Organisation for Economic Co-operation and Development

EDU/EDPC/RD(2020)9

For Official Use

English - Or. English

5 June 2020

DIRECTORATE FOR EDUCATION AND SKILLS
EDUCATION POLICY COMMITTEE



# Education responses to COVID-19: shaping an implementation strategy

**Draft**

Virtual meeting, 10-11 June 2020, *Implementing education measures during the COVID-19 crisis: exploring challenges and ways forward*. 2nd Meeting of Country Representatives for the Implementing Education Policies Project

This paper was prepared in the context of the OECD Implementing Policies: Supporting Change in Education project. The draft has been prepared as background for the Second Meeting of Country Representatives of the project on 10-11 June 2020 entitled *Implementing education measures during the COVID-19 crisis: exploring challenges and ways forward (EDU/EDPC/RD(2020)9)*.

Delegates are invited to:
- Take NOTE of the draft paper;
- PROVIDE feedback on its content.

Pierre Gouëdard pierre.gouedard@oecd.org
Beatriz Pont beatriz.pont@oecd.org
Romane Viennet rviennet.pro@gmail.com

JT03462617

# Table of contents



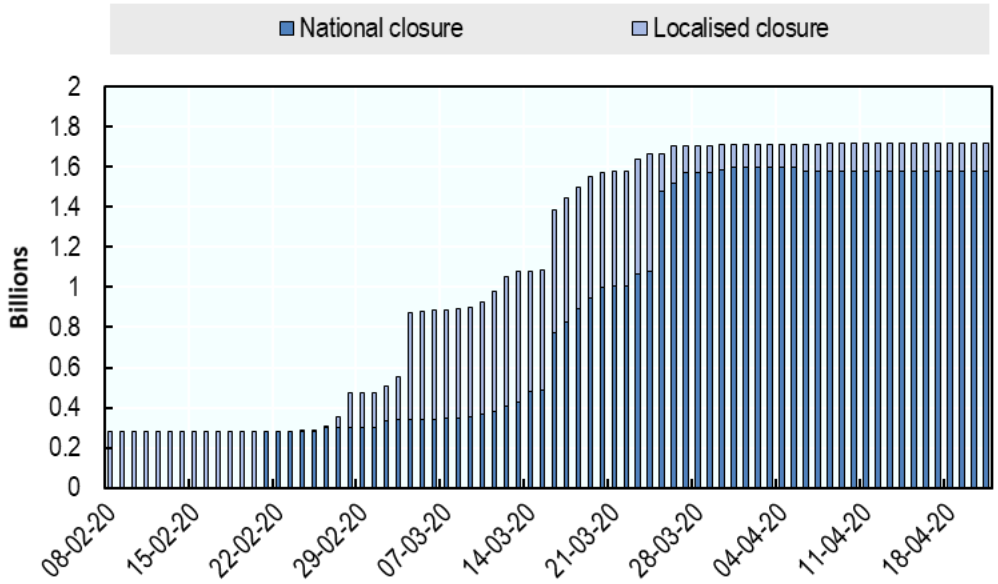
## Figures

## Boxes

# 1 Introduction

The global crisis linked to the COVID-19 pandemic exceeds by far the public health sphere, as it deeply challenges the fabric of our modern societies. Structural questions have emerged, leaving no sectors unaffected, among which: do democracies have the legal arsenal to cope with fast evolving situations; will global value chains need reorganisation; how will societies tackle the impoverishment associated with the slowing down of the economy? Education is no exception, and no less than 188 countries around the world shut down all schools, affecting the lives of almost 1.6 billion children, youth, and their families (Figure 1).

**Figure 1. World total number of affected school learners due to school closures, Feb-April 2020**



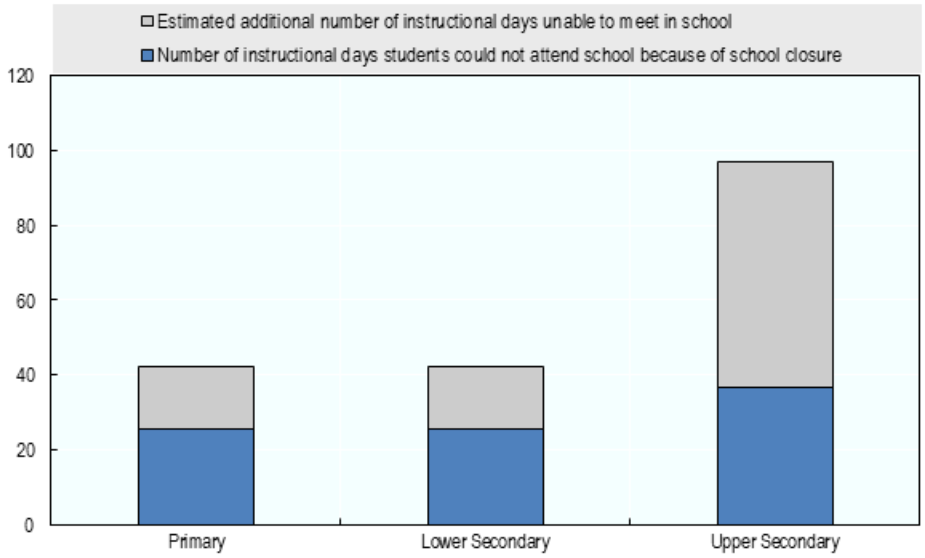

Note: Number of learners enrolled at pre-primary, primary, lower secondary, and upper secondary levels of education [ISCED levels 0 to 3], as well as at tertiary education levels [ISCED levels 5 to 8].
Source: UNESCO (2020[1]), *Global monitoring of school closures caused by COVID-19*.

However, if closing schools appeared necessary to slow down the epidemic and protect children and those surrounding them, it has disrupted their learning process (Figure 2). Many students around the world moved to distance (or remote) learning from home, whether technology based, television, radio, and paper based, or alternative approaches that schools have quickly implemented to remain connected. Student external assessments have been cancelled or replaced, and families have been expected to take a larger role in supporting student learning. Many school systems also decided to reduce the learning areas covered. As education systems consider strategies for re-opening schools, there are many different factors to consider.

The overall impact on learning of school closures still appears uncertain. For instance, there is limited evidence of online learning approaches resulting in the same levels of learning in comparison to

face-to-face teaching (OECD, 2015[2]). In addition, with the closing of physical schools, education systems face attendance challenges and higher absenteeism, which relates to the "summer learning loss", a largely studied phenomenon suggesting that in the absence of schooling, children lose skills and competence (Cooper et al., 1996[3]; Downey, von Hippel and Broh, 2004[4]; Maríñez-Lora and Quintana, 2010[5]; Gromada and Shewbridge, 2016[6]). This learning loss may even be aggravated by a lower socio-economic background, as learning at home is conditioned by the amount of parental time available for teaching, the cognitive and non-cognitive skills of the parents, and the resources they can invest in the teaching process (Oreopoulos, Page and Stevens, 2006[7]). A prolonged episode of school closing can increase inequalities if governments do not effectively implement measures to ensure every child has sufficient resources to learn in good conditions, in particular in countries where non-school factors play a determinant role in learning outcomes. This is why designing education strategies for student learning in the next stages of the COVID-19 is vital.

## Figure 2. Impact of school closure on education continuity, May 2020




Source: Reimers and Schleicher (2020[8]), Educational Opportunity during the COVID-19 Pandemic.

Implementing a policy answer in times of crisis such as COVID-19 has been and continues to be challenging in such an uncertain environment. A survey led by the OECD and the Harvard Graduate School of Education highlighted that many countries consider for instance that ensuring the continuity of education or supporting the learning of students who lack autonomy may be challenging (Figure 3). In particular, the limited available evidence base on the measures to adopt, the complexity of the interactions between stakeholders and institutions involved at different governance levels within and outside education, and the multiplicity of policies that needed to be aligned from a student's perspective, have and continue to require careful balancing within very short time frames. If in normal times, a lack of focus on implementation may result in no change, in times of COVID-19, the lack of a coherent education response strategy by a country can result in failure to have continued student learning in schools.

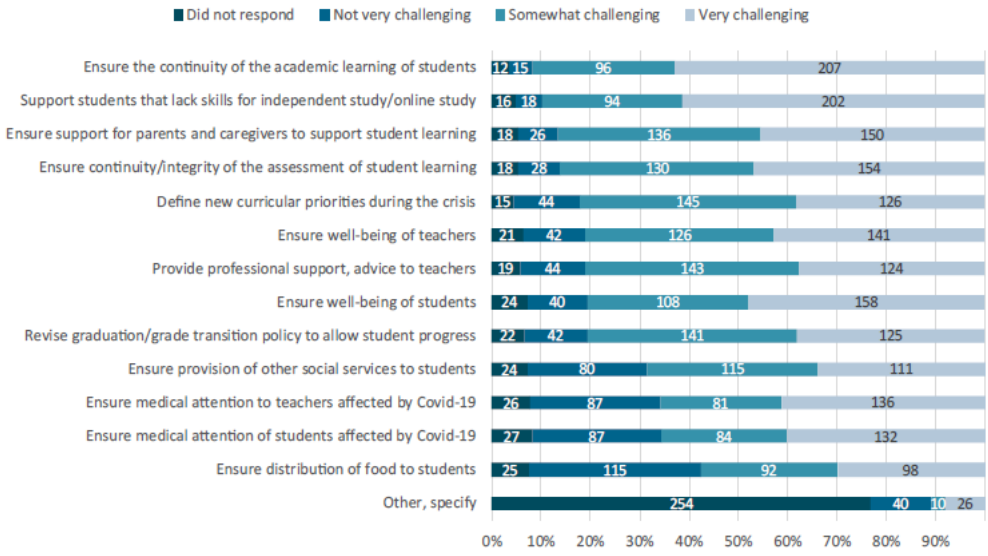
Against this backdrop, national governments, international organisations, NGOs, academics, practitioners and many others have been looking for solutions. The OECD, together with the Harvard Graduate School of Education, have published some guidelines for education responses to the pandemic of 2020. In particular, the guidelines stress the importance to develop a strategy with clear implementation plans to limit the disruption in learning, mitigate inequalities, and keep on equipping children with the skills and

competences necessary to thrive in the 21st century (OECD and Harvard Graduate School of Education, 2020[9]).

To support countries in their efforts to design and implement education responses for education systems to ensure education continuity during the COVID-19 crisis, this paper reviews the OECD education policy implementation framework and proposes a set of considerations for effective implementation of education responses to the pandemic (Viennet and Pont, 2017[10]). This framework can help governments structure the implementation strategy of their evolving educational responses to COVID-19, to guarantee continuity in education, preserve equity, and curb the educational impact of the pandemic. In normal times, the framework advocates informing the design of a policy by contextual factors, taking the time to shape a conducive context and organising wide stakeholders' engagement mechanisms for successful implementation. The emergency created by the pandemic has demanded and continues to demand speed in the implementation of responses, and a coherent implementation perspective can help ensure that these responses reach schools effectively.

## Figure 3. Implementation challenges during the COVID-19 crisis, April 2020

How challenging would it be to address the following priorities?




Source: OECD and Harvard Graduate School of Education (2020[9]), *A framework to guide an education response to the COVID-19 Pandemic of 2020.*

Based on the analysis of the school continuity approaches adopted across OECD countries during the COVID-19 pandemic, this paper proposes a framework with considerations for policy makers to use in the design of their future implementation strategies to respond to the pandemic. The framework focuses on the use of technology, distance and hybrid models of learning as complement to school based learning. It proposes that in times of crisis, initial contextual factors are determining, and can only be adjusted on the medium-term: this implies that an emergency strategy should rely on immediately available resources and existing capacity of schools and their staff, providing space for later adjustments. The engagement of stakeholders to develop a broadly supported solution may need to be limited to key actors, as there is an optimal trade-off between involvement and reactivity, but they need to have clear roles and responsibilities to support schools. With short time response frames, leeway can be given to schools to design their own response approaches, while providing a vision and generic guidelines, support to the schools in need, and clarity on the health considerations and suitable technology resources. An implementation strategy brings

together all these elements, and makes them actionable in terms of timeframes, responsibilities, tools and available resources.

As countries explore ways to continue providing education, reopening schools and designing new models of education that expand the borders of the physical schools through technology, this paper provides valuable elements to consider in the development of strategies to implement these models. It analyses the fast-paced transition to remote learning that countries implemented following the COVID-19 pandemic through an implementation lens. It provides a framework for countries to think how they can best prepare themselves to implement next steps in their COVID-19 education responses to ensure they are effective. Section 2 identifies key contextual factors that will bound the feasibility of a strategy, and Section 3 reviews processes to engage stakeholders in the co-construction of a response. Section 4 discusses major elements of policy design. Section 5 concludes with a set of guidelines that can be considered for a COVID-19 education response implementation strategy to be effective and reach schools and students.

# 2 Identifying the contextual factors that matter

Alongside confinement and social distancing measures, many governments initially shut down schools and switched to distance learning, mostly using information and communication technologies (ICT), but also other approaches that support this type of learning. These processes have to be initiated quickly, without planning, and their outcomes have critically depended on contextual factors. As countries are now reopening schools and considering their next steps, they must assess their available resources and their workforce capacity to design a feasible policy, taking into account how existing institutions can support this endeavour. Complementary policies are also necessary to provide guidance on all the elements affected by the adoption of education measures to respond to the COVID-19 pandemic.

