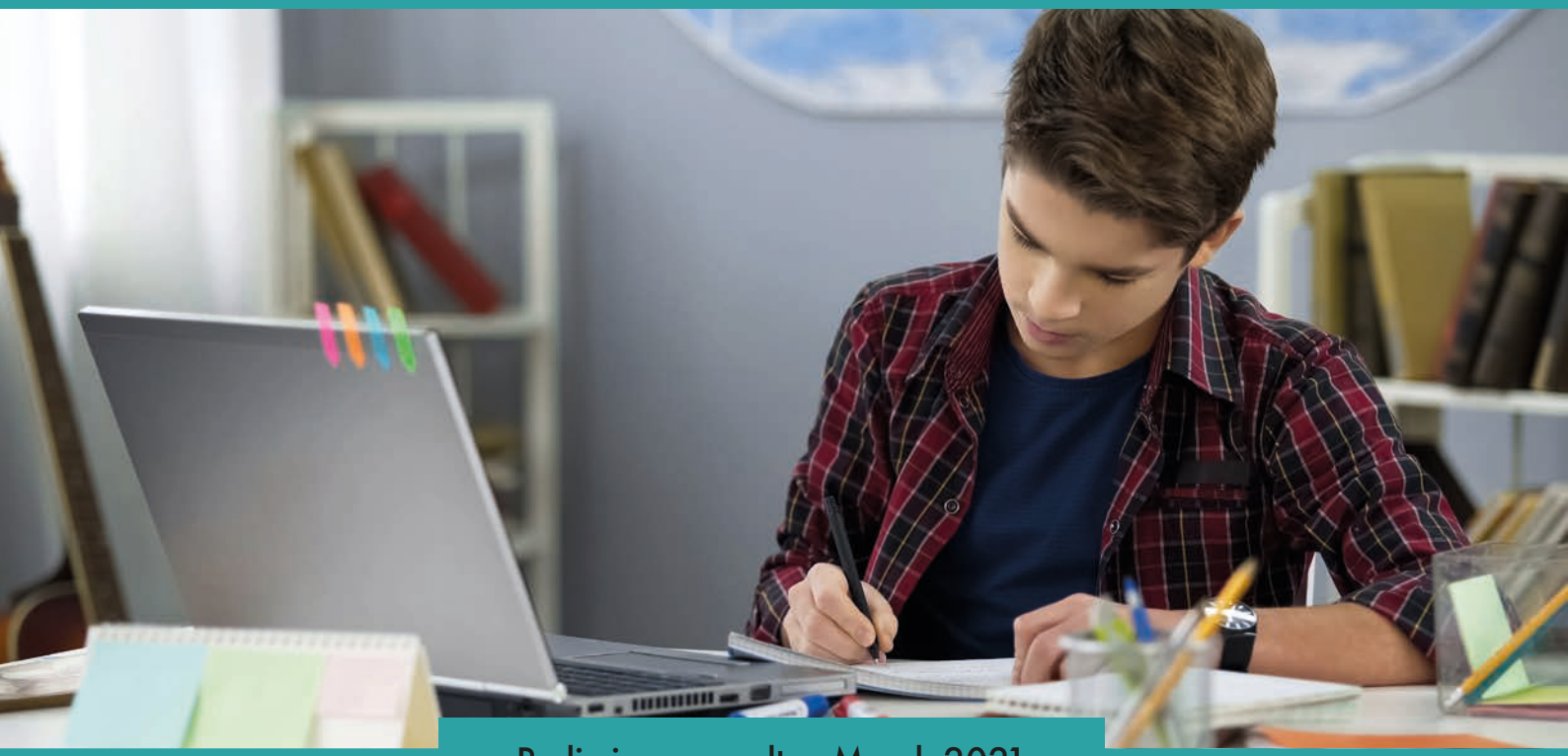
The state of school education

One year into the COVID pandemic



Preliminary results - March 2021

Updated 13 April 2021

Please see p. 50 for detailed modifications

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Editorial

Few groups are less vulnerable to the Coronavirus than school children, but few groups have been more affected by the policy responses to contain this virus: Last year, 1.5 billion students in 188 countries were locked out of their schools. Some of them were able to find their way around closed school doors, through alternative learning opportunities, well supported by their parents and teachers. However, many remained shut out when their school shut down, particularly those from the most marginalised groups, who did not have access to digital learning resources or lacked the support or motivation to learn on their own. The learning losses that follow from school closures could throw long shadows over the economic well-being of individuals and nations.

The crisis has exposed the many inadequacies and inequities in our school systems - from the broadband and computers needed for online education, through the supportive environments needed to focus on learning, up to the failure to enable local initiative and align resources with needs. But as these inequities are amplified in this time of crisis, this moment also holds the possibility that we will not return to the status quo when things return to "normal". It is the nature of our collective and systemic responses to the disruptions that will determine how we are affected by them.

In an unprecedented crisis like this 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 that range from lost learning opportunities and contingency strategies to make up for these; through the organisation of learning and the working conditions of teachers; up to issues around governance and finance.

The first of these data collections was conducted in March 2020 jointly with Harvard University, right after the pandemic had hit the OECD area. This latest Special Survey, which reflects the situation as of 1 February 2021, was a collaborative effort between the OECD, UNESCO, UNICEF and the World Bank, which jointly designed the survey which was then administered by the OECD for its members and partners and by UNESCO for other countries. The data were provided by government authorities.

The results from the Special Survey show that some countries were able to keep schools open and safe even in difficult pandemic situations. Social distancing and hygiene practices proved to be the most widely used measures to prevent the spread of the Coronavirus, but they imposed significant capacity constraints on schools and required education systems to make difficult choices when it comes to the allocation of educational opportunity. The vaccination of teachers has also been part of national strategies, with 19 out of the 31 education systems with comparable data implementing national measures prioritising teachers' vaccination. However, the limited initial supply of vaccines, and competing public health objectives make the prioritisation of vaccination a difficult balancing act.

It is noteworthy that infection rates in the population appear unrelated to the number of days in which schools were closed. In other words, countries with similar infection rates made different policy choices when it comes to school closures, whether motivated by educational objectives, by the health infrastructure or by other public policy objectives.

What is concerning, however, is that the countries with the lowest educational performance tended to fully close their schools for longer periods in 2020. In fact, the performance of 15-year-olds in countries on the OECD Programme for International Student Assessment (PISA) 2018 reading test explains 54% of the variation in the number of days where schools were fully closed in 2020 in upper-secondary schools.

In other words, education systems with already poorer learning outcomes in 2018 saw more in-person learning opportunity lost in 2020. This is not simply an artefact of higher performing education systems operating in more favourable economic conditions. Even after accounting for GDP per capita, the relationship still explains 31% of the variation. This means the crisis did not just amplify educational inequalities within countries, but it is likely to also amplify the performance gap among countries.

Where school closures were needed, the Special Survey shows that many countries made major efforts to mitigate their impact for learners, families and educators, often with particular attention to those in the most marginalised groups. Where school capacity was limited because of social distancing, most countries prioritised young children and students from disadvantaged backgrounds for learning in presence, reflecting that the social context of learning is most important for these groups, while digital alternatives are least effective for them. 86% of countries with comparable data provided remedial measures to reduce learning gaps at the primary level, 75% did so at the lower secondary and 73% at the upper-secondary level of education. More than 60% of the countries introduced specific measures focused on disadvantaged students while about 40% targeted measures at immigrant, refugee, ethnic minority or indigenous groups.

Significant efforts were made to ensure reliability and predictability of services for students and parents, and to ensure that all students have a regular and dedicated contact, even when schools were closed. Many countries put in place new channels to facilitate communication between students, families, teachers and school or local authorities. Countries have also relied on a range of approaches to ensure inclusiveness in distance education. This included flexible and self-paced digital platforms as well as agreements with mobile communications operators and internet firms to enhance access, particularly at the primary level of education.

Local capacity was key for a safe opening of schools. Success often depended on combining transparent and well-communicated criteria for service operability, with flexibility to implement them at the frontline. The latter often included local decisions as to when to implement measures of social distancing, health, quarantine or the closures of classes or schools.

With reduced instruction time, it was essential to prioritise curriculum content in order to avoid that teachers and students were overburdened. Sometimes core subjects like reading or mathematics were given greater emphasis. When it comes to learning at school, priority was often given to the learning of new content over the rehearsal of material, to the preparation and review of material learned at distance, and to the motivation and development of effective learning strategies and social learning.

During school closures, digital resources became the lifeline for education and the pandemic pushed teachers and students to quickly adapt to teach and learn online. Virtually all countries have rapidly enhanced digital learning opportunities for both students and teachers and encouraged new forms of teacher collaboration. The responses from the Special Survey show consistent patterns across countries: Online platforms were extensively used at all levels of education, but particularly so at the secondary level. Mobile phones were more common at the secondary level and radio at the upper-secondary level. Take-home packages, television and other distance-learning solutions were more common at the primary level.

The opportunities that digital technologies offer go well beyond a stop-gap solution during the pandemic. Digital technology allows to find entirely new answers to what people learn, how people learn, where people learn and when they learn. It can elevate the role of teachers from imparting knowledge towards working as co-creators of knowledge, as coaches, as mentors and as evaluators. Already today, digital learning systems cannot just teach students, but simultaneously observe how students study, the kind of tasks and thinking that interest them, and the kind of problems they find boring or difficult. These systems can then adapt learning to suit personal learning styles with far greater granularity and precision than any traditional classroom setting possibly can. Similarly, virtual laboratories give students an opportunity to design, conduct and learn from experiments, rather than just learning about them. The OECD has documented many digital contingency strategies on its COVID-19 Hub (http://www.oecd.org/coronavirus/en/).

However, the crisis has caught many education systems cold, and the Special Survey documents major limitations in access, quality, equity and use of digital resources for learning and teaching. Taking stock of lessons learned during the pandemic will be key for countries to strengthen the resilience of their education systems. Moving beyond the pandemic, it will be important to continue monitoring how distance-learning solutions are addressing the needs of different students and expand their opportunities for quality learning. The Special Survey shows how a number of education systems have already embarked on such studies, using household surveys, student assessments

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and teacher assessments. Still, there is a lot more that needs to be done. The crisis has shown that countries can collaborate better to mutualise open online educational resources and digital learning platforms, and to encourage technology companies to join this effort.

Moreover, countries need to use the momentum to reconfigure learning environments to educate learners for their future, not our past. It is important to build on the ongoing efforts to establish a future-oriented infrastructure for online and remote learning, and to continue to develop the capacity of students and teachers to learn and to teach in that way. Effective learning out of school during the pandemic placed much greater demands on autonomy, capacity for independent learning, executive functioning and self-monitoring. The plans to return to school need to focus on more intentional efforts to cultivate those essential skills among all students. This is essential first because it is likely that, until a vaccine is widely available, any return to school will be interrupted again as a result of future outbreaks, at least locally. But beyond the pandemic, there are benefits to students in expanding their learning time and learning opportunities beyond the walls of the school by being able to learn using a variety of modalities of distance learning.

The pandemic has also complicated the administration of national examinations and assessments. To a varying extent, education systems changed the calendar, content and mode of examinations and assessments. The variation in the extent to which countries deviated from their assessment and examination plans relates both to the pandemic context and to how important these tests were in their respective education systems. Countries that could draw on multiple modes of assessment in pre-pandemic times found it easier to substitute examinations with other ways to recognise student learning.

Not least, the transition to remote instruction and the subsequent re-opening of schools had a profound impact on teachers' work. The crisis required many of them to acquire new skills and prepare materials suited to virtual learning environments. In some cases, it also added new responsibilities to their work, such as the co-ordination of support and resources for their students, increased interaction with parents, the organisation of remedial classes or the implementation of new administrative, health and safety procedures in schools. In some contexts, teachers' absences further limited capacity and placed constraints on schools' ability to reduce class sizes or implement different hybrid learning models. The Special Survey shows how these new demands on teachers and their colleagues have moved some countries to change their staffing and recruitment practices.

The transition to online or hybrid teacher professional learning has been an additional challenge for many teachers who were not familiar with online learning formats. Teacher engagement in online professional development was limited prior to the pandemic and teachers were less likely than other professionals to learn by keeping up to date with new products and services. The Special Survey shows how most countries made major efforts to support teachers' learning online during the pandemic, for instance by providing access to information and communication technology (ICT) and connectivity to teachers or supporting ICT-related teacher professional learning to build teachers' digital competence.

Of course, all of this costs money. In the 2019/2020 school year, most countries were able to mobilise additional resources for their extra efforts during the pandemic, and the estimations by countries suggest that many of them will be able to raise additional funds also in the 2020/21 school year. However, the long-term economic outlook is far more challenging. Now is the time for countries to build on the lessons of the pandemic to reconfigure the people, spaces, time and technology to devise more effective and efficient educational environments.

In one way, the crisis has revealed the enormous potential for innovation that is dormant in many education systems, which often remain dominated by hierarchical structures geared towards rewarding compliance. It will be important to create a more level playing field for innovation in schools. Governments can help strengthen professional autonomy and a collaborative culture where great ideas are refined and shared. Governments can also help with funding, and can offer incentives that raise the profile of, and demand for, what works. But governments alone can only do so much. Silicon Valley works because governments created the conditions for innovation, not because governments do the innovating. Similarly, governments cannot innovate in the classroom; but they can help by opening up systems so that there is an evidence-based innovation-friendly climate where transformative ideas can bloom. That means encouraging innovation within the system but also making it open to creative ideas from outside.

To mobilise support for innovation, resilience and change, particularly in the uncertainty created by the pandemic, education systems need to become better at communicating the need and building support for change. Investing in capacity development and change-management skills will be critical; and it is

vital that teachers become active agents for change, not just in implementing technological and social innovations, but in designing them too. That means also that education systems need to become better at identifying key agents of change and champion them; and to find more effective ways of scaling and disseminating innovations. It will be crucial that the many good experiences learned during the pandemic will not be lost when things return to 'normal' but provide inspiration for the further development of education. That is also about finding better ways to recognise, reward and celebrate success, to do whatever is possible to make it easier for innovators to take risks and encourage the emergence of new ideas.

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Lost learning opportunity

It is natural that much of the public attention focuses on near-term challenges around health and employment, but the learning losses that could follow from school closures could throw long shadows over the economic well-being of individuals and nations. People with lower skills will be less productive, less able to participate in economic and social activities, and more likely to receive social transfers. And different from the direct economic impact of the pandemic, which will be temporary, these effects are likely to remain permanent. Put simply, our schools today are our economies tomorrow. Of course, many efforts were made to support student learning during school closures, but as shown in the following, there were major issues with access and quality of alternative learning opportunities. Some also argue that students will quickly catch up as schools re-open, but that is unlikely to happen if business goes on as usual. Results from OECD's PISA assessments show that there was no real overall improvement in the learning outcomes of students across OECD countries over the last two decades, with no pandemic, and despite many educational reforms and rising expenditure.

Ongoing school closures

One year after the pandemic hit, primary and secondary schools are fully open in less than 40% of the 33 countries with comparable data, 'fully open' meaning that schools are open for at least the vast majority of students.

Where there are capacity constraints for in-school learning time, countries need to make difficult choices. In-school learning is especially important for the early years, where direct contact with educators is particularly important and digital alternatives are least effective. It is also vital for students from disadvantaged backgrounds, who have fewer alternatives.

These priorities are broadly reflected in the data from the Special Survey. As shown in Figure 1.1, the higher the level of education, the greater the share of schools that in February 2021 were either closed or operated with small groups of students only.

At the primary level, schools remained fully open in 30% of the 33 countries with comparable data, at the lower-secondary level in 24% of the countries and at the upper secondary general level in 9% of the countries (i.e. Japan, Norway and New Zealand). In six countries (Chile, Colombia, Costa-Rica, Korea, Switzerland, Turkey) schools were temporarily closed because of scheduled vacations and in Austria, France, Germany and New Zealand schools were closed in some regions because of scheduled vacation periods.

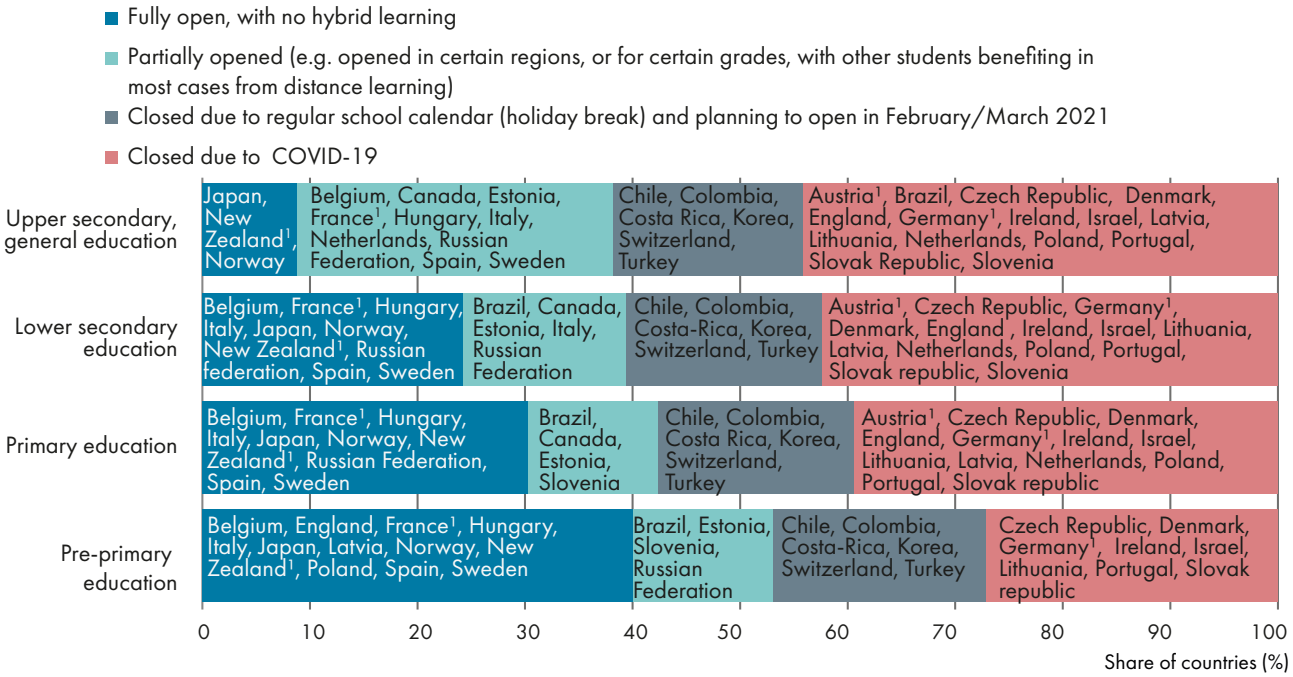
The situation is different at the pre-primary level of education, where educational institutions were fully open in 40% of the countries in February 2021. There are several considerations behind keeping pre-primary institutions open even in a difficult pandemic context. First, there are few alternative and remote modes of provision for the youngest children, and the early years are particularly important for building strong and equitable foundations. Second, pre-primary education is often the prerequisite for parental employment, particularly where teleworking is not an option. And third, some studies suggest that the transmission of the Coronavirus is less marked among the youngest children.

In-person learning time lost

The year 2020 saw a substantial share of instruction time lost for most countries with comparable data. In their initial attempt to contain the spread of the virus early in 2020 many countries closed their schools.

Figure 1.1 • School closure as of 1 February 2021

By levels of education



1. School were closed as of 1st February in some sub-national regions in these countries due to regular school calendar.

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

By 16 March 2020 about half of the 33 countries with comparable data had fully closed at least some primary and secondary schools, i.e. closed for all pupils (or only open for children of key workers or with special educational needs. By the end of that month, all countries covered in the Special Survey had at least some of their schools closed: There were countrywide school closures in 23 countries, while a further 10 countries closed schools at sub-national or local levels (Brazil, Canada, Colombia, Denmark, Estonia, Germany, Italy, New Zealand, Poland and the Slovak Republic), mainly because the pandemic context varied regionally. These sub-regional variations may have been significant in some countries. For example, upper secondary (general) schools were closed between 95 and 152 days in Colombia, between 15 and 30 days in Germany, between 58 and 101 days in Italy, between 24 and 37 days in New Zealand and between 40 and 75 days in the Russian Federation in 2020, depending on subnational regions where the students live.

