of an incidence of more than 165 per 100 000 inhabitants, schools had to switch to distance learning. In Denmark and Latvia, only graduating classes in upper secondary and vocational

attended in person and only for some lectures. Brazil and Lithuania were the only countries where upper secondary schools were "fully open" only in certain areas/regions, for certain grades (or age groups) and with a reduced number of students per classroom.

Students in higher education were also particularly affected by the partial opening of institutions. In the United States, for example, a national survey of undergraduate and graduate students enrolled between 1 July 2019 and 30 June 2020 in postsecondary institutions eligible to participate in federal financial aid programmes shows that, overall, 87% of students experienced a disruption or change in their enrolment, with 84% having some or all of their courses switched to on line-only instruction. The study also shows that 34% of undergraduates received technology or technical services from their institution to aid in transitioning to online instruction, 29% of undergraduates lost a job or income as a result of the pandemic, and 70% of undergraduates agreed that their institution provided helpful communication on changes to accessing coursework due to the pandemic (Cameron et al., 2021[2]).

In some cases, special measures were also proposed for pupils enrolled in vocational education. In Latvia, students enrolled in vocational education and training (VET) and higher education programmes requiring practical work were allowed to attend classes on site, in small groups, and with the necessary precautions and compulsory masks. In Poland, headmasters of schools providing vocational education could organise practical classes on certain days of the week, not exceeding 16 hours per week, in groups and allowing for social distancing (OECD, 2021[3]).

The number of instruction days schools were closed varied across countries, but also between 2020 and 2021

Between January 2020 and May 2021, schools closed for at least one level of education in all countries that reported data to the Special Survey on COVID-19. Generally, the number of instruction days that schools were fully closed (excluding school holidays, public holidays and weekends) increased with the level of education (Figure 2). On average across the 30 countries with comparable data for all levels of education, pre-primary schools were fully closed for an average of 55 days between 1 January 2020 and 20 May 2021 while primary schools closed for 78 days, lower secondary schools for 92 days and upper secondary schools for 101 days (Table A1 in Annex). The number of days of school closure represents roughly 28% of total instruction days over a typical academic year at pre-primary and more than 56% at upper secondary level on average across OECD countries.

However, these figures mask substantial differences across countries and within them across levels of education. For instance, in Sweden, all primary and most lower secondary schools remained open in 2020 and 2021, while upper secondary schools were fully closed for about 80 days over the same period. Schools were closed at least 40 days more at upper secondary than at primary level in the Czech Republic, Denmark, Hungary, Latvia, Mexico and Poland. In contrast, Ireland, Korea and Luxembourg closed their primary schools longer than their upper secondary schools. Upper secondary general schools were fully closed for less than 50 days in Belgium, France, Luxembourg, the Netherlands, New Zealand, Norway and Spain, and for more than 150 days in Colombia, the Czech Republic, Costa Rica, Hungary, Latvia, Mexico, Poland and Turkey. Only six countries, namely Belgium, Chile, Colombia, Costa Rica, New Zealand and Spain, have not differentiated their school closure strategies according to educational levels.

After a quasi-systematic closure of schools in most countries in mid-March 2020, approaches diverged significantly between September and December 2020. In some countries, schools remained closed as viral transmission increased, while others kept them open (OECD, 2021[4]). Similar strategies were observed over 2021, regardless of the state of viral transmission across countries. Thus, nine countries (Colombia, Costa Rica, Japan, Korea, the Netherlands, New Zealand, Norway, Spain and Switzerland) did not fully close their upper secondary schools at all between January 2021 and 20 May 2021, while Belgium and Luxembourg closed them for only five days. In the other 19 countries, the number of days of closure varies from 10 days in France and Sweden to 60 days or more in many Eastern European countries (the Czech Republic, Hungary, Latvia, Lithuania and Poland), but also in Denmark, Germany and Mexico (Figure 3). The level of COVID-19 infection rates did not determine whether schools were closed in many countries. For example, Belgium, France, Spain and Switzerland did not fully close their upper secondary schools (or only for a few days) from 1 January 2021 to 20 May 2021 despite a high cumulative number of COVID-19 cases per

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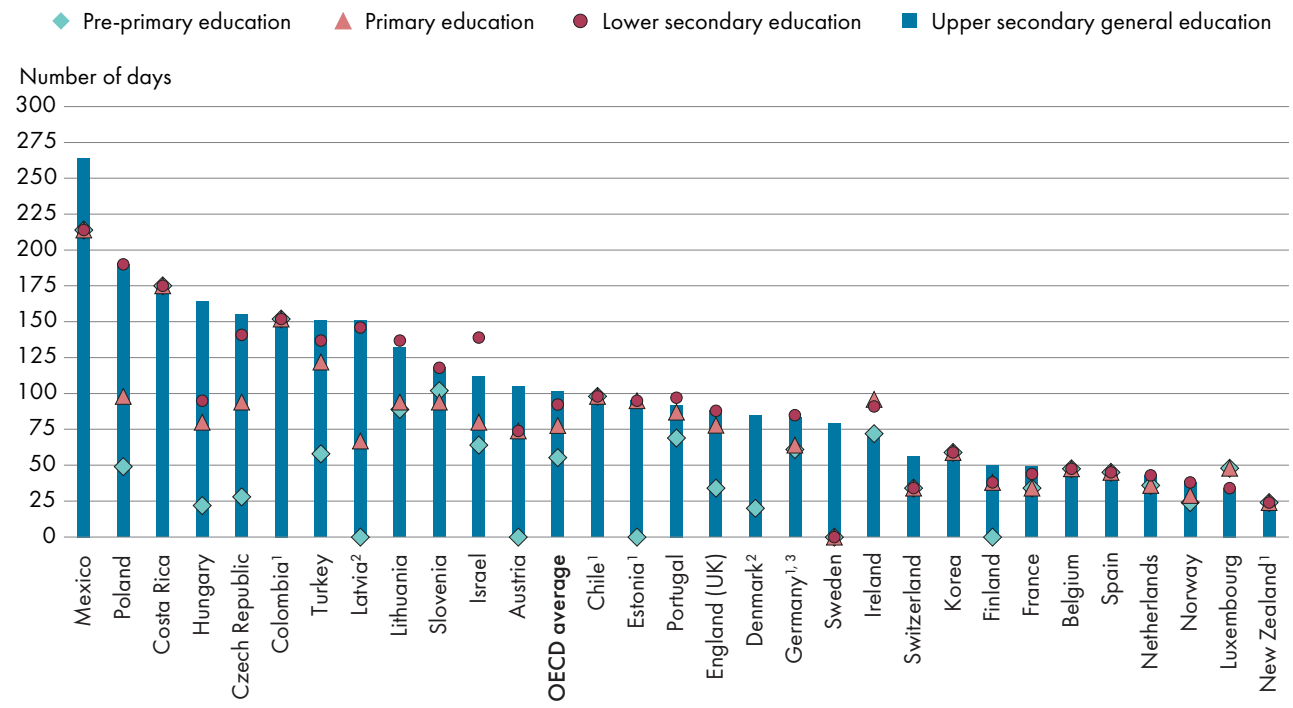
million inhabitants over this period. In contrast, infection rates were lower in Denmark, Germany and Mexico, although the three countries closed their upper secondary schools for more than 60 days in 2021.

In many countries, schools did not fully close, but remained open with reduced capacity in 2020 and until May 2021. Upper secondary schools were partially open at least 100 days over this period in Belgium, Colombia, Denmark, Germany, Lithuania, Luxembourg and the Netherlands. Learning in upper secondary schools was disrupted (full or partial closure) by more than 200 days in Colombia, Costa Rica, the Czech Republic, Lithuania, Mexico, Poland and Turkey between January 2020 and May 2021 compared to less than 50 days in New Zealand, Norway and Spain.

Figure 2 • Number of instruction days schools were fully closed in 2020 and 2021, by level of education

Excluding school holidays, public holidays and weekends, between 1 January 2020 and 20 May 2021



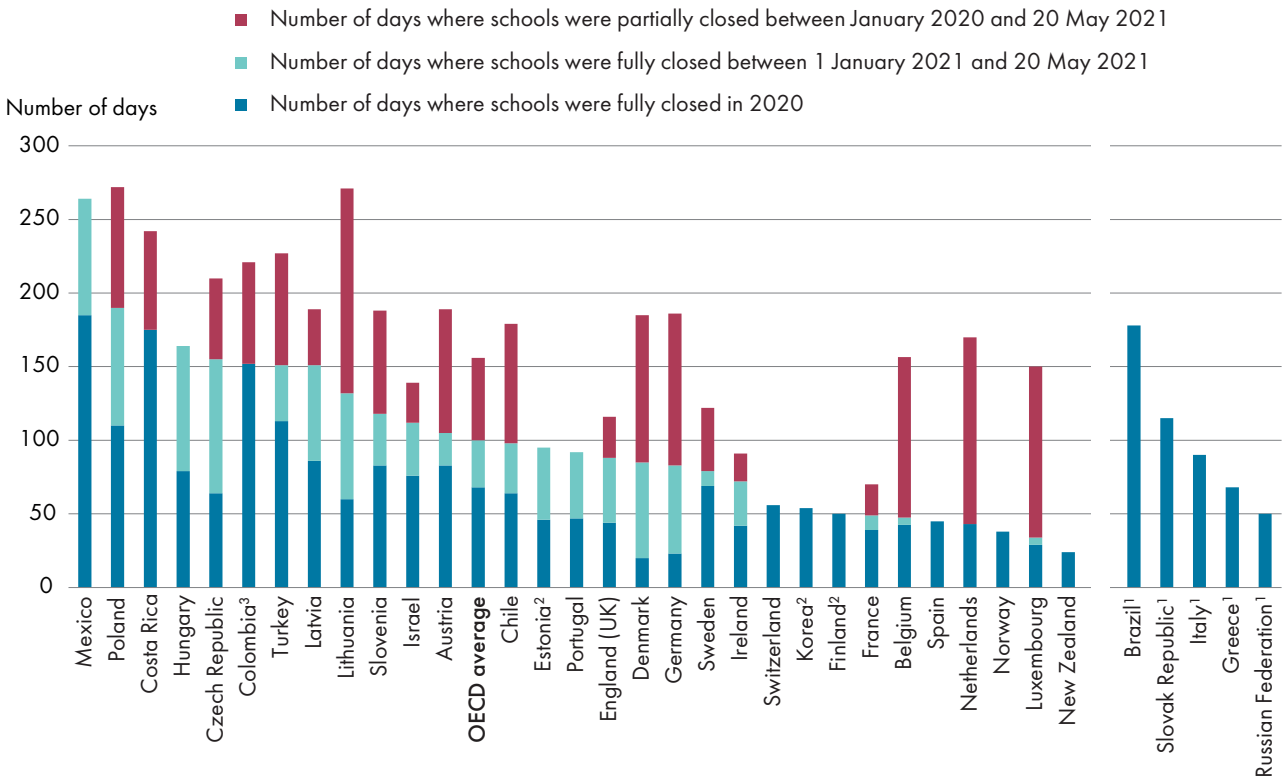
1. Most typical number of instruction days. For Colombia, some schools were fully closed during the period from September to December 2020 while others were partially open in hybrid mode for 65 days.
2. Minimum number of instruction days in 2020.
3. Different school holiday schedules explain the higher number of instruction days when schools were fully closed at pre-primary compared to primary education.

Countries and economies are ranked in descending order of the number of days schools were fully closed in upper secondary education between 1 January 2020 and 20 May 2021.

Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

Figure 3 • Number of instruction days that upper secondary general schools were fully or partially closed in 2020 and 2021

Excluding school holidays, public holidays and weekends, between 1 January 2020 and 20 May 2021



1. Data for 2021 and on number of days schools were partially open are missing.
2. Data on the number of days schools were partially open are missing.
3. Some schools were fully closed during the period from September to December 2020 while others were partially open in hybrid mode for 65 days.

Countries and economies are ranked in descending order of the number of days schools were fully closed in upper secondary education between 1 January 2020 and 20 May 2021.

Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

Criteria for deciding to close a school are set centrally in most countries

Central governments play a major role in decisions related to the closure or reopening of lower secondary schools. Among the 37 countries and economies reporting to the Special Survey on COVID-19, these decisions were taken by the central government in about two-thirds of them, or at a lower level of government within a framework set at the central level in another 6 (Figure 4). Even in countries such as the Netherlands, where nearly all decisions are taken at school level in public lower secondary education (Figure D6.1 in OECD (2018[5])), the decisions on school closures are taken at the central level. Nevertheless, in some countries, such as Denmark and Finland, regional or local authorities can also decide on local school closures in addition to decisions taken at the central level.

Central governments continue to play a major role in decision making concerning the national sanitary measures for school reopening, either deciding on these issues (in 15 out of 36 countries) or setting frameworks for these decisions (in 8 countries). This reflects the co-ordination with national health authorities on whether to close or open schools. However, in some countries such as Colombia and Lithuania, central government decided to reopen schools, but subnational entities had the authority to override national recommendations based on the local state of the pandemic.

Policies for closing classes (and in rare or extreme cases, schools) in case of a positive test for one or more students were generally the same for primary and lower secondary schools across all countries. Closure strategies in higher education were more flexible.