## What resources are available?

The resources necessary for generalised distance learning are diverse, and many countries do not match the pre-requisites for a seamless transition. To begin with, the level of school resources to handle remote learning is decisive. On average across OECD countries, just about half of 15-year-olds are enrolled in schools whose principal reported that an effective online learning support platform is available (Figure 4). Moreover, a quarter of principals pointed to inadequate digital technology for instruction prior to the COVID-19 pandemic (OECD, 2020[11]). Connectivity and good study environments are also necessary for students: more than 90% of advantaged students but only 69% of disadvantaged students, reported having a quiet place to study at home and a computer that they can use for schoolwork (OECD, 2019[12]). In other words, almost a third of disadvantaged students do not have adequate resources for learning at home. Unless countries design targeted interventions towards them to compensate their lack of resources, there is a tremendous risk that the crisis is likely to increase the socio-economic achievement gap.

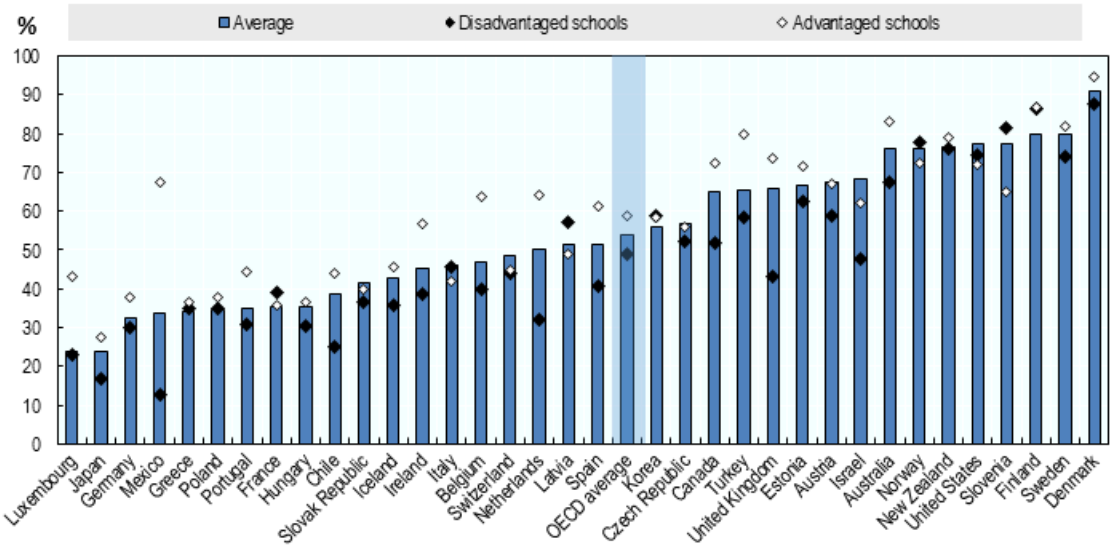
Existing technological resources condition the transition to distance learning. The quality of the broadband internet connection, the existence and usage of online distance learning platforms, the access to devices (laptops, tablets, and phones) for students at home, or the availability of adapted software are among the critical factors that must be integrated when designing a response to the crisis. To ensure continuity in education, an emergency strategy should build on resources immediately available: almost all countries who answered the OECD and Harvard Graduate School of Education survey indicated they relied on existing online instructional resources (Figure 5). Some countries have lent laptops to students (New South Wales, Australia), or relied on more traditional practices by printing and delivering additional work booklets (Great Britain, Japan). Mexico is currently building on an alternative network, given its long-standing tradition of using television to provide secondary education to groups of students in rural areas as part of its *telesecundaria* policy. The national educational television network includes several broadcast channels with a varied programme for different levels, and has a broad coverage potential since in 2017, only 7% of households in Mexico did not have a television set (OECD, 2017[13])).

Many private companies have already stepped forward to help educators reach students, either by making their paid services free through the rest of the school year or by lifting limits to services. By partnering with

Internet providers for instance, governments may improve the broadband coverage and provide teachers and students with online learning and collaborative spaces and security tools. Online comparators can guide schools in choosing the most suitable remote learning tools, such as virtual classrooms, cloud storage, printable worksheets and educational resources. In Japan (Learning Innovation, 2020[14]) and the Republic of Korea (Choi, 2020[15]), the ministries partnered with private providers of educational content and Edtechs to provide students with free access to a rich catalogue of online learning resources. In many OECD members and key partners, including Austria, Australia, Brazil, Estonia, and Portugal among others, publishers of educational content allowed free online reading of their material (International Publishers Association, 2020[16]). In many countries, public-private partnerships have allowed for a quick and effective set-up of remote learning, and expanded countries' response capacity (OECD, 2020[17]).

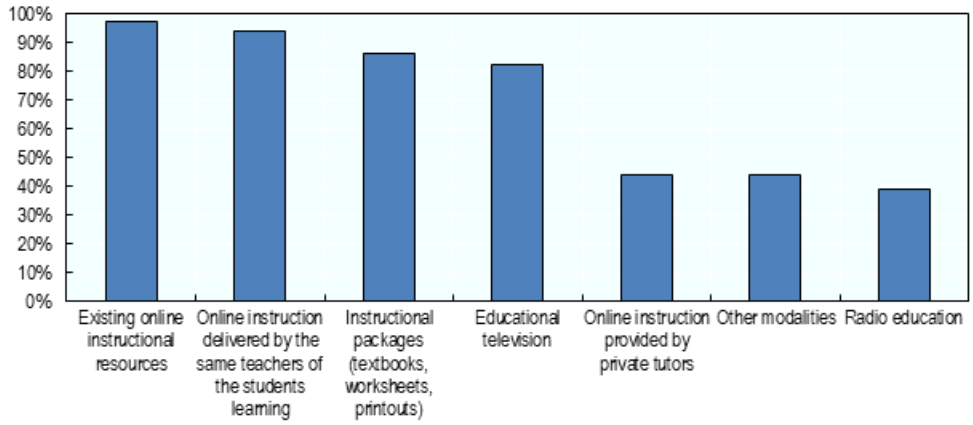
## Figure 4. Availability of an effective online learning support platform, PISA 2018

Percentage of students in schools whose principal agreed or strongly agreed that an effective online learning support platform is available




Source: OECD (2019[12]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, PISA, OECD Publishing, Paris.

## Figure 5. Instructional resources that were used to provide educational continuity, May 2020




Source: Reimers and Schleicher (2020[8]), Educational Opportunity during the COVID-19 Pandemic.

The abrupt transition to distance learning may have required schools to create new lesson plans or adapt existing ones quickly. However, schools usually participate in networks, and encouraging co-operation between teachers and schools may facilitate the transition to new learning environments. On average across OECD countries, 40% of lower secondary teachers and 60% of principals have participated in a professional network during the last 12 months (OECD, 2019[18]). Schools can build on these networks and pool resources such as study plans to focus on what matters the most: maintaining contact with students and the school community. In countries where schools collaborate with universities (e.g. the United Kingdom, Norway and Estonia), the universities can support schools by sharing online virtual learning environments, and offering a large catalogue of online activities (National Co-ordinating Centre for Public Engagement, 2018[19]).

In the near future, investing in technology to support learning beyond the school borders will be required for both schools and their students. If education budgets require adjustment due to the slowing down of the economy, technological resources to ensure remote learning approaches to all students will still be required, as countries are exploring ways to deliver education that rely less on physical schools. Accordingly, countries will need to analyse their educational budgets against these needs, and potentially explore working with other ministries (technology, interior, local authorities, private sector or others) to provide connectivity and support staff to maintain networks and platforms and provide skilled support in this area. On average across OECD countries, 8% of education expenditures are spent on capital (OECD, 2019[20]), which could be reduced with the closing of schools, and fund initiatives to support education continuity. Overall, the capacity governments have to maintain the level of education expenditures will define the post-crisis education outcomes, especially for the most disadvantaged.

## How ready are teachers and school leaders?

Effective distance learning requires that teachers have the adequate resources at home, and are already proficient with online teaching. Yet, the OECD Education 2030 project identified the incorporation of information and communication technologies (ICT) into the classroom as one of the major challenges currently facing education systems (OECD, 2018[21]). For instance, on average across OECD countries, 65% of 15-year-olds were enrolled in schools whose principal considered that their teachers had the necessary technical and pedagogical skills to integrate digital devices in instruction (OECD, 2019[12]).

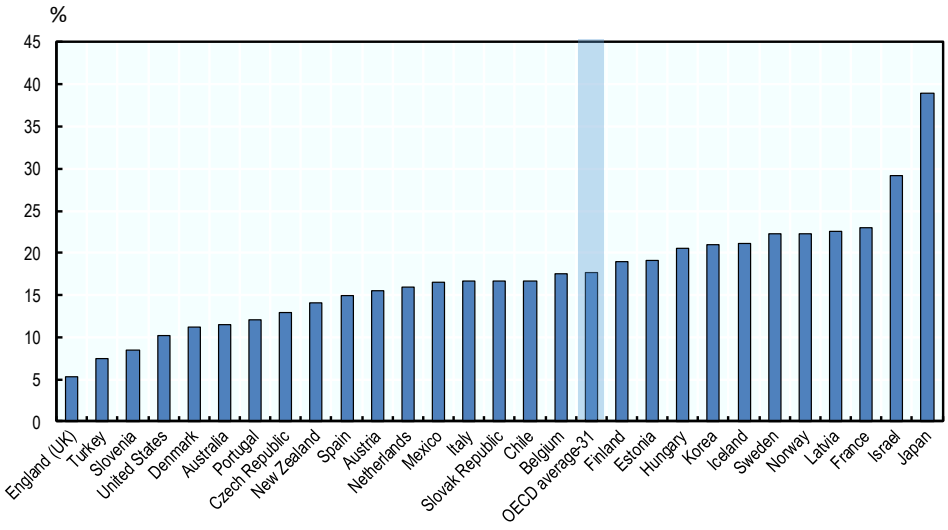
Evidence also demonstrated that being exposed to technology by itself will not improve student learning without the mediation and training of teachers (OECD, 2015[2]). Teachers have been aware of the need to develop ICT skills: already in 2013, they reported that among their most important professional development needs were those related to ICT skills (19% of teachers), and using new technologies in the workplace (18% of teachers) (OECD, 2014[22]). In 2018, 56% of surveyed teachers across OECD countries had received training on the use of ICT for teaching as part of their initial training, and 60% as part of their professional development (OECD, 2019[18]). Yet 18% of teachers still reported a strong need for professional development in this area (Figure 6).This highlights the need for education systems to design effective professional development in ICT for teaching, and ensure that all teachers, especially those who have been in the profession for longer, are ready to integrate educational technology in their practices. It also implies that any strategy to cope with the crisis must take into account teachers' capacity in using ICT skills for teaching, as well as the potential impact it may have on teachers themselves, in terms of their self-efficacy and well-being.

The COVID-19 confinement measures have tested the capacity of teachers internationally to use technology and deliver learning remotely, and there has likely been much improvement and innovation by teachers and schools in short amounts of time. While it is too soon for comparative data, survey information points to high levels of teacher capacity building and collaboration in developing tools for online learning approaches (OECD and Harvard Graduate School of Education, 2020[9]). As time advances, these

practices will move from more improvised approaches to a stronger integration of technologies by teachers in their teaching methodologies to be able to sustain remote learning or complement classroom learning for different periods.

## Figure 6. Teachers' needs for professional development in ICT skills for teaching, TALIS 2018

Results based on responses of lower secondary teachers




Source: OECD (2019[18]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris.

Principals are also key, as they are at the heart of the school-level strategies to respond to emergencies. Across OECD countries, schools have a high degree of autonomy in making decisions around learning provision for their students. On average, schools have an autonomous status in determining course content according to 48% of principals, in deciding which courses to offer according to 60% of principals, and in choosing which learning materials to use according to 87% of principals (OECD, 2020[11]). This implies that school leaders can enable the conditions for success by bringing coherence to the implementation of school remote learning and back to school strategies with their staff, the students and their families, if enabled and given resources to do so.

In collaboration with the teaching staff, school principals can undertake many actions to support learning continuity. They can (re)establish the school community, define, shape and communicate a vision to guide members of the school community during the crisis, establish approaches to meet health requirements and organise the technological network. They can provide spaces and processes for effective collaboration among teachers (whether online or live), and find options for training of their staff. They can connect staff with students and their families (WISE and Salzburg Global Seminar, 2020[23]). In particular, the importance of system leadership, engaging with parents and the broader community, cannot be underplayed, as these relationships are vital to keep on providing quality education (Schleicher, 2018[24]).In 2018 across OECD countries, only 55% of lower secondary principals reported providing parents or guardians with information on the school and student performance (OECD, 2020[11]). The crisis calls for renewed leadership from school principals, who should not only provide guidance on curriculum and instruction, but also intensify their effort in maintaining the school community fabric.

## Which complementary policies should be considered?

Closing schools raises questions beyond the mere continuity of education. Schools also play a key role for individual well-being, social cohesion and health. In addition, either schools or external institutions provide assessments for students, such as end of year or end of level certifications. With shifts towards remote learning or intermittent learning, reviewing complementary policies that contribute to support schools in these areas is important for the coherence of educational provision to students. Among these, school staff and student health and welfare, meals and assessment practices can be highlighted.