As health considerations took precedence over other considerations, the choices made by policy-makers with regard to school closures in the following months were quite similar, with most of the countries surveyed closing all or most of their schools from mid-March 2020 until mid-May or mid-June. At the primary level, and among countries with no sub-national variation, 14 closed their schools only once in 2020 while 11 countries closed them over multiple periods. Sweden is an exception with no primary school closures in 2020.

For the reasons discussed previously, the number of instructional days when schools where closed (excluding school holidays, public holidays and weekends) increases with the level of education (Figure 1.2).

On average across the 30 countries with comparable data for all levels of education, pre-primary schools were fully closed for an average of 42 days in 2020, while primary schools closed for 54 days, lower secondary for 63 days and upper-secondary schools for 67 days. However, these figures mask large differences between countries and, within countries, between levels of education. For instance, in Sweden, all primary and most lower-secondary schools remained open in 2020, while upper-secondary schools resorted mainly to distance learning from mid-March onwards.

Globally, schools were closed at least 20 days longer for upper-secondary education than for primary in Austria, Israel, Latvia, Poland, the Slovak Republic and Switzerland. In contrast, Ireland, Korea and the Czech Republic closed their primary schools longer than their upper-secondary schools. Upper-secondary general schools were closed for less than 40 days in Denmark, France, Germany, New Zealand and Norway, and for more than 100 days in the Colombia, Costa Rica, Poland, the Slovak Republic and Turkey. In Colombia, for example, schools were fully closed in most regions

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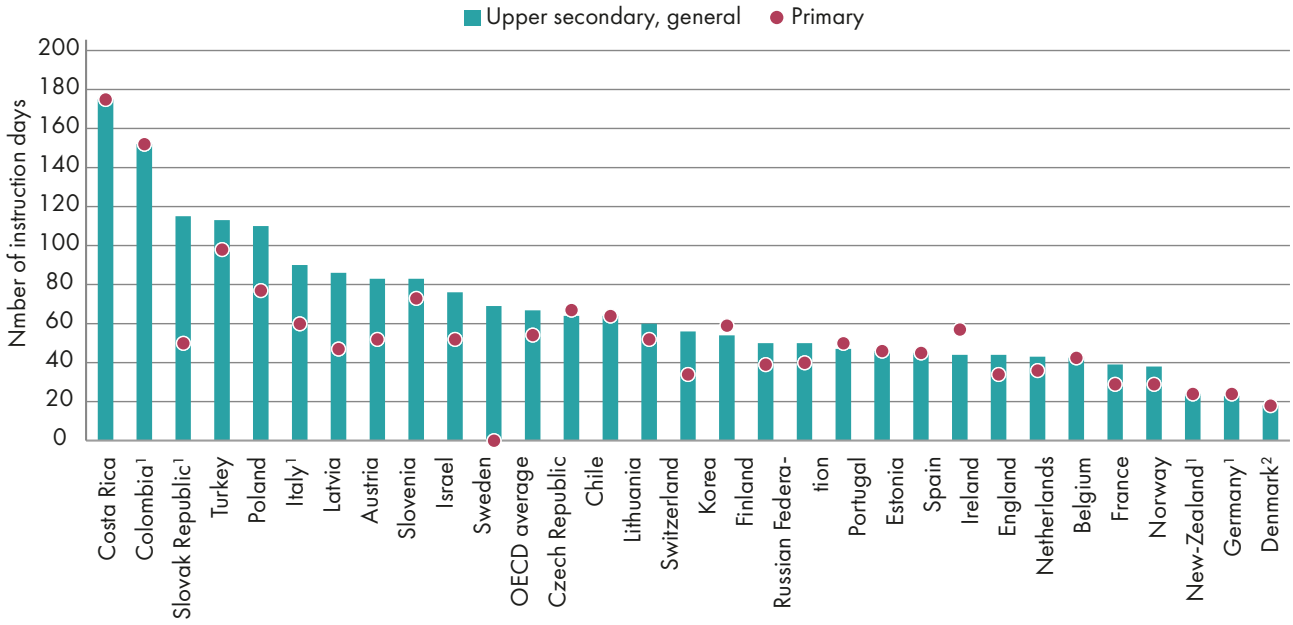
Figure 1.2 • Number of instruction days (excluding school holidays, public holidays and weekends) where schools were fully closed in 2020

Primary and upper-secondary general education



1. Most typical number of instruction days
2. Minimum number of instruction days.

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

between March and December 2020, resulting in the loss of 152 days of instructions over this time period.

School closures have not only amplified inequities in learning opportunities within countries, as students from less privileged backgrounds had fewer alternatives to compensate for learning losses, but the data also suggest that the pandemic has amplified inequities in learning opportunity across OECD countries.

As shown in Figure 1.3, the countries with the lowest educational performance tended to fully close their schools for longer periods of time in 2020. In fact, the performance of 15-year-olds in countries on the PISA 2018 reading test explains 54% of the variation in the number of days where schools were fully closed in 2020 at the upper-secondary level of education. In other words, education systems with poorer learning outcomes in 2018 were more likely to suffer from greater losses of in-person learning time in 2020. This is not simply an artefact of higher performing education systems operating in more favourable economic conditions. Even after accounting for GDP/capita, the relationship explains 31% of the variance.

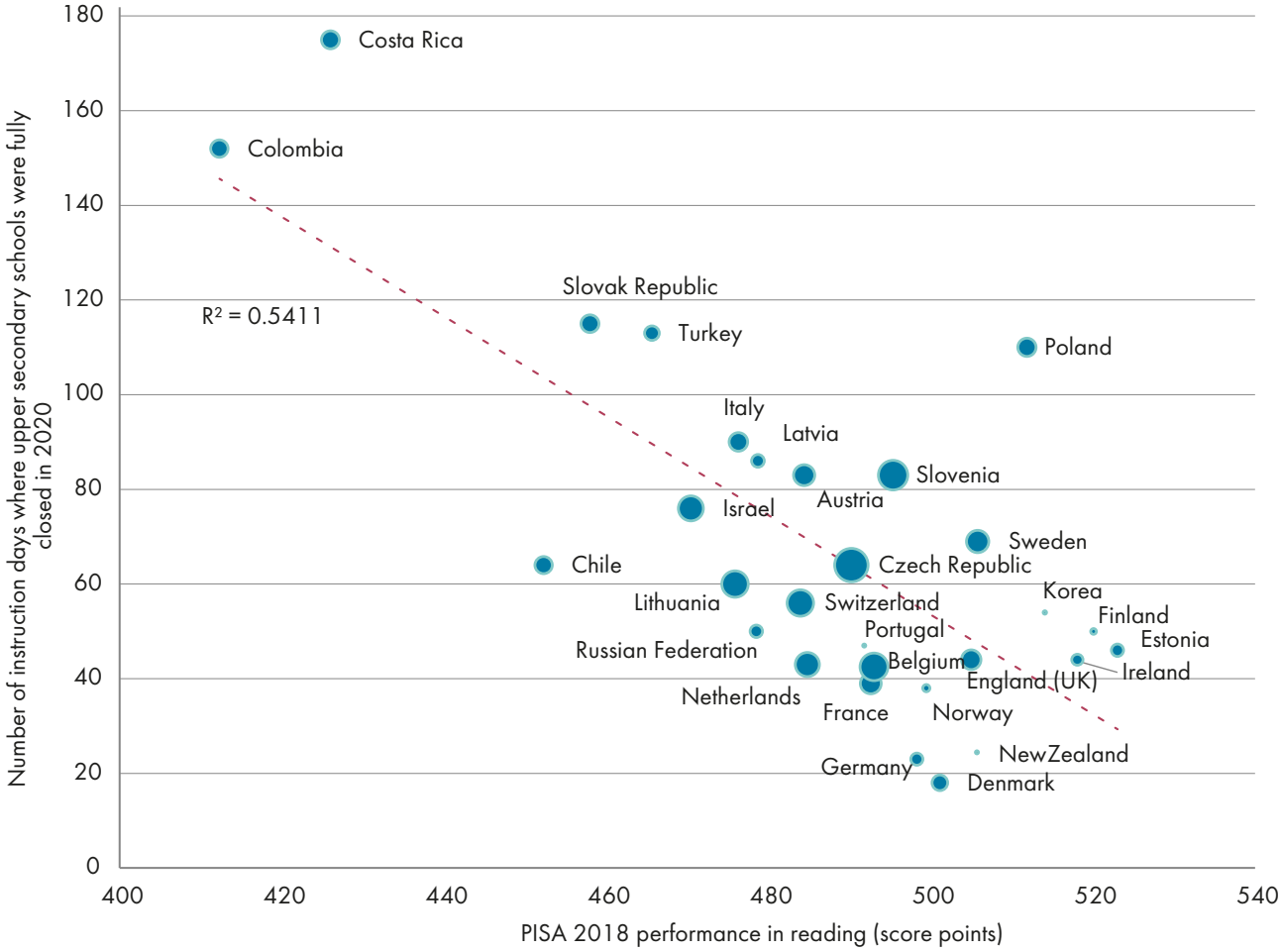
Furthermore, the intensity of COVID-19 transmission does not appear related to the duration of school closures. The size of the bubbles in Figure 1.3, which indicates the number of confirmed cases of COVID-19 per million inhabitant since the start of the pandemic to the end of 2020, appears unrelated to the total number of days in which schools were closed in 2020, indicated by the position of countries on the vertical axis. For example, countries with similar infection rates and PISA performance (e.g. Poland, Sweden and England or France and Austria) have made different policy choices when it comes to school closures. These choices may have been motivated by educational objective, by the health infrastructure or by other health-related objectives.

Adjustments to the school calendar and curriculum

School closures and social distancing requirements reduced available instruction time and thus forced countries to make difficult choices when it comes to the curriculum and the school calendar. For example, countries had to choose whether to maintain the breadth of the curriculum at more shallow depth or to teach fewer things at greater depth; or whether to use limited on-site learning opportunity to teach new content or to prepare and review material learned at distance, etc.

Slightly more than half (55%) of the 33 countries with comparable data reported that adjustments to the school calendar or curriculum of their primary

Figure 1.3 • PISA 2018 performance in reading and number of instructional days upper-secondary schools were fully closed in 2020



Note: the size of the bubbles represent the number of COVID-19 cases per million inhabitant from the start of the pandemic to 31 December 2020. Higher is the size of the circle, higher was the number of COVID-19 cases in 2020.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021; Number of COVID-19 cases per million inhabitant from Our World in Data (Roser et al., 2020[1]).

schools were implemented in 2020 in response to the pandemic. In contrast, the share of countries planning such adjustments for 2021 rose to 66% (Figure 1.4).

Where adjustments were made at the primary level, only 6 countries (Chile, Ireland, Israel, the Russian Federation, the Slovak Republic and Turkey) indicated that certain subjects – in most cases mathematics and reading - were prioritised. Physical education and the natural sciences were other subjects cited by several countries as priorities. Brazil and Portugal were the only two countries that extended the academic year in response to the pandemic.

Four countries (Latvia, the Netherlands, Spain and Sweden) have planned to revise regulations (at the national level) on the duration of education and the content of curricula after the 2020/2021 school year. In the Netherlands, a national programme has been announced to provide financial means to help schools overcome learning losses. In Sweden, the special COVID-19 regulation offers the possibility to deviate from the teaching periods, i.e. the regular number of school days and the length of school days. In Spain, the Royal Decree-Law passed on 29 September 2020 adopted urgent measures in the field of non-university education to deal with the pandemic. Finally, in Latvia, in order to ensure that the instructional time provided for in the regulations is devoted to learning, the government approved, on 11 March 2021, the regulation on the starting and ending times of the 2021/2022 school year, and stipulated that if, during the school year, an unforeseeable situation does not allow the study process to be fully ensured for at least one week, the head of the educational institution, in co-ordination with the hierarchical authorities, is empowered to decide on the extension of the school year for classes.

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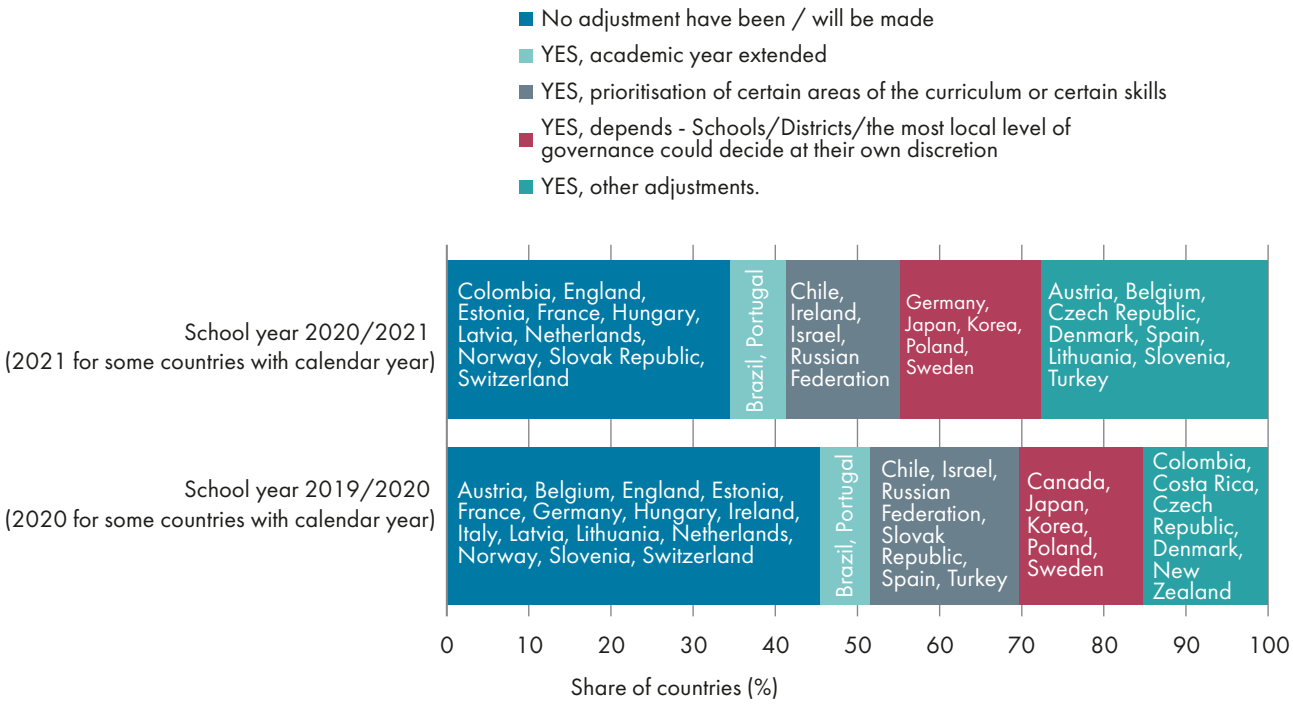
Figure 1.4 • Have/will adjustments been/be made to the school calendar dates and curriculum due to the pandemic in the previous and current school year?

Primary education



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Consequences of learning losses

If anything, the period of school closures has made public and widely visible the many benefits that students draw from being able to learn in close contact with their teachers and their peers, and with access to the variety of services which schools offer. This public awareness of the importance of schools and of teachers can help to further engagement and support from communities and parents for schools and for teachers. This is important as a possible result of the pandemic will be greater financial austerity, resulting from the economic adjustment that the health and economic costs of the pandemic will bring about.

While it is difficult to predict exactly how school closures will affect students' future development, economists Eric Hanushek and Ludger Woessmann estimate that the students in Grades 1-12 affected by the closures could expect some 3 percent lower income over their entire lifetimes for every three months of effective learning time lost (Hanushek and Woessmann, 2020[2]). Hanushek and Woessmann also project individual losses on to economies and arrive at a long-run cost ranging from USD 504 billion in South Africa to USD 14.2 trillion in the United States for every three months effective learning time lost.

Most concerning is that the learning losses will not affect students equally, but will further amplify and accelerate social inequality in learning opportunities. Already pre-COVID, inequities in education had been the most formidable challenge facing education systems.

Definitions

- **Schools were fully closed:** Government-mandated or/and recommended closures of educational institutions (e.g. closure of buildings) affecting all or most of the student population enrolled at a given level of education. In many countries, despite school closures at national level, schools were still open for vulnerable students or/and children of key workers.
- **Schools were fully open:** For the majority of schools, classes are being held exclusively in person (e.g. buildings are opened), noting that measures to ensure safety and hygiene in schools vary considerably from context to context and/or by level of education.
- **Schools were partially opened:** Government-mandated or/and recommended (a) partial re-opening in certain areas, and/or (b) a phased (re-)opening by grade level or age and/or (c) the use of a hybrid model combining in-person at school and distance education. It also includes the countries where national governments have deferred decisions on (re-)opening to other administrative units (e.g. region, municipality or individual schools), and where a variety of (re-)opening modalities are being used.

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Distance education during school closures

During school closures, digital resources became the lifeline for education and the pandemic pushed teachers and students to quickly adapt to teach and learn online. The opportunities that digital technologies offer go well beyond a stop-gap solution during the pandemic. Digital technology allows to find entirely new answers to what people learn, how people learn, where people learn and when they learn. It can elevate the role of teachers from imparting knowledge towards working as co-creators of knowledge, as coaches, as mentors and as evaluators. Already today, digital learning systems cannot just teach students, but simultaneously observe how students study, the kind of tasks and thinking that interest them, and the kind of problems they find boring or difficult. These systems can then adapt learning to suit personal learning styles with far greater granularity and precision than any traditional classroom setting possibly can. Similarly, virtual laboratories give students an opportunity to design, conduct and learn from experiments, rather than just learning about them.

However, the crisis has caught many education systems cold. The PISA 2018 assessment revealed wide disparities both between and within countries in the availability of technology in schools and of teachers' capacities to use those tools effectively (OECD, 2020[3]). As a result, many have faced challenges in ensuring the continuity of learning at a distance. As countries continue navigating the pandemic, governments and societies need to take stock of progress achieved and prevailing gaps in distance education delivery. This reflection will act as building block, not only for a more informed shorter-term response in a context of disruption, but also towards a richer, more flexible type of education delivery able to cater to different students' needs over the mid and longer-term (OECD, 2020[4]).

Preparedness of countries

Starting with the very basics, on average across OECD countries, in 2018, 9% of 15-year-old students did not even have a quiet place to study in their homes (OECD, 2020[3]). These tended to be students from marginalised groups: Even in PISA top-performer Korea, one in five students from the quarter of the most disadvantaged schools do not have a place to study at home. The picture was similar when it came to access to computers. For example, virtually every 15-year-old in advantaged schools in the United States had a computer to work with at home, but only three out of four students in disadvantaged schools had one.

Both to compensate for capacity constraints due to social distancing requirements and as a way to innovate learning, hybrid and technology-supported learning is seen in many countries as the new normal post the pandemic. But again, judging from the equipment that was available in schools a year before the pandemic, schools are not ready for this. On the one hand, PISA shows that there was almost one computer at school for every 15-year-old student, on average across OECD countries (OECD, 2020[3]). Also, the distribution of computers tended to be more equitable in schools than in homes, and in 16 education systems the computer-student ratio was greater in disadvantaged schools than in advantaged schools. However, in many countries school principals said that these computers were not powerful enough, thus hindering learning for one in three students globally. Moreover, remote and hybrid learning depend not just on individual access to computers, but also on powerful online learning platforms. In 2018 just about half of 15-year-olds were enrolled in schools with an effective online learning support platform, according to school principals. Again, there were large

variations within and across countries, and especially related to schools' socio-economic profile.