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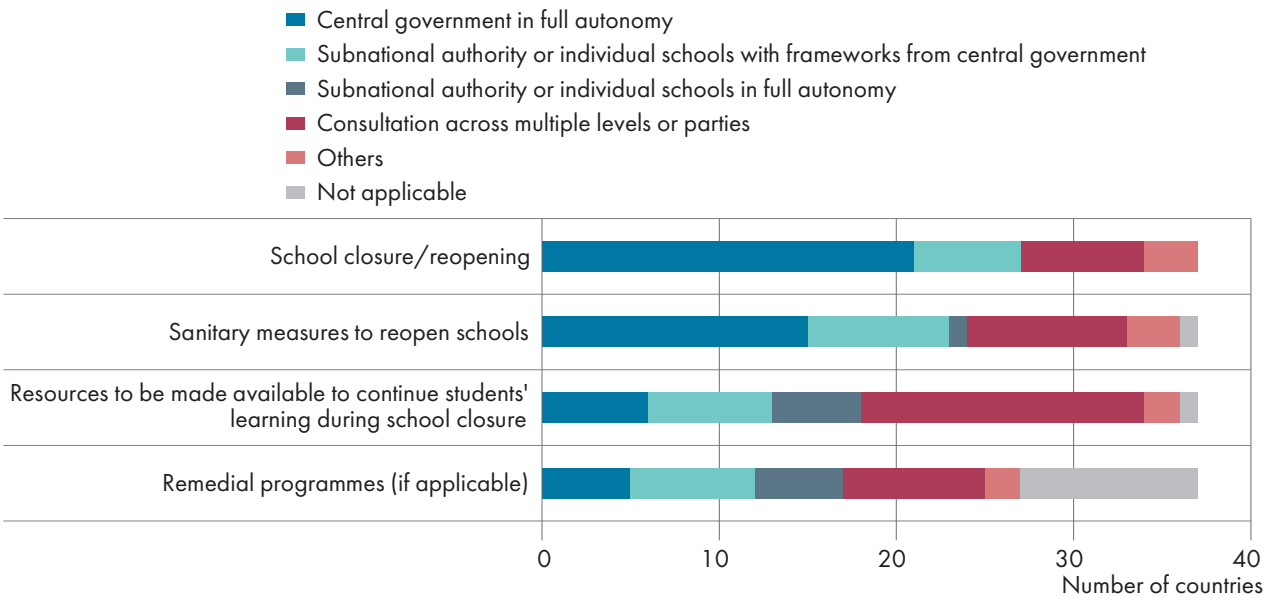
Positive cases of COVID-19 in higher education institutions were generally less likely to result in the closure of classes than at other levels of education, and instead led to the isolation of the infected student(s) for a set quarantine period. This is not surprising, as tertiary institutions were already heavily engaged in remote teaching and learning strategies in 2021, facilitating social distancing.

Figure 4 • Decision making on school closure and reopening due to COVID-19 (2020)
In public lower secondary education



Notes: Central government in full autonomy includes decisions taken by the central education authority in consultation or recommended by the central level health authority. Subnational authority includes state governments, provincial/regional authorities, sub-regional/municipal authorities. Others indicates cases where classification into given categories is not possible or the information is insufficient to classify.
Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

Only in a few countries (Korea, Latvia and New Zealand) did certain schools shut down entirely when a positive case of COVID-19 was detected among students or staff. In Korea, for instance, a particular school in which a COVID-19 case was declared organised a temporary transition from offline learning to distance learning.

In six other countries (Brazil, Finland, Germany, Lithuania, Norway and Sweden), schools, districts or the most local level of governance could take decisions on school closures at their own discretion. In Finland, for example, according to the provisional Basic Education Act (valid until 31 July 2021), local authorities could decide independently to move towards distance education on the basis of recommendations made by the regional authority for a given area. In Germany, the municipal health authority decides which mitigation measures to implement, including isolation of infected cases or closing classes or schools. In Norway, the head teacher and the municipality decide whether to close the school or quarantine those who have been in close contact with infected pupils or staff. In 17 of the remaining countries, school based contact tracing is carried out (i.e. COVID testing of students and staff), which may or may not be followed by school or classroom closure.

Despite this trend, the criteria and duration of class closures vary between these countries. In the Czech Republic, for example, if a positive case is detected before classes start, only the infected individual is quarantined. If the case is detected later in the week, the class is closed (all students are quarantined) and switch to distance learning. In France, primary and secondary classes are closed for seven days when a case of COVID-19 is confirmed. In Costa Rica, classrooms with COVID-19 cases are closed for 24 hours, are thoroughly disinfected, and only students or staff suspected or confirmed for COVID-19 are isolated for 10 days. In England (United Kingdom), if 2 or more confirmed cases are declared within 14 days of school, or there is an increase in sick leave with suspicion of COVID-19 infection, the local health protection team is informed, which advises if any additional action is required.

Finally, in Turkey, if a student is diagnosed with COVID-19, students in the same class are considered to be close contacts and will only be allowed to return to school wearing a mask according to the national guidelines. If more than one case occurs in the same class within 14 days, all of the students in that class are considered close contacts and sent home to isolate for 14 days.

Distance learning during school closures often took place on a daily basis, with a hybrid approach involving a mix of asynchronous and synchronous online learning

As schools shut down, new arrangements were made to ensure learning continuity. The organisation of distance learning was often decided at the local level, to ensure rapid and targeted action for schools amidst the uncertainty of the pandemic.

Data from the Special Survey on COVID-19 show that flexible and collaborative arrangements across multiple levels of government allowed the smooth roll-out of resources made available for students and for distance education during school closures. Decisions on the resources available during school closures were usually taken at a more local level and in collaboration with or in consultation across multiple levels. Only in 8 countries were these decisions taken in full autonomy by the central level (4 countries), state level (2 countries) or provincial level (2 countries). In about 40% of countries, these decisions were taken by multiple levels of government. For example, in Colombia, the central government defined the main resources to be transferred to sub-regional authorities. However, some local or sub-regional authorities with resources also were able to take decisions on the resources to be made available during school closures (Figure 4).

With school closures often implemented at short notice to respond to the rapidly changing situation, countries sought to bridge gaps in education coverage by building on existing digital tools or developing new ones. Responses from the Special Survey on COVID-19 show consistent patterns across countries: online platforms were prioritised across levels of education, most clearly at the secondary level. Mobile phones were more common at the secondary level and radio at the upper secondary level. At the same time, take-home packages, television or radio were reported with similar frequency at both primary and secondary levels of education and other distance-learning solutions were more commonly reported at the primary level (OECD, 2021[4]).

Countries have therefore managed, during this crisis, to develop a range of tools to provide distance education to students during school closures. It is therefore not surprising that 74% of them report that primary and secondary schools were virtually open (i.e. every day of face-to-face schooling was provided remotely during school closure periods) when schools were first closed at the onset of the crisis in 2020. However, remote learning is not always considered a substitute for a full day of instruction in the classroom. For example, six countries (Austria, Costa Rica, Israel [for only few primary schools], Mexico, Portugal and Turkey) reported that distance education strategies did not compensate for each day of in-person teaching lost during school closures. Finally, of the 33 countries with data, only the Czech Republic did not provide distance education to pupils during the first period of school closure in 2020. However, for the second closure in autumn 2020 and the first closure in 2021, the amendment to the Czech Republic's Education Act implemented the obligation for pupils to attend distance education in primary and secondary education and at pre-primary level (only for pupils in the last compulsory pre-school year).

While the availability of digital tools for remote learning is generally widespread across most OECD countries, the overall quality of distance education and the way it operates has been a matter of debate in many countries. Results from the Special Survey on COVID-19 show that primary and lower secondary schools in two thirds of the countries were autonomous in setting up and implementing strategies for distance education. While autonomy may allow for greater agility to address specific learning gaps or to tailor remote learning strategies to students' level of access and digital skills, the quality of the strategies implemented may differ, thereby exacerbating inequalities across schools. Ten countries and economies (Austria, Costa Rica, England [United Kingdom], France, Hungary, Lithuania, Luxembourg, Mexico, Slovenia and Turkey) reported using a hybrid approach, including a mix of asynchronous learning (i.e. learning through online channels without real-time interaction with other students or teachers, at one's own pace) and synchronous online learning (i.e. real-time with interaction such as Zoom/Skype classes) and no country reported using exclusively one or the other

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model at primary or lower secondary levels of education.

Despite this trend, the modalities used for hybrid learning differ between countries. Korea, for example, incorporated different types of distance learning, including two-way live courses (synchronous learning), content-based courses, homework-based courses, courses combining two or more of these methods, etc. In France, online platforms often operated in two different but complementary and articulated ways: at the national level, the National Centre for Distance Learning (Centre national d'enseignement à distance, CNED) provided access to educational resources and virtual classes (Ma Classe à la Maison) while at the local level, other platforms were also used. In Luxembourg, synchronous learning took place to a varied extent and was adapted to the age of children. There were also a number of tutorials, teaching videos and other online learning materials, as well as training courses for teachers on how to develop such asynchronous learning offers. Blended learning opportunities (i.e. an approach that combines online educational materials and opportunities for interaction on line with traditional place-based classroom methods) have also been developed, but these are early attempts and still often rely on individual teachers' initiatives.

2

Early childhood education and care: Managing the crisis when social distancing and distance education are more complex to implement

In about two-thirds of countries with data, there was no evident policy to reduce the duration of school closures at pre-primary compared to primary level in 2020

Countries around the world have implemented unprecedented containment measures to control the spread of COVID-19, including the closure of schools. While all levels of education shut down their premises during the first months of the outbreak in 2020, pre-primary schools were generally closed for shorter periods of time on average. On average across OECD countries, pre-primary schools were fully closed 44 days in 2020, compared to 58 at primary level and 65 for lower secondary general programmes. There are, however, significant differences across countries: in Brazil, Colombia, Costa Rica and Mexico, pre-primary schools closed for 140 days or more in 2020. In contrast, they could remain open throughout the year in Austria, the Czech Republic, Estonia, Finland, Hungary, Japan, Latvia and Sweden, even though in some countries such as Finland, families were urged to keep their children home if possible during the second quarter of 2020. Similar to other levels of education, municipalities in many countries still offered emergency care to disadvantaged and vulnerable children during periods of full school closure.

In about two-thirds of countries with data, there was no evident policy to reduce the duration of school closures at pre primary compared to primary level in 2020. In about a third of the countries with data, the duration of pre-primary school closures was the same as at lower secondary level. In Poland and Turkey, pre-schools closed for less than half the number of days as primary schools, and in Austria, the Czech Republic, Estonia, Finland, Hungary and Latvia, pre-primary was the only level of education to have not closed at all in 2020. Germany, Ireland and Slovenia are the only countries with data where pre-primary schools remained closed longer than primary schools, for 10 days more or less (Figure 5). However, different school holiday schedules may also explain variations in the number of instruction days that schools were fully closed across levels of education. For example, in Germany, pre-primary schools remained open during the spring holidays when primary and secondary schools are typically closed, explaining the higher number of instruction days when schools were fully closed at pre-primary compared to primary level.

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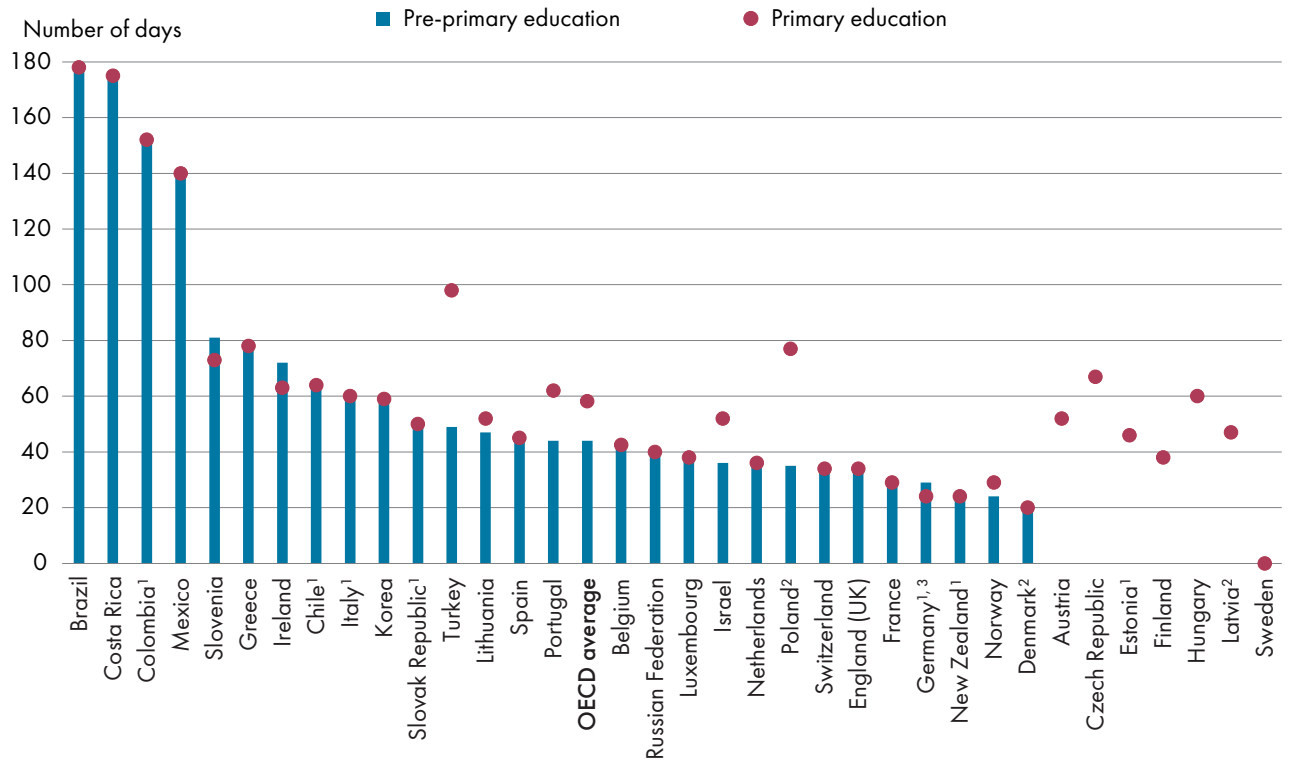
Figure 5 • Number of instruction days pre-primary and primary schools were fully closed in 2020

Excluding school holidays, public holidays and weekends



1. Most typical number of instruction days. For Colombia, some schools were fully closed during the period from September to December 2020 while others were partially open in hybrid mode for 65 days.
2. Minimum number of instruction days.
3. Different school holiday schedules explain the higher number of instruction days when schools were fully closed at pre-primary compared to primary level.
Countries and economies are ranked in descending order of the number of days schools were fully closed in pre-primary education in 2020.
Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

As the pandemic continued to progress during the first half of 2021, pre-schools were much less likely to close their premises in almost all OECD and partner countries. In about half of countries with data, pre-schools closed for ten days or less between January and May 2021, including countries such as Costa Rica or Ireland, where school closures were among the highest in 2020. In some countries, pre-primary institutions remained open, although authorities recommended parents keep their children at home when possible. Such recommendations may, however, have been challenging for working parents. For example, municipalities in Denmark have estimated that approximately 66% of pre-primary children attended early childhood education and care (ECEC) in January 2021, increasing to 86% in March 2021 (Kommunernes Landsforening 2021). Only in the Czech Republic, Germany and Hungary did pre-schools fully shut down their premises for more days in 2021 than in 2020.