The COVID crisis, as a health hasard, has been tackled with social distancing among other approaches. During the lockdown period, health concerns have been at the centre, and are now at the heart of school reopening plans, in terms of whether schools should open and under which conditions, and how remote learning can decrease the reliance on physical schools. Supporting staff and students infected by the COVID, as well as defining clear criteria for schools to follow to assure the health of their communities have been and are key. According to the country survey on the pandemic, strategies for reopening schools range among progressive return of students by age cohorts, school attendance in shifts, and the reliance on an hybrid model of learning blending in-person and distance learning to facilitate social distancing (Reimers and Schleicher, 2020[8]). In the next stages, the reopening plans include a range of health-related activities such as the review of the overall health situation, the development and communication of hygiene criteria for school staff and their families, cleaning of school premises, availability of health support in schools or school transport.

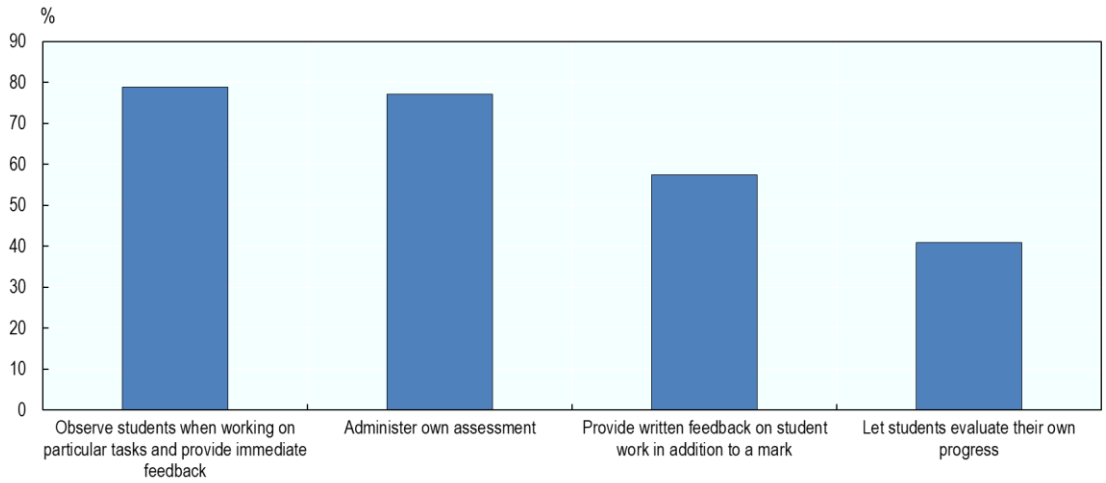
Providing healthy school meals, along with nutrition education, help children improve their diets, develop healthier food practices and extend these to their families and communities (FAO, 2019[25]). In most countries with full day schooling, meals are provided in schools. In some countries, all children benefit from free school meals (e.g. Sweden, Finland, Estonia), in others, only children from households meeting an income-based criteria are eligible (e.g. the United Kingdom, the United States). Social services provided at school, such as meals and mental health support, are directly affected by the closing of schools or changes in the scheduling, and alternative forms of provision may need to be developed. In the United Kingdom for instance, the absence of school meals delivery may increase food insecurity for less privileged children. To tackle this, the Department for Education has been providing guidance to all schools that suggests they should keep on providing free meals according to their existing food arrangements, or offer eligible families of pupils an alternative in the form of supermarket vouchers according to a national scheme (Department for Education, United Kingdom, 2020[26]).

Under the new teaching conditions, it is also important to ensure that teachers are able to provide students with relevant formative and/or summative assessments. Formative assessment consists of providing feedback and information during the teaching process, while learning is taking place. Summative assessments typically take place after the teaching process has been completed, and provide information and feedback about learning outcomes (OECD, 2019[18]; OECD, 2013[27]). Both types of assessment have been severely impacted by the closing of schools in their traditional approaches (Reimers et al., 2020[28]).

In terms of formative assessment, on average across the OECD, almost 80% of lower secondary teachers report that they frequently or always observe students and provide immediate feedback (Figure 7). According to Hattie (2008[29]), these feedback processes are vital to student learning. Their modalities however, have been strongly dependent on students' physical presence, which presents a challenge during school closure. Teachers may still organise assessment in a synchronous way, when teachers and students work together at the same time, using online resources such as virtual classrooms. If not possible, asynchronous assessment is still possible, via various activities on learning platforms for instance. While there exists a large catalogue of online resources (UNESCO, 2020[30]), traditional phone call, mail, or messaging applications can also support continuous assessment in low resource, low connectivity, low technological proficiency contexts (Liberman, Levin and Luna-Bazalduan, 2020[31]).

## Figure 7. Teachers' assessment practices, TALIS 2018

Percentage of lower secondary teachers who "frequently" or "always" use the following assessment methods in their class (OECD average-31)




Source: OECD (2019[18]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris.

Irrespective of its delivering modality, formative assessment needs to be valid, aligned with the learning goals, timely, synchronised with the learning pace and allowing quick remedial action, constructive, providing feedback and guidance, and specific to the learning needs of the child, informing the teacher and the student about the achievement of specific learning goals (Liberman, Levin and Luna-Bazalduan, 2020[31]). In addition, taking examinations from home requires developing secure solutions, including authentication process to identify the exam taker, data encryption to avoid examination manipulation, and resources restriction to prevent the exam taker from using unauthorised material.

In terms of summative assessment, an important disruption concerns high-stake tests such as university entrance examination. Aside from those of low socio-economic background, students engaged in transitional stages in education are also especially at risk. These modifications of high-stakes examinations must be aligned to the curriculum, revised or not, as they are likely to drive the whole education system (OECD, 2013[27]).

According to an analysis by UNESCO, 58 out of 84 surveyed countries had postponed or rescheduled exams, 23 introduced alternative methods such as online or home-based testing, 22 maintained exams, while in 11 countries, they were cancelled altogether (UNESCO, 2020[32]). In France for instance, the national examinations certifying the end of lower and upper secondary education, respectively the Brevet and the Baccalauréat, have been replaced by a continuous assessment of the grades obtained during the year (Ministère de l'Éducation Nationale et de la Jeunesse, France, 2020[33]). Similarly, in Norway, most national exams for the last year of junior high and high school were cancelled, and replaced by continuous assessment. The purpose has been to ensure that every student graduates and can continue its education. In Japan, the first phase of university entrance examination for public universities is centralised by the National Center for University Entrance, and was held as scheduled in January 2020. The second phase, specific to each university, was cancelled in some universities following requests issued by the Japanese Ministry of Education, Culture, Sports, Science and Technology. For these universities, the admission has been based solely on the central examination. For the remaining majority of universities, specific examinations were held as scheduled with additional measures taken to protect the exam takers. Consequently, the overall impact of the pandemic on high-stakes examination in Japan was rather limited (UNESCO, 2020[34]).

# 3 Stakeholders making change happen

In regular times, the engagement of stakeholders is fundamental in elaborating education policies: it can enhance the operationalisation of a policy based on the information they provide, generate ownership, garner support, and thus facilitate the policy effective implementation. In times of crisis however, fast action is required, which calls for reducing and optimising the time devoted to policy making. A balance must be found between involvement and reactivity.

The involvement of key stakeholders – if possible – can contribute to inform initial decision-making. Otherwise, feedback loops may support later on the fine-tuning of the strategy, and monitor the feasibility and the outcomes of the implemented measures. Social distancing measures and the cancellation of schools' physical manifestation of community highlight the need not only for clear communication, but also for the re-creation of remote school communities. Countries need to convey clear messages in a timely manner to education stakeholders to allow them to fulfil their roles.

## Involving stakeholders during emergency conditions

Engaging stakeholders in the design of a policy provides relevant insights, favours consensus, and paves the way for broad stakeholders' support and future effective implementation. Consultation processes with key representatives such as unions, school principals, parent associations, and education specialists, contribute to shaping a solution adapted to stakeholders' reality. There are various ways for stakeholders to get involved, such as through public or internal consultations, boards and councils, social partner committees, polls/surveys, publications, and meetings (Viennet and Pont, 2017[10]). In the case of teachers, on average across OECD countries, in 2018, only 14% of lower secondary teachers considered their views to be valued by policy makers, and 24% of them thought they could influence the policy process Figure 8.

With school closures, the success of students critically hinges on maintaining a close relationship with the educational staff of their schools, especially for students from disadvantaged groups who may not have the parental support or lack the resilience, learning strategies, or engagement to learn on their own. For instance, the development and mobilisation of self-directed learning content (section Leveraging the adequate policy tools: technology and preparedness) requires active participation from students, as they develop their learner's agency and become the forefront implementers of the education continuity strategy. With greater autonomy granted to learners, the role of parents is even more critical to recreate at home a learning environment. Parental support is indeed positively correlated with the indices of learning goals and motivation to master tasks (OECD, 2019[12]).

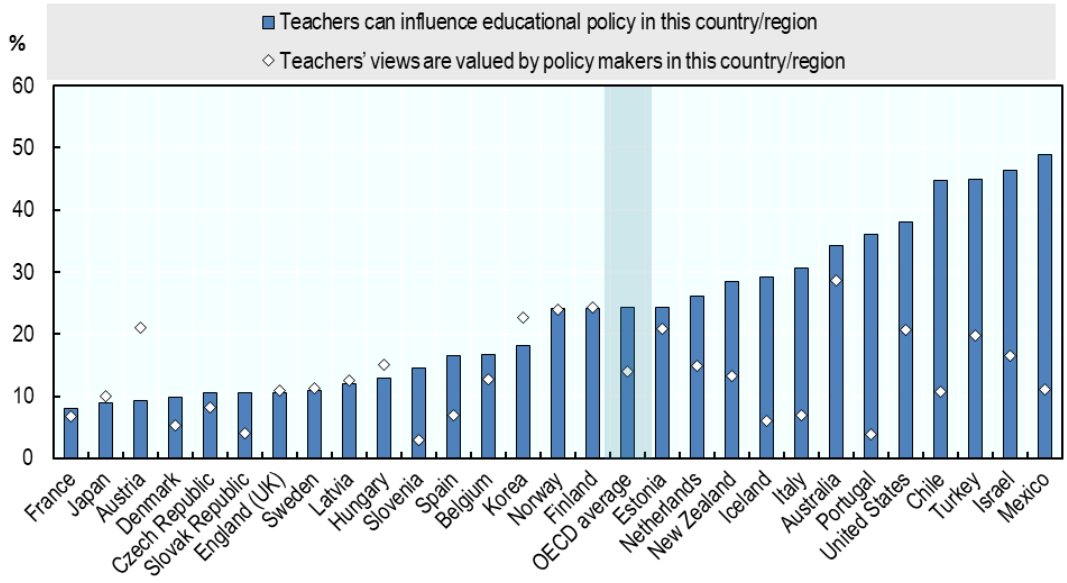
This calls for an increased need for school principals to inform their community, and initiate and promote sustainable home-based and school-based parental involvement, and for teachers to continuously reach out and monitor the progress of all their students. The structure of the national parental association provides, for instance, an appropriate arena for exchange to bridge the gap between schools and parents. Most education authorities in OECD countries issued some specific advice on how to maintain contact with staff, parents, and students as part of their general guidance. However, the difficult conditions created by

the crisis and the effective distance between students and formal learning environment increased the risk of dropout, especially among students in difficult socio-economic and family situations. This risk, acknowledged worldwide (Saavedra, 2020[35]), is echoed by education leaders and practitioners, although no comprehensive data collection has given a clear picture of the scope of effective learning dropout.

This is why the degree of school principals' and teachers' engagement is critical. It will however depend on their own confidence, self-efficacy and time available in applying emergency measures, particularly for teachers who feel less proficient in using ICT. It is therefore essential to recognise and build on teachers' expertise and professionalism, by drawing on their feedback, practices, and beliefs, to shape an adapted response to the crisis. This will foster ownership, and ultimately determine teachers' and school principals' willingness to assume responsibilities, risks, and personal sacrifice (Pierce, Kostova and Dirks, 2003[36]). Moreover, the role of collective agency at the school level to effectively guarantee remote learning is progressively being unveiled, as reports from school practitioners, parents and learners differ significantly sometimes within the same local jurisdiction. A comparison of self-reported cases of school practitioners in the Paris area in France shows that the education reality varies widely depending on the actions taken by teachers, school leaders and their teams, and parents (Académie de Paris, France, 2020[37]).

## Figure 8. Teacher's views on their relation with policy-making, TALIS 2018

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements




Source: OECD (2020[11]), TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals, TALIS, OECD Publishing, Paris.

Given the complexity of developing, co-ordinating, and implementing an emergency education strategy, countries can establish a crisis management group / task force / steering committee. In Iceland, the Ministry established a co-operation committee, composed of 70 members from throughout the school system (Ministry of Education, Iceland, 2020[38]). In Kentucky, USA, the Department of Education created an Education Continuation Task Force to work on issues pertaining to the pandemic, provide strategic advice, and contribute to a global communication strategy (Department of Education, Kentucky, USA, 2020[39]). Such groups may bridge the gap between the government and stakeholders, especially if different representatives of the educational landscapes are selected, and inform the work by sharing different perspectives.