Finally, technology is only as good as its use. On average across OECD countries, in 2018 65% of 15-year-olds were enrolled in schools whose school principals considered that their teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction (OECD, 2020[3]). This highlights the learning needs that lie ahead of teachers to get ready for the new normal. This, too, varies considerably between socio-economically advantaged and disadvantaged schools. In Sweden, for example, the share of teachers with the necessary skills was 89% in advantaged schools but just 54% in disadvantaged schools.

The following progress made during the pandemic should be seen against this background.

Access to distance learning during the pandemic

Distance education is defined here as education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously.

With school closures often implemented at short notice to respond to the rapidly changing pandemic context, countries sought to bridge gaps in education coverage by building on existing digital tools or developing new ones.

The results from the Special Survey indicate important differences in access to distance education delivery, whether because of differentiated approaches by level of education, differences in the duration of school closures, geographic variation in policies and practices, or because specific student groups were given priority to continue attending schools during school closures.

During the **first period of school closures**, all students received distance education in 8 countries at the primary and lower-secondary levels, as well as in 12 countries at the upper-secondary general level. Still more than 75% of students but not all of the students followed distance learning in 15 countries at the primary level, in 14 countries at the lower-secondary level and in 13 countries at the upper-secondary general level. Denmark stood out in its differentiated approach by education level, with less than 25% of students following distance learning during the first school closure at the primary level, more than 50% but less than 75% of students following it at lower-secondary level, and all students following it at upper-secondary level.

For countries reporting information for a **second period of school closures**, all students received distance education in only Latvia, the Netherlands and Slovenia at the primary, lower-secondary and upper-secondary general levels. At the upper secondary level, this was also reported by Austria, Denmark and Estonia. More than 75% of students but not all of the students continued receiving distance education in at least 7 countries at the primary and lower-secondary level, and 6 countries at the upper secondary level. Less than one-quarter of students received distance education in New Zealand (since a second period of closure happened only in one area of the country where all students were catered for by distance learning), while in Turkey, more than half but less than three-quarters of students followed distance education at the primary level, lower secondary and general upper secondary level.

For the **third period of school closures**, only Latvia and the Netherlands reported that all students received distance education at the primary, lower and upper general secondary level of education.

In slightly less than half of the countries with comparable data, all students attended school in person during the first period of school reopenings. This was the case for 11 countries at the primary level and lower-secondary level and 12 countries at the upper secondary level. In 7 countries, between half and almost all students came back to institutions at the primary, lower secondary or upper secondary levels. Less than half of the students came back to school in Chile, Colombia, the Czech Republic, Denmark, England (UK), Lithuania, the Slovak Republic, Slovenia and Spain. In only two countries, the decision was made at schools/district/most local levels of governance at their own discretion (Germany and Japan).

Although these data give some indication of the extent of distance learning during the pandemic, they do not provide an indication of the effectiveness of distance learning.

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Delivery of distance learning

Distance-learning solutions

Distance education can be delivered through a wide array of tools. Technologies used for instruction may include paper (e.g. books, take-home packages); TV; radio; Internet; one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fibre optics, satellite or wireless communication devices; audio conferencing; and video cassette, DVDs, and CD-ROMs.

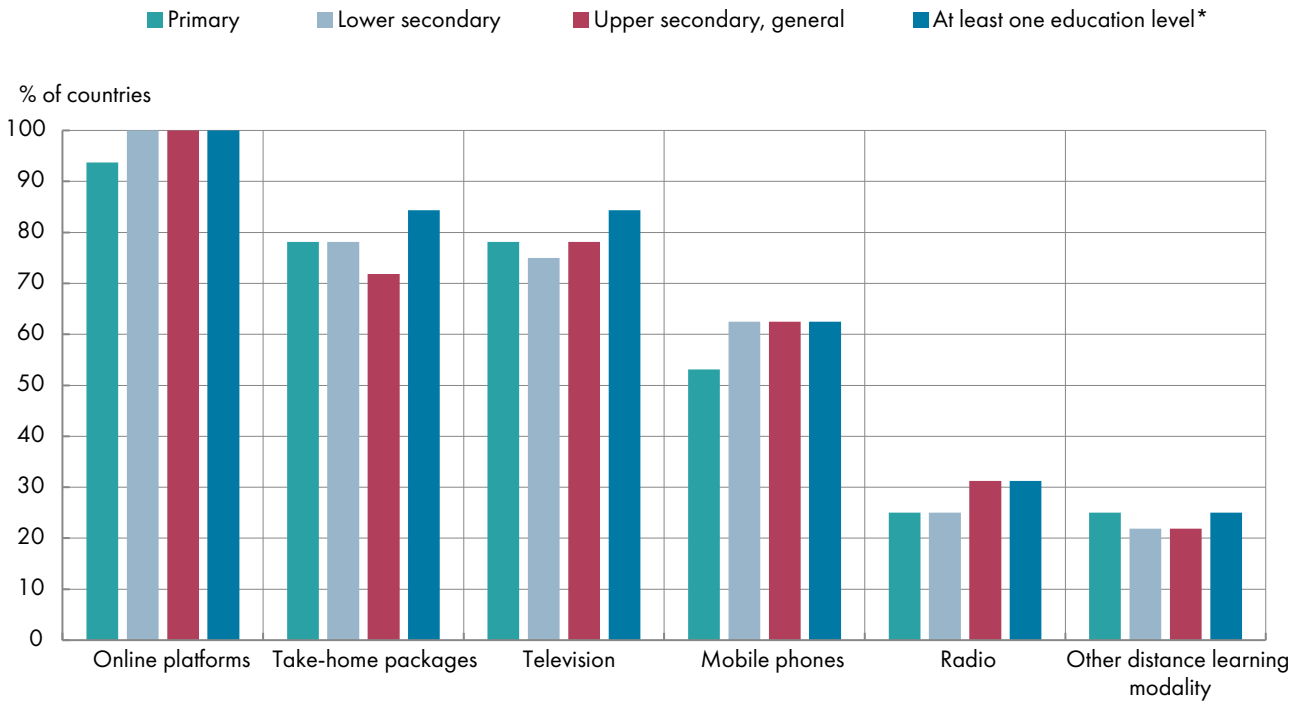
The responses from the Special Survey show consistent patterns across countries: Online platforms were prioritised across levels of education, most clearly at the secondary level. Mobile phones were more common at the secondary level, and radio at the upper secondary level. At the same time, take-home packages, television or radio were reported with similar frequency at both primary and secondary education and other distance-learning solutions were more commonly reported at the primary level (Figure 2.1).

Online platforms were implemented across all 32 countries with comparable data during 2020 and 2021, with all countries except for Sweden and the Russian Federation reporting them at primary level and all countries reporting them at both lower and upper-secondary levels. "Take-home packages" and television followed closely as solutions implemented, with a similar share of 84% of countries who reported using them for at least one level of education, although take-home packages were more commonly used at the primary and lower secondary level. The provision of mobile phones was also reported by over half (63%) of the countries for at least one level of education. One-third of countries (31%) reported using radio as an educational resource, and this was most commonly reported for the upper-secondary level. Other distance-learning modalities were reported also by about one-third (25%) of countries.

It is important to note that countries combined these resources differently. Three groups of countries can be identified:

- **Limited set of instruments**: Some 34% of countries reported implementing three or fewer of the instruments included in the Special Survey. Countries in this group are the Czech Republic, Denmark, England (UK), Estonia Hungary, Italy, Lithuania, the Netherlands, Norway, the Slovak Republic and Sweden. All relied on online platforms for at least one education level, while a majority of them also reported using take-home packages (Czech Republic, England [UK], Lithuania, the Netherlands, Slovak Republic and

Figure 2.1 • Distance-learning solutions offered in participating countries during 2020 and/or 2021



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Table 2.1 • Distance learning solutions offered in participating countries during 2020 and/or 2021

	Online platforms			Take-home packages			Television			Mobile phones			Radio			Other distance learning modality		
	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US
Grand Total	30	32	32	25	25	23	25	24	25	17	20	20	8	8	10	8	7	7
Austria	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X
Belgium (Fl)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Belgium (Fr)	X	X	X	X	X	X	X	X	X	X	X	X						
Canada	X	X	X	X	X	X	X	X	X				X	X	X			
Chile	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Colombia	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Costa Rica	X	X	X	X	X	X	X	X	X				X	X	X			
Czech Republic	X	X	X	X	X	X	X											
Denmark	X	X	X															
England (UK)	X	X	X	X	X	X	X	X	X									
Estonia	X	X	X								X	X				X	X	X
France	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X
Germany	X	X	X	X	X		X	X	X	X	X	X						
Hungary	X	X	X				X	X	X									
Israel	X	X	X	X			X	X	X	X	X	X						
Italy	X	X	X						X	X	X	X						
Japan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Korea	X	X	X	X	X	X	X	X	X	X	X	X						
Latvia	X	X	X	X	X	X	X	X	X	X	X	X						
Lithuania	X	X	X	X			X	X	X									
The Netherlands	X	X	X	X	X	X												
New Zealand	X	X	X	X	X	X	X	X	X		X	X				X	X	X
Norway	X	X	X															
Poland	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Portugal	X	X	X	X	X	X	X	X	X	X	X	X						
Russian Federation		X	X		X	X		X	X		X	X						
Slovak Republic	X	X	X	X	X	X	X											
Slovenia	X	X	X	X	X	X	X	X	X	X	X	X			X			
Spain	X	X	X	X	X	X	X	X	X	X	X	X						
Sweden		X	X		X										X			
Switzerland	X	X	X	X	X	X	X	X	X	X	X	X						
Turkey	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X

Note: (P):Primary education, (LS): Lower secondary education, (US): Upper secondary education (general).
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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Sweden) and television (Czech Republic, England [UK], Hungary, Italy, Lithuania and Slovak Republic). At the same time, Estonia and Italy were the only countries in this group who reported using mobile phones and Sweden was the only country which reported using radio. Denmark and Norway only reported using online platforms.

- **Wider range of instruments:** Some 56% of the countries reported using four or five of the solutions surveyed. Austria, Belgium (Flemish Community and French Community), Canada, Costa Rica, France, Germany, Israel, Japan, Korea, Latvia, New Zealand, Portugal, the Russian Federation, Slovenia, Spain, Switzerland and Turkey are the countries in this group. In addition to online platforms, television or take-home packages, these countries also more commonly reported using mobile phones. All these measures were reported for all levels of education in this group of countries. In this group only Canada, Costa Rica and France did not report using mobile phones. Some countries in this group reported relying on the radio or other distance-learning solutions, which was in most cases for all levels of education as well.
- **All instruments:** The remaining 19% of countries reported using all of the instruments referred in the Special Survey, including other distance-learning modalities. These countries are Chile, Colombia and Poland and implemented all instruments across levels of education. Other distance-learning modalities were reported at primary level in Chile, and at all levels in Colombia and Poland.

As countries continue to navigate the pandemic and beyond, a wider range of teaching and learning modes will become increasingly important. This wider spectrum needs to place priority on people and processes (with students supported by teachers and other staff at the centre of education delivery), rather than classes and devices (OECD, 2020[4]). Accessibility of devices and their use, the quality of instruction delivered through them, and their cost-effectiveness will require close consideration.

Inclusion of populations at risk

Countries relied on a range of approaches to ensure inclusiveness in distance education. This included flexible and self-paced platforms as well as agreements with mobile communications operators and internet firms to enhance access, particularly at the primary level of education.

Measures to subsidise devices for access (PCs or/and tablets), or implementing flexible and self-paced platforms (asynchronous learning platforms) where the two most common solutions to this end reported by countries in at least one education level, with 89% and 81% of countries who reported using them, respectively. Furthermore, over half of the countries reported efforts in at least one level of education to improve access to infrastructure for learners in remote areas (67%), support learners with disabilities (e.g. sign language in online learning programmes) (59%), establish agreements with mobile communications operators/Internet firms to remove accessibility barriers (56%), improve access to infrastructure for learners in urban high-density areas (56%), or provide additional support to lower-income households, including economic support (i.e. take-home rations, cash based transfers) (52%). At the same time, less than half of the countries reported undertaking special efforts to make online learning more accessible to migrant and displaced children, including those in camps (44%) and designing learning materials for speakers of minority languages (26%) (Figure 2.2).

Countries which implemented at least half of these measures according to the Special Survey were Belgium (Flemish Community and French Community), Chile, Colombia, England (UK), Estonia, France, Japan, Korea, Latvia, New Zealand, Poland, Portugal, Slovenia, Spain and Turkey. In these countries, such measures were implemented at the primary, lower secondary or upper-secondary levels of education.

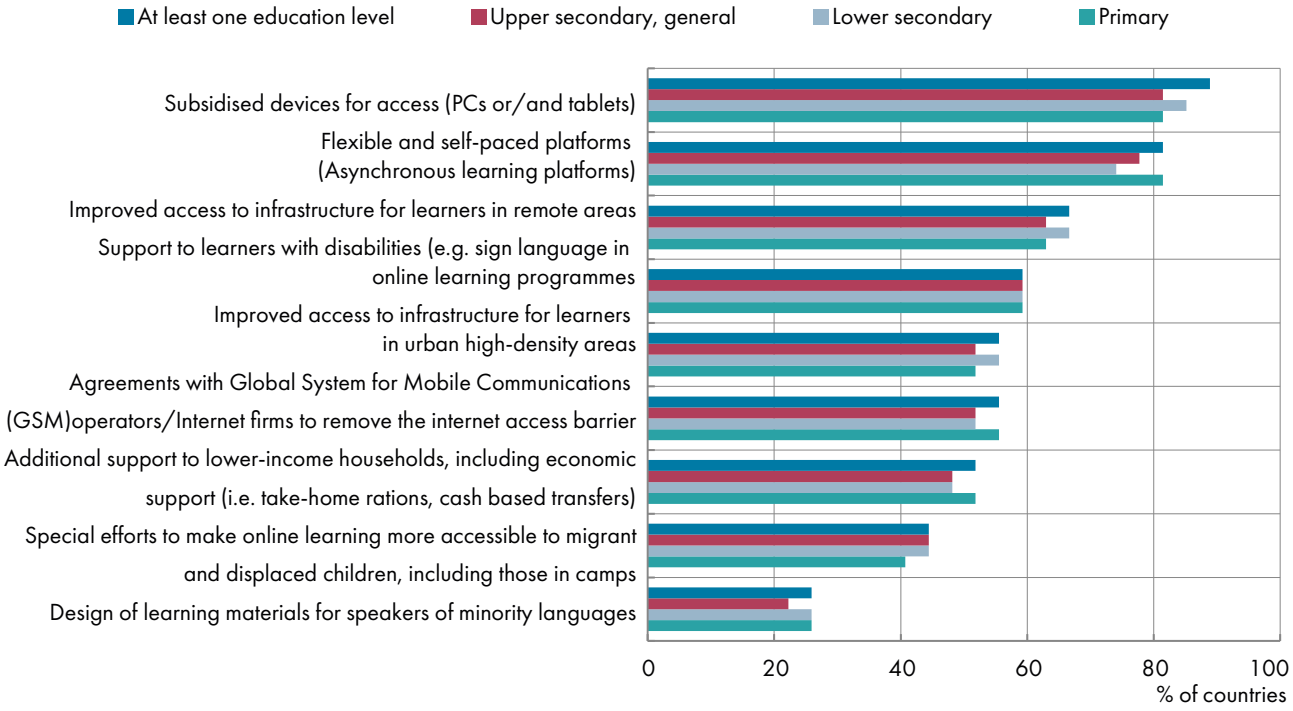
It should be noted, however, that in some education systems, efforts to distribute education devices may have already taken place before the pandemic. In Estonia, digital learning materials, including for flexible platforms and materials in Russian (main minority language) were available already before school closures. Students who did not have access to digital devices at home, could borrow these from their school. In the same way, in the Czech Republic, support for disabled students and speakers of minority languages was assured via activities which had been in place already before the crisis.

Local efforts also played an important role in 2020, in countries such as the Netherlands or France. In the Netherlands, for example, efforts were undertaken by different actors, such as organisations (e.g. providing funding for the acquisition of devices at school level), municipalities (e.g. through arrangements at their own initiative including, such as the distribution of second hand devices), schools (e.g. who were recommended to make arrangements for students without access to good quality internet or digital devices, but can also allocate compensation to under-age low-income students for the purchase of education material). In France, for example, depending on local capacities, students with special needs received access to adapted equipment.

Effectiveness of distance-learning solutions

Figure 2.2 • Measures targeting populations at risk of exclusion from distance education platforms

Measures taken during the first closure of schools in 2020 at school level



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

As mentioned earlier in this chapter, taking stock of lessons learned during the pandemic will be key for countries in order to strengthen the resilience of their education systems. Moving beyond the pandemic, it will be important to continue monitoring how distance-learning solutions are addressing the needs of different students and expand their opportunities for quality learning.

To assess the effectiveness of the measures implemented, a number of education systems reported studies that have taken place, or are still underway. The Czech Republic, Estonia, Finland, Israel, Latvia, Slovenia or Turkey have administered household surveys, student assessments, teacher assessments or other field studies.

In Finland, the Finnish National Agency for Education (FINEDU) has been compiling information on data collections, surveys and reports. Furthermore, Poland monitors the number of platform users and the use of individual e-materials (e.g. in terms of popularity of educational material, or the number of users of the platform). In Latvia, a partnership with a private company enabled the Ministry of Education to run periodical surveys on study process monitoring. Aspects of education delivery which Latvia adjusted based on outcomes of these surveys included access to digital tools, access to internet in rural areas, time spent on learning in comparison with on-site learning, or learning methods. In Estonia, a national survey has mapped effects of distance learning based on impressions from students, teachers and parents in general and vocational education. Israel has also been running periodical surveys (with two applied so far) to assess access to technology and supporting features, professional development and needs among teachers, and perceived efficiency of distant learning. Finally, in Slovenia, an overall evaluation will take place in 2021 to assess impact on student learning, although some initial smaller scale surveys/analyses have been implemented with school principals, teachers and students, on different aspects of distance-learning strategies, their implementation and experience in schools.

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Table 2.2 • Measures targeting populations at risk of exclusion from distance education platforms

	Additional support to lower-income households, including economic support (i.e. take-home rations, cash based transfers)			Agreements with Global System for Mobile Communications (GSM) operators/Internet firms to remove the internet access barrier			Design of learning materials for speakers of minority languages			Flexible and self-paced platforms (Asynchronous learning platforms)			Improved access to infrastructure for learners in remote areas			Improved access to infrastructure for learners in urban high-density areas			Special efforts to make online learning more accessible to migrant and displaced children, including those in camps			Subsidized devices for access (PCs or/and tablets)			Support to learners with disabilities (e.g. sign language in online learning programmes)		
	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US	P	LS	US
Grand Total	14	13	13	15	14	14	7	7	6	22	20	21	17	18	17	14	15	14	11	12	12	22	23	22	16	16	16
Austria										X	X	X										X	X	X			
Belgium (Fl.)				X	X	X				X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Belgium (Fr.)				X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chile	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X					X		X	X	X
Colombia	X	X	X	X	X	X				X	X	X	X	X	X				X	X	X	X	X	X			
Czech Republic										X	X	X															
Danemark										X		X		X			X					X					
England (UK)	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X				X	X	X	X	X	X
Estonia	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X
France	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Germany	X	X	X							X	X	X	X	X	X							X	X	X			
Hungary				X						X									X	X	X				X	X	X
Israel							X	X	X													X	X	X			
Italy																						X	X	X			
Japan	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Korea	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X
Latvia	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X	X	X	X
Lithuania	X	X	X																			X	X	X	X	X	X
Netherlands																						X	X	X			
New Zealand				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Poland				X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Portugal	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Russian Federation	X																						X	X			
Slovak Republic										X	X	X															
Slovenia	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Spain	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X				X	X	X	X	X	X
Turkey				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note: (P):Primary education, (LS): Lower secondary education, (US): Upper secondary education (general).
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

3

Support of students and schools during school reopenings

The benefits of open schools must be weighed against the health risks. Evidence from previous epidemics suggests that school closures can prevent up to 15% of infections (OECD, 2020[5]). While this impact is modest compared with other public policy measures (for instance workplace social distancing can reduce transmission by up to 73%, case isolation by around 45% and household quarantine by around 40%), it is not negligible. In some countries, there are also high levels of interaction between the youngest children and the older generations most at risk from the virus.