Partial school closures were not as extensive in pre-primary education as at higher levels of education. Only in Chile, Colombia, Lithuania and Turkey were pre-schools partially closed for 70 days or more between January 2020 and May 2021, while in Poland they remained partially closed for more than 300 days over this period.

Several factors may explain the lower tendency of governments to close pre-primary schools compared to other levels of education during the pandemic:

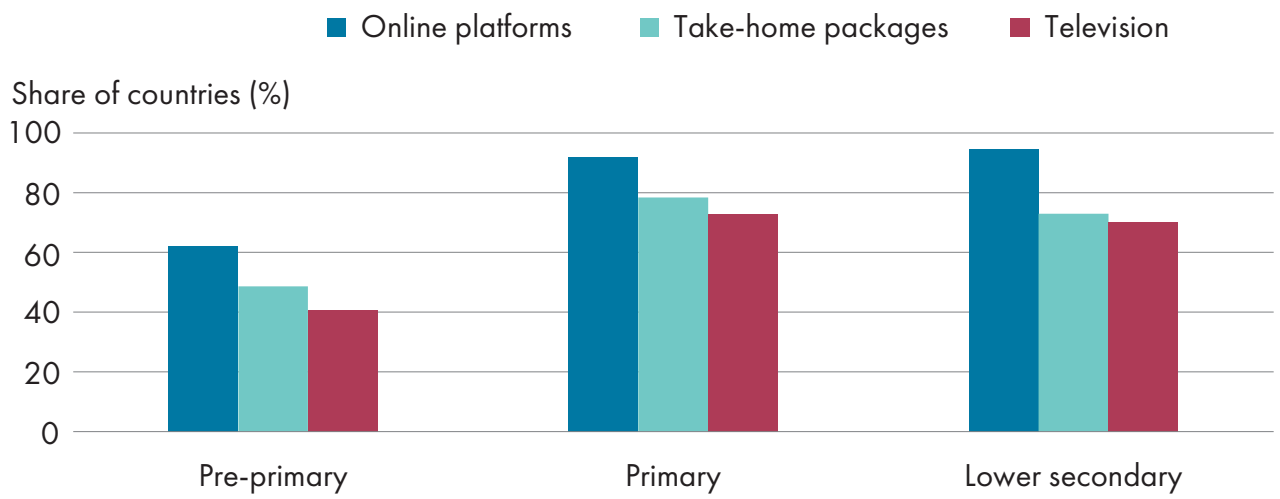
» **The early years are critical for children's cognitive and emotional development, particularly for the most disadvantaged.** During school closures, children relied on their caregivers to provide for their developmental and emotional needs. Parents, having to balance childcare and work responsibilities, amid the uncertainty of a looming economic crisis and employment instability, may have faced additional stress, and found it difficult to provide the nurturing learning environment at home children need to develop. In a recent

survey conducted by the OECD on ensuring the continuity of ECEC during the pandemic, the most cited challenge faced by families was parents' or caregivers' lack of time to support children's learning at home (OECD, forthcoming[6]). Some countries targeted specific measures to ensure the return of children to ECEC after school closures. For example, in Denmark, the Minister for Children and Education required municipalities to conduct proactive outreach efforts towards children aged 0-6, in particular towards those from disadvantaged backgrounds. With the same goal of supporting families, face-to-face school activities in pre-primary education resumed at the beginning of June in Portugal.

» **Setting up effective remote learning strategies is particularly difficult for young children.** Watching screens and being restrained in chairs may also be undesirable for young children's health and well-being (WHO, 2019[7]). Among countries that responded to the Special Survey on COVID-19, about 60% reported making use of online platforms to support pre-primary children's learning during the pandemic, compared to almost all countries at primary and lower secondary level. Other strategies, like take-home packages and television, were also seldom used, with only 40-50% of countries reporting doing so at pre-primary level, compared to more than 70% at primary and lower secondary levels, although the lower uptake may also be due to the shorter periods of closures at pre-primary level (Figure 6). Contrary to higher levels of education, distance learning is not always considered an effective method of teaching at pre-primary level. For example, Belgium, Germany and the United Kingdom do not consider distance learning a valid form of delivery to account for official instruction days at that level. In addition, a number of countries cited the low quality of digital learning strategies and content for young children and the number of computers/tablets available in a household as some of the major hurdles impeding the use of digital technology among pre-primary children. The digital competency of teachers may also have led to lower uptake of distance learning. Only half of the countries reported training pre-primary teachers for remote teaching during the pandemic, compared to 78% among primary school teachers (OECD, forthcoming[6]).

» **ECEC provides reliable childcare support to parents returning to work after the confinement periods.** As confinement measures relax and the economy reopens, parents will require reliable childcare solutions to return to work. However, in some countries, the provision of ECEC is strongly dependent on small privately owned businesses, which struggled to break even during the crisis. In the United States, 50% of parents who have not yet returned to work cite childcare as a main reason according to a survey conducted in 2020 (US Chamber of Commerce Foundation, 2020[8]).

Figure 6 • Share of countries offering the following distance learning solutions during the pandemic in 2020 and/or 2021



Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

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Public funding to pre-primary education increased in about two-thirds of countries with data over the 2019/20 academic year

Families are also finding it increasingly difficult to bear the financial burden of childcare costs amid the economic and employment uncertainty brought about by the pandemic. To support families and ensure the continuity of pre-schooling, public funding to pre-primary education increased in about two-thirds of countries with data over the 2019/20 academic year, a share similar to that at other levels of education. Whereas more countries increased the education budget to primary, secondary and tertiary education during the 2020/21 school year compared to 2019/20, the share of countries reporting a budget increase on pre-primary education remained similar to the previous year (see Section 7).

Some countries have implemented specific financial support for childcare. For example, Austria temporarily waived the conditions to receive childcare benefits. In Germany, access to child benefits has been simplified for families who have lost income due to COVID-19 (Abels et al., 2020[9]). Governments have also provided financial support to private ECEC settings, particularly in countries that rely strongly on them. For example, in Japan and Norway, the government continued to provide funding to cover operational costs in private ECEC settings when the centres were closed due to COVID-19. In addition, public funds also compensated ECEC centres in Norway for the loss of parental fees, which amounted to about 15% of total running costs (OECD, 2020[10]).

3

Impact of COVID-19 on learning outcomes and examinations

Countries with the lowest educational performance tended to fully close their schools for longer periods of time in 2020

The results from the Special Survey on COVID-19 show that some countries were able to keep schools open and safe even during the difficult pandemic situation. Social distancing and hygiene practices proved to be the most widely used measures to prevent the spread of COVID-19, but they imposed significant capacity constraints on schools and required education systems to make difficult choices when it comes to the allocation of resources.

The level of COVID-19 infection rates appears unrelated to the number of days schools were closed. The number of days of school closures varies significantly even among countries with similar infection rates, although such policy may have been motivated by educational objectives, the capacity of national health infrastructures or other public policy objectives (Figure 7).

However, the data show that schools were closed for longer periods of time in countries with lower educational performance in 2020. In fact, 15-year-olds' performance on the OECD Programme for International Student Assessment (PISA) 2018 reading test explains 61% of the variation in the number of days that upper secondary schools were fully closed in 2020. In other words, education systems with lower learning outcomes in 2018 lost more opportunities to teach in-person in 2020 than those with high performing systems. This is not simply an artefact of higher performing education systems operating in more favourable economic conditions. The relationship still explains 48% of the variation even after accounting for gross domestic product (GDP) per capita. It is thus expected that the crisis will not only amplify educational inequalities within countries, but also exacerbate the performance gap among them.

The pandemic has disrupted national examinations

Many countries rely on examinations to certify the completion of upper secondary and assess which students can progress to the next level of education. As a response to the COVID-19 crisis, a number of education systems have revised the content, format and mode of delivery of their national examinations.

For the academic year 2020-21, the most common adjustments in upper secondary general education (67% of countries) were related to enhanced health and safety measures, such as extra space between desks to ensure social distancing during exams. A significant share of countries (44%) also adjusted the content of examinations, for example, the subjects covered or the number of questions asked. These

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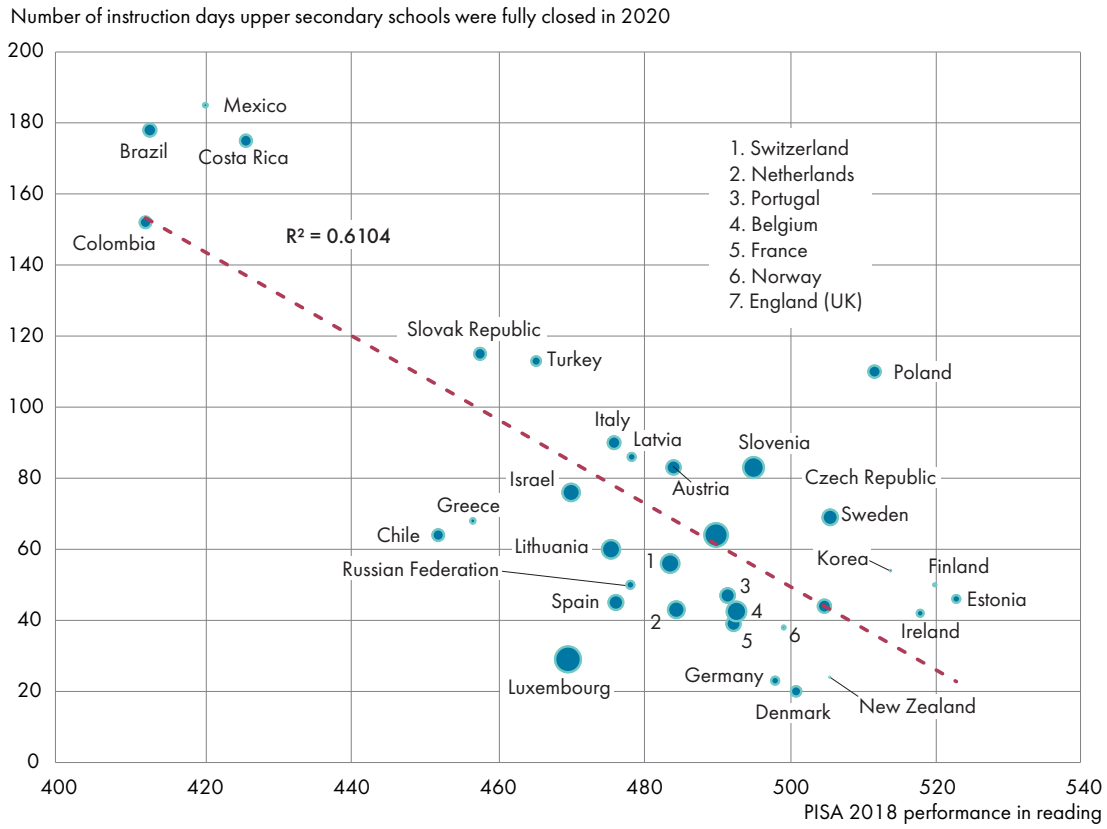
countries include Austria, the Czech Republic, Denmark, France, Germany, Latvia, Lithuania, Luxembourg, Mexico, Poland, Portugal, Slovenia, Spain and Turkey. In Slovenia, for instance, there was a 15% decrease in the content assessed and the number of examination papers at oral exams . The examiner also had the option to discharge one question if s/he believed the subject had not been adequately addressed during school closures. Another common measure (33%) was to postpone or reschedule exams. This type of measure was implemented in Austria, the Czech Republic, Germany, Ireland, Lithuania, Mexico, the Netherlands, Portugal, the Slovak Republic and Turkey.

Less common approaches have included adjusting the mode of administration (17%); introducing alternative assessments/validations of learning, such as appraisal of a student learning portfolio (17%); and cancelling examinations to use an alternative approach, such as calculated grades for high-stakes decision making (13%).