Some countries were able to consult with selected practitioners and stakeholder representatives on certain aspects of the strategy for school closure and remote learning. Aside from the co-operation committee in Iceland, the Ministry of Education organised online meetings with community leaders, head teachers and principals, all member organisations of the Icelandic Teachers' Union, local educational authorities and government institutions. The Ministry also opened a hotline to support principals in case of infections and quarantine issues at their schools (Ministry of Education, Iceland, 2020[38]). In Ireland, the guidance published by the Department of Education and Skills on continuity of schooling was informed by three surveys of schools and practitioners conducted by i) the Inspectorate, ii) Maynooth University on behalf of the Irish Primary Principal Network, and iii) the Education and Training Board, Ireland on behalf of the post-primary institution management bodies (Department of Education and Skills, Ireland, 2020[40]). In Wales, UK, a technical advisory cell has been established where a children and education subgroup consults on best approaches, while other consultation stakeholder groups have been participating in shared decision-making (Education Wales, 2020[41]). These highlight that due to the transversal impact of the crisis, a consultation process should not be limited to the educational sphere, but also take into account insights from health and safety, child wellbeing, and possibly IT experts to cover all potential aspects affecting students and assess the feasibility of distance learning solutions.

Given the emergency, many countries did not have time to organise thorough consultation processes, and the closing of schools happened sometimes very suddenly. In such circumstances, where speed of the governmental response is key, governments can consider a lighter engagement strategy. On the one hand, a targeted consultation of existing expert committees, or union representatives, who already know the challenges of their members, can provide insights quickly on the desirability and feasibility of the emergency policy. On the other hand, the establishment of feedback loops will allow stakeholders to contribute to shaping later on the response to the crisis (next section).

## Fostering transparency for effective implementation

For the crisis response to be effective, a clear task allocation and accountability relationships must be established. Roles and expectations need to be defined: teachers to ensure continuity of education, school principals to exert leadership and maintain the integrity of the school community fabric, parents to engage with schools and their children, local and central authorities to support these endeavours. These have been usually established in guidelines published by the government (see Ireland, the Russian Federation, and France in the “Communicating in times of crisis” section).

An OECD review of evaluation and assessment has documented the general trend towards the devolution of responsibilities to the local level (OECD, 2013[27]). This increased autonomy has usually been accompanied by the strengthening of monitoring by local or educational authorities, since decision making at the school level without the necessary support and monitoring can lead to low performance and inequality of educational outcomes (OECD, 2016[42]). This means that in many countries, monitoring tools, such as an Education Management Information System (EMIS) already exist, and can serve the purpose of implementing emergency measures.

Monitoring of progress assumes a dual function, namely serving accountability and enhancing development (OECD, 2013[27]). However, during the crisis, the development side of monitoring should be stressed, since the crucial involvement of stakeholders, mentioned in the previous section, depends on the trust vested in them (Brown et al., 2015[43]). Monitoring tools can therefore support the engagement and communication between stakeholders within school communities and across the system to maintain contact, cultivate trust and make up for the limitations imposed on physical proximity.

At the school level, it implies to develop mechanisms of periodic checking-in with teachers and school staff, to monitor their well-being, and ensure they have sufficient resources. In educational systems where all schools and teachers use official online learning platforms and workspaces, school leaders and their teams

can track which students logged in and attended classes or submitted homework. This allows teachers and other school staff to identify which students are at risk.

Existing data information systems that collect, compile and manage information can provide real-time access to student data. These have the potential to assist teachers in the instruction of their students, provide quick feedback to school agents, serve as a platform to post relevant instructional material to support teachers, and operate as a network to connect teachers and schools with similar concerns. Information systems can support teachers who need to maintain communication with each student, ideally in a form of daily checking-in. In case of technological limitation, this can take the form of text messages, or phone calls. School principals can also build on existing communication platforms (applications, school portal, newsletters etc.) to inform their community, and promote home-based and school-based parental involvement.

Across the OECD, the reality and possibilities for action vary substantially from one school or institution to the next. Although data are still scarce, some countries are starting to document the reality of implementation at school level. In the United States for instance, an online survey of 2 600 teachers conducted in March and April 2020 by the non-profit publisher Education Week found that schools in rural, urban and high-poverty districts were less likely to offer online learning opportunities to all students. Schools in districts with a majority of low-income students were also more likely to use a wider variety of communication tools beyond emails, including phone calls, texts, social media, and snail mail (Herold, 2020[44]).

At the central level, existing mechanisms for intelligence gathering can be mobilised. Countries have usually surveys of key stakeholders to collect qualitative feedback on the education system, including on the teaching and learning environment and overall satisfaction (OECD, 2013[27]). In Latvia, the Ministry of Education and Science only had a week to design a remote learning process. The Ministry launched afterwards a survey on the implementation of distance learning during the crisis, to gather feedback from parents, students, teachers and school principals and ground policy-making on evidence (Jenavs and Strods, 2020[45]). Data information systems can also provide timely quantitative information and inform decision-making. An essential component of both crisis prevention and crisis response, intelligence gathering allows to monitor feedback from all stakeholders and accordingly to shape continuously the policy response to a crisis, contributing in the meantime to fostering stakeholders' engagement.

## Communicating in times of crisis

During the crisis, stakeholders may lack information, which will generate high levels of uncertainty and anxiety, and erode trust. This may therefore limit stakeholders' participation in initiatives to support educational continuity. To offset this, governments can foster transparency by engaging in targeted communication strategies that, for instance, provide teachers with guidance, clarify available resources and objectives to local authorities, and inform parents and tutors of updated assessment methods and national examinations. In countries with a large share of immigrant students (Figure 9), or countries with a range of linguistic groups, translated material may be necessary to foster greater parental involvement. In New Zealand, for example, during the period of confinement, the Ministry guaranteed that educational resources were available in English and Maori languages by creating bilingual content to populate two online platforms, two dedicated television channels, and hard copies of educational content (Ministry of Education, New Zealand, 2020[46]).

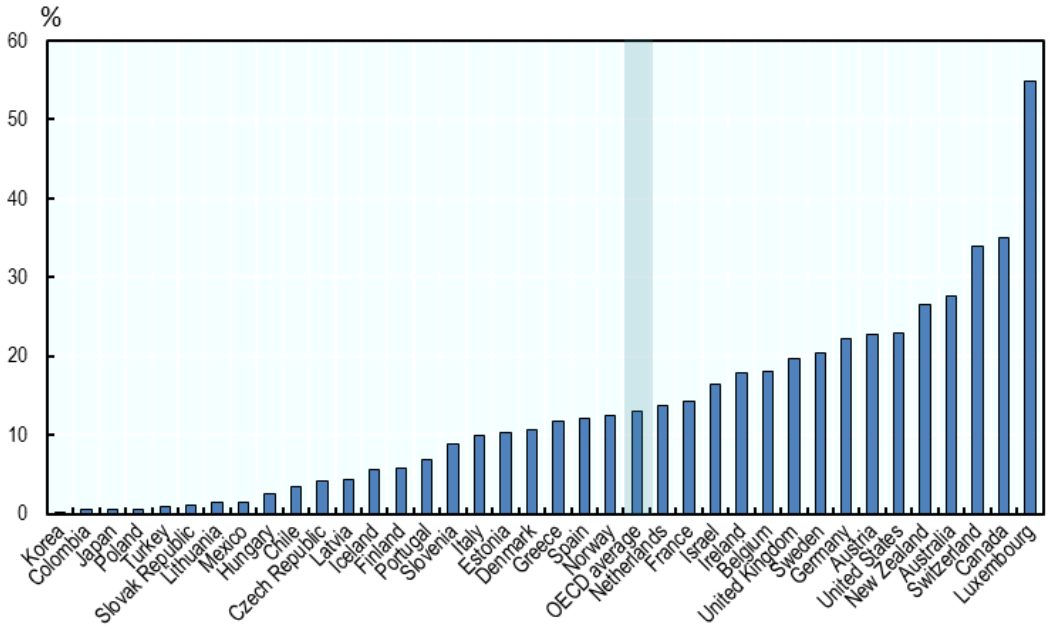
An effective communication strategy is multi-faceted. It builds on the many available media (e.g. websites, newsletter, TV news, radio interviews, Facebook and Twitter posts), and uses an adapted language to reach diverse audiences. Andrews (2020[47]) suggests simple principles to support communication: be calm, clear, factual, and frank. He also emphasises the importance of explaining openly and often the situation, plans, and concerns, what is known and what is not. Given the scope of the shock affecting

education systems across the world, the actual crisis calls for a strong central communication strategy, to inform and mobilise stakeholders, and for sustained school-centred communication at the local level to keep the community updated of the latest developments.

An example of targeted communication to students has taken place in several education systems. As the pandemic has created unprecedented conditions that can be difficult for youth to comprehend and can generate severe stress, several political leaders took the time to communicate directly with young learners. For instance, Prime Ministers of Norway, New Zealand and Finland held press conferences for and with children only attending, to listen to their concerns and answer their questions. In addition, central authorities in countries such as Norway set up hotlines for children and young people to reach out 24/7 in case of emergencies via telephone, texts, and email (Directorate for Education and Training, Norway, 2020[48]).

The crisis is the opportunity to restate the national commitment to key educational principles and goals and to establish priorities for the next stages in terms of learning outcomes, but also health and well-being. OECD countries have adopted different communication approaches, balancing stakeholders' need for guidance and up-to-date information, and demonstrating the government's ability to plan forward by detailing the next steps to come. Due to the risk of overwhelming stakeholders with constant updates to match the progression of the pandemic, the communication strategy needs to focus on the elements relevant to education and avoid "information pollution". Most Ministries of early childhood, school and higher education set up dedicated pages on their websites and published press releases, guidelines and other contents throughout the crisis to update education stakeholders on the national strategies and their direct implications for education. For instance, the dedicated webpage of the Ministry of Education in Estonia clarified all key topics related to education during the COVID-19 crisis, creating a one-stop location for stakeholders to find up-to-date information and links to useful resources (Ministry of Education and Research, Estonia, 2020[49]).

### Figure 9. Percentage of students with an immigrant background, PISA 2018




Note: Students whose mother and father were born in a country/economy other than that where the student is schooled are considered immigrant.
Source: OECD (2019[12]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, PISA, OECD Publishing, Paris.

Most OECD countries defined broad guidelines to inform schools on the implementation of distance learning with different emphasis. For instance, the guidance published by Ireland's Department of Education and Skills highlighted priority themes such as schools' responsibilities, the importance of co-operation between practitioners, and the necessity to maintain communication and well-being in a short document, with links to additional resources for further information and regular updates published online (Department of Education and Skills, Ireland, 2020[40]). The Russian Federation published comprehensive guidelines for the implementation of educational programmes using e-learning and distance learning technologies to inform schools at all levels of school education of the basic measures they should take, such as communicating with parents, forming a timetable and planning for alternatives methods of teaching, student support and assessment (Ministry of Education, Russian Federation, 2020[50]). In France, a ministerial memorandum was published a few days before school closure to outline the strategic principles for pedagogical continuity during school closure and the main responsibilities of sub-national authorities and schools to implement remote learning (Ministère de l'Éducation Nationale et de la Jeunesse, France, 2020[51]).

Anecdotal evidence shows that along with clear communication at central level, dynamic communication initiatives between levels of education systems and within school communities have facilitated stakeholders' engagement in the implementation of remote learning across OECD countries. Compilations of schools' self-reported experience and the importance of clear communication at local and school levels can be found for several countries such as France (Académie de Paris, France, 2020[37]), Latvia (Ministry of Education and Science, Latvia, 2020[52]), New Zealand (Ministry of Education, New Zealand, 2020[53]), and for English-speaking schools around the world (Finalsite, 2020[54]).

# 4 Designing a smart policy that responds to school needs

The policy design, or policy plan, refers to the solution that policy makers develop to answer an issue such as providing education while most schools are closed. For an overwhelming majority of OECD countries, this solution was to switch to remote learning provision when the COVID-19 crisis hit. As the numbers of newly infected cases slow down, and confinement is softened or ends, countries have different options for a return to school. In the mid-term, experts acknowledge there are risks of further waves of infections, possibly until a vaccine is found. In these conditions, governments are planning different scenarios they can use in response to the evolution of the pandemic, and school closures and variation of remote learning approaches are feasible policy options.

The nature of a policy solution, and its design, influence its implementation. According to Viennet and Pont (2017[10]), designing a smart policy relies on articulating a vision to guide the strategy, consulting stakeholders and taking into account contextual factors to ensure it is feasible. It implies to select the adequate policy tools to drive the reform. As they developed their education response in emergency, OECD countries had to select the appropriate policy tools under time, resources, and capacity constraints. These emergency initiatives have varied greatly between education systems due to different contexts and stakeholder engagement parameters.