Several steps have been taken across countries to manage the risks and trade-offs of ensuring quality and equitable learning while enforcing appropriate measures to mitigate the risks of infection. Sustained and effective co-ordination between education and public health authorities at different levels of government is required to ensure learning continues in adherence with the relevant sanitary measures to reduce viral transmission.

Mitigating health risks

Depending on national strategies to contain the spread of the virus, and the evolution of the pandemic, countries differed in their approaches to re-open schools. While a number of countries ensured physical in-person learning during the academic year in 2019/20, others postponed the re-opening until the following one, in particular for higher levels of education.

Social distancing proved to be one of the most effective measures to prevent the spread of the Coronavirus. Within a school context, this means reducing contact between groups of children and maintaining a safe distance of 1-2 metres between students and staff.

Across all levels of education, adjustments to schools and physical arrangements were the most common strategy implemented in almost 8 out of 10 countries after the first period of school closures in 2020. Half of the countries also implemented measures for students to return progressively to classes, for example based on age cohorts, and suspending extra-curricular activities. Strategies such as combining in-person and distance learning together with organising students in shifts were more commonly adopted at secondary levels of education than at primary level (Figure 3.1).

Thirteen countries reported a normal return to class schedules and school attendance at primary level after the first period of school closures in 2020. Of those, eleven re-opened in May or June, while in two others (Canada and Turkey) most schools across the country remained closed until the start of the following academic year. With the exception of New Zealand, all of these countries are in the Northern Hemisphere with summer holidays beginning around the end of June. Only two countries, Brazil and Portugal, extended the 2019/20 or 2020/21 academic year at primary or secondary level following this first period of school closures to compensate for possible learning losses, while in another seven, schools had the possibility to do so at their discretion. Others offered the possibility to reorganise the teaching schedule on weekends, evenings, summer holidays.

As schools re-opened, a number of countries have ensured schools had the autonomy to adjust to distance-learning methods should the sanitary situation deteriorate. For example, a temporary amendment has

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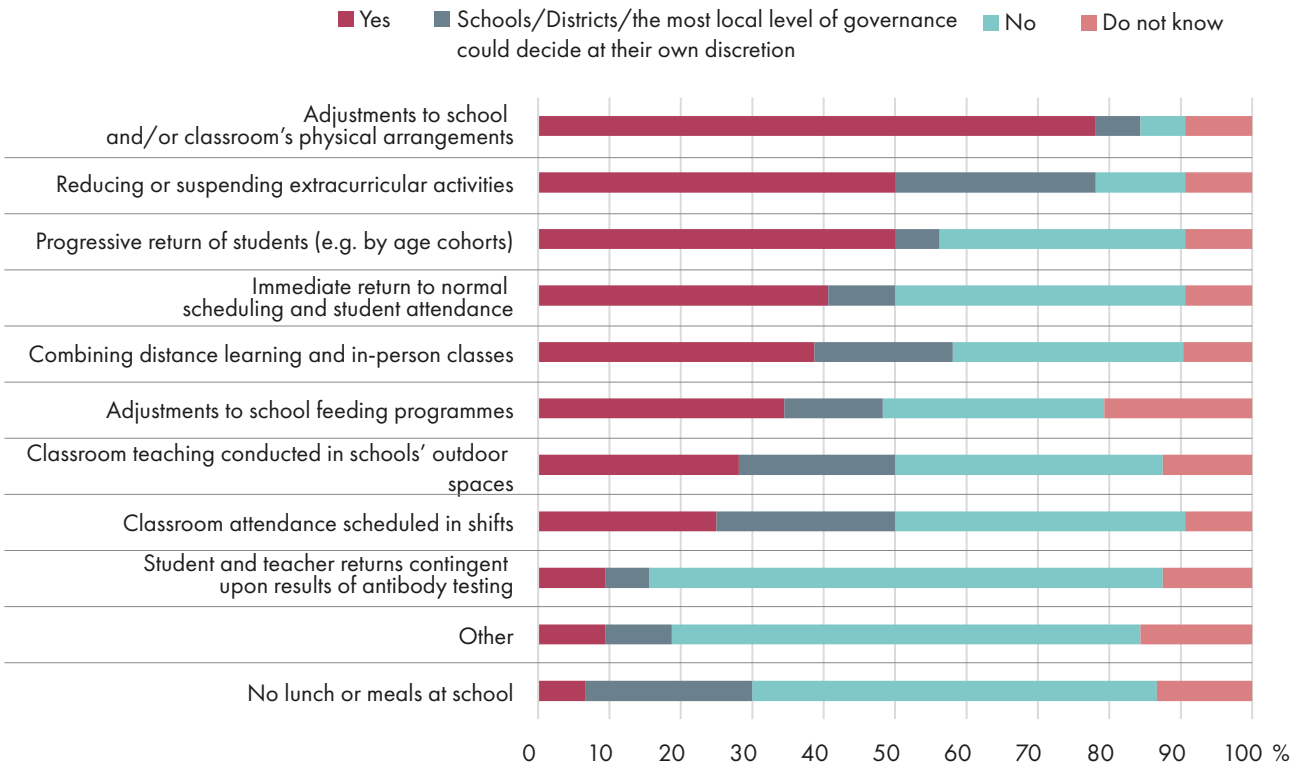
Figure 3.1 • Strategies for the re-opening of primary schools after the first period of closures in 2020



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

been made to the Basic Education Act in Finland to enable exceptional distance teaching arrangements in primary and lower-secondary education if contact teaching could not be organised safely according to recommendations given by regional authorities.

Vaccination of teachers

The vaccination of teachers, together with measures such as social distancing and strict hygiene practices in class, can contribute to making in-person teaching safer, following the re-opening of schools. Given the limited initial supply of vaccines, however, and with competing health objectives (e.g. relieving the healthcare system, protecting the most vulnerable individuals), governments faced difficult decisions about the prioritisation of vaccination (European Centre for Disease Prevention and Control, 2020[6]).

As of March 2021, the Special Survey shows that 19 out of the 31 countries with comparable data implemented national measures prioritising teachers' vaccination, at the pre-primary to upper-secondary levels. These countries include Austria, Chile, Colombia, the Czech Republic, Estonia, Germany, Hungary, Israel, Italy, Korea, Latvia, Lithuania, Poland, Portugal, the Russian Federation, the Slovak Republic, Slovenia, Spain and Turkey. For instance, in Germany, staff in ECEC and primary institutions are assigned to the second priority group (together with individuals aged 70-80 and individuals with special diseases; and after individuals aged 80+ and health care staff). In this country, the vaccination campaign started at the end of February 2021 for teachers in primary schools and special education institutions. In countries such as Belgium, Costa Rica, Denmark, England, Finland, France, Ireland, Japan, the Netherlands, Norway, Sweden and Switzerland, teachers are either subject to the same vaccination schedule as the general population, or the schedule for teachers' vaccination has not been defined yet (Table 3.1). In France, for instance, although no decision has been taken as of March 29 2021, the government is exploring the possibility of starting teachers' vaccination in mid- or late April 2021, as part of a targeted vaccination campaign for exposed professions.

As shown in Figure 3.2, most of the countries that prioritise teachers' vaccination have also adopted prioritisation criteria among teachers. Given that

Table 3.1 • Measures for the prioritisation of teachers' vaccination, at the pre-primary to upper secondary levels (as of 13 April 2021)

Countries with national measures prioritising teachers' vaccination		Countries where teachers are subject to the same vaccination schedule as the general population, or where teachers' vaccination schedule has not been defined yet	
Number of countries	List of countries	Number of countries	List of countries
19	Austria, Chile, Colombia, Czech Republic, Estonia, Germany, Hungary, Israel, Italy, Korea, Latvia, Lithuania, Poland, Portugal, Russian Federation, Slovak Republic, Slovenia, Spain and Turkey	12	Belgium, Costa Rica, Denmark, England (UK), Finland, France, Ireland, Japan, Netherlands, Norway, Sweden and Switzerland

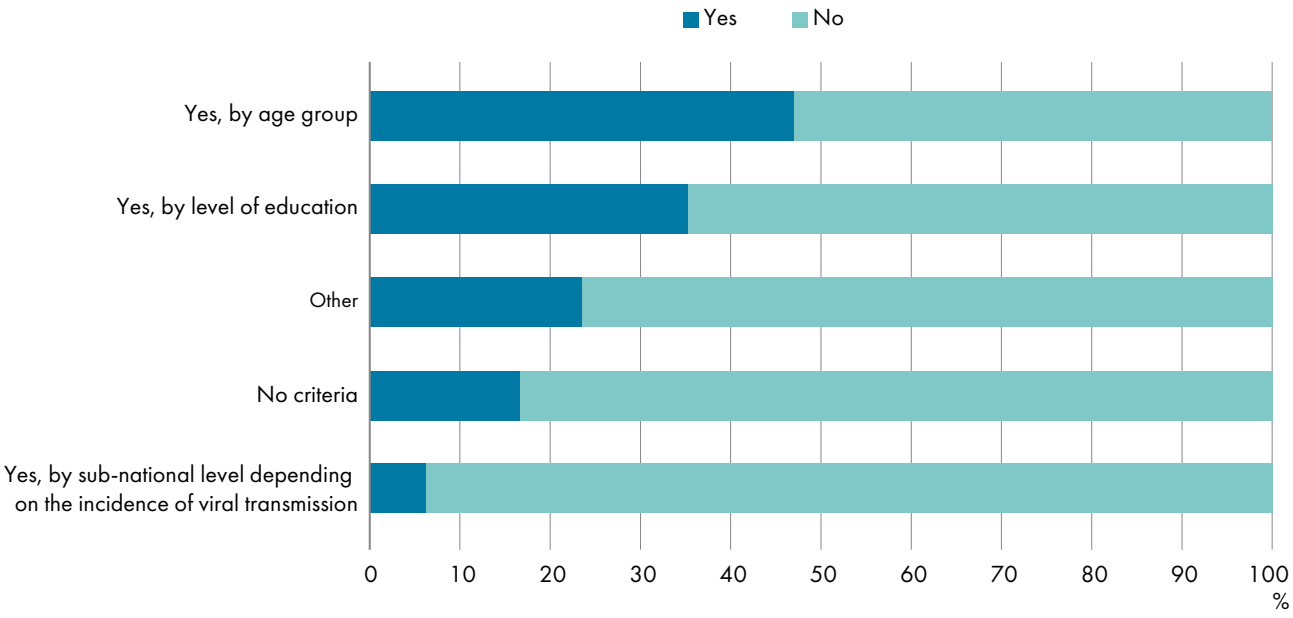
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

older adults face higher risks of developing severe forms of the disease, several countries (Austria, Chile, Colombia, the Czech Republic, Germany, Hungary, Latvia and Slovenia) have prioritised teachers' vaccination based on their age. Another criterion is the level of education at which teachers' teach, which was used to determine the order of vaccination in Germany, Latvia, Poland, Portugal, Slovenia and Spain. In Latvia, for instance, priority was given to teachers working face-to-face with children (pre-primary teachers and special education teachers). Another criterion was adopted in the Russian Federation: the incidence of viral transmission, in order to prioritise the vaccination of teachers by sub-national level.

Sustaining learning

With the difficulties of ensuring equitable access and quality in distance learning, countries have relied on different strategies to mitigate learning losses, particularly at the lower levels of education where

Figure 3.2 • Percentage of countries reporting that the following criteria were used to prioritise vaccination among teachers (pre-primary to upper-secondary levels)



Note: Countries that reported "Do not know" / "Not applicable" are excluded from the denominator.
Prioritisation criteria are ranked in descending order of the percentage of countries who answered "Yes".
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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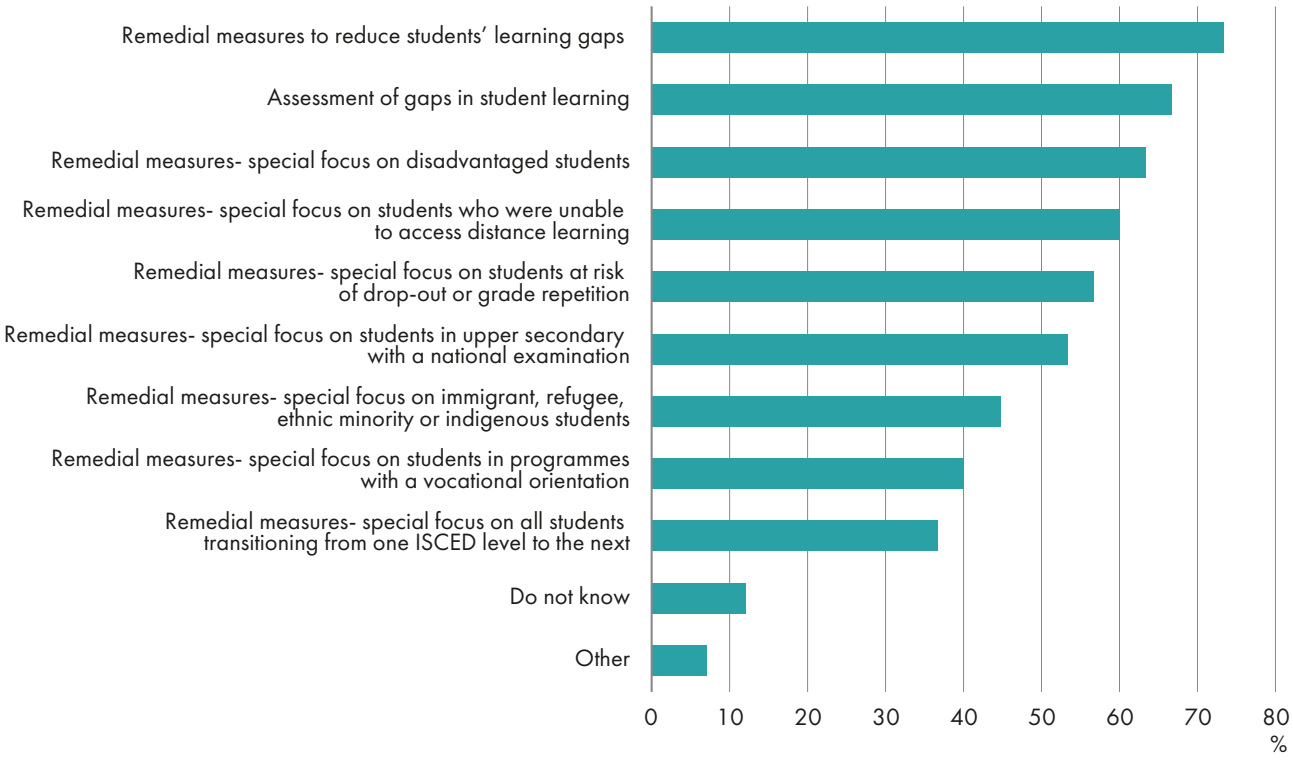
these challenges are most prevalent. 86% of countries with comparable data reported providing remedial measures to reduce learning gaps at the primary level, 75% did so at lower secondary and 73% at the upper-secondary level of education. Remedial measures were more commonly targeted to all students that would need them rather than focusing on specific demographic groups. More than 60% of countries with comparable data introduced specific measures focused on disadvantaged students while about 40% targeted measures at immigrant, refugee, ethnic minority or indigenous groups. Similarly, more than half of the countries introduced measures specifically targeted at those at risk of repeating their grade or dropping out (Figure 3.3). For example, in Israel, the opening of schools in disadvantaged areas or areas with a large share of students at risk of low performance was prioritised. During the second period of school closures, they were allowed to remain open.

While about one in four countries focused their remedial efforts on students transitioning across education levels, the share doubled when it came to upper-secondary students expecting to pass a national examination that would be a prerequisite for completion of the level and enable access to higher education. For example, upper-secondary students in Latvia passing the national examination for the 2019/20 school year were allowed to return to school for open consultations on course material. Despite the difficulties of ensuring practical learning in a virtual and remote environment, only 40% of countries implemented measures to address the specific challenges of upper-secondary vocational students (Figure 3.3). Vocational students in Estonia benefited from additional study time while specific adjustments to the organisation of the trade examinations for apprentices were implemented in Norway.

With school closures and hybrid learning significantly reducing the number of in-person instruction hours available within the academic year, education systems adapted by allocating time for remedial classes within current schedules. Slightly less than half of the countries providing remedial measures to address learning gaps provided additional class time outside of normal school hours across all levels of education. For example, in France, the initiative Devoirs Faits, which supports students with completing their homework through dedicated time at school, was strengthened in September 2020 to support students with educational challenges during the pandemic. At primary and lower secondary level, nine countries scheduled extra remedial time during the school holidays and some schools in

Figure 3.3 • Strategies to address learning gaps when schools re-opened after the first closure in 2020

Upper-secondary education



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Table 3.2 • Strategies to address learning gaps when schools re-opened after the first closure in 2020

Upper-secondary education

	Assessment of gaps in student learning that may have accumulated during school closures	Remedial measures to reduce students' learning gaps (for all students who need it)	Remedial measures with a special focus on disadvantaged students	Remedial measures with a special focus on students who were unable to access distance learning	Remedial measures with a special focus on students at risk of drop-out or of grade repetition	Remedial measures with a special focus on immigrant and refugee students, ethnic minority or indigenous students	Remedial measures with a special focus on students in programmes with a vocational orientation	Remedial measures with a special focus on students in upper secondary grades with a national examination at the end of 2019/20 or 2020 calendar year)	Remedial measures with a special focus on all students transitioning from one ISCED level to the next
Austria	X	X	X	X	X	X	X	X	X
Belgium flemish community	X	X	X	X	X	X	X		
Belgium French Community	X	X	X	X	X	X	X		
Canada	X	X							
Chile	X							X	
Colombia	X	X						X	
Czech Republic	X	X	X	X					
England (UK)		X	X	X	X	X			X
Estonia	X	X	X	X	X		X	X	X
Finland	X	X			X				
France	X	X	X	X	X		X	X	X
Germany	X	X	X	X				X	
Hungary			X		X				
Ireland			X						
Israel		X	X	X	X	X	X	X	X
Japan	X	X	X	X	X		X	X	X
Korea		X	X	X	X	X			
Latvia		X						X	
Lithuania		X		X		X	X	X	
Netherlands	X	X	X	X	X	X	X	X	X
New Zealand	X	X	X	X	X	X	X	X	
Norway									
Poland	X	X	X	X	X	X	X	X	X
Portugal	X	X	X	X	X	X	X	X	
Slovak Republic	X				X				
Slovenia						X		X	X
Spain	X	X	X	X	X	X	X	X	X
Turkey		X	X	X		X		X	X

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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Germany, Japan and the Netherlands organised such measures during weekends. In other countries, such as Slovenia or Switzerland, such remedial measures were organised during planned school time.

However, the extent to which these measures have been equitably distributed cannot be discerned from these data. In many countries, although national guidelines were issued, schools could decide how and when to implement them. In countries such as Korea, New Zealand or Norway, setting up after-school, weekend, or holiday tutorials was largely left to the school's discretion. According to a recent survey of lower-secondary institutions in France, 54% of respondents reported setting up a complementary system to support students with difficulties to consolidate the fundamental skills and integrated the additional hours into their teaching activity.