Figure 7 • PISA 2018 performance in reading and number of instruction days upper secondary schools were fully closed in 2020



Note: The size of the bubbles represent the number of COVID-19 cases per million inhabitants from the start of the pandemic until 31 December 2020. The larger the circle, the more cases of COVID-19 in 2020.
Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]); OECD database, March 2021. The number of COVID-19 cases per million inhabitants are from Roser et al. (2020[11]).

A number of countries have taken steps to assess learning losses following school closures

Although remote learning can mean opportunities to explore new ways of teaching, there have been concerns about the learning losses associated with school closures (Engzell, Frey and Verhagen, 2021[12]; Hanushek and Woessmann, 2020[13]). As an attempt to address this issue, a number of countries have taken

steps to track learning outcomes and identify students in need of specific support.

Standardised assessments can constitute a powerful tool to keep track of learning losses. In 2020, 44% of countries and economies with available data reported assessing students in a standardised way in upper secondary general education. These include Austria, Chile, the Czech Republic, Denmark, England (United Kingdom), Estonia, France, Italy, Korea, Latvia, Luxembourg, Mexico, Poland and the Russian Federation. In 2021, a slightly lower proportion of countries and economies (37%) implemented such assessments. All of the countries (with available data for both years) that used standardised assessments in 2020 kept this measure in 2021, except for Chile, Denmark and Mexico (Table 1). In Chile, between March and April 2021, 7 000 schools and 1.8 million students took the Comprehensive Learning Diagnosis (DIA) developed by the Quality Education Agency to measure students' learning outcomes and assess their socioemotional situation following school closures. The study revealed lower learning outcomes in mathematics and reading, and highlighted students' eagerness to go back to traditional ways of interacting with professors and peers.

In terms of equity, reports based on standardised assessments from England (United Kingdom) and France raise concerns about a potential exacerbation of inequalities due to school closures. In England (United Kingdom), at the secondary level, learning losses in reading in the first half of the autumn 2020 term were estimated at 1.8 months in the overall student population, and at 2.2 months among disadvantaged students. Similarly, at the primary level, learning losses represented around 1.7 months in reading and 3.7 months in mathematics overall, but these losses reached 2.2 months and 4.5 months respectively among disadvantaged students (Education Policy Institute and Renaissance Learning, 2021[14]). This is in line with a study from the Netherlands showing that students from disadvantaged backgrounds suffered greater learning losses than their peers (Engzell, Frey and Verhagen, 2021[12]). Learning losses, however, are not irreversible. In France, for instance, the decline in reading performance and mathematics observed at primary level in September 2020 (i.e. following the first school closures in the spring 2020) had been reversed by January 2021. Students from disadvantaged schools, however, exhibited lower improvements in reading than their peers over the period (Ministère de l'éducation nationale, de la jeunesse et des sports, 2021[15]).

Aside from standardised assessments, other common approaches to monitor student outcomes include formative assessments by teachers at the classroom level (67% of countries) and studies based on questionnaires to teachers, principals or school providers (41%). For instance, the districts' education management in Israel conducted assessments at class level and sent questionnaires to principals to evaluate learning losses in mathematics, English and language studies. In Portugal, a diagnostic study was applied in a representative sample of schools to assess the students' performance in certain subjects in specific school grades; the study and its results have proven to be important in the process of signalling and anticipating difficulties, and to support teachers in preparing the new school year. In Norway, survey and interview data were collected from students, parents and teachers, which revealed concerns about learning losses and a possible widening of the learning gap across students. Similarly, the results from a study by the Finnish Education Evaluation Centre (FINEEC) revealed important disparities in parental support across students, which raised equity concerns knowing that students relied more heavily on home support in the absence of direct contact with teachers. In order to address this issue, the FINEEC highlighted the need to identify learners needing special support. The study also showed that students across education levels experienced study-related stress during the COVID-19 crisis. Together with monitoring equity in learning outcomes, keeping track of students' emotional well-being during and after school closures can be important, as well-being in childhood and adolescence can be a strong predictor of emotional well-being later in life (Burns and Gottschalk, 2019[16]).

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Table 1 • Implementation of standardised assessments following school closures due to COVID-19 in 2020 and 2021

Upper secondary general education

Year	Countries and economies that implemented standardised assessments			Countries and economies that did not implement standardised assessments		
	Number	Share	List of countries and economies	Number	Share	List of countries and economies
2020	14	44%	Austria, Chile, Czech Republic, Denmark, England (UK), Estonia, France, Italy, Korea, Luxembourg, Latvia, Mexico, Poland and Russian Federation	18	56%	Belgium, Colombia, Costa Rica, Finland, Germany, Hungary, Israel, Japan, Lithuania, Netherlands, Norway, New Zealand, Portugal, Slovak Republic, Slovenia, Spain, Switzerland and Turkey
2021	11	37%	Austria, Czech Republic, England (UK), Estonia, France, Korea, Lithuania, Luxembourg, Latvia, Netherlands and Poland	19	63%	Belgium, Canada, Chile, Colombia, Costa Rica, Denmark, Finland, Germany, Hungary, Israel, Japan, Mexico, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland and Turkey

Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

National measures have been implemented to address learning gaps

A number of countries have taken steps to address the learning gaps associated with school closures. For instance, following the first closure in 2020, 78% of countries report having implemented remedial measures to reduce students' learning gaps, and 70% declare having implemented these measures with a special focus on disadvantaged students. In France, for instance, in a recent national survey, 9.2% of Grade 9 students from disadvantaged schools (REP+) reported having benefited from teachers' support during the March-April 2020 school closures, compared to 5.6% in more advantaged schools (Ministère de l'éducation nationale, de la jeunesse et des sports, 2021[15]). Moreover, a support programme will be implemented at the start of the 2021/22 school year, notably to help upper secondary students with homework.

Other common approaches to ensure equitable access to quality learning include remedial measures with a special focus on students who were unable to access distance learning (63%); on students at risk of dropping out or repeating a grade (59%); and on immigrant and refugee students, ethnic minority or indigenous students (45%). In France, for instance, the programme "Learning Holidays" was implemented in 2020 and 2021 to support students that may have been particularly affected by the COVID-19 crisis. This initiative builds on co-operation with local authorities and associations, and has two main objectives: 1) educational (addressing learning gaps and reducing the risk of dropout); and 2) social (ensuring children's access to enriching experiences during summer vacations).

Remedial programmes were also often implemented after the reopening of schools. About two-thirds of countries (26 countries) took decisions on additional remedial programmes after the school reopening. In 12 out of these 26 countries, these decisions were taken at school or subnational level, most often within a framework from the central government. In the other eight countries and economies, the decisions involved various levels, either as different types of decisions are taken at or consulted among different levels or as different programmes are organised at different levels. For example, in the Flemish Community of Belgium, summer schools were decided by the Flemish government, while other remedial measures were taken at school level. Decisions were nevertheless taken at the central level in full autonomy in 4 of the 26 countries (see Figure 4).

4

Support for primary and secondary teachers during the pandemic

Criteria for deciding on the working requirements of primary and lower secondary teachers are often set at school level

In 40% of countries responding to the Special Survey on COVID-19 (15 out of 37), schools or school boards/committees decide on working requirements of teachers during school closure. In half of them (8 out of the 15), decisions are taken in full autonomy, and in 4 countries decisions are taken within a framework set by a higher authority. In the remaining 21 countries with responses, decisions are taken at the central level in 10 countries, at the subnational level in another 8 and at multiple decision-making levels in 3.

Similarly, in more than a half of countries and economies (20 out of the 37), schools or school boards/committees decide how their teachers should adapt their teaching practices to school closures and reopenings, and decisions are taken in full autonomy in about half of these countries and economies (11 out of the 20). In more than a quarter of these countries and economies (6), decisions are taken within a framework set at the central level. For example, in Chile, the Ministry of Education proposed a tool to prioritise certain objectives of the pre-primary to upper secondary curriculum and schools decided whether or not to adopt the tool.

The COVID-19 crisis has resulted in significant changes in the teaching and working conditions of primary and lower secondary teachers

Change in working or teaching time and teachers' practice

In one-half of the countries and economies, some adjustments have been made to the school calendar and/or in the curriculum during the 2019/20 (or 2020) school year at pre-primary, primary and secondary levels. These adjustments consisted in the prioritisation of certain areas of the curriculum or certain skills in about one-third of these countries (usually reading, writing and literature, mathematics, second or other languages, natural sciences, and social studies), flexible arrangements at the most local level of governance in another one-third, and other types of adjustments in the remaining countries and economies.

Non-teaching tasks during school closure

Non-teaching tasks are an essential part of a teaching job, including communication and co-operation with

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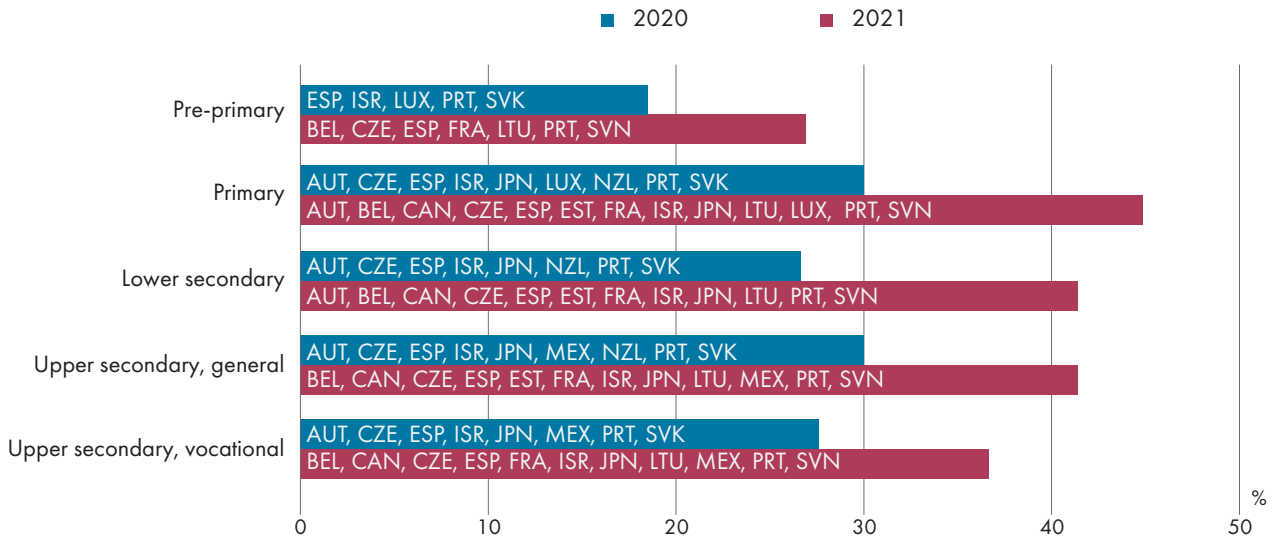
parents and guardians. At the primary and secondary levels (general programmes), relevant official documents state this task as mandatory for all teachers in nearly all countries and economies taking part in the survey. In Norway, the task can be mandatory for some teachers at the discretion of individual schools (Table D4.4, available on line).

During school closures, teachers were encouraged to continue some form of interaction with their students and/or their parents/guardians outside of the regular instruction time in 29-30 countries and economies at the primary and secondary levels (general programmes). For example, teachers in the Czech Republic were expected to provide each student an individual consultation via email, phone or in person, as well as to gather feedback from parents through online surveys. In Portugal, teachers, local governments and other local entities joined forces with security forces and official mail services to create a support network during school closures to ensure the supply of study materials and a daily contact with students, regardless of the material and technical conditions students had at home. Seven countries (Denmark [for primary and lower secondary levels], Finland, Hungary, the Netherlands, Norway, Spain and Sweden) did not have specific national guidelines, but schools or the most local level of governance could decide to encourage interactions between teachers and their students and/or their parents during school closures.

About 40% of countries recruited temporary teachers and/or other staff in 2021 to ensure the impact on students' learning is minimised

An increasing number of countries decided to recruit temporary teachers and/or other staff to implement measures to support students in need. One-third of countries (33%) stated that this kind of temporary recruitment had taken place in at least one educational level during the 2019/20 school year. This rose to nearly half of countries (48%) surveyed about the 2020/21 school year. While the recruitment of temporary staff increased at every educational level between both years, the rise was the largest at primary and lower secondary (Figure 8). At these levels, the proportion of countries hiring temporary staff in schools increased by 15 percentage points.

Figure 8 • Share of countries reporting the recruitment of temporary teachers and/or other staff to support students in need by level of education (2020 and 2021)



Notes: In both 2020 and 2021, Chile, Finland, Korea, the Netherlands, and Sweden reported that the decision to recruit temporary teachers and/or other staff was taken by schools/districts/the most local level of governance at all levels of education from pre-primary to upper secondary. This was true in Denmark in 2020, and in Norway in 2021. Decisions were taken locally at one or two levels in England (United Kingdom) and Ireland in 2020, Denmark in 2021, and in New Zealand in both years. Data for upper secondary vocational education in Japan exclude the College of Technology and regular courses in Grades 1-3.
Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

In several countries, temporary staff have been hired to ensure that education can continue safely and in accordance with public health measures. In France, for example, 5 000 temporary teachers and support staff were hired in April 2021 to cover for the absences of teachers testing positive for COVID-19. In Luxembourg, temporary staff were hired to assist teachers with organisational and administrative tasks as well as with support to students in remedial programmes. These staff also helped during the remedial programmes organised during the summer (Summer School). Elsewhere, temporary staff have also been hired to run remedial programmes outside of normal school hours. This has been the case in Belgium, France and Israel. In Israel, remedial summer study programmes are usually run for pre-primary and primary school students only, but temporary staff were used to provide similar programmes at all educational levels in July 2021.