## Shaping a vision to guide the strategy

A vision usually serves as a guiding principle for a policy decision, describing an aspiration to an educational situation, and bringing stakeholders together around a common objective. For instance, at the foremost of its communication on the impact of coronavirus on education and culture, the Ministry of Education and Culture in Finland emphasised the educational rights to every child, despite the closing of school premises. It also reaffirmed as a top priority health of children, young people, teachers and staff (Ministry of Education and Culture, Finland, 2020[55]). In Korea, the Ministry of Education stated three guiding principles for its response to COVID-19: “Openness, transparency and democratic process”, describing its response as the result of “a whole nation working together with a high level of civic responsibility, thoughtfulness and a sense of solidarity” (Choi, 2020[15]).

The vision guiding the policy response to the crisis should be integral to any communication strategy. As detailed in the “Involving stakeholders during emergency conditions” section, the current situation represents an opportunity to renew the national commitment to key educational principles. Following the Finnish and Korean examples, such principles should not be narrowed down to mere educational performance, but also include equity and well-being, concepts that are increasingly being highlighted across education systems in OECD countries, to remind to all the holistic role of education.

Stakeholders will respond to a vision that clarifies how their own roles contribute to a broader common good. Specifying a vision that guides the emergency policy will strengthen schools, teachers, students and parents’ sense-making process, contributing to their engagement. In the COVID-19 case, it may focus on accomplishing the whole curriculum in the same way as during physical school presence, providing a social

network to students to remain engaged in education with a narrower learning focus, or opening schools for those in need. In any event, involved stakeholders will be able to adapt their actions accordingly, resulting in a higher chance of success as efforts are aligned in the same direction.

## Empowering schools to enable innovation and change

The strategies adopted by governments to switch to distance learning relied heavily on schools' capacity to respond quickly, as well as on teachers' immediate proficiency in ICT, among other factors. The section "How ready are teachers and school leaders?" already highlighted the urgency that education systems face to prepare teachers for educational technology use. For many teachers and school principals, adapting to distance learning required knowledge of a range of ICT tools. While adopting a professional development strategy to support education professionals would have been suitable, the quick developments linked to the crisis posed a significant time constraint on what was possible for countries to set up in terms of professional development and support.

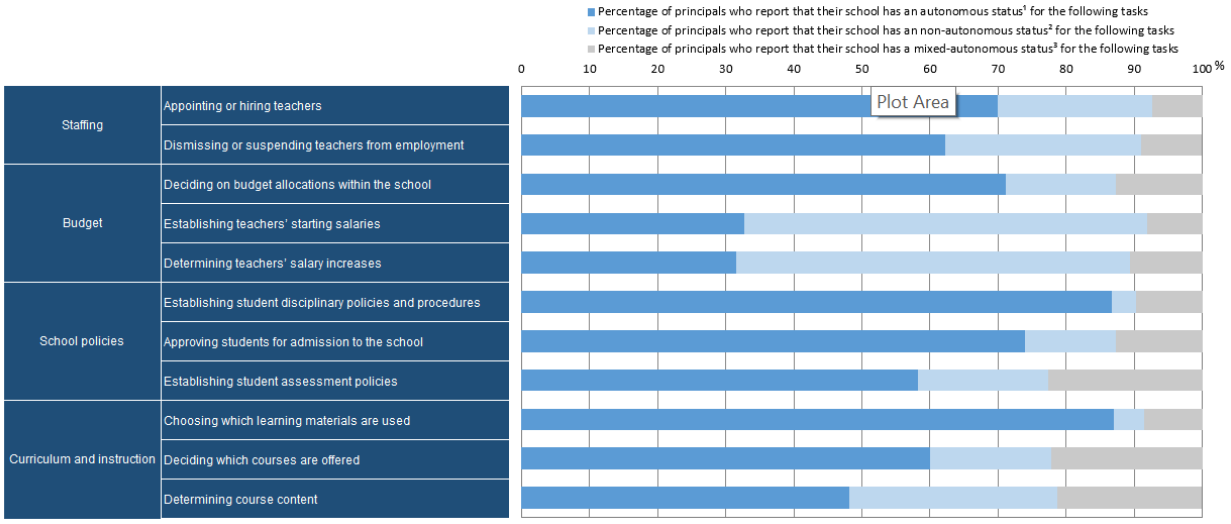
Some countries succeeded in setting up support to schools, as in the case of Korea, where the Ministry of Education facilitated the creation of a support network of digitally savvy teachers who volunteered to mentor their peers and help them use digital tools before the academic year started again online (Ministry of Education, Korea, 2020[56]). Several other countries co-ordinated the creation or the expansion of resource platforms to train and support practitioners as they teach and co-ordinate remote learning with guidelines, tips and testimonies from other schools. This is the case in New Zealand, for instance, where the "Learning from home" online platform and its Maori equivalent provide advice for teachers to plan lessons and teach remotely, as well as up-to-date guidelines to continue education in coherence with the national level (Ministry of Education, New Zealand, 2020[46]). To help teachers develop their capacity to teach remotely and plan their lessons, Mexico built on existing platforms online (*aprende en casa*) and on television (Capacita TV). Teachers are encouraged to take online Massive Open Online Courses (MOOCs) and attend online conferences on digital tools and teaching online, and to watch pedagogical programmes on educational TV channels to update their lesson plans (Worlbank, 2020[57]; Secretariat of Public Education, Mexico, 2020[58]).

The abrupt transition to distance learning challenged teachers and school principals, forcing them to adapt quickly their way of teaching and reviewing the school organisation. Across OECD countries, schools exert on average high levels of autonomy in curriculum and instruction (Figure 10). In addition, over 90% of surveyed teachers say that it is up to them to select teaching methods, assess students' learning, discipline students and set the amount of homework to assign, 80% of teachers say that most teachers in their school strive to develop new ideas for teaching and learning, and 75% say that most teachers are open to change (OECD, 2020[11]).

This resulted in much innovation by schools and their professionals during the crisis, who found many solutions through virtual means to continue teaching and engaging with their students (Figure 5). In Estonia, all learning materials were already online, which gave teachers room to focus on teaching. With the support of the Finnish National Agency for Education, Finnish schools have been exploring flexible learning arrangements. In Hungary, as teaching shifted online, the government observed "remarkable dynamism" from schools designing their own solution in a large bottom-up approach across the country (OECD and Harvard Graduate School of Education, 2020[9]). These positive developments have demonstrated the innovation and change capacity of schools that can be fostered in the future. In the mid-term, schools, their principals, and teachers, can be at the heart of the strategies to adapt the education vision to their schools by collaborating and exploring the most suitable approaches that match their students' needs with their own staff capacity and availability.

## Figure 10. School autonomy, TALIS 2018

Results based on responses of lower secondary principals




Note: 1. "Autonomous status" occurs when significant responsibility is taken solely by at least one of the following entities: principal, other members of the school management team, teachers who are not part of the school management team or the school governing board.
2. "Non-autonomous status" occurs when significant responsibility is taken solely by a local/regional/state/national/federal authority.
3. "Mixed-autonomous status" occurs when significant responsibility is taken by a local/regional/state/national/federal authority and by at least one of the following entities: principal, other members of the school management team, teachers who are not part of the school management team or the school governing board.
Source: OECD (2020[11])*TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, TALIS, OECD Publishing, Paris.

Innovation adoption is complex, because it disrupts an established routine and pushes teachers and school principals out of their comfort zone (Serdyukov, 2017[59]). In that sense, the crisis has played a transformative role: whether schools have resorted to old-fashioned correspondence, or tried to recreate online the school setting using digital tools, lessons learnt so far promote agile and autonomous schools, likely to adapt quickly (Schleicher, 2020[60]; Schleicher, 2020[61]). As countries evaluate their responses, they can assess the capacity their schools had and can continue to have to innovate and adapt to change. The strategic use of research should contribute to evaluate the implementation of new teaching and learning practices. The identification and streamlining of best practices will contribute to the improvement cycle of the educational system and inform the reform agenda in the mid-term.

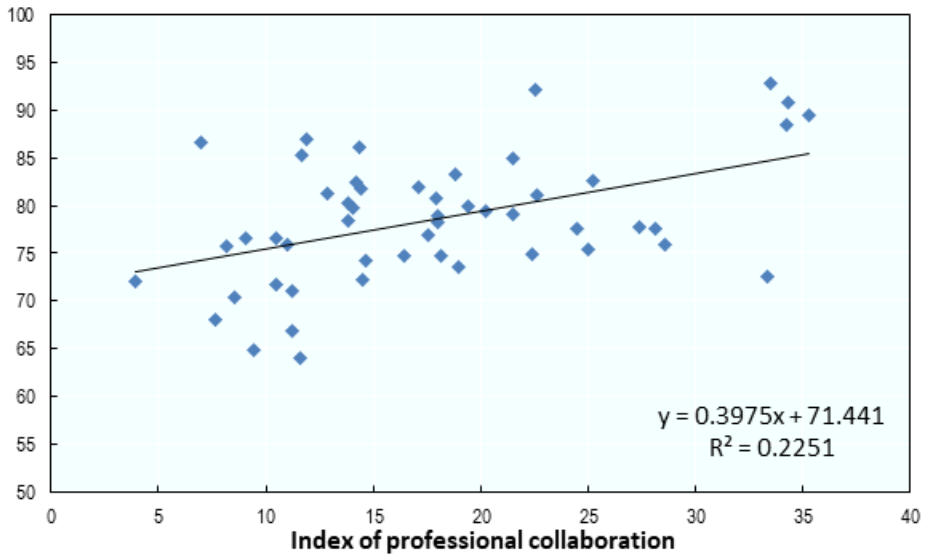
In the school improvement literature, highly innovative schools are associated with a "bottom-up" influence. Teachers' sense of autonomy and participation in decision-making contribute to create an innovation-driven environment (Geijsel, Sleegers and van den Berg, 1999[62]; Geijsel et al., 2001[63]). However, school principals could more actively promote teachers' involvement in the decision-making processes of their schools. TALIS shows that only 56% of principals report that teachers have a role in the school management team, and only 42% of principals report that their teachers have a significant responsibility over a large share of tasks related to school policies, curriculum and instruction (OECD, 2020[11]). In other words, there exists an untapped latent potential of the teaching force to steer innovation and change from within.

The school organisational structure also matters. Countries whose schools present a higher level of professional collaboration are also associated with a higher level of innovation behaviour (Figure 11). Implementing innovative practices requires teachers to continuously reflect on their existing teaching methods and consider changing their knowledge and beliefs (Bakkenes, Vermunt and Wubbels, 2010[64]),

and schools and their leaders to provide environments where teachers can collaborate and develop their own strategies (Pont, 2020[65]). Structures such as learning organisations or professional learning communities are associated with higher levels of readiness for change, self-efficacy, and innovation adoption, making such organisations the more likely to thrive in highly uncertain environments (Harris and Jones, 2010[66]; Owen, 2014[67]; Tam, 2014[68]; Kools and Stoll, 2016[69]; Kools et al., 2019[70]).

Long-lasting changes require specific conditions, "a mixture of cultural and institutional changes, commitment from those within the programme, and active and engaged leadership" (De León, 2013, p. 347[71]). Educational systems can emerge from this crisis with a renewed confident, highly skilled and autonomous teaching profession that exerts its agency collaboratively. School principals can be key to promote and shape the culture of change and innovation in schools to adapt to the external context, by involving teachers and other stakeholders more in decision-making, and reviewing the school's organisational structures in favour of more organic models that can adapt quickly to an ever-changing environment. This emergence of a "new normal" in education will precede the development of a 21st century model of school (OECD, 2019[72]).

### Figure 11. Correlation between teachers' innovativeness and professional collaboration, TALIS 2018




Note: The index of professional collaboration measures teachers' engagement in deeper forms of collaboration that involve more interdependence between teachers, including teaching jointly as a team in the same class, providing feedback based on classroom observations, engaging in joint activities across different classes and age-groups and participating in collaborative professional learning.
The index of teachers' innovativeness measures whether most teachers in their school strive to develop new ideas for teaching and learning; whether most teachers in this school are open to change; whether most teachers in this school search for new ways to solve problems; and whether most teachers in this school provide practical support to each other for the application of new ideas.
Source: Author's computation, Table I.2.35 (OECD, 2019[18]) and Table II.4.1 (OECD, 2020[11]).

## Leveraging the adequate policy tools: technology and preparedness

Policy tools refer to the multiple actions and incentives put in place to reach the desired policy objectives. This paper has already covered some of them, including among others: developing suitable assessments and social services during the closure of physical schools; considering public-private partnerships to expand quickly a country's response capacity; and providing just in-time professional development to adjust teaching staff's capacity.