Ensuring equity and inclusion

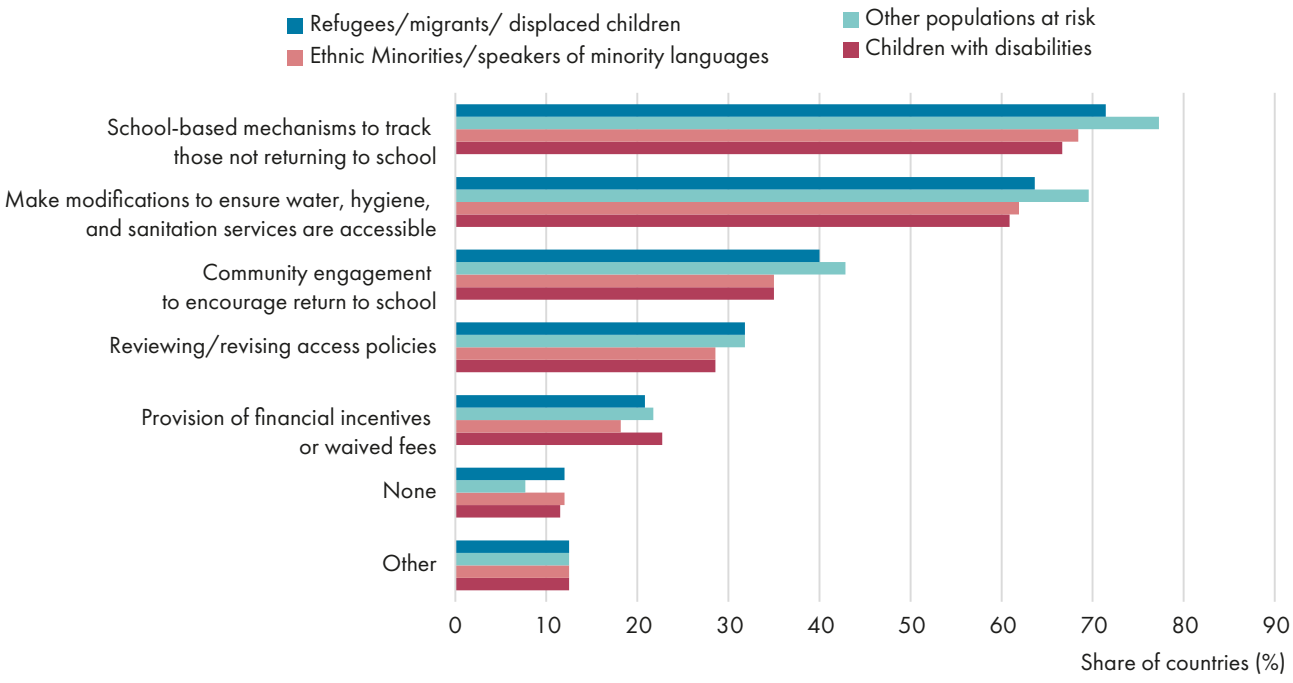
Populations from disadvantaged demographic groups are most vulnerable to learning losses during school closures. Not only are they less likely to have access to a quality education, but they are also less likely to benefit from digital infrastructure, a quiet place to study, and a supportive environment for effective distance learning.

Between 65% and 75% of the 20 countries implemented school-based mechanisms to track vulnerable student groups not returning to school, and a slightly lower share adjusted the accessibility of sanitation and hygiene services. About 40% of countries leveraged community engagement activities while 30% reviewed access policies. Although basic public schooling is provided free of charge in the majority of OECD countries, some such as Costa Rica, Estonia, Poland, Portugal, Hungary, Spain and Turkey provided financial incentives such as cash, food or transport or waived school fees to at least one group of vulnerable students (Figure 3.4).

While most measures were generally applied to all vulnerable population groups, some countries targeted specific measures to some. For example, in Latvia, special education institutions delivering basic education for children with mental disabilities were allowed to remain open for on-site learning while in the Czech Republic, children with specific cognitive disabilities or other specific disorders were not obliged to wear face masks with special care taken to ensure

Figure 3.4 • Outreach and support measures to encourage the return to school of vulnerable populations (pre-primary to upper-secondary education)

Share of countries that responded having implemented the specified measures



Note: The share of countries calculated includes only countries that responded "yes" or "no" to the question.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

small groups and enforced hygiene measures. In Ireland, a summer programme was developed to support vulnerable students and those with disabilities in returning to school. In addition, the country's Access and Inclusion Model (AIM) which supports the participation of children with disabilities in the State's free-school programme, was open throughout the pandemic. In Turkey, financial or waived fees targeted mostly refugees, migrants or displaced children.

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4

Examination and assessment

In many countries, and in a typical school year, students' ability to progress to a higher level of education requires the obtainment of a certification or credential, which often requires taking an examination. Such examinations are most prevalent at the upper secondary level and can certify completion of this level and/or select students to enter tertiary institutions.

Standardised assessments, distinct from end-of-cycle examinations, are also regularly used. They help policy-makers and educators monitor learning across cohorts, can inform funding formulae or teacher allocation mechanisms which aim at better matching resources with needs, and provide diagnostic information to teachers, students and parents. In some cases, such assessments also inform school evaluations (OECD, 2015[7]). For both examinations and assessments, standardisation in content coverage and in the conditions of administration help ensure comparability of results across students, schools and over time.

The pandemic complicated the administration of national examinations and assessments. To a varying extent, education systems changed the calendar, content and mode of examinations and assessments. Many countries cancelled planned administrations and, in the case of upper secondary examinations, replaced them by other criteria for graduation. The variation in the extent to which countries deviated from their assessment and examination plans is related both to the pandemic situation and to how important these tests were in their respective education systems.

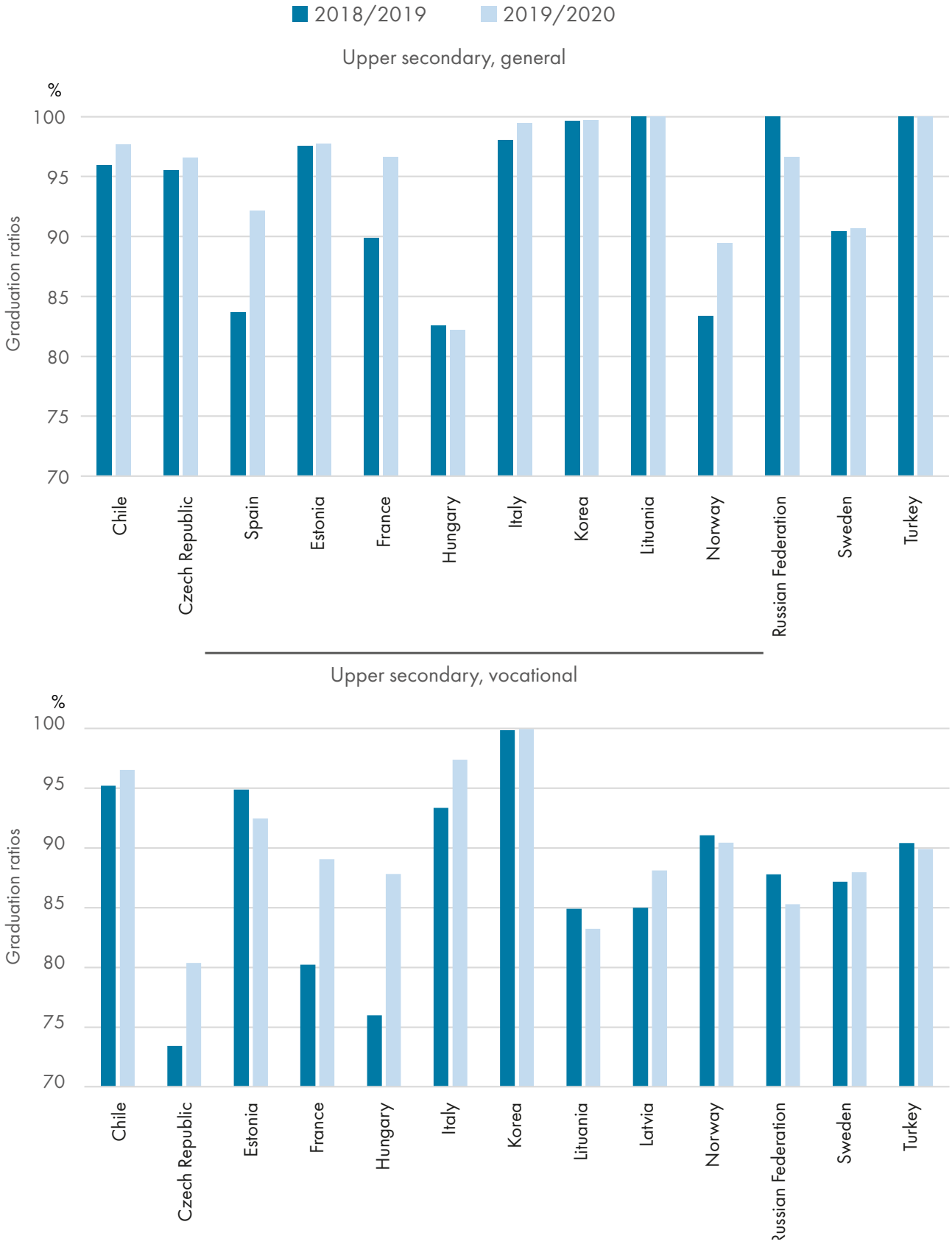
Changes to graduation criteria and examinations

Countries were asked whether, as part of the school re-opening plans, they made changes to the graduation criteria at upper-secondary level in either 2019-20 or 2020-21. Many countries reported adjustments. For example, in Spain, as a general rule, all students were promoted to the next level at the end of the past academic year; central examinations were mostly cancelled and replaced by collegial decisions by teachers. In France, for classes where graduation criteria included both standardised examinations and school marks, only the latter component was retained.

Few countries have been able to report graduation ratios for 2020 as well as for 2019 (i.e. the ratio of upper secondary graduates to students enrolled in the last year of upper-secondary education). Initial results show that in Chile, the Czech Republic, France, Hungary, Italy, Latvia, Norway and Spain there was a significant increase in graduation ratios (among vocational students only, in the Czech Republic, Hungary and Latvia; among general education students only, in Norway); in contrast, Estonia, Korea, Lithuania and Sweden reported stable graduation ratios, and the Russian Federation reported a decline in graduation ratios (Figure 4.1). Colombia also reported that it expects graduation ratios to have decreased (without being able to compute them, at this stage).

Some 17 countries postponed or rescheduled the examinations (Austria, Chile, Colombia, the Czech Republic, Estonia, Finland, Germany, Israel, Korea, Latvia, Lithuania, New Zealand, Poland, Portugal, Slovenia, Spain and Turkey). Re-scheduling did not always mean postponing: in Finland, for example, matriculation examinations which determine university entry are typically held in Spring, and were moved forward by one week in Spring 2020 in anticipation of a worsening pandemic situation; at the same time, to compensate for the shortened preparation, students were offered to repeat the examination in the Autumn, if they were unsatisfied with the Spring result. Nine education systems (the French Community of Belgium, Denmark, Estonia, France, Hungary, Israel, the Netherlands, Norway and the Slovak Republic)

Figure 4.1 • Graduation ratios for students in the last year of upper secondary education (2019 and 2020)
General and vocational tracks



Notes: Graduation ratios are computed by dividing the number of upper secondary graduates by the number of students who were enrolled in their last year of upper secondary education. Ratios above 100% are shown as equal to 100%. Only countries with valid responses for both school years are shown in the figure.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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Table 4.1 • Have you made any of the following changes to 2019-20 national examinations due to the pandemic?

Upper secondary general

Changes	N	Countries
Introduced additional health and safety measures (e.g., extra space between desks for distancing students)	21	Austria, Belgium (Flemish), Belgium (French), Chile, Colombia, Czech Republic, Estonia, Finland, France, Germany, Hungary, Israel, Italy, Lithuania, Latvia, Poland, Portugal, Russian Federation, Slovenia, Spain, Turkey
Adjusted the content of the Examinations (e.g., subjects covered or number of questions)	10	Austria, Chile, Spain, Israel, Italy, Latvia, Poland, Portugal, Russian Federation, Turkey
Adjusted the mode of administration (e.g., computer-based or online-based)	5	Belgium (Flemish), Colombia, Italy, Latvia, Lithuania
Postponed/rescheduled the Examinations	17	Austria, Chile, Colombia, Czech Republic, Germany, Spain, Estonia, Finland, Israel, Korea, Latvia, Lithuania, New Zealand, Poland, Portugal, Slovenia, Turkey
Canceled the Examinations and used an alternative approach for high-stakes decision making (e.g., calculated grades)	9	Belgium (French), Denmark, Estonia, France, Hungary, Israel, Netherlands, Norway, Slovak Republic
Introduced alternative assessment/validation of learning (e.g. appraisal of student learning portfolio)	8	Costa Rica, France, Israel, Latvia, Netherlands, New Zealand, Poland, Russian Federation

Note: 34 countries completed the questionnaire. Of these, 28 provided valid answers (different from "not applicable" or "do not know") to at least one of these questions.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

cancelled the examinations altogether, at least partially (in Hungary, for example, the oral examination was cancelled).

Many of the countries that maintained the examinations (possibly at a different date than originally planned) also made other changes to the content or mode of examination. Ten countries (Austria, Chile, Israel, Italy, Latvia, Poland, Portugal, Russian Federation, Spain and Turkey) reported changes to the content of the examinations, and five education systems (the Flemish Community of Belgium, Colombia, Italy, Latvia and Lithuania) reported changes to the mode of administration (in Lithuania, for example, a small part of final exams was administered on line). Eight countries (Costa Rica, France, Israel, Latvia, the Netherlands, New Zealand, Poland and Russian Federation) reported that they introduced alternative ways of assessing and validating students' learning.

For the 2020-21 school year, four education systems (the French Community of Belgium, Denmark, Hungary and Norway) reported that they cancelled examinations at the upper secondary general level and three other systems (the Flemish Community of Belgium, Colombia and Latvia) reported that they would adjust the mode of administration. Twelve countries (Austria, the Czech Republic, Denmark, France, Germany, Latvia, Lithuania, Poland, Portugal, Slovenia, Spain and Turkey) have adjusted the content of the examinations, and eight have postponed or rescheduled the examinations.

Use of assessments to evaluate learning

Given the widespread disruptions of regular schooling over the past year, there is an urgent need for knowing how students' learning has been affected in order to guide the efficient use of resources in the coming months. In most countries, the assessment of the impact of school closures and other health and safety measures on students' learning has been mostly the responsibility of classroom teachers (Table 4.2). In some cases, e.g. in Colombia, teachers received guidance and instruments from central authorities to help them assess learning losses. Only a few countries reported that students were assessed in a standardised way: five countries (France, Germany, Denmark, Estonia, Italy) did so at the primary, lower secondary and upper-secondary levels; the Netherlands did so at the primary level; Norway at the primary and lower-secondary levels; Poland at the lower and upper-secondary levels; and Austria, the Czech Republic, Latvia and the Russian Federation at the upper-secondary level. In several other countries, there are plans to use the standardised assessments conducted in the current school year to assess learning losses due to the pandemic.

Table 4.2 • Steps taken to assess whether there have been learning losses as a result of COVID related school closures in 2020

Primary, lower-secondary and upper-secondary (general)

	Students were assessed in a standardised way (at the sub-national or national level)			Students were assessed at the classroom level (formative assessment by teachers)		
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary
Austria			X	X	X	X
Belgium (Flemish Community)				X	X	X
Belgium (French Community)				X	X	X
Chile				X	X	X
Costa Rica				X	X	X
Czech Republic			X	X	X	X
Denmark	X	X	X	X		X
Estonia	X	X	X	X	X	X
France	X	X	X	X	X	X
Germany	X	X	X			
Israel				X	X	
Italy	X	X	X			
Japan				X	X	X
Latvia			X	X	X	X
Lithuania				X	X	X
Netherlands	X			X	X	X
Norway	X	X		X	X	X
Poland		X	X		X	X
Portugal	X	X		X	X	X
Russian Federation			X	X	X	X
Spain				X	X	X
Switzerland				X	X	X

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

One reason why so few countries were able to assess learning using standardised assessments is that national assessments were called off during 2020 in many countries: For example, Hungary, Israel, the Slovak Republic and Spain cancelled all national assessments in 2020. Countries that were able to maintain national assessments in 2020 used their results to provide teachers with student diagnostic information and to provide feedback to parents (nine education systems, at lower-secondary level: Austria, the Flemish Community of Belgium, the Czech Republic, Estonia, France, Italy, Latvia, Poland and Russian Federation); seven countries used the results to compare them with to the school's results in past years (Austria, the Czech Republic, Estonia, France, Hungary, Latvia and Poland).

Seven countries indicated that they used the results of national/central assessments conducted during the 2019/20 school year at lower-secondary level to evaluate school performance (Austria, the Czech Republic, Denmark, France, Latvia, Poland and Russian Federation). In 2015, in response to a similar question, a majority of countries had reported that they used national/central assessments to evaluate school performance (OECD, 2015[7]) . The low number of countries that used national assessments in 2020 for school accountability purposes may reflect simply the fact that assessments were cancelled; when they were not cancelled, it may also be the consequence of lower student participation rates in such assessments, which may affect the validity and comparability of school- and teacher-level results.

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5

Supporting teachers

The transition to remote instruction and the subsequent re-opening of schools – often at reduced capacity and under strict sanitary protocols – has had a profound impact on teachers' work. The crisis required many of them to acquire new skills and prepare materials suited to virtual learning environments. In some cases, it also added new responsibilities to their work, such as the co-ordination of support and resources for their students, increased interaction with parents, the organisation of remedial classes or the implementation of new administrative, health and safety procedures in schools. In some contexts, teachers' absences further limited capacity and placed constraints on schools' ability to reduce class sizes or implement different hybrid learning models. These new demands on teachers and their colleagues, have moved some countries to change their staffing and recruitment practices. Japan, for example, secured a supplementary budget in mid-2020 to adjust the staff mix in schools and hire additional support staff to alleviate teachers' workload through March 2021 (the plan foresaw hiring up to 84 900 additional staff in elementary and junior high schools, or 3 per school, on average) (Boeskens and Nusche, 2021, p. 68[8]).

Ensuring educational continuity

Responses to the Special Survey show that, in the majority of OECD countries, all teachers at the primary and secondary levels were required to teach remotely during the school closures of 2020 (Figure 5.1). Between a quarter and a third of countries reported that not all but more than 75% of teachers were required to teach while a few countries left the decision to schools and local authorities.

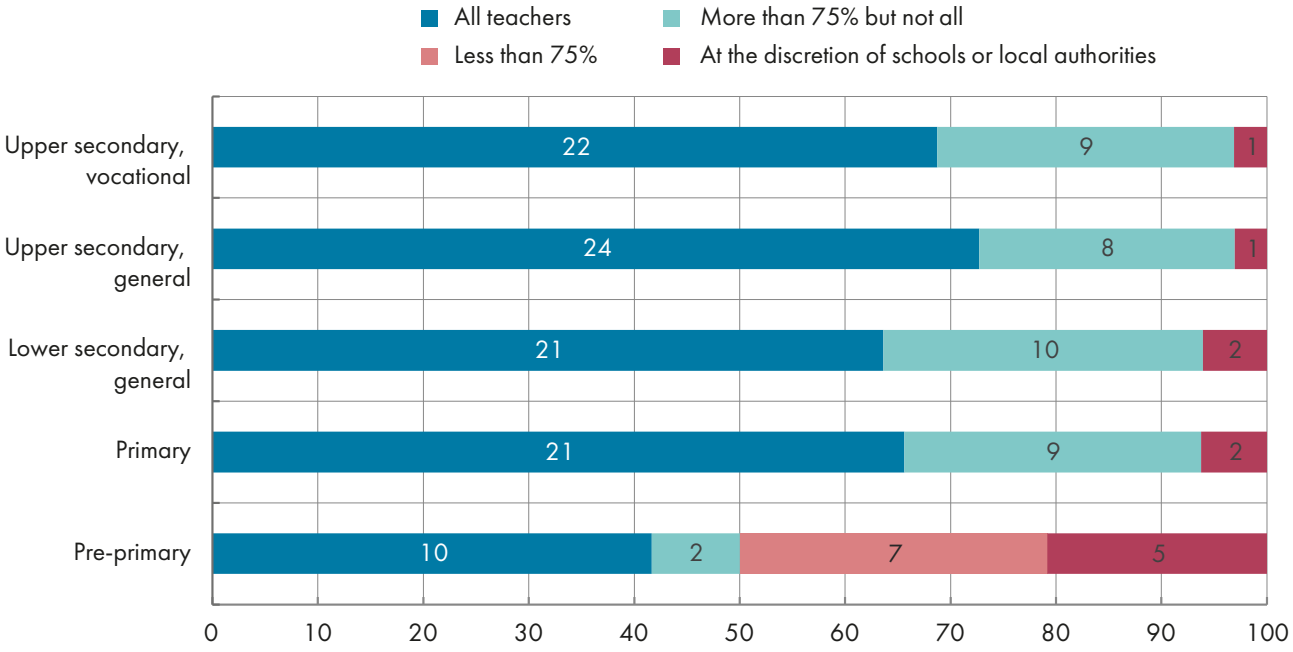
At the pre-primary level, organising remote and distance learning posed even greater challenges than in schools. Only 42% of the countries with comparable data required all professionals at the pre-primary level to teach during school closures, but some countries kept Early Childhood Education and Care (ECEC) centres open throughout the pandemic or closed them for shorter periods of time. While they were closed, seven countries reported that half or fewer teachers were required to teach, perhaps due to the greater difficulty of meaningfully engaging children at the ECEC level remotely. Likewise, more countries at the pre-primary level (21%) left the decision whether teachers should engage in instruction to schools or local authorities.