Measures to encourage existing teachers to change their working schedules as part of national policy remained uncommon. Only five countries (Belgium, the Czech Republic, France, Israel and Poland) stated that there were increased incentives for teachers to take on remedial classes in 2020/21 which were put in place for every educational level from primary to upper secondary. This was a small increase from 2019/20, when only Belgium, the Czech Republic and Poland reported such measures. No country had a national level policy to incentivise teachers to delay retirement in 2020/21, representing a small decrease from the previous year. However, a few countries stated that this decision is taken at school/district level. In 2019/20, only New Zealand had such incentives, which were implemented from primary to upper secondary levels. Chile, Denmark, Finland, the Netherlands and Sweden reported that decisions were taken about incentives at the local level both for taking on remedial classes and for delaying retirement at all educational levels in 2019/20. In 2020/21, both types of incentive could be decided at their own discretion on a local basis in Chile, Finland, Norway and Sweden at all levels.

Before the pandemic, less than half of the primary and secondary teachers felt "well prepared" or "very well prepared" to use ICT in their own teaching

With the widespread adoption of online platforms to provide education remotely, it is extremely important that teachers are comfortable using relevant ICT tools. However, data from the OECD Teaching and Learning International Survey (TALIS) suggest that significant proportions of teachers do not receive sufficient training in using ICT in their initial teacher education programmes: 56% of teachers in the OECD stated that the use of ICT for teaching had been included in their formal education or training on average and only 43% reported that they felt "well prepared" or "very well prepared" to use ICT in their own teaching. Furthermore, ICT skills for teaching was the second most commonly selected option by teachers (18%) as an area in which there was a high need for professional development (OECD, 2019[17]).

Only seven countries and economies reported comparable data on the share of primary and secondary teachers trained in using ICT tools before the COVID-19 crisis and after its onset. These all stated that the proportion of teachers with this kind of training has risen since the pandemic began in 2020, with an increase of at least 25 percentage points. For the Flemish Community (Belgium), Israel, Finland, Lithuania and Luxembourg, this meant that over three-quarters of teachers had had training in using ICT tools by 2021. In Colombia, Israel and Turkey, the share of teachers with ICT training has more than doubled after the onset of the pandemic compared to before the crisis.

Some countries were not able to provide data on the total share of teachers with training in ICT tools from before and after the pandemic started, but they did implement widespread measures to support teachers in using such tools during the crisis. In Chile, for example, the Centre for Improvement, Experimentation and Pedagogical Research (CPEIP) and the Innovation Centre of the Ministry of Education held a series of free online conferences and training sessions on distance learning using ICT (as well as on other topics such as teacher well being and socioemotional learning in the context of the pandemic). These were attended by more than 125 000 teaching professionals, representing 56% of all the teachers working in subsidised schools.

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In more than one-third of countries, teachers followed the same vaccination schedule as the general population as of 20 May 2021

More than half of the countries and economies surveyed (60%) in May 2021 reported that teachers had been prioritised as part of their national policy to vaccinate the population against COVID-19. Among these countries, there were a variety of approaches on how to prioritise vaccinations for teaching staff. In Germany, for example, teachers in pre-primary and primary education levels were prioritised ahead of secondary teachers. In Portugal, the teachers' vaccination process was also gradual, starting with pre-primary and primary (1st cycle) teachers, then being extended to teachers of other levels of non-tertiary education. Meanwhile, in the French Community (Belgium), teachers in special education schools were allowed to access doses of the vaccine that were in surplus from other priority groups. In Canada, some provinces and territories prioritised teachers for vaccination, either all teachers or those in areas where incidence rates of COVID were high; otherwise teachers were vaccinated with their age group. In some cases, prioritisation of teachers was based on multiple criteria, such as in the Czech Republic, where teachers were prioritised according to their age and whether their classes were expected to reopen first.

Countries like Israel noted that there had been no need to prioritise teachers because of the speed at which the general population was vaccinated. In France, since 17 April, all school staff members aged 55 and over (teachers, administrators and support staff) have had access to vaccination in dedicated vaccination centres. The prioritisation of all school staff (including those under the age of 55) was implemented on 24 May, but ended up being rather short-lived, as vaccination was opened up to the general population of the same age group a week later, on 31 May. In the case of Chile, 91% of teachers had been vaccinated with at least one dose and 86% had been vaccinated with two doses as of 20 May 2021.

Table2 • Measures for the prioritisation of teachers' vaccination, pre-primary to upper secondary levels (as of 20 May 2021)

Upper secondary general education

Countries with national measures prioritising all or some teachers' vaccination		Countries and economies where teachers follow the same vaccination schedule as the general population, or where teachers' vaccination schedule has not yet been defined	
Number	List of countries and economies	Number	List of countries and economies
18	Austria, Chile, Colombia, Czech Republic, Estonia, France, Germany, Hungary, Japan, Korea, Latvia, Lithuania, Mexico, Poland, Portugal, Slovenia, Spain, Turkey	12	Belgium, Costa Rica, Denmark, England (United Kingdom), Finland, Ireland, Luxembourg, Netherlands, New Zealand, Norway, Russian Federation, Sweden

Note: In Brazil, Canada and Switzerland, there were variations between regions regarding the prioritisation of teachers for vaccination. In Israel, teachers were originally prioritised for vaccination in the first quarter of 2021, but this ended up being unnecessary due to the speed of vaccine rollout.
Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

5

Financing education during the pandemic

About two-thirds of OECD and partner countries increased their education budget in response to the pandemic

Public expenditure enables governments to serve a wide range of purposes, including providing education and health care and maintaining public order and safety. Decisions concerning budget allocations to different sectors depend on countries' priorities and the options for private provision of these services. Education is one area in which all governments intervene to fund or direct the provision of services. As there is no guarantee that markets will provide equal access to education, government funding of educational services is necessary to ensure that education is not beyond the reach of disadvantaged families.

Policy choices or external shocks, such as demographic changes or economic crises, can influence the allocation of public funds across sectors. The COVID-19 crisis has disrupted education at an unprecedented scale. Maintaining learning continuity amidst school closures and teacher shortages, as well as ensuring schools reopen safely, all require additional financial resources beyond those merely budgeted for prior to the pandemic. As the sanitary crisis evolved into an economic and social crisis, governments have had to take difficult decisions regarding the allocation of funds across sectors.

So far, education seems to have maintained its priority in national budgets. The results of the Special Survey on COVID-19 show that, during 2020, about two-thirds of OECD and partner countries increased the budget devoted to education in response to the pandemic, with the remaining third operating at constant budget. This result is generally similar across all levels of education, although a slightly lower share of countries reported increasing the public budget on pre-primary and tertiary education as governments focused on compulsory education initially. While decisions on increasing or maintaining budgets stable were generally applied to all education levels consistently within countries, some took concrete decisions to support certain levels of education over others. For example, additional education budget was provided only to pre-primary education in Ireland in an effort to support working families as the economy reopened post-confinement. In contrast, tertiary education was the only level to receive additional public funds in Hungary and Korea while in Denmark, tertiary education was the only level where decisions on funding were not left to the discretion of schools or districts.

Public education budgets continued to rise in 2021. At least 75% of countries increased the financial resources directed to educational institutions in primary, secondary and tertiary education compared to 2020 levels. The increase was most striking for tertiary education: while 63% of countries reported increasing public budgets to tertiary education in 2020, 80% did in 2021. In contrast, the share of countries reporting increasing the public budget allocated at pre-primary level remained generally stable across both years (Figure 9). Most countries increased their

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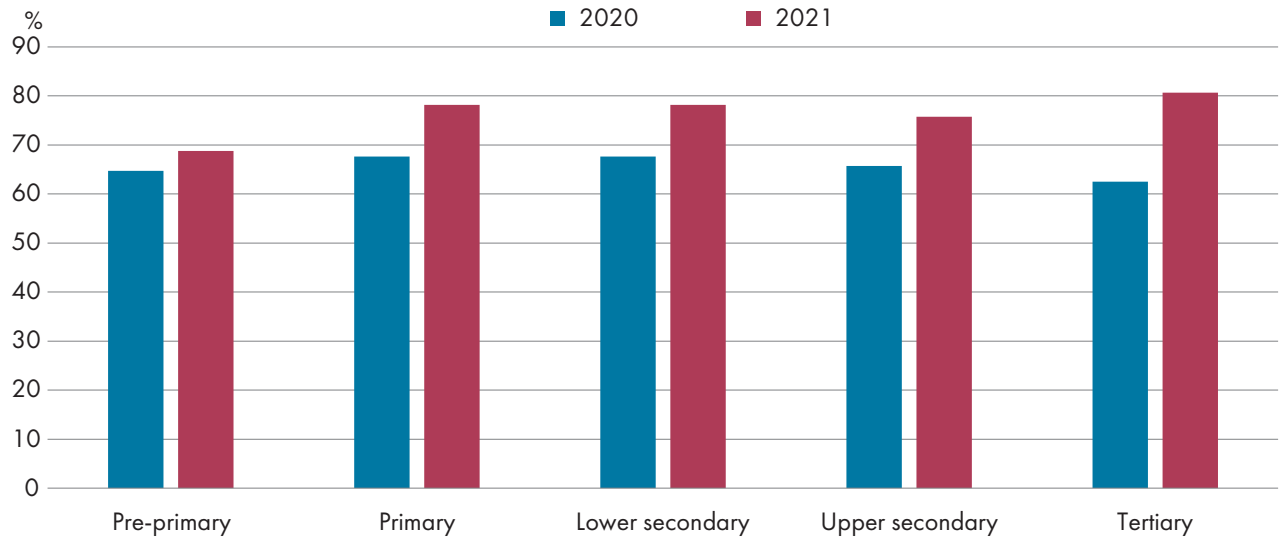
public budgets over two consecutive years, but this is not the case for all countries. For example, Austria, Canada, the Czech Republic and Ireland kept the public education budget to primary education in 2020 constant, but increased it over 2021. In some cases, as in Ireland, the increase in 2021 also covered the additional expenses incurred by educational institutions in 2020. The opposite pattern is observed in the Slovak Republic, where public education budgets to primary education increased in 2020 but remained constant in 2021.

In most cases, local governments received additional subsidies or allocations from the central government based on the number of students or classes. For example, in Poland, the general educational subsidy was based on the number of teachers. In Sweden, under the so-called "School billion" (Skolmiljarden plan), municipalities received additional state funding distributed proportionally based on the number of children and young people aged 6-19.

While no country reported decreasing public funding to education in 2020 nor in 2021, budget cuts to education tend to lag the emergence of crises. Between 2008 and 2009, despite a slowdown of the economy in all OECD countries following the global financial crisis, public spending on education continued to rise. It was not until 2010 that education budgets started to decrease in about a third of OECD countries following austerity measures and budget cuts (OECD, 2013[18]).

Figure 9 • Share of countries reporting an increase to the education budget in response to the COVID-19 pandemic, by education level (2020 and 2021)



Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

How additional funding was spent varied greatly across countries

Across primary and secondary levels of education, the compensation of teachers is the largest driver of cost, accounting on average for around 70% of current expenditure on primary, secondary and post-secondary non tertiary education across OECD countries. Various factors influence the cost of teachers' salaries, such as the number of teachers, their salaries, class size, statutory teaching time and student instruction time, all of which have been impacted by the COVID-19 pandemic. While students across the world traded in physical classroom teaching for more independent study and learning at home during school closures, statutory instruction and teaching times have remained generally stable over 2020/21 compared to the 2019/20 academic year. At lower secondary level, more than 85% of countries reported that student instruction time and teaching time has remained the same throughout the pandemic. Instruction time increased only in Austria and Israel, while teaching time increased in Austria and Lithuania. In Austria, two extra hours per week were added to primary and upper secondary schedules and schools were free to use these hours either to reduce class size or to set up additional remedial classes. In Israel, students were provided remedial instruction hours during the summer holiday months. Only in Mexico did actual instruction time decrease during the pandemic over the 2020/21 school year at pre-primary, primary and lower secondary levels.