Countries are facing the critical choice of selecting the right policy tools for education delivery when schools may be closed, require social distancing or hybrid measures to respond to health needs. Online tools provide great versatility and opportunity for interaction (OECD, 2020[17]), but are only as good as their teachers' capacity to use them, so their selection and choice should be discussed with practitioners (section "Involving stakeholders during emergency conditions"), and be adapted to the existing resources (section "What resources are available?"). To facilitate the exploration of online resources, the UNESCO has listed distance learning solutions, most of them free, to help parents, teachers, schools and school administrators facilitate student learning and provide social care and interaction during periods of school closure (UNESCO, 2020[30]). The OECD, in collaboration with the Harvard Graduate School of Education, the World Bank, and the Hundred Organisation, has also published an annotated list of resources to help students, teachers and parents keep learning going during the crisis (Reimers et al., 2020[28]). These tools consist mostly in:

- Collaboration platforms that support live video communication: to recreate classrooms online and hold meetings between the educational staff, and with parents.
- Digital learning management systems: a learning environment software designed to provide a range of administrative and pedagogic services related to formal education settings (e.g. enrolment data, access to electronic course materials, faculty/student interaction, assessment). Other terms used to describe such applications include "virtual learning environments" and "course management systems" (OECD, 2005[73]).
- Massive Open Online Course platforms: free of charge online courses, designed for large numbers of people to take them at once. They encourage peer-to-peer learning and award certificates rather than academic course credit (OECD, 2013[74]).
- Self-directed learning content: a vast array of resources where the learner is an active participant and develops ownership over the learning process, including, but not limited to: software packages that aim to help students practice particular skills, also referred to as computer-assisted learning, game-like activities, adaptive tutoring system, and repository of educational videos (UNESCO, 2020[30]).

A literature review on the impact of education technology on learning outcomes concludes that two tools show considerable promise. On one hand, computer-assisted learning targets the development of specific skills, such as improving math computation or reading comprehension. The major channel through which computer-assisted learning can improve learning is its potential to personalise education, in other words, to tailor its content to the learning needs of a student. On the other hand, technology-enabled behavioural interventions, such as large-scale text message campaigns and communication channels between the school and parents, offer cost-effective alternatives. They mostly rely on engaging parents in their children's learning process, by practising skills with their kids at a young age, and progressively encouraging them to put more effort into school as they grow older (Escueta et al., 2017[75]).

Moreover, the choice of a learning tool should not only pursue an objective of educational continuity, but also strengthen the sense of belonging to a learning community. The imposed distancing measures have weakened the schools as communities, which may have a detrimental effect on students' outcomes. In fact, students in schools with a strong sense of community are more likely: to avoid risky behaviours, including drug use and violence (Resnick et al., 1997[76]); to act ethically and altruistically (Battistich et al., 1997[77]); to be academically motivated (Solomon et al., 2000[78]); and to develop social and emotional competencies (Schaps, Battistich and Solomon, 2004[79]).

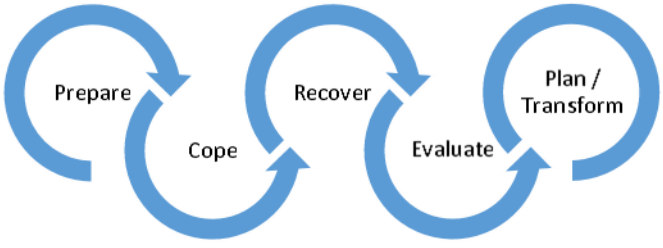
With distance learning, students are led to develop their agency and manage their own learning. There is however a considerable risk in educational systems where online courses have simply replaced physical courses in schools. Escueta et al. (2017[75]) showed indeed in their literature review that without some degree of face-to-face teaching, learning outcomes may be diminished. In contrast, blended learning environments, a pedagogical approach that combines the strengths of face-to-face and online modes of

learning (Garrison and Vaughan, 2008[80]), have not been found to perform significantly less than face-to-face courses. This blended learning approach provides a combination of the classroom socialisation opportunities with the technologically-enhanced active learning possibilities of an online environment (Dziuban, Hartman and Moskal, 2004[81]). Under specific conditions, such an "hybrid model" has been recognised for offering greater time flexibility, enhanced opportunities for teacher-student interaction, increased student engagement in learning, reduced students' attrition, leading to increased student achievement and satisfaction (Vaughan, 2007[82]; Vaughan, 2014[83]). At a time where the future of physical schools appears uncertain, hybrid models of education offer an interesting solution to ensure education continuity without negatively affecting quality. The chosen digital modality should however follow an established quality control, to ensure the aforementioned adverse effects are avoided.

With these types of approaches to teaching, learning time may be re-organised, as simply replacing the schooling hours by online lectures may be inadequate. Research suggests to keep online lectures short and to promote active learning, as limited attention span and cognitive overload may undermine the learning process (Mayer, 2014[84]). With shorter teaching time, schools and their teachers may have to review the curriculum, and prioritise specific content. This can depend on the level of autonomy provided to schools in defining and delivering the curriculum. It may require central guidelines that identify the core of the curriculum, as well as support for teachers in their lesson planning. This is especially relevant for centralised countries, such as Greece and Turkey, where teachers and school leaders are responsible for less than 10% of the curriculum, as opposed to more decentralised countries, like the Netherlands and New Zealand, where the cumulated responsibilities of teachers and school leaders is over 90% (OECD, 2016[42]).

Finally, an emergency situation such as this has raised awareness for the need for schools and education systems to be prepared for different eventualities, such as COVID. In many parts of the world, schools face environmental hazards and have emergency plans to cope quickly and effectively with potential disasters (International Finance Corporation, 2010[85]; UNISDR, 2010[86]). This crisis made clear that every school could benefit from having a cyclical approach for emergencies. This can imply having a response plan to operate from a distance, and for a prolonged period. If this happens again, countries can develop a coping strategy to mitigate the impact of the crisis and, in particular, identify and provide additional support to the most vulnerable. As the emergency phase dissipates, educational systems can start to recover, and implement measures to compensate the negative effects of the crisis, such as adjusting the academic calendar, and supporting students to prepare high-stakes examinations (Kaliope and Shmis, 2020[87]). Education stakeholders can then assess the impact of the crisis in their schools and beyond, and draw lessons for eventually improving more broadly, building on the transformative role of the crisis to plan for the future (Figure 12).

### Figure 12. A cyclical approach to education in emergencies




Source: OECD (2020[88]), "Spotlight 21. Coronavirus: Back To School", in *Trends Shaping Education*, OECD Publishing, Paris.

# 5 Shaping an education implementation strategy in times of COVID-19

The COVID-19 pandemic triggered a number of public health safety measures across the world, including social distancing and school closures in a vast majority of cases, leading governments to re-organise their educational systems to provide education remotely. Health hazards aside, the pandemic has evidenced large risks to student learning and well-being, as well as the increase in education inequalities if the provision of solutions, including remote learning, is not associated with measures to ensure every child has sufficient resources to learn in good conditions.

Overall, the crisis is a stress test challenging the resilience and equity of our education systems. At a time when individuals and schools are isolated, there is a risk that connections between students and schools, and with their community are broken. This is especially important when non-school factors play a determinant role in learning outcomes. Yet, the crisis may be an opportunity to re-imagine education and to explore alternative education organisation approaches that bring schools and homes closer together, that foster the autonomy of students to manage their own learning, and provide additional support to those at a disadvantage. For governments, the next steps are about assuring quality, equity and well-being in education:

- Quality: to minimise the disruption in learning and ensure that students are able to complete their studies with the required level of competences.
- Equity: to ensure that all students from the same cohort enjoy the same learning opportunities, and that students impacted by the crisis will graduate with the same level of competences than their peers from unaffected cohorts.
- Well-being: to ensure not only students' physical and mental health, but also the development of socio-emotional skills, by preserving the school community, and the link between peers and teachers.

As the number of cases declines, countries are adopting different strategies to reopening schools in the short term. Some countries are opening schools for specific groups of children, specific grade levels, specific days of the week, or organising rotating schedules for students to attend in turn. Other countries have already fully returned, or chosen to postpone schools reopening to September (NCEE, 2020[89]). As epidemiologists warn that the epidemic may not end until 2021 (CIDRAP, 2020[90]; Xu and Li, 2020[91]), education leaders are in the midst of establishing short- and mid-term strategies for the provision of education in this peculiar context. Countries need to consider preparing different education scenarios or options to respond to potential developments around COVID, which will all have implications on schools opening. At the heart of success of these measures will be the capacity of schools, and education systems more broadly, to implement these changes in uncertain environments and short timelines.

Consequently, designing strategies for implementation, in terms of how the measures are designed and adopted will greatly condition the outcomes of these policy responses. In regular times, the process of

implementation is as important as the design itself. It requires that policy measures take into consideration the wider context and the participation of education stakeholders, and are shaped in a coherent implementation strategy detailing actionable steps. In times of COVID, implementation strategies are important, as they can provide the necessary vehicle for actions to take place quickly, smoothly and coherently for students and their families, teachers, and schools.

### Box 1. An education policy implementation strategy

An implementation strategy refers to the actions that follow a decision on the design of a policy for it to become a reality. While the policy itself may be defined in a document or statement and provide an overarching vision, its implementation strategy needs to be action-oriented, and requires being flexible enough to be updated and adapted according to progress made and eventual issues that may arise.

A coherent implementation strategy is central to providing clarity on the range of tasks, responsibilities and timing required to move forward and achieve success with the policy. Education policy making is often complex, with responsibilities spread across different levels of governance, with a large number of stakeholders involved, and often taking time to take root in relation to other public policy spheres. Broadly communicating the implementation strategy provides clarity to all those involved in the policy on several central elements: what the objectives are, what needs to be done and how different people may be engaged to achieve them, the type of data that can help understand progress towards the objectives, and the timing and scale of actions to be taken.

Source: Viennet and Pont (2017[10]), "Education policy implementation: A literature review and proposed framework", *OECD Education Working Papers*, No. 162, OECD Publishing, Paris.

## Initial responses to the crisis were implemented quickly

When the crisis hit, most countries resorted to closing schools, and switched to distance learning to ensure continuity of education. Many of these actions were launched and implemented in an emergency situation, under strict time constraints, with short consultation processes at best, and sometimes a lack of evidence on their educational impact. In a short amount of time, education systems and their schools found different approaches to respond to the crisis, and set these into motion quickly. The continuity of education has relied on one hand, on the availability of a range of technical solutions to deliver remote learning. On the other hand, it has relied on the continuous, and versatile engagement of school principals and teachers with their students and their school community, and on the strong engagement of education leaders in consultation with health experts, who promoted actions or provided guidelines and guidance at the national level.

In a recent survey across 54 countries, respondents expressed their views on the implemented strategy for education continuity. Overall, almost 3 out of 4 respondents considered the strategy for education continuity to be well planned, and having some kind of co-ordination mechanism. However, one respondent out of two indicated there was still a lot of improvisation, meaning that the modalities of implementation may have not been clearly laid out. It also appears that teachers were given a lot of leeway to deliver the curriculum, since almost three out of four respondents consider the strategy was designed in a collaborative manner including teachers (Reimers and Schleicher, 2020[8]).

Overall, if two out of five respondents consider that students have learned, but less than they would if they were in school, a third of the respondents indicated that it was not possible to assess how effective were

the implemented strategies for education continuity (Reimers and Schleicher, 2020[8]). However, the previous analysis displayed in this paper allows drawing some lessons for the next steps:

- While countries have pursued school continuity with a strong reliance on technology for remote learning using different means (IT, TV, radio or other), schools' closure have shed light on inequalities related to access to education, and on student well-being in the absence of social interactions and social services provided in schools.
- Due to the emergency, there was little time to craft fully coherent responses around students and schools. For example, the lack of clarity on external assessment practices, or the suspension of the provision of welfare and meal support during the crisis left students, families and schools in periods of high uncertainty.
- Despite binding time constraints, some countries managed to involve stakeholders in shaping the policies through different engagement processes. In such countries, evidence-based decision-making has more likely aligned the education strategy with the effective capacity and available resources for schools to be able to provide remote learning responses.
- Across OECD countries, the continuity of education has heavily relied on schools principals and teachers, whose investment to found solutions through virtual means to continue teaching and engaging with their students has been pivotal.
- As actions were decided on a daily basis, following information on the health front, this may have led to schools and students not having a clear picture or timeline on what schools could be looking for in terms of progress – or too many expectations. This was improvisation, with just in time actions for quick change, understandable given the nature of the situation. Forward-looking strategies are necessary to equip schools with the tools and capacity to navigate in uncertain environments.

## Considerations for shaping an education implementation strategy for the next stages of COVID-19

As we move into the next stages of the pandemic, the lessons learnt from this first stage can pave the way for more strategic education implementation processes as schools reopen. In times of emergency, when constraints on resources, capacity, and time are binding, and evidence of what may work is limited, having an implementation framework can save time, efforts, and result in better outcomes. Governments can look at the next steps through a framework for effective education policy implementation to structure their response to the pandemic (Viennet and Pont, 2017[10]). By weaving together policy design that provides a vision, tools, and gives schools autonomy over their learning approach, just in time stakeholder engagement that informs decision-making, and key contextual factors such as available resources and complementary policies required to build policy coherence around schools and students, countries can shape an actionable implementation strategy, successful in bringing about effective change.

But it is important to point out that despite the global character of the pandemic, there is no one-size-fits-all implementation strategy for coping with the crisis. This is why, building on the analysis of different country practices and evidence presented in this paper, this chapter provides a set of general recommendations and guiding questions to be adapted for the effective implementation of an education policy response during the next steps of the COVID-19 pandemic. These aim to serve education policy makers in at least two ways. First, they can support policy makers in evaluating the emergency measures that were initially developed to cope with the crisis. Second, they can inform the development of mid-term strategies, considering how to adapt quickly and efficiently to the evolution of the pandemic, and more broadly, how to build our school systems' resilience for potential future emergencies in education.