Not all countries that responded to the Special Survey had monitored the settings in which their teachers engaged in remote instruction during the school closures. Among those that did, more than half reported that teachers were able to teach from the premises while schools were closed. In Slovenia, for example, teachers were allowed to teach from the school premises if they did not have suitable conditions to teach from home.

Across the countries participating in the Special Survey, only a limited number of countries reported to have changed their recruitment practices and staff policies while the majority appears to have prioritised other levers to minimise the impact of school closures and enable schools re-opening. Nine of the 28 OECD countries that monitored changes in staffing practices report having recruited temporary teachers and/or other staff to support lower-secondary students in need during the pandemic in 2020. In Slovenia, for example, basic schools and kindergartens received additional funding to hire technical operators to support their ICT infrastructure during the second wave of the pandemic. Another five countries reported that hiring additional temporary staff was at the discretion of schools or local authorities (similar practices were observed at the primary and upper secondary levels) (Figure 5.2). Four, or 12% of countries, reported having

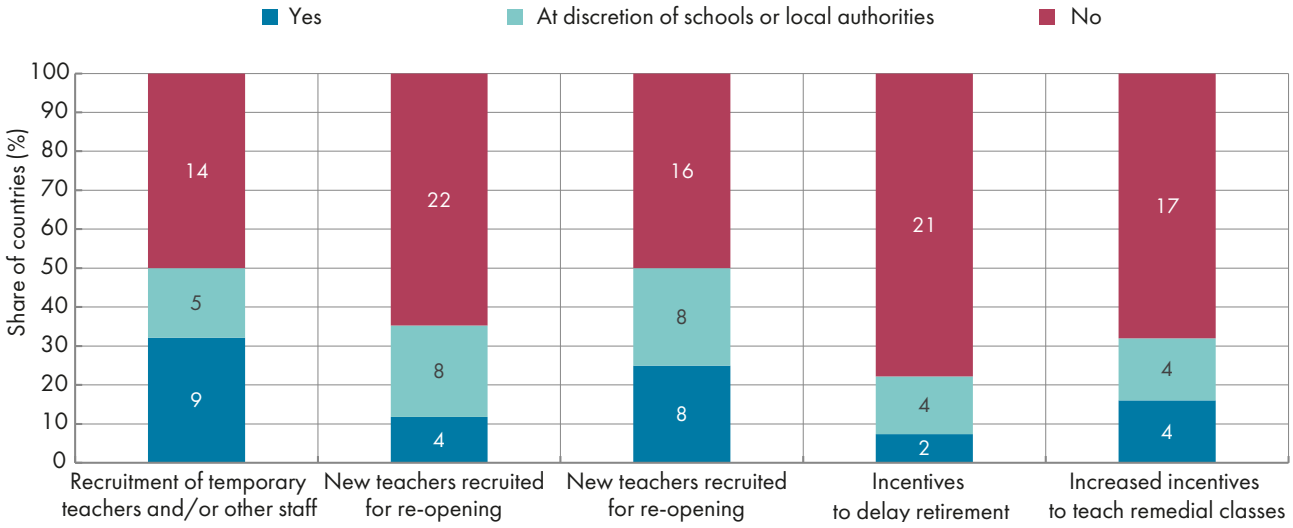
Figure 5.1 • Proportion of teachers who were required to teach (remotely/online) during all school closures in 2020

Percentage of countries reporting the following shares of teachers were required to teach remotely/online during school closures in 2020



Note: Based on data from 34 OECD and partner countries (excluding "don't know" / "not applicable" from the totals).
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Figure 5.2 • Changes to staff policies and recruitment practices (ISCED 2)



Note: Based on data from 34 OECD and partner countries (excluding "don't know" / "not applicable" from the totals). Responses for most systems were similar at the primary and upper-secondary level.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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hired new teachers for the re-opening schools in the school year 2019/20 and eight, or 25% of countries did so for the following school year 2020/21.

Fewer countries reported that they systematically changed their policies for existing staff members. Only two OECD countries, Japan and New Zealand, provided teachers with incentives to delay their retirement and continue working. Four education systems, the Flemish and French Communities of Belgium, the Czech Republic and Poland, offered teachers increased incentives to take on remedial classes some of which were organised during the summer months to help students make up for lost learning time (Figure 5.2).

Three OECD countries (10% of those that responded to the Special Survey and monitored these changes) reported having adjusted the pay and benefits of teachers at the primary to upper secondary level in response to the school closures in 2020. In the Slovak Republic, for example, teachers who refused or were unable to teach remotely had their base salary reduced by 20%. In Slovenia, teachers could be compensated for some of the resources they used when working from home and were eligible for a risk allowance when working at the school premises, subject to the school leadership's approval.

Maintaining interactions between teachers, students and parents

Maintaining a close relationship between teachers, students and parents has been key in ensuring education continuity during school closures.

Distance learning implies a number of challenges for students, such as remaining focused during online classes, and finding the motivation and engagement to work without the direct supervision of a teacher. Students' self-efficacy and resilience describe their confidence in their ability to pursue their goals in the face of challenging situations. These attitudes may constitute important assets to overcome the challenges posed by school closures (Meluzzi, 2020[9]). As shown in PISA 2018, prior to the pandemic, 84% of students 'agreed' or 'strongly agreed' that they can usually find a way out of difficult situations, and 71% 'agreed' or 'strongly agreed' that their belief in themselves gets them through hard times (OECD, 2019[10]).

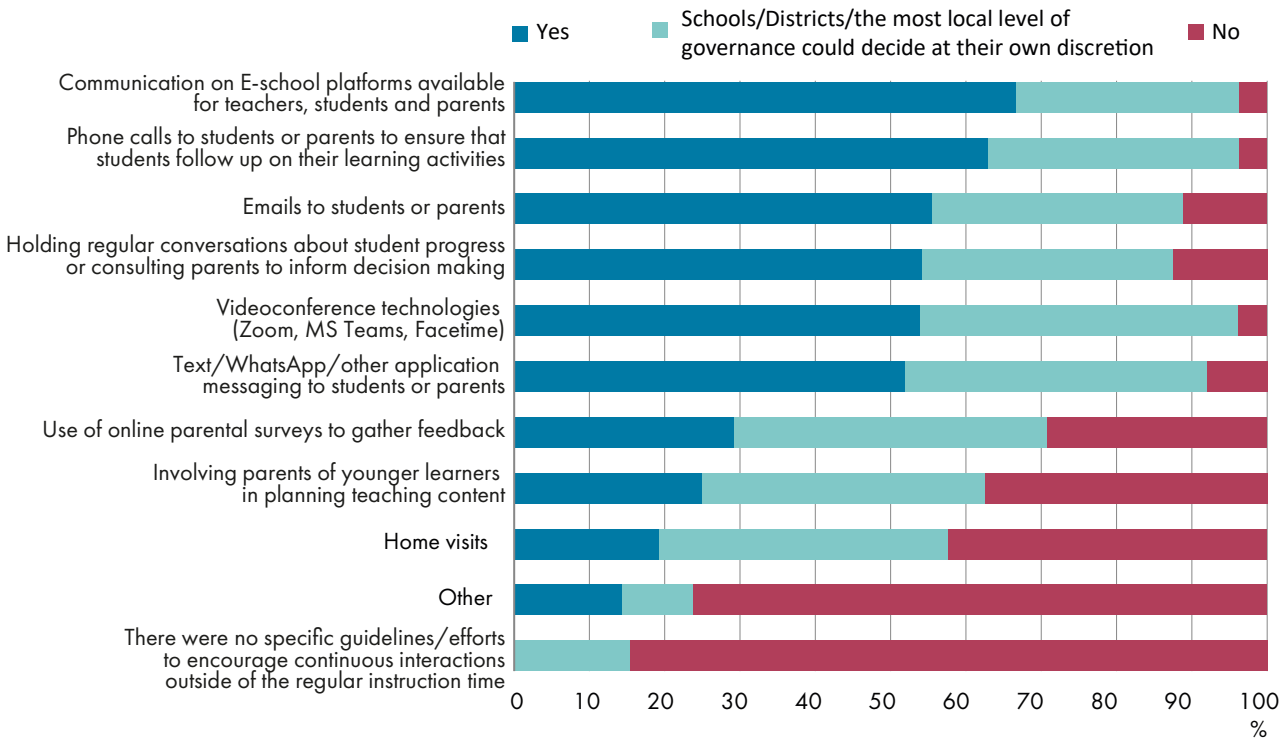
Support from teachers and families can contribute to the development of students' sense of self-efficacy and to better learning outcomes (OECD, 2019[11], OECD, Forthcoming[12]). There are equity concerns, however, as parents from disadvantaged backgrounds may face more challenges in supporting their children with schoolwork (e.g. due to time constraints, or lack of familiarity with the learning material). Communication between schools and families may help bridge this gap, for instance by providing guidance to parents on how to effectively support their children's learning (Meluzzi, 2020[9]). Prior to the pandemic, on average across OECD countries participating in OECD's Teaching and Learning International Survey (TALIS), teachers reported having spent an average of 1.4 hours on communication and co-operation with parents or guardians during the most recent complete calendar week. Moreover, 9% of teachers on average reported a high level of need for professional development in teacher-parent/guardian co-operation (OECD, 2019[13]).

School closures are likely to imply a change in the volume and format of the interactions needed between schools and families. As an attempt to maintain smooth communication between teachers, students and parents, governments have often provided guidelines about potential communication channels during school closures. Among countries with comparable data at the lower-secondary level, the most commonly encouraged forms of interaction are "communication on e-school platforms available for teachers, students and parents" and "phone calls to students or parents to ensure that students follow up on their learning activities" (Figure 5.3). These communication channels were encouraged nationally in around two thirds of countries with comparable data, while in most other countries decisions regarding communication between schools and families are made at the school or local level (Figure 5.3). In Finland, for instance, although national authorities provide recommendations about the importance of maintaining smooth communication between schools and families, all decisions regarding these co-operation and communication practices are made at the local level.

Less common approaches to encouraging communication between schools and families include "the use of online parental surveys to gather feedback" (33% of surveyed countries), "involving parents of younger learners in planning teaching content" (34%) and "home visits" (14%). For instance, home visits were only implemented in 4 countries with comparable data: the Flemish Community of Belgium, Chile, Ireland and Japan (Figure 5.3).

Figure 5.3 • Percentage of countries that encouraged interactions between teachers and their students and/or their parents during school closures in 2020

Lower secondary education



Note: Based on data from 34 OECD and partner countries (excluding "don't know" / "not applicable" from the totals). Responses for most systems were similar at the primary and upper-secondary level.
Types of interactions are ranked in descending order of the share of countries who answered "Yes".
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Preparing teachers for remote/hybrid teaching

To ensure the continuity of student learning during the pandemic, education systems across the OECD switched to remote or hybrid learning. To help teachers adapt to this transition, most countries provided support to their teachers (from pre-primary to upper-secondary levels) (Figure 5.4). While nation-wide measures were prevalent across countries, support was also provided at the sub-national level (e.g. in Austria, the Flemish and French Communities of Belgium, the Czech Republic, Spain and France) and on a school-by-school basis (e.g. in Austria, the Flemish and French Communities of Belgium, Estonia, Germany and Korea). The provision of instruction on distance teaching (e.g. TV, radio, learning platforms) and of adapted teaching content (e.g. in the form of open education resources, sample lesson plans) have been the most common forms of support in the 34 countries covered by the Special Survey.

The pandemic has shown that digital divides in access to digital tools and Internet connection remain major areas of concern in OECD countries. If many countries have focused their efforts in enhancing access for students, teachers often also needed support. Teachers' access to technology (computers, software, stable Internet connection) was one of the most frequently mentioned challenges by European teachers when switching to online or distance learning during the pandemic (reported by 34% of teachers surveyed in April/May 2020 on the School Education Gateway platform) (School Education Gateway, n.d.[14]). The Special Survey reveals that 70% of participating countries supported teachers by providing ICT tools or free connectivity (PC, mobile device, voucher for mobile broadband, etc.) (Figure 5.4).

Before the pandemic, evidence from PISA (2018) showed large cross-country variations in teachers' preparedness (technical and pedagogical) at integrating digital technologies in their instruction. Teachers who appeared prepared (based on their principals' reports) taught more than 80% of students in Austria in contrast to just 27% of students in Japan (OECD, 2020[3]). Three quarters of countries

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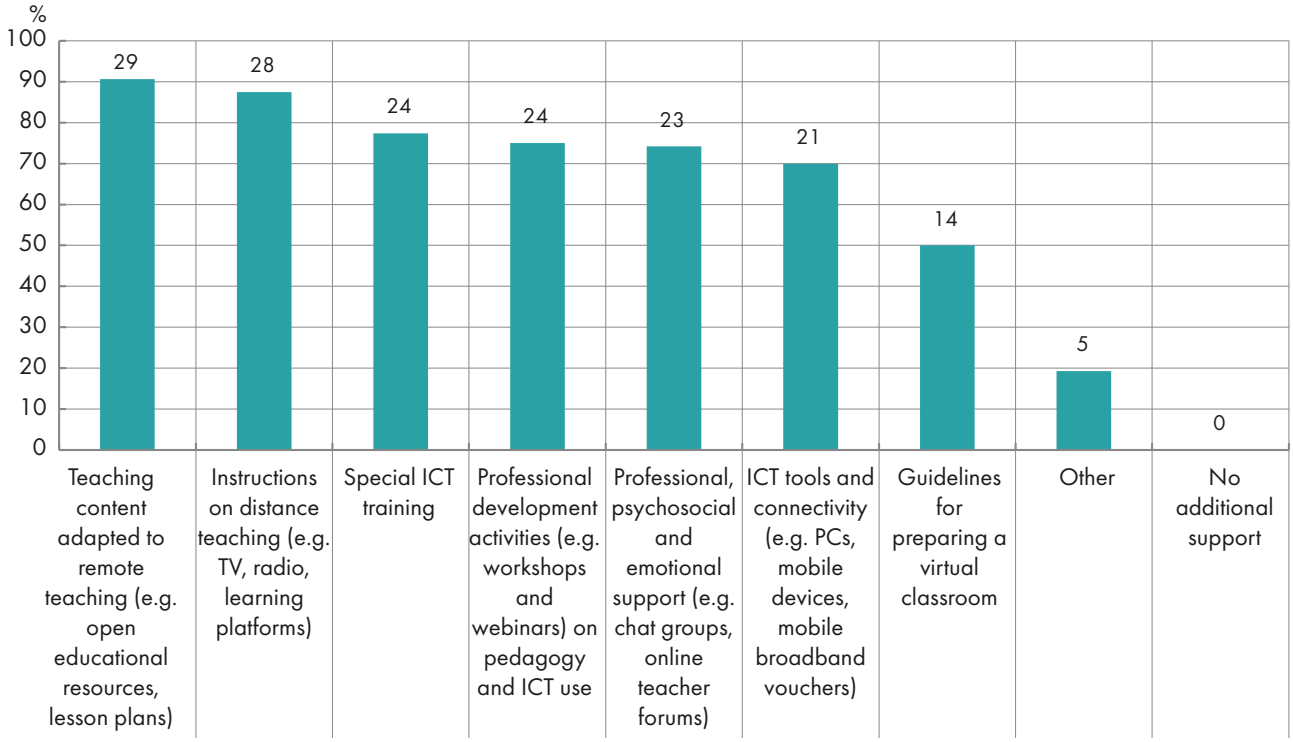
Figure 5.4 • Support for teachers in their transition to remote learning in 2020

Percentage of countries that provided each type of support at a national level

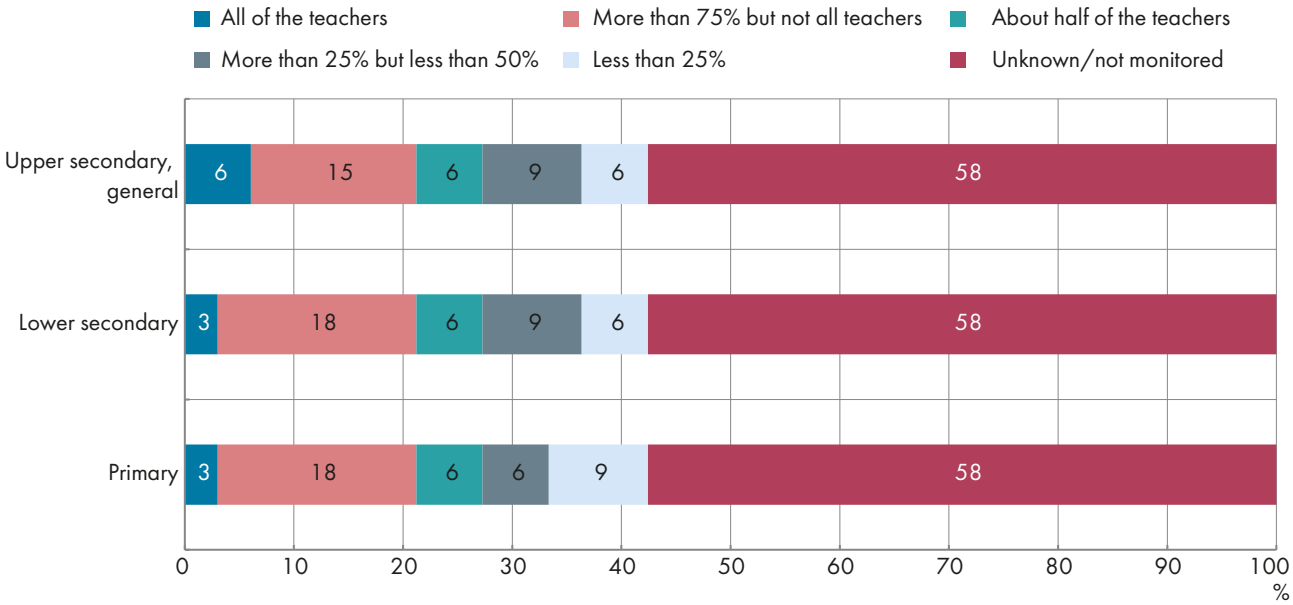


Note: Based on data from 34 OECD and partner countries. Countries that reported "Do not know" / "Not applicable" are excluded from the denominator.

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Figure 5.5 • Teachers trained in using distance-learning tools in response to the pandemic

Percentage of countries reporting the following shares of trained teachers in 2020



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

covered by the Special Survey provided professional development to teachers during the pandemic, whether in the shape of ICT training or activities on pedagogy and effective use of technologies.