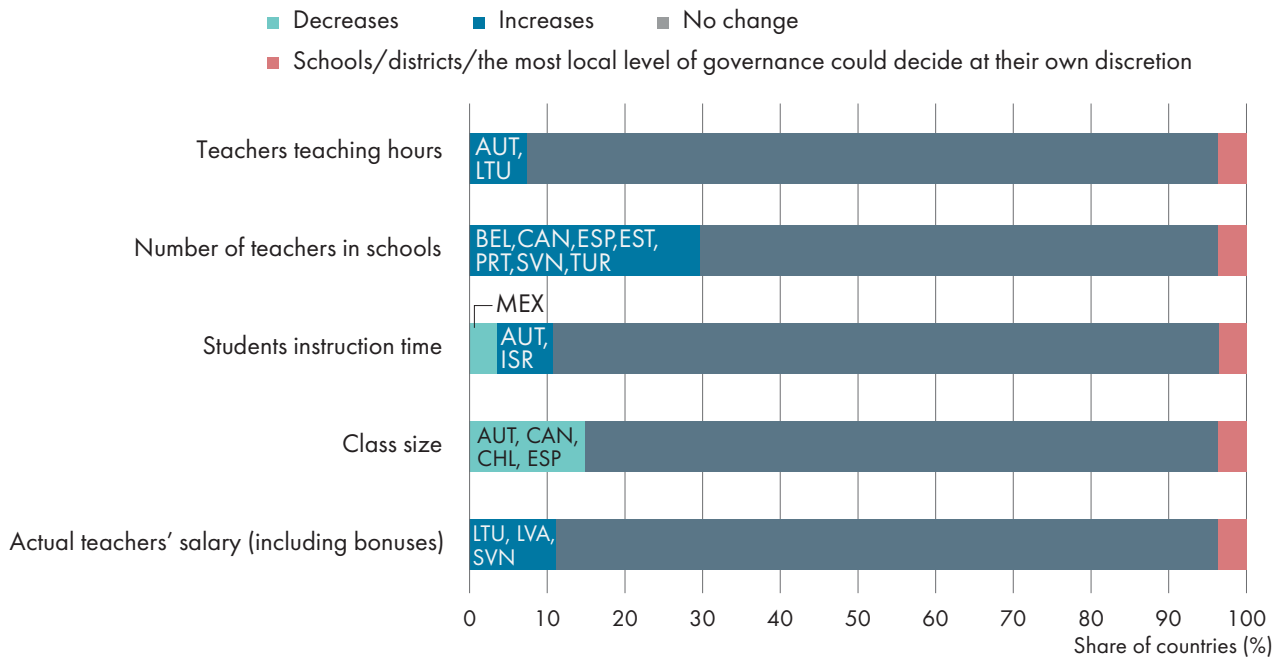
Similarly, distance learning and hybrid strategies have not resulted in any change in class size across most countries, although many countries have implemented measures to reduce the number of students physically present on school premises and in a classroom. Class sizes at lower secondary and primary levels have decreased only in Austria, Canada, Chile and Spain, with the majority of the remaining countries reporting no changes (Figure 10). In Denmark and Turkey, class sizes decreased only at pre primary level, whereas class size decreased only at upper secondary level in Ireland (vocational programmes only) and Portugal.

Countries were more likely to report an increase in the number of teachers to cover for teachers' absences or vulnerability to COVID-19 infection, ensure adequate support and remedial strategies to students, and reduce class sizes. At lower secondary level, about 30% of countries reported increasing the number of teachers, and 37% reported doing so at primary level over the 2020/21 academic year (Figure 10). For example, in Portugal, higher funding to support teachers in providing extra hours for educational and tutorial support under the Learning and Consolidation Recovery Plan resulted in 3 300 new teacher hires in 2020. In Spain, the decrease in class size was accompanied by the recruitment of 30 000 new teachers, leading to 21 000 more classes over the 2020/21 school year. In Belgium (the French Community), additional capacity to hire extra teachers for the 2020/21 academic year was provided to schools with a relatively low socio-economic index to support the larger outreach activities towards disadvantaged students that had not returned to school. However, the additional staff hired did not always meet the regular qualifications expected of teachers. For example, in Luxembourg, temporary hires in primary schools were not certified teachers and the usual required inception period for substitute teachers was dropped due to the urgency of the crisis.

Few countries reported increasing teachers' actual salaries in 2020/21 to account for the additional workload incurred during the COVID-19 crisis, with only Latvia, Lithuania and Slovenia reporting doing so. In Latvia and Slovenia, teachers were compensated financially for the use of their own resources when working from home. In addition, teachers in Latvia also received additional allowances to provide individual counselling to vulnerable students (professional, psychological and academic). In contrast, 85% of countries reported no changes in teachers' actual salaries. However, while salaries may not have changed, teachers may have received additional payment for overtime work, as in Austria, or seen their salary decrease if they refused or were not able to teach remotely during school closure, as in the Slovak Republic.

Figure 10 • Changes in the allocation of public funds during the 2020/21 academic school year

Lower secondary education



Source: OECD/UIS/UNESCO/UNICEF/WB (2021[1]).

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In addition to the factors influencing teachers' salary cost, many countries, such as the Czech Republic, France, Hungary, New Zealand, Poland and Portugal, devoted significant additional funding to the purchase of digital equipment to support the transition to remote learning, or to provide the sanitary and hygiene conditions for safe school reopening. For example, in New Zealand, a USD 62 million emergency funding package was announced to support the development of the distance learning programme until the end of June 2020, including digital enablement and capability building. This response was focused on ensuring underprivileged students had access to opportunities to learn from home. In the United States, 59% of adults with children below the age of 18 enrolled in a public or private primary and secondary school reported that computers were provided by the children's school or school district (US Department of Commerce, Bureau of the Census, 2021[19]). Funds were also directed to ensure remedial measures to address learning loss. For example, Sweden increased the earmarked government grant directed to schools that provided education during holidays in 2020 ("Statsbidrag för lovskola 2020"), while in Finland, remedial measures were targeted to disadvantaged pupils, such as those with special education needs or an immigrant background. Other targeted areas included student and teacher well-being in Denmark and New Zealand. At tertiary level, some countries targeted funding to support economic recovery programmes through adult education.

Specific financial support measures for tertiary education

Tertiary education is key for students' career and personal development. It also plays a key role in lifelong learning, providing adults with opportunities to reskill and upskill throughout their professional life. A failure to sustain effective tertiary systems can lead to inequalities, as youth or older adults may face difficulties in engaging in learning, particularly as they become older, endangering their education and employment prospects in the process. Economies have been confronted with a massive challenge of how to support tertiary education to keep students' education and, more generally, social cohesion on track.

The economic crisis brought on by the spread of COVID-19 has affected the most vulnerable the most, as unemployment rose and specific sectors of activity relating to tourism, services and entertainment were the most strongly hit. Funding efforts towards tertiary education in some countries have focused on enabling access to higher education programmes to support economic recovery programmes through education. For example, higher education institutions in Sweden received increased funding from the state to finance short courses for lifelong learning and programmes leading to professions where there is a shortage of labour. Similarly, in Finland and Norway, tertiary institutions received additional funds to support increased entry places for students in response to job loss or unemployment during the pandemic.

Ensuring strong public financial support to students, particularly the most disadvantaged, has also become key to sustaining effective tertiary education (World Bank, 2020[20]). While only five countries (Hungary, Italy, Korea, Poland and the United States) adapted tuition fee policies in response to the COVID-19 pandemic, the majority of them made adjustments in support of international students (OECD, 2021[21]).

While the crisis has affected all tertiary students, it has had a severe impact on international and foreign students. In particular, the crisis has affected the safety and legal status of international students in their host country, the continuity of learning and the delivery of course material, and students' perception of the value of their degree, all of which could potentially have dire consequences for international student mobility in the coming years. A decrease in the share of international students can lead to a drop in revenues, affecting in particular higher education sectors with greater dependence on international fees. For example, in Australia, international students represent 21% of tertiary enrolment and those enrolled in a bachelor programme pay almost four times as much as national students (OECD, 2021[21]). While digital technologies have improved capacities for virtual learning, students may question the value of paying high fees to earn a degree abroad in uncertain times, particularly if that learning is to occur mostly on line and they are no longer able to benefit from networking and access to a foreign labour market.

A number of countries and economies, however, introduced measures to facilitate the repayment of public student loans. In 2020, Germany provided interest-rate support on student loans; Korea extended the repayment period of student loans; and Chile, England (United Kingdom), Finland, the Netherlands, Norway and Sweden increased tertiary students' loan capacity or provided them with the possibility to borrow additional funds. Additional funding for public scholarships was extended by a large majority of countries and economies with data available, including Chile, Belgium (the Flemish Community), Finland, France, Israel, Japan, Korea, Latvia, the Netherlands and Norway. In Norway, a portion of student

loans could be converted into a grant under certain conditions with flexible criteria for students employed in sectors at the frontlines during the pandemic. In Chile, Italy and Japan, students were also supported with additional tuition fee waivers (OECD, 2021[21]).

Despite new policies to facilitate the payment of tuition or the repayment of public student loans, tertiary students still face challenges in meeting the financial commitments relating to their studies. For instance, between 19 August and 31 August 2020, some 31% of adults above 18 years of age with household members that had planned to enrol for classes in a postsecondary education institution in the fall 2020 in the United States reported that the plans had been cancelled for at least one household member. The second most frequently cited reason for cancelling after health concerns relating to COVID-19 was not being able to pay for educational expenses following changes in their income level due to the COVID-19 crisis (US Department of Commerce, Census Bureau, 2021[22]).

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6

Consequences of COVID-19 on labour market opportunities and the transition from education to work

Unemployment rates increased between 2019 and 2020

In early 2020, COVID-19 infection and lockdown measures interrupted international supply chains, leading to a severe "supply shock" which affected many countries. At the same time, confinement measures as well as the economic and job crisis stemming from the pandemic led to a "demand shock", with lower demand for products and services. The massive economic shock not only affected countries where governments responded with restrictive measures (e.g. lockdown), but also those relying more on social conformity and/or social capital rather than on enforced confinement (OECD, 2020[23]).

In some of the most affected countries, unemployment rates skyrocketed within the first few weeks of the pandemic. For instance, in the United States, the unemployment rate jumped from 3.5% in February 2020 to 14.7% in April 2020, in Canada from 5.7% to 13.1%, and in Colombia from 12.3% to 21.0% over the same period. In many countries, unemployment rates reversed after the peak, but remained at a slightly higher level than they were at the beginning of the year (OECD, 2020[23]).

The impact of COVID-19 on the labour market has been more evenly distributed across adults of different educational attainment than during the global financial crisis

Educational attainment

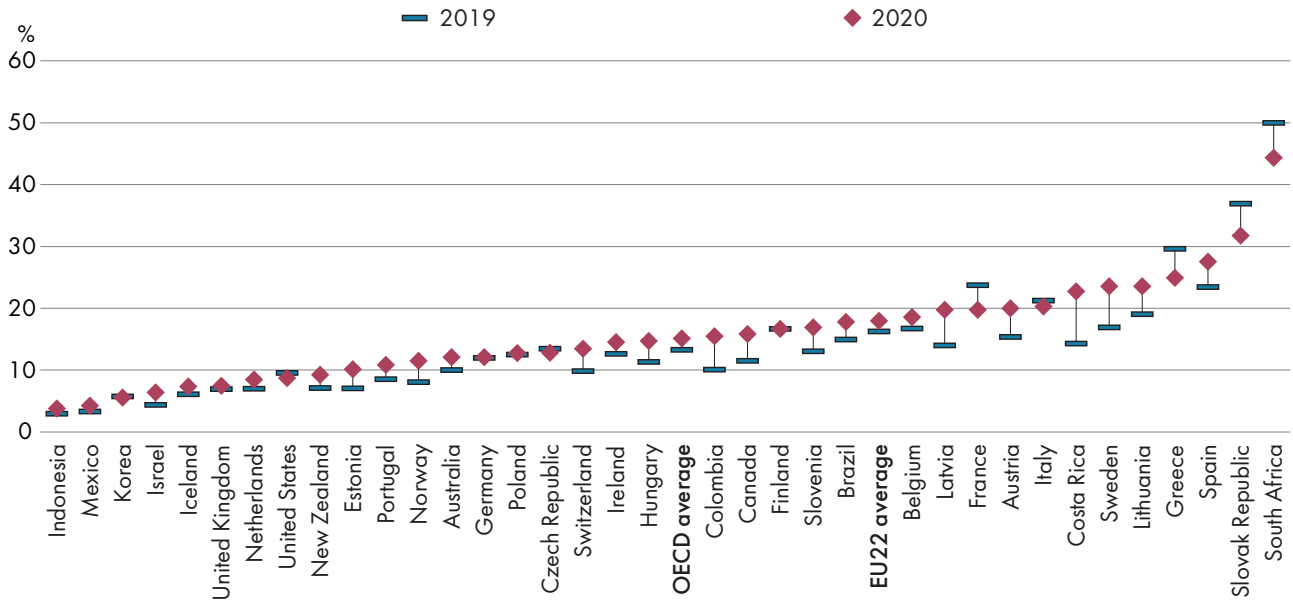
On average across OECD countries, the unemployment rate among 25-34 year-olds with below upper secondary attainment was 15.2% in 2020, showing an increase of about 2 percentage points in one year's time. However, unlike the 2008 crisis, there is no clear pattern of which education

levels were the most affected by the crisis in 2020 compared to 2019. In general, those with upper secondary or higher levels of educational attainment were affected in often-equal proportions by the increase in unemployment rates between 2019 and 2020. However, in a few countries, such as Austria, Latvia, Lithuania and Sweden, the unemployment rate for 25-34 year-old adults who have not attained upper secondary education increased by at least 5 percentage points between 2019 and 2020, while it remained generally stable over this period for other levels of education (the increase is less than 3 percentage points). France, Greece and the Slovak Republic show the opposite pattern: in these countries, the unemployment rate among 25-34 year-olds with below upper secondary attainment fell by at least 4 percentage points between 2019 and 2020 (Figure 11). However, these figures should be interpreted with caution, as these three countries have seen the inactivity rate of those who have not attained upper secondary education increase over the same period (OECD, 2021[21]).

The availability of job retention schemes in many countries limited the impact of the economic crisis on unemployment rates in 2020. Job retention schemes, such as the "Kurzarbeit" in Germany, the "Activité partielle" in France or the "Expediente de Regulación Temporal de Empleo" in Spain allowed preserving jobs at companies experiencing a temporary drop in business activity while providing income support to workers whose hours were reduced or who were temporarily laid off (OECD, 2020[23]). Moreover, while highly educated adults were often able to work remotely, those with lower educational attainment dominated many occupations that performed essential functions during the pandemic.

While the change in unemployment rate may not have differed significantly across adults with different education levels in the majority of OECD countries, the number of hours worked was more disparate. Across the OECD, the year-on-year change in hours worked during the second quarter of 2020 fell by 8.5% among the high skilled, 20% among those with a medium level of education, and 24% among those holding just a lower secondary education diploma or less. Although the number of hours worked recovered for highly educated adults that returned to work later in the year, they persisted for those with a lower level of education (OECD, 2021[24]).