### *Recommendation 1: Identify key contextual factors relevant to the crisis*

Following school closures, the transition to distance learning did not happen in a vacuum, but was extremely dependent on the context, in terms of available technology, resources and capacity. In addition, policies around student learning, such as formative assessment practices, curriculum content, and high-stake examinations practices, required alignment. Countries also explored alternative ways of delivering social services to disadvantaged students that were traditionally offered at school.

To be feasible and implemented quickly, the development of a policy response to a crisis must rely on immediately available resources, but can also build on existing institutions to expand the scope of the emergency measures. Policy coherence around schools and students is necessary to ensure that all educational aspects surrounding schools affected by the crisis are covered by the policy response. In shaping the next steps of the educational response to the COVID crisis, countries can consider the following contextual factors in their strategy:

- **Action 1.1. Assess the resources necessary for a transition to distance or hybrid learning approaches** (for example through national broadband connection, online learning platforms, access to devices for students at home) and their availability to all schools, education staff and families. Identify the population at risk of dropping-out or experiencing a narrowed-down learning experience due to a limited access to resources and define financial, logistical, and other welfare support.
- **Action 1.2. Broaden the co-operation with potential partners.** Encourage schools to build on existing institutions, networks, national pedagogical centres, universities, public-private partnerships or other to pool resources, share best practices and expand response capacity to improve education delivery in the new modalities, and maintain contact with students and the school community.
- **Action 1.3. Consider health, welfare and assessment policies in the education response**. Health considerations and criteria to protect school communities can help families, school staff and students in the adoption of measures to respond to the pandemic. In education systems where schools provide meals and social services (such as mental health support or counselling services) explore alternative ways to provide these. A range of practices, such as end of term or year examinations, formative assessment practices to follow student progress, and other school or system evaluation processes may be reconsidered to align to the objectives of the education measures.

### *Recommendation 2: Consider stakeholders as the main drivers of change*

The crisis has shown that when things move fast, success relies on the capacity at the frontline to respond quickly, with supportive frameworks that provide policy guidance and criteria. This requires that roles of education stakeholders at each level of the system are clear and co-ordinated in different ways. Some countries have been successful in engaging stakeholders in the development of a solution and defining role, either by launching a consultation process or by establishing a crisis management type of group to co-ordinate the education response to the crisis. Such groups can include stakeholders from different educational and health horizons to inform evidence-based policy making. In complex environments, such consultation with education stakeholders is instrumental to accomplish change, as practitioners hold the expertise of what is feasible on the ground and responsibility to make it happen at the local level and around schools.

In the shaping of education responses to COVID developments, the potential lack of information on the next steps for education and schools, or on the expected roles and responsibilities of different stakeholders, may generate high levels of uncertainty and anxiety and erode trust. Allocating responsibilities in terms of the policy design and implementation by involving stakeholders in shaping a broadly supported education

response can offset this. However, given the short time frames, this process may need to be initially limited and targeted with key actors, as an optimal trade-off between involvement and reactivity. Afterwards, once education delivery is in process, feedback loops can support the fine-tuning or revision of the strategy. For the response to be most effective, the education strategy should:

- **Action 2.1. Co-construct the education response with key stakeholders** to ensure broad policy support. Since the success of students critically hinges on maintaining a close relationship with the educational staff of their schools, it is pivotal that educational staff endorse the policy. Consultation processes with key representatives such as unions, school principals, parent associations, education and health specialists, contribute to shaping a solution adapted to stakeholders' reality. Different approaches to do this can be creating advisory committees or task force groups, and using surveys to gather information quickly.
- **Action 2.2. Focus responsibilities of the different stakeholders on supporting education delivery.** It implies for school principals to shape the school approach to education delivery and inform their community, and initiate and promote sustainable parental involvement, and teachers to be aligned to the scenarios chosen for curriculum delivery, including hybrid models and to continuously reach out and monitor the progress of all their students. Local education authorities could also provide additional support to the most vulnerable schools and students. At the central level, health, safety and educational guidelines can be developed by the government.
- **Action 2.3. Build on existing monitoring tools to support communication** between stakeholders within school communities and across the system to maintain contact, cultivate trust and make up for the limitations imposed on physical proximity. This can be done at the national level and also at the school level through existing communication platforms (applications, school portal, newsletters etc.).
- **Action 2.4. Adapt existing feedback loops to gather information.** Countries may use surveys or other data collection to collect qualitative feedback on teaching and learning progress, challenges and solutions. These sources allow continuously shaping the policy response to the crisis according to stakeholders' feedback, contributing also to fostering their engagement.

### *Recommendation 3: Design an educational policy that mitigates the educational impact of the crisis*

According to Viennet and Pont (2017[10]), designing a smart policy relies on articulating a vision to guide the strategy, taking into account contextual factors and insights from stakeholders. As they developed their education continuity policies following school closures, OECD countries had to select the appropriate policy tools under time, resources, and capacity constraints.

In the early stages of the pandemic, the vision guiding the policy response may have not been clearly stated in some countries, while schools and teachers exerted their autonomy to shift rapidly to distance learning, either through synchronous instruction via online classrooms, or asynchronous instruction relying on self-directed learning content, TV or radio broadcasts. As time passed, governments and schools can capitalize on this experience to refine their approaches to distance learning delivery, and consider the following to fine-tune the design of their response to the crisis:

- **Action 3.1. Develop a vision guiding the policy response** that acknowledges the crisis and its implications, and restates the national commitment to key educational principles and safety. The vision should not be narrowed down to mere educational performance, but also include equity and well-being, reminding to all the holistic role of education.
- **Action 3.2. Choose the adequate means of education delivery** based on the assessment of resources and stakeholders' feedback. Such means should not only support learning, but also strengthen the sense of belonging to a learning community. Online learning tools may offer great

versatility and opportunity for interaction, but could be balanced with screen-free activities to maintain attention and limit potential detrimental effects on health. More traditional education practices, such as using the TV or the radio as a medium, or printing work booklets, should be considered in places lacking an IT infrastructure. Given the disruptive delivery of education (new modalities of teaching, shortened learning time), re-organise the curriculum by defining what should be learnt in priority during the emergency.

- **Action 3.3. Provide just in time professional development for teachers and parents** to support learners in their instructional approach. According to the context and existing infrastructure, this can take be done by traditional pedagogical centres providing online training, professional networks exchanging best practices, online platforms supporting practitioners and parents, MOOCs.
- **Action 3.4. Empower schools in the delivery of learning**, building on the experience of the COVID crisis to transform schools. Promote school organisational structures that empower teachers in terms of pedagogical content and school management. Structures such as learning organisations or professional learning communities are associated with higher levels of readiness for change, self-efficacy, and innovation adoption, making such organisations the more likely to thrive in highly uncertain environments. Promote the development of a new educational model, such as blended learning, a pedagogical approach that combines the strengths of face-to-face and online modes of learning, to increase flexibility and enhanced opportunities for teacher-student interaction.

### *Recommendation 4: Shape a clear and coherent implementation strategy*

Bringing together the different dimensions into an implementation strategy make them actionable. The strategies adopted by OECD countries following school closures to ensure education continuity were bounded by short timelines, and shaped in line with the progression of the COVID pandemic. Some strategies were co-constructed with stakeholders, drawing on the insights of practitioners, but others were ad hoc, given the lack of information and knowledge on the pandemic, and sometimes fragmented, leaving some facets of education uncovered.

Countries are now taking a step back, as they consider the next steps in their back to school strategies. Surveys, questionnaires, and other feedback loops have been used to gather information on practices and their success at different levels of the system. This knowledge should serve as input for education policy makers and leaders across systems to shape the next strategies to cope with the pandemic. Lessons drawn from international practices suggest that to bring effective change in education, countries should:

- **Action 4.1. Shape and communicate the implementation strategy** bringing together the different relevant dimensions. This includes the national education vision, the clarification of the roles different stakeholders will play during the next steps, the available resources, the adjusted academic calendar, the updated assessment methods, including the high-stake examinations at transitional stages of education, and the selected policy tools to reach these objectives.
- **Action 4.2. Monitor to understand progress and potential pitfalls**. This may be done by developing monitoring approaches that provide systematic feedback on progress in implementing the education measures. This would help to identify and, if needed, readjust the strategy in terms of policy design, timing, resources and roles and responsibilities. It would also allow to understand progress made for teachers and learners, as well as the approaches to support at risk students and schools where needed.
- **Action 4.3. Establish a communication strategy that can reach different audiences.** Launching communication and engagement campaigns for discussion and exchange of good practices and progress made using an adapted language and translated material if necessary. This can be done based on available media (e.g. websites, newsletter, TV news, radio interviews, Facebook and Twitter posts) to ensure broad coverage.

## Box 2. Guiding questions for a coherent implementation strategy

### Identify the contextual factors that matter

- What technologies are available and feasible for teachers and students to be able to undertake remote or hybrid learning? What initiatives are necessary to support groups of learners with additional risks and needs?
- What welfare and social support should be maintained to help communities and individuals through school continuity strategies (e.g. meal distribution, healthcare and mental health support)?
- What health and welfare precautions should be taken to guarantee students, parents and staff well-being?
- What are the priorities and most appropriate practices for student assessment? Should high-stakes examinations be maintained, modified or postponed?

### Consider stakeholders as the drivers of change

- Who are the key actors in the crisis, what are their roles and responsibilities, and how to involve them in shaping the design of the policy response?
- What are the specific expectations for school leaders, teachers, parents and learners, and what is the most effective way to support them in their role? What can policy makers do to support schools and student learning?
- Which existing monitoring tools at school, local and system level can gather information and help implement the policy? Are additional tools such as surveys necessary and can they be implemented quickly?

### Design a smart policy that responds to school needs

- Given the current crisis, its implications for performance and equity in education, has the country developed a vision with clear priorities for education for the next steps and beyond?
- What are the most appropriate and feasible tools to teach students in different COVID scenarios? How much education can happen online, via TV or radio broadcast, and via physical books and worksheets?
- What competences should teachers and school principals develop quickly to co-ordinate the new means of curriculum delivery?

### Shape a clear and coherent implementation strategy for education provision during COVID-19

- Are all these elements shaped into a coherent implementation strategy that clearly states roles and responsibilities, details policy tools, develops policy coherence around schools and students, and sets timeframes to ensure the policy unfolds effectively on the ground?
- Which communication channels are most appropriate to reach each target audience (including learners, parents, practitioners, local decision-makers)? What can be said with certainty (e.g. published in official guidance documents); what needs precaution when announced; and how to follow up with updates without overwhelming the audience?

# 6 References


Académie de Paris, France (2020), *CARDIE*, https://www.ac-paris.fr/portail/jcms/p2_2017054/en-direct-des-etablissements-partageons-nos-pratiques. [37]

Andrews, M. (2020), *Public Leadership Through Crisis: Good communication ideas you might consider*, Building State Capability, Center for International Development, Harvard University, https://buildingstatecapability.com/2020/03/17/public-leadership-through-crisis-5-good-communication-ideas/. [47]

Bakkenes, I., J. Vermunt and T. Wubbels (2010), "Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers", *Learning and Instruction*, Vol. 20/6, pp. 533-548, http://dx.doi.org/10.1016/j.learninstruc.2009.09.001. [64]

Battistich, V. et al. (1997), "Caring school communities", *Educational Psychologist*, Vol. 32/3, pp. 137-151, http://dx.doi.org/10.1207/s15326985ep3203_1. [77]

Brown, S. et al. (2015), "Employee trust and workplace performance", *Journal of Economic Behavior & Organization*, Vol. 116, pp. 361-378, http://dx.doi.org/10.1016/j.jebo.2015.05.001. [43]

Choi, S. (2020), "Online school year and planning for school reopening", in *COVID-19 Education Response Webinar*, UNESCO, https://unesco.sharepoint.com/sites/Education/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FEducation%2FShared%20Documents%2FCOVID%2D19%20crisis%2FCovid%2D19%20ED%20webinars%2F2020%5F04%5F25%20%2D%20Webinar6%20%2D%20Back%20to%20school%20%2D%20Prepa. [15]

CIDRAP (2020), *COVID-19: The CIDRAP Viewpoint*, https://www.cidrap.umn.edu/sites/default/files/public/downloads/cidrap-covid19-viewpoint-part1_0.pdf. [90]

Cooper, H. et al. (1996), "The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review", *Review of Educational Research*, Vol. 66/3, pp. 227-268, http://dx.doi.org/10.3102/00346543066003227. [3]

De León, L. (2013), "Managing technological innovation and issues of licensing in higher education", in Ran, B. (ed.), *The Dark Side of Technological Innovation*, Information Age Publishing, Charlotte. [71]

Department for Education, United Kingdom (2020), *Coronavirus (COVID-19): free school meals guidance for schools*, https://www.gov.uk/government/publications/covid-19-free-school-meals-guidance/covid-19-free-school-meals-guidance-for-schools. [26]

Department of Education and Skills, Ireland (2020), *Guidance on Continuity of Schooling, For primary and post-primary schools*, https://www.education.ie/en/Schools-Colleges/Information/guidance-on-continuity-of-schooling.pdf. [40]

Department of Education, Kentucky, USA (2020), *Education Continuation Task Force*, https://education.ky.gov/CommOfEd/adv/Pages/Continuing-Education-Task-Force.aspx. [39]