Countries display large variations in the share of teachers trained in using distance-learning tools and more than half of countries were not able to report how many teachers had actually been covered by such support. This raises questions about access and provision of professional development provided to teachers which may, in turn, have implications on the extent to which all students were able to benefit from high-quality distance instruction.

To help teachers adapt to the challenges of remote or hybrid teaching, governments have relied on a range of support measures for teachers' professional learning. Across all education levels, the most common forms of government support targeted the development of new training programmes and courses for practising teachers (74% of countries on average across all education levels) and of new self-learning tools on remote/hybrid teaching and related ICT skills (73%). In contrast, more indirect support measures, such as reformed approaches to school accountability, quality assurance rules and teacher appraisal to take better account of increased use of remote/hybrid learning for students were less recurrent (Figure 5.6). The emergency context is likely to have provided insufficient time for the design and implementation of such measures. Only six countries reformed approaches to school accountability and quality assurance rules and procedures (Austria, Israel, Japan, Latvia and Poland and Turkey) and five of them also implemented reformed approaches to teacher appraisal (Israel, Japan, Latvia, Poland and Turkey). In addition, in some countries, it was schools, districts or a local level of governance that could decide at their own discretion regarding the type of support measures for teachers' professional learning (e.g. in Spain and Sweden).

Almost half of the countries surveyed have also concentrated their efforts on support for the establishment or expansion of teacher networks or communities of practice. When embedded in system-wide and school-specific goals, collaborative learning can be particularly effective at enhancing teachers' skills and expertise (OECD, 2019[13]). Before the pandemic, few OECD countries offered support for enhancing collaboration or feedback among teachers and teachers' engagement in professional networks, peer observation or coaching remained limited relative to more traditional forms of professional development (e.g. courses and seminars) (OECD, 2019[15]; OECD, 2019[13]). It is encouraging therefore, that 68% of surveyed countries have supported teacher networks or communities of practice. Digitalisation in the wake of the pandemic, together with bottom-up, teacher-led initiatives though which teachers supported each other have accelerated the creation and/or improvement of such networks or communities. Some education systems, like the Flemish Community of Belgium, could build on existing online educational platforms (e.g. KlasCement) to support teacher exchanges through redesigned teacher forums and newly-proposed webinars (Minea-Pic, 2020[16]). In others, like Korea, the government created new networks. The Korean government introduced the Community of 10 000 Representative Teachers, whereby representative teachers, proficient in remote teaching, supported other teachers in adapting to and solving problems associated with remote teaching (OECD, 2019[13]).

On average, surveyed countries intend to maintain the same types of support for teacher professional learning in 2021, across all education levels. The inclusion of (more) learning content on remote/hybrid teaching and related ICT skills as part of initial teacher education programmes is likely to become more recurrent (Panel B, Figure 5.6). More than 80% of countries plan to provide such support in 2021 in contrast to 45% in 2020 for lower-secondary teachers. Given the accelerated digitalisation of education systems, enhanced support for initial teacher education acknowledges the importance of rethinking the initial teacher education curriculum and adapting the skills-set of future teachers for fast-changing skills demands. Belgium, the Russian Federation, Slovak Republic and Slovenia are countries that did not provide such support for initial teacher education in 2020 but plan on providing it in 2021.

Health-related restrictions due to the pandemic have led many teacher professional learning activities to transition online and governments have relied on a range of digital-based professional learning opportunities for teachers. In Latvia, for instance, all continuous professional development activities were moved online since October 2020. The Special Survey reveals that recurrent formats of online teacher professional learning provided in 2020 have revolved around digital resources banks, information webpages or guidelines.

Learning formats involving collaborative features (that hold great potential for enhancing teacher learning), such as teacher communities or webinars with peer interaction, have also been common. More than 60% of surveyed countries have provided such teacher professional learning opportunities and many teachers also engaged on their own, through more bottom-up initiatives (e.g. social media, teacher forums) in

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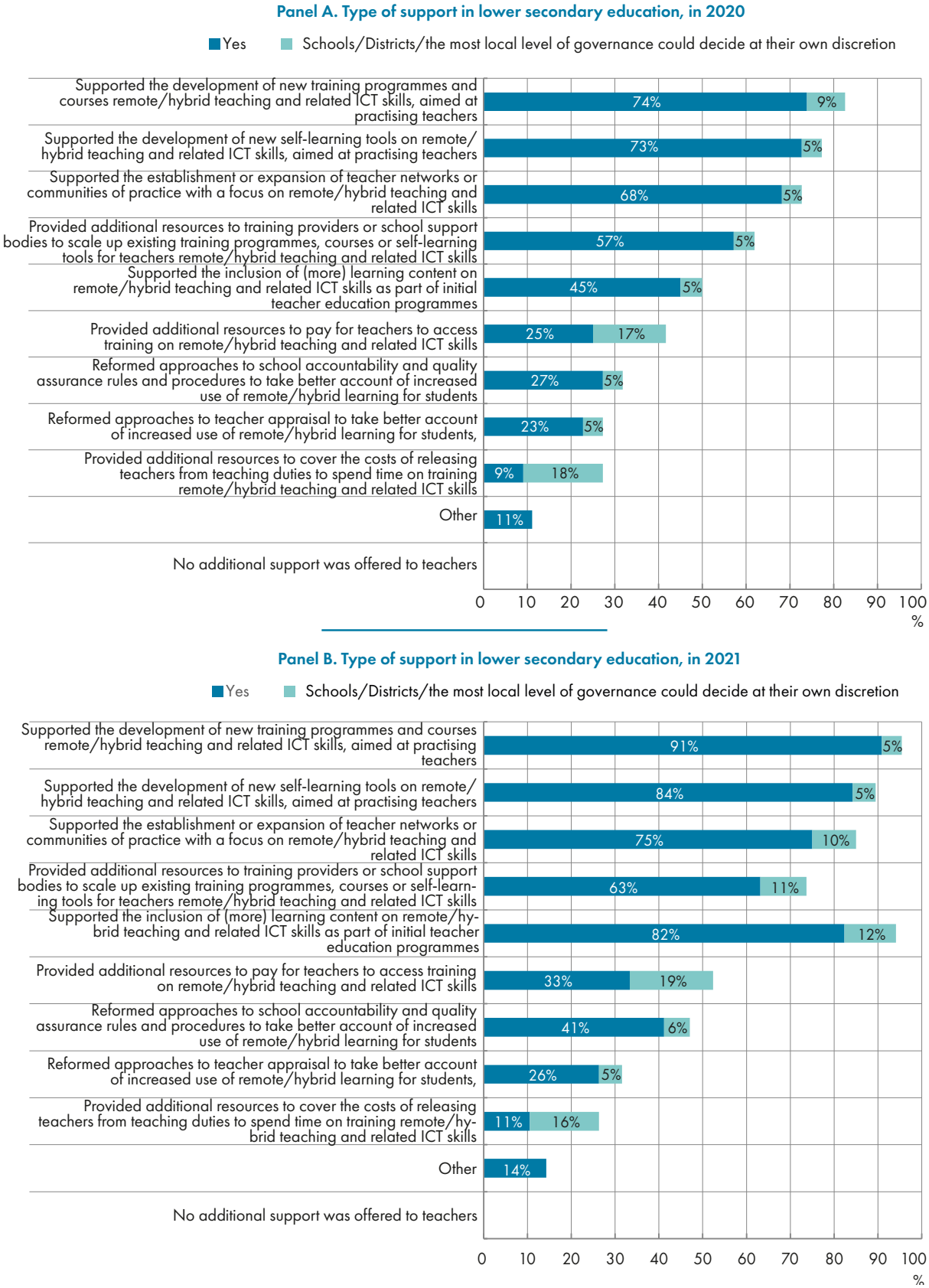
Figure 5.6 • Support for teachers' professional learning to help teachers prepare for more effective use of ICT tools and remote/hybrid teaching

Share of countries providing each type of support to lower-secondary teachers

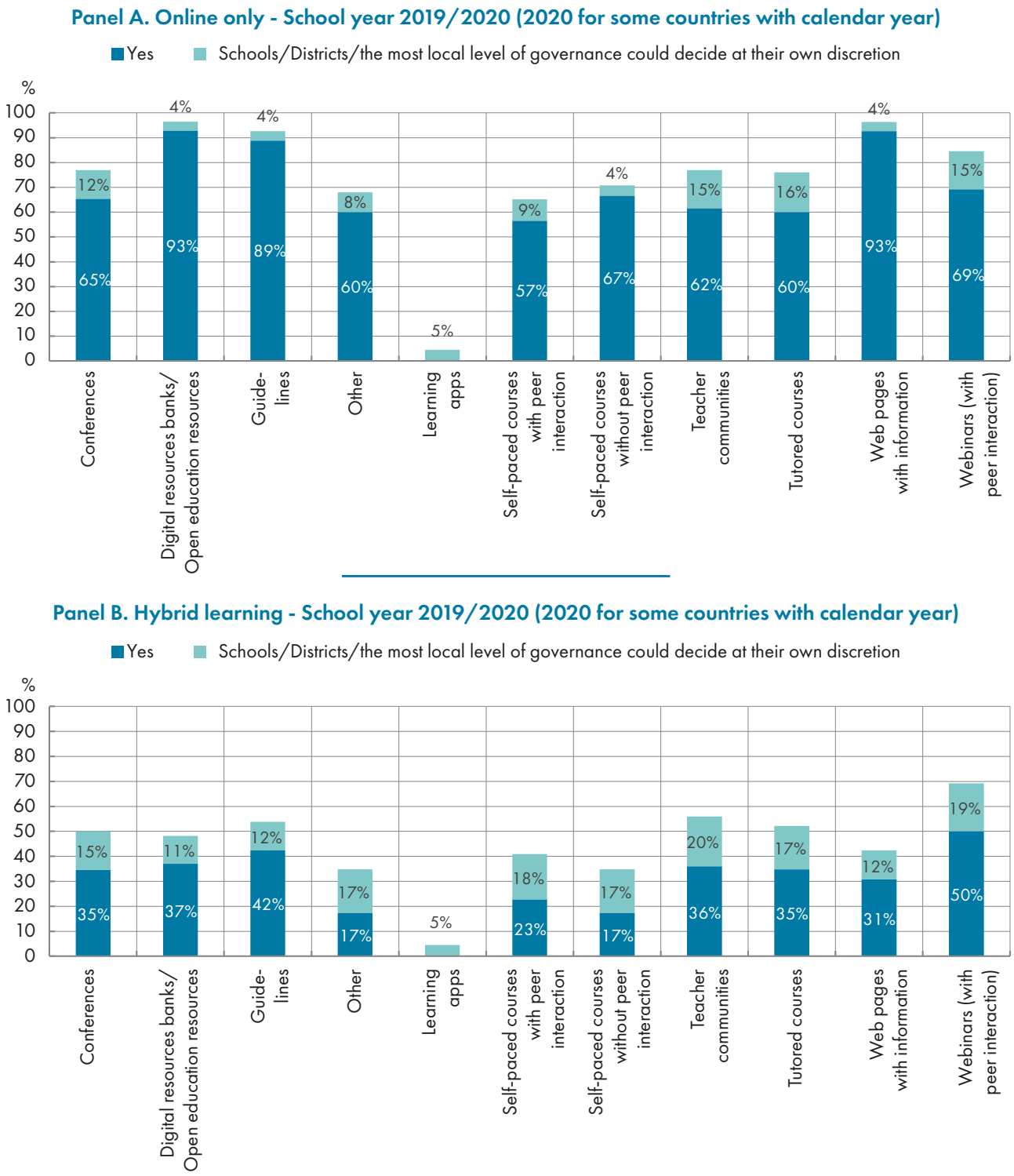


Note: "2020" refers to support provided by the government in 2020 to help teachers prepare for more effective use of ICT tools and remote/hybrid teaching. "2021" refers to how the government plans to support teachers' professional learning in 2021 to help teachers prepare for more effective use of ICT tools and remote/hybrid teaching. Countries that reported "Do not know" / "Not applicable" are excluded from the denominator.

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Figure 5.7 • Provision of online or hybrid teachers' professional learning opportunities in response to the pandemic

Percentage of countries where teacher professional learning was provided in the following formats



Note: Countries that reported "Do not know" / "Not applicable" are excluded from the denominator.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

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such forms of support Balancing central guidance and teacher agency in technology-based teacher professional learning opportunities can indeed help teachers more easily navigate through the wealth of available learning resources available online and establish more sustainable online communities driven by their members' desire to learn (Minea-Pic, 2020[17]; OECD, 2019[13]; Vangrieken et al., 2017[18]). In Norway, for instance, the Directorate for Education and Training has been active in social media groups on digital learning gathering more than 50 000 members.

The transition to online or hybrid teacher professional learning has been challenging for many teachers who were not familiar with online learning formats. Teacher engagement in online professional development was limited prior to the pandemic in OECD countries and teachers were less likely than other professionals to learn by keeping up to date with new products and services (Minea-Pic, 2020[17]). Countries have provided support to help meet necessary pre-conditions for teachers' learning on line during the pandemic, for instance by providing ICT access and connectivity to teachers or supporting ICT-related teacher professional learning to build teachers' digital competence.

At the same time, technology alone is insufficient to ensure the quality of technology-based teacher professional learning. A number of design features can help enhance its effectiveness (e.g. skilled moderators for online communities, behavioural interventions to increase course completion rates) (Minea-Pic, 2020[17]; Dede et al., 2016[19]). Hybrid or blended learning environments for teachers (and adults) have thus been shown to be more beneficial to learners than purely virtual ones, whether in the shape of courses or communities (Escueta et al., 2017[20]; Matzat, 2010[21]). In addition, hybrid learning activities provide flexibility in combining and delivering teacher professional learning in a range of formats that can help reduce costs, address time constraints and integrate more impactful forms of learning such as coaching, mentoring or external support (Education Endowment Foundation, 2020[22]). Health restrictions and school closures have nevertheless limited the extent to which countries could rely until now on hybrid forms of teacher professional learning. Countries have especially provided hybrid teacher professional learning through webinars with peer interaction and guidelines, but also teacher communities. At the same time, the Special Survey shows that most forms of online and hybrid teacher professional learning are being sustained in the 2020/2021 academic year, providing opportunities for progressively enhancing the digitalisation of teacher professional learning systems and the transition to more hybrid forms of learning for teachers (Figure 5.7).

6

Financing education in response to the pandemic

Public expenditure enables governments to serve a wide range of purposes, including providing education, 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 educational opportunities, government funding of educational services is necessary to ensure that education is not beyond the reach of some members of society.

Policy choices or external shocks, such as demographic changes or economic trends, can have an effect on how public funds are spent. Like the financial crisis in 2008, the pandemic is likely to significantly impact societies economically, and education is one of the sectors affected.

While the 2008 financial crisis severely impacted the economy, cuts to government expenditure were delayed in many countries. Between 2008 and 2009, despite a slowdown of the economy in all OECD countries, public spending on education continued to increase (Figure 6.1). The first signs of a slowdown appeared in 2010 following austerity measures that imposed cuts in the government budgets which then impacted education budgets. Indeed, education budgets decreased in about one-third of OECD countries between 2009 and 2010 (OECD, 2013[23]). Since 2013, education spending growth has tended to closely track growth in the overall economy (Figure 6.1).

Spending on education during the pandemic

So far, education seems to have maintained its priority in national budgets. In fact, the results of the Special Survey show that, during 2020, a large share of OECD countries have increased the budget devoted to education in order to respond to the impact of the pandemic. In 2020, around 65% of countries with comparable data confirmed an increase in the education budget at primary and secondary education levels (Table 6.1). For the rest of the countries the budget has remained unchanged, while no country reported a budget decrease in 2020.

In 2020, increases in educational expenditure at the primary and secondary levels of education have been targeted mainly to current expenditure. Current expenditure includes staff compensation and spending on the goods and services needed each year to operate schools. However, countries have applied different approaches to target current expenditure. For example, countries such as Denmark, France and Hungary have provided some additional funds to handle health protective equipment and cleaning costs. Exceptional bonuses to staff in order to ensure the continuity of public services in some particular circumstances were provided in France. Finland has supported programmes, which aimed to compensate learning losses during the remote learning periods for disadvantaged students, e.g. for students with a foreign mother tongue, students with special education needs or students with an immigrant background. Expenditure in New Zealand was also increased in order to support the well-being needs of teachers. France has provided additional financial support to the national centre for distance learning as well as for the large-

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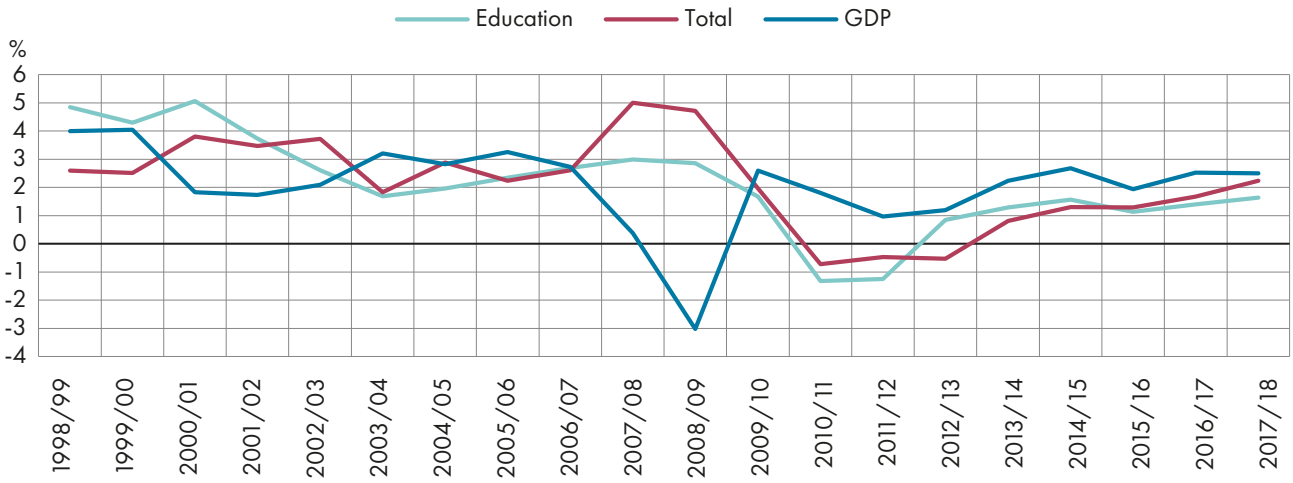
Figure 6.1 • Annual growth in education expenditure, total general government expenditure and GDP in OECD countries (1999-2018)

Expenditure and GDP figures in real terms



Note: Expenditure and GDP figures used here are in real terms. This figure excludes data from Canada, Chile, Colombia, Costa Rica, Ireland, Japan, Mexico, New Zealand and Turkey due to a lack of complete time series. Data on expenditures are disaggregated according to the Classification of the Functions of Government (COFOG), which divides expenditures into ten functions: general public services; defence; public order and safety; economic affairs; environmental protection; housing and community amenities; health; recreation, culture and religion; education; and social protection.

Source: OECD National accounts database, March 2021 (http://www.oecd.org/sdd/na/).

scale deployment of the "Open School" initiative that took place during the 2020 summer break.

Sometimes additional funds were also allocated to capital expenditure. Capital expenditure refers to spending on the acquisition or maintenance of assets, which last longer than one year. France, the Czech Republic, Hungary, New Zealand and Poland have also increased their spending due to the purchase of internet access services and computer equipment (hardware and software).

The efforts made by OECD and partner countries to increase education spending in 2020 is expected to continue in the current year. In fact, compared to 2020 figures, a slightly larger share of countries reported plans to increase their education budgets in 2021 in primary and secondary education levels (Table 6.1).