Figure 11 • Trends in unemployment rates of 25-34 year-olds with below upper secondary attainment (2019 and 2020)



Countries are ranked in ascending order of the unemployment rate of 25-34 year-olds with below upper secondary attainment in 2020.

Source: OECD (2021[21]), Indicator A3.

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Gender

Younger women without upper secondary attainment are particularly affected by high unemployment. On average across OECD countries, the unemployment rate among women without upper secondary attainment was 11.9% in 2020, compared to 10.3% among men. With higher educational attainment levels, unemployment levels tend to be not only lower, but also similar between men and women. On average across OECD countries, the difference between the unemployment rates of women and men is 1.6 percentage points among adults with upper secondary or post-secondary non-tertiary attainment and 0.4 percentage point among tertiary educated adults.

Throughout the pandemic there has been increasing concern that women would suffer most from job loss, reversing the progress of recent decades. Women are more likely to work part-time, earn less and are less likely to have stable contractual status. Women were also more likely to be the primary caregiver to children when schools closed, resulting in higher risk of reduction in the number of hours worked. However, while unemployment increased in 2020 for all adults compared to 2019, the impact among men and women has been very similar on average across OECD countries. Among adults with below upper secondary education, the change in the unemployment rate of women has been within ±1 percentage point that of men in slightly more than half of OECD and partner countries with available data (Figure 12). At higher education levels, the differences level out further. Among tertiary-educated adults, the change in the unemployment rate of women between 2020 and 2019 is within ±1 percentage point that of men in 80% of OECD and partner countries.

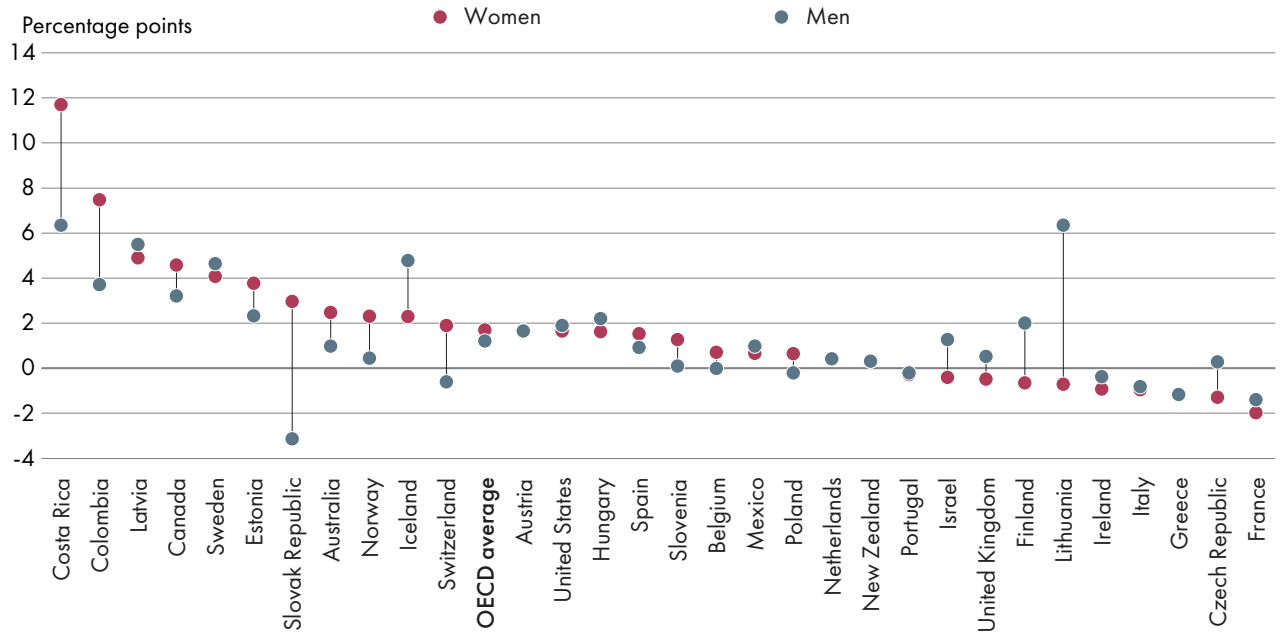
Many factors may have contributed to balancing out the impact of the pandemic on unemployment across genders. Sectors such as health and welfare, characterised by high female employment, have been under pressure during the crisis, with many working additional hours as demand surged during the early stages of the pandemic. At the same time, sectors characterised by higher male employment where physical contact is lower, such as construction and manufacturing, were also authorised to work in subsequent phases of the pandemic. Moreover, policies that have enabled women to request part-time work or special care leave during the crisis may have cushioned the adverse effects of the pandemic on women's employment (OECD, 2021[24]).

However the pandemic has brought on more inequality in a few countries. In Colombia and Costa Rica, the gender difference in the unemployment of adults with below upper secondary education was amplified in favour of men by 4-5 percentage points between 2019 and 2020. In other countries, the gender gap reversed. In the Slovak Republic, while women were less likely to be unemployed than men in 2019, close to 30% were unemployed in 2020 compared to 26% of men. In Lithuania, the opposite occurred, with the pandemic increasing the unemployment rate of men by 6 percentage points, while the unemployment of women remained generally stable (Figure 12).

Unemployment statistics do not capture all of the labour-market slack due to COVID-19, as some unemployed individuals are unable to actively seek employment or are not available for work and are therefore classified as "out of the labour force". Gender differences in the increase in inactivity rate due to the pandemic have also been generally low for all levels of educational attainment in most OECD and partner countries. However, some countries have seen an increase in the inactivity rate of women compared to that of men during the COVID-19 crisis. For instance, in Italy, the inactivity rate among women without upper secondary attainment rose from 53% in 2019 to 59% in 2020 and that of men from 18% in 2019 to 22% in 2020.

Figure 12 • Change in unemployment rates of 25-64 year-old adults with below upper secondary attainment between 2019 and 2020, by gender

Percentage point difference (2020-19)



Countries are ranked in descending order of the change in the unemployment rate of women between 2019 and 2020.
Source: OECD (2021[25]), *Education at a Glance Database*, http://stats.oecd.org. See *Source* section for more information and *Annex 3* for notes (https://doi.org/10.1787/69096873-en).

Age group

Young workers often bear the brunt of economic and employment crisis as they often have not acquired the skills and professional experience needed in the labour market and are more likely to have short term or precarious contracts. In times of layoffs, they are also often the first to go as they have not acquired sufficient seniority. While the difference in the rise in unemployment between 2019 and 2020 across age groups has been moderate, the increase in the youth unemployment rate still outpaces that of older adults across all levels of educational attainment. Among 25-34 year-old adults with below upper secondary attainment, unemployment increased by 2 percentage points on average between 2019 and 2020 compared to 1 percentage point among 45-54 year-olds. The same pattern is observed among adults with tertiary attainment, where unemployment increased by 1.4 percentage points among 26-34 year-olds between 2019 and 2020 compared to 0.7 percentage points among 45-54 year-olds.

Despite the economic slowdown due to the COVID-19 pandemic, the share of young adults neither in employment nor in education or training did not change remarkably between 2019 and 2020

The share of young adults (18-24 year-olds) neither in employment nor in education or training (NEET) increased from 14.4% in 2019 to 16.1% in 2020 on average across OECD countries. However, this share increased by more than 4 percentage points over this period in Canada, Colombia and the United States. Similarly, the increase in the share of NEETs among 25-29 year-olds is particularly marked only in the aforementioned countries, Israel and Latvia, and increased from 16.4% in 2019 to 18.6% in 2020 on average across OECD countries. It should, however, be noted that annual data have been used for this analysis, which could hide some important variations over the months.

The share of NEETs among 18-24 year-olds increased only slightly between 2019 and 2020 in many countries, partly because more young people extended their studies. Particularly, in Austria, France,

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Poland, Portugal and Slovenia, further education helped limit the increase in the share of NEETs. For instance, in Portugal, the share of young adults that are NEET increased by less than 2 percentage points between 2019 and 2020, while the increase in young adults in education increased by 4 percentage points, from 54% in 2019 to 58% in 2020. Similarly, in France, the share of NEETs remained stable between 2019 and 2020, but the share of young adults in education increased by 2 percentage points, from 54% to 56% over this period.

Governments across the world reacted quickly to the economic challenges that the youth are facing. For example, the European Commission has launched the "Youth Employment Support: A bridge to jobs for the next generation (European Commission, 2020[26]) . Depending on the speed of the economic recovery, the education-to-work transition may be smoother in the future.

Participation in adult learning decreased during the first wave of the COVID-19 pandemic

A recent OECD brief shows that, under a certain number of assumptions, COVID-19 induced shutdowns of economic activities decreased workers' participation in non-formal learning by an average of 18%, and in informal learning by 25%. Before the pandemic, workers across OECD countries spent on average 4.9 hours per week on informal learning and 0.7 hours on non-formal learning. According to estimates, during the pandemic, it dropped to 3.7 hours for informal learning and 0.6 hours per week for non formal learning. This represents a notable amount of lost learning, which may not be easily recovered (OECD, 2021[27]).

Data from the EU Labour Force Survey for European countries and from the Continuous Employment Survey for Costa Rica show a similar pattern by examining how the first wave of the COVID-19 pandemic has affected participation in adult learning (formal and/or non-formal education and training). Figure 13 shows that relative to the same quarter in 2019, the number of adults reporting they participated in formal and/or non-formal education and training in the month prior to the survey decreased significantly in the second quarter of 2020. This is particularly evident in Austria, the Czech Republic, Denmark, Estonia, France, Latvia, Poland, the Slovak Republic, Slovenia and Switzerland, where the number of adults participating in formal and/or non-formal education and training decreased by 30% or more between the second quarter of 2019 and the second quarter of 2020, for both women and men (i.e. during the peak of the first wave of COVID-19 in Europe). Greece seems to be an outlier, at least when considering male adults.

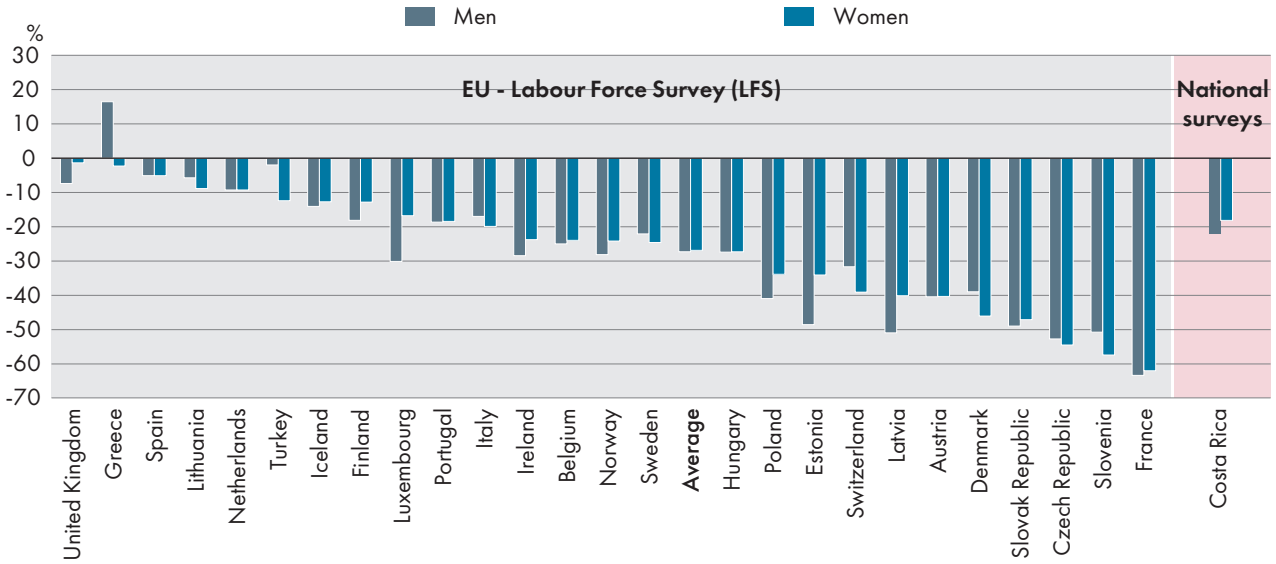
However, it is worth highlighting that participation rates in formal and/or non-formal education and training are rather low in Greece. In this case, small variations of the participation rates over time may have a large impact on the relative change over the same period (Figure 13).

The results presented in Figure 13 have at least two important limitations. First, as observed in the European Union's *Education and Training Monitor 2018*, the way participation in adult learning is measured in the EU Labour Force Survey is rather restrictive, as it measures the "share of population who report having participated in formal and/or non-formal learning activities during the 4 weeks prior to being interviewed". This is problematic in the context of adult learning, which is a sporadic activity, often taken up once or at most twice a year for a short duration (European Commission, 2018[28]).

Second, this section reports only some preliminary analyses on the impact of COVID-19 on participation in adult learning during the first wave of the pandemic and they must be interpreted with care. Further analyses, covering a wider range of quarters, are needed. In fact, third and fourth quarter data suggest that participation rates increased again considerably in Latvia and Switzerland, for example. Most likely, the steep drop in participation observed between the second quarter of 2019 and the second quarter of 2020 is a consequence of the widespread lockdown restrictions implemented during the first wave of the pandemic. During this period, non-formal education providers needed some time to adapt to the provision of online-only courses.