The increase in the share of countries that reported additional educational expenditure between 2020 and 2021 is particularly significant at the tertiary level of education, where the share of OECD and partner countries increasing their education budgets in response to the pandemic moved from 65% in 2020 to 71% in 2021. The pandemic has shown that tertiary education has been one of the most impacted levels of education. International students normally pay higher fees than domestic students and this can make a significant contribution towards funding tertiary educational institutions (OECD, 2017[24]). Mobility restrictions resulting from the pandemic can therefore have a significant impact on university finances. In Canada, the impact on university revenues has been estimated to be between USD 377 million and UDS 3.4 billion (or 0.8-7.5% of projected revenues) in 2020/2021 (STATCAN, 2020[25]). Similar impacts are also expected in the United States where international students declined by 16% between 2020 and 2021. The pandemic has also had an effect on the labour market which, in some countries, has led to an increase in the demand for higher education. In response, countries such as Finland, Norway and Sweden allocated additional resources to make room for more students in higher education. Other countries such as Australia, Canada, New Zealand and the United States have put in place measures which include increasing the amount of student loans and providing additional support to students to cover extra course-related costs (OECD, 2020[26]).

Several countries found it difficult to specify the extent to which they allocated additional public resources to education due to the pandemic, sometimes because such decisions were made at local levels (Table 6.1).

Table 6.1 • Changes planned to the education budget in response to the pandemic in 2020 and 2021
Primary and secondary education

	Total public expenditure in the school year 2019/2020 (2020 for countries with calendar year)		Total public expenditure in the school year 2020/2021 (2021 for countries with calendar year)	
Increases	Belgium (flemish community), Belgium (french community), Colombia, England (UK), Estonia, Finland, France, Germany, Israel, Italy, Japan, Latvia, Lithuania, Netherlands, Norway, Portugal, Russian Federation, Slovak Republic, Slovenia, Spain, Sweden, Turkey	65%	Austria, Belgium (flemish community), Belgium (french community), Canada, Colombia, Czech Republic, England (UK), Estonia, Finland, France, Germany, Ireland, Israel, Japan, Latvia, Lithuania, Netherlands, Norway, Portugal, Russian Federation, Slovenia, Spain, Sweden, Turkey	71%
No changes	Austria, Canada, Chile, Costa Rica, Czech Republic, Hungary, Ireland, Korea	24%	Costa Rica, Hungary, Korea, Slovak Republic	12%
Don't know	Denmark, New Zealand, Poland, Switzerland	12%	Chile, Denmark, Italy, New Zealand, Poland, Switzerland	18%
Total	34		34	

Notes: 1) In Japan school year 2019/2020 begins in April 2019 and ends in March 2020 and school year 2020/2021 begins in April 2020 and ends in March 2021. 2) In Chile and Korea, there are no changes in the total amount, but significant changes in the distribution of expenditure.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Spending choices

Countries differ in the criteria used to allocate additional expenditure in response to the pandemic (Figure 6.2). Almost 50% of the countries responded the number of students per class as the main criterion used to allocate additional resources. A similar percentage of countries responded that other criteria, including the number of teachers per school, the particular cases and needs of schools, or the type of school (public or private), where used to allocate resources. To a lesser extent (between 30% and 40%), the proportion of students with special socio-economic characteristics or with special education needs were used to allocate additional funds at these educational levels (Figure 6.2).

It should be noted that most countries had difficulty specifying the measures they have taken to allocate additional public resources following the 2020 pandemic, often because the pandemic hit them in the middle of the 2019/2020 school year, with insufficient time to adapt legislation, because data are not yet available at the national level, or because decisions are made at sub-national levels. Table 6.2 shows the changes in policy choices at the lower-secondary educational level for countries able to provide this information. While countries such as Italy, Latvia, Portugal and Slovenia have changed just one criterion to allocate public educational resources between 2019 and 2020, other countries have adjusted a variety of criteria.

Some countries have provided examples of the measures that led change in the allocation of public educational resources. The increase in teacher salaries in the Slovak Republic was mainly explained by compensation for the use of own resources when performing work at home, and also by allowances for work in risky situations granted to those going to schools during the pandemic period. In Turkey, the reduction of the number of hours of instruction is explained by the 10 minutes decrease in the duration of online lessons.

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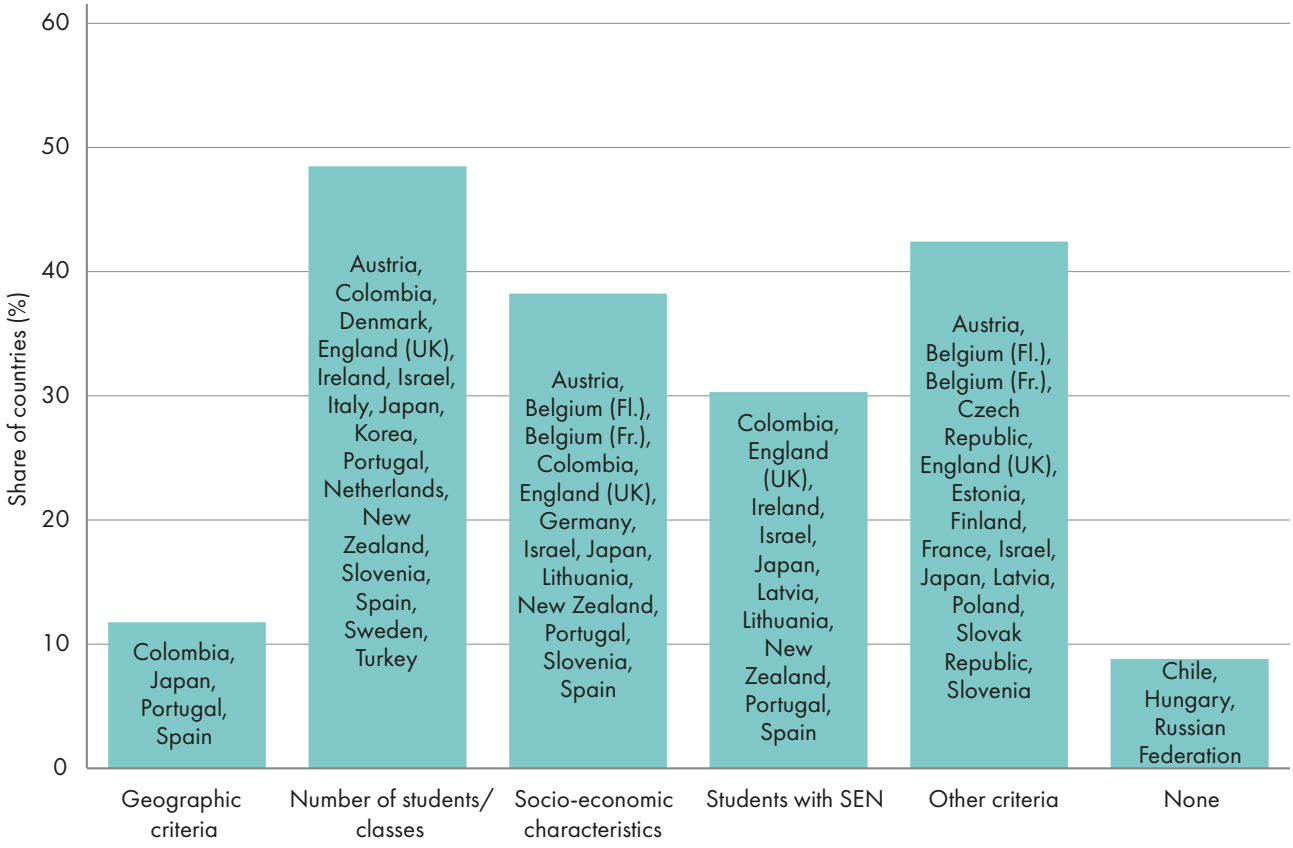
Figure 6.2 • Percentage of countries allocating additional public funds/resources to primary and secondary schools in response the pandemic in 2020 or/and in 2021, by criteria



Note: Based on data from 34 OECD and partner countries.
Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Table 6.2 • Countries expecting a change in the allocation of public educational resources as a result of the pandemic in 2020 (compared to 2019)

Lower secondary education

	Class size	Number of hours of Instruction students received	Number of teachers in schools	Number of teaching hours of teachers	Actual teachers' salary (including bonuses)
Increases	.	.	Ireland, Italy, Portugal, Spain, Turkey	.	Latvia, Slovak Republic, Slovenia
Decreases	Denmark, Ireland, Spain	Denmark, Lithuania, Slovak Republic, Turkey	.	Lithuania, Slovak Republic	.

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

7

Who decides?

An effective distribution of decision-making responsibilities between national, regional and local authorities as well as schools was essential to ensure agility and responsiveness during the pandemic.

Distribution of decision-making during the pandemic

The Special Survey asked respondents at what level decisions were made regarding a number of strategic education issues during the pandemic. The results show a consistent pattern: on the one hand, decisions pertaining to school closures were mostly taken at more central levels and informed by health considerations. This allowed system leaders to react quickly to the pandemic context, ensure predictability in service offerings and ensure the health and well-being of students and staff. On the other hand, teaching arrangements and pedagogical practices were mostly decided at school levels (Figure 7.1).

In a majority of countries and jurisdictions with comparable data, decisions pertaining to school closures were taken centrally. In two-thirds of the surveyed countries, the decision to close or open schools in primary and lower-secondary was taken in full autonomy at the central or state level. It often followed advice from an expert group such as the Outbreak Management Team in the Netherlands, the Ministry of Health in Colombia, or the National Public Health Emergency Team in Ireland. In the Flemish Community of Belgium, Hungary, the Russian Federation and Lithuania, this decision was taken at regional or multiple levels within a framework set by the central government. Korea is the only country where decisions regarding school closures were made in consultation with multiple bodies in the education system, including the provincial offices of education and individual schools, under the general guidelines of the Central Disaster and Safety Countermeasures Headquarters. In Sweden, primary schools were never closed.

In more than a third of the surveyed systems, decisions concerning pedagogical resources were taken at multiple levels. In France, the National Centre for Distance Education was mandated by the Ministry of Education to propose online resources, completed by regional authorities, while local authorities were in charge of designing learning virtual environments and embedded resources. In Spain, national, regional and local authorities committed to providing resources to ensure education continuity. In Slovenia, the central government in co-operation with the National Education Institute provided ICT equipment such as computers, tablets and modems with free mobile data packages, through various donations directly to students in need. Finland was the only system where decisions concerning pedagogical resources were made at the local level, while in Chile, England (UK), Lithuania, Portugal, the Slovak Republic and Sweden (in secondary education) these decisions were made only at the school level.

In almost half of the systems, schools could make decisions about teaching/working arrangements. These decisions concern a variety of elements such as the number of working hours or requirements for teachers to be present at schools even without students. In Belgium, the Netherlands, Poland, the Russian Federation, and the Slovak Republic schools had full autonomy. In Chile, the Czech Republic, Estonia, Norway, and Slovenia, schools made these decisions within a framework set by a local, regional, or central authority. Teaching and working arrangements were decided by central governments in Austria, Colombia, Costa Rica, France, Israel, Latvia, Portugal, and Turkey, and by state governments in Canada, Germany and Switzerland.

In more than half of the surveyed systems, schools could decide how to adapt teaching practices.

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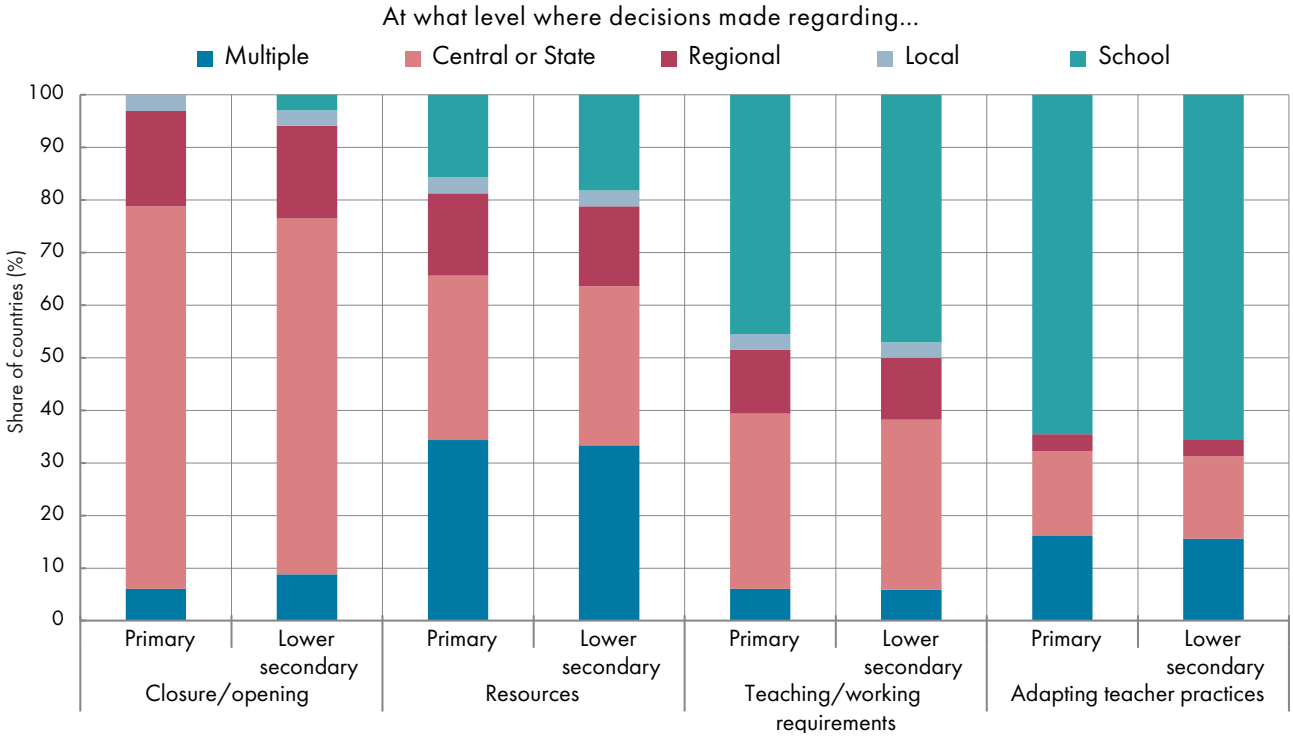
Figure 7.1 • Distribution of decision-making responsibilities



Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

Table 7.1 • Locus of decision-making and degree of autonomy for adapting teacher practices

Degree of autonomy decision	Locus of decision regarding adapting teaching practices			
	Multiple	Central or state	Regional	School
Full autonomy				Flemish Community of Belgium French Community of Belgium Canada Czech Republic England (UK) Estonia Latvia Netherlands Norway Poland Slovak Republic
After consultation		Germany		Lithuania
Within a framework	Korea	Turkey	Hungary	Chile Colombia Denmark France Japan Portugal
Other		Slovenia		New Zealand

Source: OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

This included, for instance, the choice of distance-learning tools, the adaptation of learning content, or the communication channels to maintain contact with parents and the broader community. The central or state authorities directly regulated teaching practices in Austria, Costa Rica, Germany, Slovenia and Turkey, although with different practices. In Germany, decisions were made at state level after consultation, while in Slovenia, this was done by central authorities in co-operation with the National Education Institute. In the remaining systems, schools either followed guidelines established by a higher authority, decided after consultation with the central government (e.g. in the case of Lithuania), or were entrusted to make adaptations in full autonomy (Table *7.1*). In Chile, Colombia, Denmark and Japan, schools made the decision within a framework set by the central government, while in Ireland, guidelines on continuity of learning during periods of closure emanated from multiple actors including school management bodies, staff associations and teachers unions, the Inspectorate and the Department of Education.

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Table 7.2 • Locus of decision-making

Decisions regarding...	Locus of decision regarding adapting teaching practices				
	Multiple	Central or state	Regional	Local	School
... closure/ re-opening of schools (due to the pandemic)	Korea; Lithuania; Norway (secondary)[1]	Austria; French Community of Belgium; Canada; Chile; Colombia; Costa Rica; Czech Republic; Denmark; England (UK); Estonia; Finland; France; Germany; Ireland; Israel; Latvia; Netherlands; Norway (primary)[1]; Poland; Portugal; Slovak Republic; Slovenia; Switzerland; Turkey	Flemish Community of Belgium; Hungary; Italy; New Zealand; Russian Federation; Spain	Japan	Sweden (secondary)
... resources to be made available to continue students' learning during school closure	Colombia; Denmark; Estonia; France; Germany; Korea; New Zealand; Norway; Slovenia; Spain; Switzerland	Austria; French Community of Belgium; Canada; Costa Rica; Ireland; Israel; Latvia; Netherlands; Poland; Turkey	Flemish Community of Belgium; Czech Republic; Hungary; Italy; Russian Federation	Finland	Chile; England (UK); Lithuania; Portugal; Slovak Republic; Sweden (secondary)[1]
... teaching/working requirements of teachers during the school closure	Ireland; Korea	Austria; Canada; Colombia; Costa Rica; France; Germany; Israel; Latvia; Portugal; Switzerland; Turkey	Hungary; Japan; New Zealand; Spain	Finland	Flemish Community of Belgium; French Community of Belgium; Chile; Czech Republic; Denmark; England (UK); Estonia; Italy; Lithuania; Netherlands; Norway; Poland; Russian Federation; Slovak Republic; Slovenia; Sweden (secondary)[1]
... the way teachers should adapt their teaching practice during the school closure/when school re-opened	Finland; Ireland; Korea; Russian Federation; Spain	Austria; Costa Rica; Germany; Slovenia; Turkey	Hungary		Flemish Community of Belgium; French Community of Belgium; Canada; Chile; Colombia; Czech Republic; Denmark; England (UK); Estonia; France; Israel; Japan; Lithuania; Latvia; Netherlands; New Zealand; Norway; Poland; Portugal; Slovak Republic; Sweden (secondary)[1]

Notes: 1.The country names in bold indicate countries for which the locus of decision-making differed between primary and secondary education for a given category of decisions.
Source: OECD/UIS/UNESCO/UNICEF/WB Special Survey on COVID. March 2021.

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The OECD is compiling data, information, analysis and recommendations regarding the health, economic, financial and societal challenges posed by the impact of coronavirus (COVID-19). Please visit our dedicated page for a full suite of coronavirus-related information.

Updated 13 April 2021

Updates were made to the following pages:

p. 3, col. 2, para. 2: "19 out of 31 countries" instead of "19 out of 30 countries"

p. 8, Figure 1.1: In pre-primary education, England appeared in both "Fully open" and "Closed due to COVID-19". It was deleted in "Closed due to COVID-19" section

p. 19, Table 2.2: lines were misaligned, the table was replaced

p. 21, col. 1, para. 2: "19 out of 31 countries" instead of "19 out of 30 countries"; Ireland was removed from the list of countries and Korea added

p. 21, col. 2, para. 1: Ireland was added to the list of countries

p. 22, Table 3.1: "as of 13 April 2021 instead of "as of March 2021"; Ireland was moved from col. 2 to col. 4; Korea was added to col. 2; total in col. 3 is 12 instead of 11

p. 24, Table 3.2: X were added for Portugal to all columns except the last one; col. 5 and 8 were modified for several countries

p. 30, Table 4.2: X were added for Portugal to columns 1 and 2

p. 42, Table 6.1: in row "No changes", 24% instead of 21% in col. 2 and 12% instead of 9%; in row " Don't know", 12% instead of 15% in col. 2 and 18% instead of 21%; Korea was moved from "Don't know" to "No changes" in col. 1 and 3; in Note 2 it is now "In Chile and Korea" instead of "In Chile"

p. 44, col. 1, para. 3: "Korea is the only country where decisions regarding school closures were made in consultation with, or in the recommendations of, other bodies located in the education system" is replaced by "Korea is the only country where decisions regarding school closures were made in consultation with multiple bodies in the education system, including the provincial offices of education and individual schools, under the general guidelines of the Central Disaster and Safety Countermeasures Headquarters"

Find out more on the survey at
http://oecd.org/education/state-of-school-education-one-year-into-COVID.htm

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