Figure 13 • Relative change of participation in formal and/or non-formal education and training, by gender (second quarter of 2020 compared to second quarter of 2019)

EU Labour Force Survey or national survey, 25-64 year-olds



Note: The EU Labour Force Survey measures the "share of population who report having participated in formal and/or non-formal learning activities during the 4 weeks prior to being interviewed".

Countries are ranked in ascending order of the relative change of participation in formal and/or non-formal education and training for women during the second quarter of 2020 relative to the second quarter of 2019.

Source: OECD (2021[21]), Indicator A7.

By May 2021, the number of online job vacancies had dropped by more than 40% in most countries compared to the beginning of the year

The COVID-19 pandemic deteriorated economic conditions in 2020 in most countries and they remain difficult in 2021. The job vacancy rate, the share of total posts that are vacant, in the 20 European countries of the OECD dropped by about 25%, from 2.2% in Q2 2019 to 1.6% in Q2 2020 as companies stopped hiring due to lockdown restrictions and a difficult economic context (Eurostat[29]). In many countries, the economic crisis has led to massive job losses, with no certainty that all jobs will be recreated after the economic crisis as the pandemic accelerated broader economic transformations, such as the digitalisation and transformation of jobs.

The number of online job vacancies has also been affected by the crisis. Evidence shows that by May 2020, the volume of online job vacancies had dropped by more than 40% in most countries compared to the beginning of the year. Job postings requiring individuals to work from home soared, driving home the need for workers to possess digital skills. Low-educated workers were particularly affected by declining openings in the early phase of the pandemic (OECD, 2021[27]).

On average across the OECD, the number of new jobs posted on line dropped by approximately 60% by early May 2020 compared to the start of the year. By July 2020, several countries experienced a relative improvement, with a reduction in the contraction of new jobs published on line. However, total jobs published on line were still considerably lower than during the pre-crisis period, and remained low between September and November 2020 (in countries for which information is available) (OECD, 2021[27]).

Although the volume of online job postings has declined in virtually every industry, heterogeneity exists across sectors. Some industries and sectors maintained most of their operations and sometimes even experienced a surge in demand, while others were forced to reduce or halt their operations. On average across European countries for which information is available, the health care and social assistance sectors experienced a milder decline relative to other sectors.

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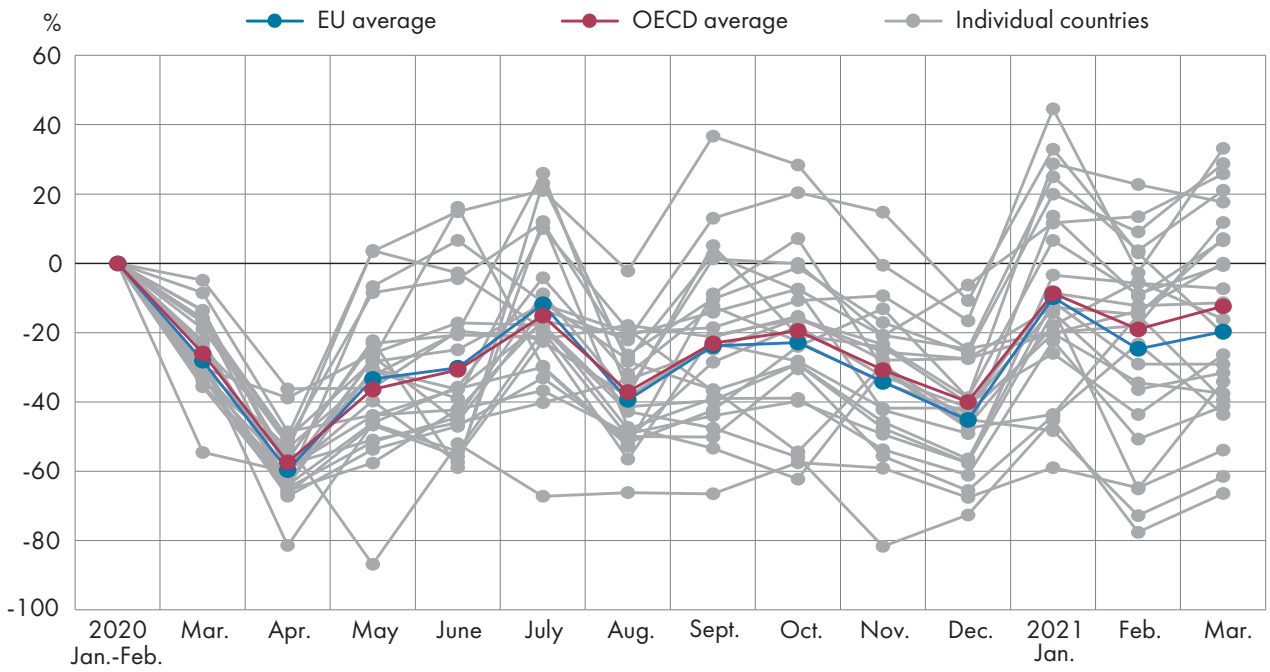
By contrast, occupations in the tourism and leisure sectors were hit hard. In many European countries, online job postings for client information workers fell by 70% compared to the beginning of the year. In Canada, the United Kingdom and the United States, advertisements seeking travel agents, tour guides or flight attendants dropped by 70-90% between March and November 2020 (OECD, 2021[27]).

Figure 14 • Evolution of online job vacancies during the COVID-19 pandemic (January 2020-March 2021)



Note: The figure shows the percentage change in the number of online job postings by country relative to the pre-crisis period (average of January and February 2020). Belgium, Finland, Hungary, New Zealand, Portugal and Sweden are omitted from the analysis due to small sample size or high volatility observed in the studied period.
Source: OECD (2021[27]), Figure 5.1. OECD calculations based on data from Burning Glass Technologies, May 2021.

ANNEX

Table A1[1/2] • Number of instruction days schools were "fully closed" and "partially open" in 2020 and 2021, by level of education

Excluding school holidays, public holidays and weekends, between 1 January 2020 and 20 May 2021

		Pre-primary education				Primary education				Lower secondary education			
		Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021	Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021	Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021
OECD	Australia	m	m	m	m	m	m	m	m	m	m	m	m
	Austria	0	0	0	0	52	22	37	14	52	22	37	56
	Belgium	43	5	10	0	43	5	14	0	43	5	30	0
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Chile[1]	64	34	27	54	64	34	27	54	64	34	27	54
	Colombia[1]	152	0	65	74	152	0	65	74	152	0	65	74
	Costa Rica	175	0	0	67	175	0	0	67	175	0	0	67
	Czech Republic	0	28	0	20	67	27	23	59	65	76	54	15
	Denmark[2]	20	m	0	0	20	m	m	m	20	m	m	m
	Estonia[1]	0	0	0	0	46	49	0	18	46	49	0	18
	Finland	0	0	m	m	38	0	m	m	38	m	m	m
	France	29	5	16	0	29	5	16	0	34	10	10	0
	Germany[1]	29	32	0	0	24	40	65	53	25	60	65	33
	Greece[1]	78	m	m	m	78	m	m	m	68	m	m	m
	Hungary	0	22	0	0	60	20	0	0	60	35	0	0
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	72	0	0	58	63	33	0	10	42	49	0	0
	Israel	36	28	0	18	52	28	23	18	93	46	0	0
	Italy[1]	60	m	m	m	60	m	m	m	90	m	m	m
	Japan[3]	0	0	0	0	m	0	0	0	m	0	0	0
	Korea	59	0	m	m	59	0	m	m	59	0	m	m
	Latvia[2]	0	0	0	0	47	20	0	68	86	60	0	38
	Lithuania	47	42	123	44	52	42	128	44	60	77	125	9
	Luxembourg	38	10	19	0	38	10	19	0	29	5	28	0
	Mexico	140	74	0	0	140	74	0	0	140	74	0	0
	Netherlands	36	0	36	25	36	0	36	25	43	0	43	84
	New-Zealand[1]	24	0	0	0	24	0	0	0	24	0	0	0
	Norway	24	0	m	m	29	0	m	m	38	0	m	m
	Poland[2]	35	14	220	83	77	21	113	63	110	80	78	4
	Portugal	44	25	m	m	62	25	m	m	62	35	m	m
	Slovak Republic[1]	50	m	m	m	50	m	m	m	105	m	m	m
	Slovenia	81	21	0	14	73	21	17	14	83	35	7	0
	Spain	45	0	0	0	45	0	0	0	45	0	0	0
	Sweden	0	0	0	0	0	0	0	0	0	0	0	0
	Switzerland	34	0	0	0	34	0	0	0	34	0	0	0
	Turkey	49	9	67	55	98	24	39	40	113	24	39	40
	United States	m	m	m	m	m	m	m	m	m	m	m	m
Economies /partners	Brazil	178	m	m	m	178	m	m	m	178	m	m	m
	Russian Federation	40	m	m	m	40	m	m	m	50	m	m	m
	England (UK)	34	0	0	0	34	44	38	0	44	44	28	0
	OECD average	44	11	22	19	59	19	25	24	65	27	24	19

1. Most typical number of instruction days. For Estonia, for primary, lower secondary and upper secondary general education. For Colombia, some schools were fully closed during the period from September to December 2020 while others were partially open in hybrid mode for 65 days.
2. Minimum number of instruction days in 2020. For Poland , only for tertiary education. For Latvia, only for primary and secondary education. For Denmark, only for year 2020.
3. Colleges of technology and regular courses in Grades 1-3 in upper secondary education (vocational) are excluded in the response for upper secondary vocational programmes.

Source: OECD/UIS/UNESCO/UNICEF/WB Special Survey on COVID. 20 May 2021.

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Table A1[2/2] • Number of instruction days schools were "fully closed" and "partially open" in 2020 and 2021, by level of education

Excluding school holidays, public holidays and weekends, between 1 January 2020 and 20 May 2021

		Upper secondary general education				Upper secondary vocational education				Tertiary education			
		Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021	Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021	Fully closed in 2020	Fully closed in 2021	Partially open in 2020	Partially open in 2021
OECD	Australia	m	m	m	m	m	m	m	m	m	m	m	m
	Austria	83	22	28	56	83	22	28	56	154	68	0	0
	Belgium	43	5	30	79	43	5	30	79	34	0	0	0
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Chile[1]	64	34	27	54	64	34	27	54	128	m	27	54
	Colombia[1]	152	0	65	69	152	0	65	74	95	0	65	72
	Costa Rica	175	0	0	67	175	0	0	67	m	m	m	m
	Czech Republic	64	91	55	0	62	71	57	20	77	m	m	m
	Denmark[2]	20	65	50	50	20	60	50	50	20	63	31	32
	Estonia[1]	46	49	0	18	51	49	0	0	55	49	0	0
	Finland	50	m	m	m	50	m	m	m	50	m	m	m
	France	39	10	5	16	34	10	10	16	104	0	0	75
	Germany[1]	23	60	70	33	23	60	70	33	m	53	0	0
	Greece	68	m	m	m	68	m	m	m	m	m	m	m
	Hungary	79	85	0	0	79	85	13	0	85	36	33	52
	Iceland	m	m	m	m	m	m	m	m	m	m	m	m
	Ireland	42	30	0	19	m	33	78	17	m	m	m	m
	Israel	76	36	17	10	76	36	17	10	0	0	100	10
	Italy[1]	90	m	m	m	90	m	m	m	50	m	m	m
	Japan[3]	m	0	0	0	m	0	0	0	0	0	0	0
	Korea	54	0	m	m	54	0	m	m	m	0	m	m
	Latvia[2]	86	65	0	38	76	65	0	38	86	84	0	38
	Lithuania	60	72	125	14	60	72	125	14	69	90	136	0
	Luxembourg	29	5	43	73	29	5	43	73	m	m	m	m
	Mexico	185	79	0	0	185	79	0	0	m	m	0	0
	Netherlands	43	0	43	84	60	0	60	84	60	m	m	m
	New-Zealand[1]	24	0	0	0	24	0	0	0	24	0	0	0
	Norway	38	0	0	0	29	0	0	0	29	21	75	m
	Poland[2]	110	80	78	4	110	80	78	4	179	84	0	0
	Portugal	47	45	m	m	47	45	m	m	m	m	m	m
	Slovak Republic[1]	115	m	m	m	115	m	m	m	112	m	m	m
	Slovenia	83	35	27	43	83	35	27	43	83	m	m	m
	Spain	45	0	0	0	45	0	0	0	45	0	55	85
	Sweden	69	10	0	43	69	10	0	43	57	0	90	85
	Switzerland	56	0	0	0	56	0	0	0	91	38	0	23
	Turkey	113	38	34	42	108	38	34	42	m	m	m	m
	United States	m	m	m	m	m	m	m	m	m	m	m	m
Economies / partners	Brazil	178	m	m	m	178	m	m	m	m	m	m	m
	Russian Federation	50	m	m	m	50	m	m	m	m	m	m	m
	England (UK)	44	44	28	0	44	0	28	0	59	69	0	0
	OECD average	70	31	27	30	71	30	30	29	70	33	29	26

1. Most typical number of instruction days. For Estonia, for primary, lower secondary and upper secondary general education. For Colombia, some schools were fully closed during the period from September to December 2020 while others were partially open in hybrid mode for 65 days.
2. Minimum number of instruction days in 2020. For Poland , only for tertiary education. For Latvia, only for primary and secondary education. For Denmark, only for year 2020.
3. Colleges of technology and regular courses in Grades 1-3 in upper secondary education (vocational) are excluded in the response for upper secondary vocational programmes.

Source: OECD/UIS/UNESCO/UNICEF/WB Special Survey on COVID. 20 May 2021.

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