Directorate for Education and Training, Norway (2020), *School - information about the corona situation*, https://www.udir.no/kvalitet-og-kompetanse/sikkerhet-og-beredskap/informasjon-om-koronaviruset/skole-korona/. [48]

Downey, D., P. von Hippel and B. Broh (2004), "Are Schools the Great Equalizer? Cognitive Inequality during the Summer Months and the School Year", *American Sociological Review*, Vol. 69/5, pp. 613-635, http://dx.doi.org/10.1177/000312240406900501. [4]

Dziuban, C., J. Hartman and P. Moskal (2004), *Blended Learning*, Educause Center for Research Learning, Research Bulletin, 2004(7). [81]

Education Wales (2020), *The decision framework for the next phase of education and childcare: considerations, planning and challenges*. [41]

Escueta, M. et al. (2017), *Education Technology: An Evidence-Based Review*, National Bureau of Economic Research, Cambridge, MA, http://dx.doi.org/10.3386/w23744. [75]

FAO (2019), *School Food and Nutrition Framework*, Rome. Licence: CC BY-NC-SA 3.0 IGO, http://www.fao.org/3/ca4091en/ca4091en.pdf. [25]

Finalsite (2020), *Coronavirus Communication Strategies for Schools*, https://www.finalsite.com/resources/coronavirus-communication-strategies-for-schools?tag_id=2025. [54]

Garrison, D. and N. Vaughan (2008), *Blended Learning in Higher Education Framework, Principles, and Guidelines*, San Francisco, CA Jossey-Bass. [80]

Geijsel, F., P. Sleegers and R. van den Berg (1999), "Transformational leadership and the implementation of large-scale innovation programs", *Journal of Educational Administration*, Vol. 37/4, pp. 309-328, http://dx.doi.org/10.1108/09578239910285561. [62]

Geijsel, F. et al. (2001), "Conditions Fostering the Implementation of Large-Scale Innovation Programs in Schools: Teachers' Perspectives", *Educational Administration Quarterly*, Vol. 37/1, pp. 130-166, http://dx.doi.org/10.1177/00131610121969262. [63]

Gromada, A. and C. Shewbridge (2016), "Student Learning Time: A Literature Review", *OECD Education Working Papers*, No. 127, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jm409kqqkjh-en. [6]

Harris, A. and M. Jones (2010), "Professional learning communities and system improvement", *Improving Schools*, Vol. 13/2, pp. 172-181, http://dx.doi.org/10.1177/1365480210376487. [66]

Hattie, J. (2008), *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement.*, NY: Routledge. [29]

Herold, B. (2020), "The Disparities in Remote Learning Under Coronavirus", *Education Week*, https://www.edweek.org/ew/articles/2020/04/10/the-disparities-in-remote-learning-under-coronavirus.html. [44]

International Finance Corporation (2010), *Disaster and Emergency Preparedness : Guidance for Schools.*, World Bank, Washington, DC., https://openknowledge.worldbank.org/handle/10986/17669. [85]

International Publishers Association (2020), *Publishers Without Borders*, https://www.internationalpublishers.org/covid-19-reaction/168-covid-19/966-publishers-act-amid-covid19-pandemic. [16]

Jenavs, E. and J. Strods (2020), *Managing a school system through shutdown: lessons for school leaders*, Edurio, Ministry of Education and Science, Latvia, https://home.edurio.com/report-shutdown-lessons. [45]

Kaliope, A. and T. Shmis (2020), *Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping, and planning for recovery*, Worldbank Blogs, https://blogs.worldbank.org/education/managing-impact-covid-19-education-systems-around-world-how-countries-are-preparing. [87]

Kools, M. et al. (2019), "The relationship between the school as a learning organisation and staff outcomes: A case study of Wales", *Eur J Educ.*, Vol. 54, https://doi.org/10.1111/ejed.12355. [70]

Kools, M. and L. Stoll (2016), "What Makes a School a Learning Organisation?", *OECD Education Working Papers*, No. 137, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jlwm62b3bvh-en. [69]

Learning Innovation (2020), *Future Classroom Project*, https://www.learning-innovation.go.jp/covid_19/. [14]

Liberman, J., V. Levin and D. Luna-Bazalduan (2020), "Are students still learning during COVID-19? Formative assessment can provide the answer", *Worldbank Blogs*, https://blogs.worldbank.org/education/are-students-still-learning-during-covid-19-formative-assessment-can-provide-answer. [31]

Maríñez-Lora, A. and S. Quintana (2010), "Summer Learning Loss", in *Encyclopedia of Cross-Cultural School Psychology*, Springer US, Boston, MA, http://dx.doi.org/10.1007/978-0-387-71799-9_415. [5]

Mayer, R. (ed.) (2014), *The Cambridge Handbook of Multimedia Learning*, Cambridge University Press, Cambridge, http://dx.doi.org/10.1017/cbo9781139547369. [84]

Ministère de l'Éducation Nationale et de la Jeunesse, France (2020), *Circulaire du 13 mars 2020*, https://www.education.gouv.fr/media/52017/download. [51]

Ministère de l'Éducation Nationale et de la Jeunesse, France (2020), *Questions – réponses sur les examens nationaux*, https://www.education.gouv.fr/sites/default/files/2020-04/questions-r-ponses-sur-les-examens-nationaux---session-2020-66513_3.pdf. [33]

Ministry of Education and Culture, Finland (2020), *The impact of coronavirus on education and culture*, https://minedu.fi/en/the-impact-of-coronavirus-on-education-and-culture. [55]

Ministry of Education and Research, Estonia (2020), *Spread of COVID-19: recommendations for educational institutions, parents, students*, https://www.hm.ee/en/spread-covid-19-recommendations-educational-institutions. [49]

Ministry of Education and Science, Latvia (2020), *Learn at home diary*, https://izm.gov.lv/lv/aktualitates/3983-maciesmajas-dienasgramata-1-diena. [52]

Ministry of Education, Iceland (2020), *Education in Iceland, during COVID-19 pandemic*. [38]

Ministry of Education, Korea (2020), *Press Release, All Schools Postpone the New School Year*, http://english.moe.go.kr/boardCnts/view.do?boardID=265&boardSeq=80295&lev=0&searchType=null&statusYN=W&page=1&s=english&m=0301&opType=N. [56]

Ministry of Education, New Zealand (2020), *Learning from home, Advice for teachers*, https://learningfromhome.govt.nz/distance-learning/advice-for-teachers. [46]

Ministry of Education, New Zealand (2020), *Learning from home, Voices from schools*, https://learningfromhome.govt.nz/updates/voices-schools-7-april-2020. [53]

Ministry of Education, Russian Federation (2020), *Guidelines for the implementation of educational programs of primary general, basic general, secondary general education, educational programs of secondary vocational education and additional general educational programs*, https://docs.edu.gov.ru/document/26aa857e0152bd199507ffaa15f77c58/. [50]

National Co-ordinating Centre for Public Engagement (2018), *School-University Partnerships: Lessons from the RCUK-funded School-University Partnerships Initiative*, https://www.publicengagement.ac.uk/sites/default/files/publication/nccpe_supi_lessons.pdf. [19]

NCEE (2020), *Top Performers' Plans To Reopen Schools: Key Trends*, http://ncee.org/2020/05/top-performers-plans-to-reopen-schools-key-trends/. [89]

OECD (2020), *Education Responses To Covid-19: Embracing Digital Learning And Online Collaboration*, https://oecd.dam-broadcast.com/pm_7379_120_120544-8ksud7oaj2.pdf. [17]

OECD (2020), "Spotlight 21. Coronavirus: Back To School", in *Trends Shaping Education*, OECD Publishing, Paris, http://www.oecd.org/education/ceri/Spotlight-21-Coronavirus-special-edition-Back-to-school.pdf. [88]

OECD (2020), *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/19cf08df-en. [11]

OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/f8d7880d-en. [20]

OECD (2019), "A Series of Concept Notes", in *OECD Future of Education and Skills 2030: OECD Learning Compass 2030*, https://www.oecd.org/education/2030-project/contact/OECD_Learning_Compass_2030_Concept_Note_Series.pdf. [72]

OECD (2019), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/b5fd1b8f-en. [12]

OECD (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/1d0bc92a-en. [18]

OECD (2018), *The Future of Education and Skills: Education 2030*, OECD Publishing, Paris, http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf. [21]

OECD (2017), *OECD Telecommunication and Broadcasting Review of Mexico 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264278011-en. [13]

OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264267510-en. [42]

OECD (2015), *Students, Computers and Learning: Making the Connection*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264239555-en. [2]

OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264196261-en. [22]

OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264190658-en. [27]

OECD (2013), *Webinar: Open Educational Resources and MOOCs: what is the evidence?*, http://www.oecd.org/education/imhe/FoodforThoughtOERsandMOOCs.pdf. [74]

OECD (2005), *E-learning in Tertiary Education: Where Do We Stand?*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264009219-en. [73]

OECD and Harvard Graduate School of Education (2020), *A framework to guide an education response to the COVID-19 Pandemic of 2020*, https://globaled.gse.harvard.edu/files/geii/files/framework_guide_v2.pdf. [9]

Oreopoulos, P., M. Page and A. Stevens (2006), "The Intergenerational Effects of Compulsory Schooling", *Journal of Labor Economics*, Vol. 24/4, pp. 729-760. [7]

Owen, S. (2014), "Teacher professional learning communities in innovative contexts: 'ah hah moments', 'passion' and 'making a difference' for student learning", *Professional Development in Education*, Vol. 41/1, pp. 57-74, http://dx.doi.org/10.1080/19415257.2013.869504. [67]

Pierce, J., T. Kostova and K. Dirks (2003), "The State of Psychological Ownership: Integrating and Extending a Century of Research", *Review of General Psychology*, Vol. 7/1, pp. 84-107, http://dx.doi.org/10.1037/1089-2680.7.1.84. [36]

Pont, B. (2020), "A literature review of school leadership policy reforms", *European Journal of Education*, Vol. 55, pp. 154 – 168, http://dx.doi.org/10.1111/ejed.12398. [65]

Reimers, F. and A. Schleicher (2020), *Educational Opportunity during the COVID-19 Pandemic*. [8]

Reimers, F. et al. (2020), *Supporting the continuation of teaching and learning during the COVID-19 Pandemic, Annotated resources for online learning*, OECD Publishing, Paris, http://www.oecd.org/education/Supporting-the-continuation-of-teaching-and-learning-during-the-COVID-19-pandemic.pdf. [28]

Resnick, M. et al. (1997), "Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health.", *Journal of the American Medical Association*, Vol. 278/10, pp. 823-32, http://dx.doi.org/10.1001/jama.278.10.823. [76]

Saavedra, J. (2020), "Educational challenges and opportunities of the Coronavirus (COVID-19) pandemic", *Worldbank Blogs*, https://blogs.worldbank.org/education/educational-challenges-and-opportunities-covid-19-pandemic. [35]

Schaps, E., V. Battistich and D. Solomon (2004), "Community in School as Key to Student Growth: Findings from the Child Development Project", in Zins, J. et al. (eds.), *Building academic success on social and emotional learning: What does the research say?*, Teachers College Press. [79]

Schleicher, A. (2020), *How can teachers and school systems respond to the COVID-19 pandemic? Some lessons from TALIS*, https://oecdedutoday.com/how-teachers-school-systems-respond-coronavirus-talis/. [61]

Schleicher, A. (2020), *TALIS 2018: Insights and Interpretations*, http://www.oecd.org/education/talis/TALIS2018_insights_and_interpretations.pdf. [60]

Schleicher, A. (2018), *Valuing our Teachers and Raising their Status: How Communities Can Help*, International Summit on the Teaching Profession, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264292697-en. [24]

Secretariat of Public Education, Mexico (2020), *Apprende en Casa*, http://formacionycapacitaciondigitales.televisioneducativa.gob.mx/. [58]

Serdyukov, P. (2017), "Innovation in education: what works, what doesn't, and what to do about it?", *Journal of Research in Innovative Teaching & Learning*, Vol. 10/1, pp. 4-33, http://dx.doi.org/10.1108/jrit-10-2016-0007. [59]

Solomon, D. et al. (2000), "A six-district study of educational change: direct and mediated effects of the child development project", *Social Psychology of Education*, Vol. 4/1, pp. 3-51, http://dx.doi.org/10.1023/a:1009609606692. [78]

Tam, A. (2014), "The role of a professional learning community in teacher change: a perspective from beliefs and practices", *Teachers and Teaching*, Vol. 21/1, pp. 22-43, http://dx.doi.org/10.1080/13540602.2014.928122. [68]

UNESCO (2020), *COVID-19 A glance of national coping strategies on highstakes examinations and assessments*, https://en.unesco.org/sites/default/files/unesco_review_of_high-stakes_exams_and_assessments_during_covid-19_en.pdf. [34]

UNESCO (2020), *Distance learning solutions*, https://en.unesco.org/covid19/educationresponse/solutions. [30]

UNESCO (2020), *Exams and assessments in COVID-19 crisis: fairness at the centre*, https://en.unesco.org/news/exams-and-assessments-covid-19-crisis-fairness-centre. [32]

UNESCO (2020), *Global monitoring of school closures caused by COVID-19*, https://en.unesco.org/covid19/educationresponse. [1]

UNISDR (2010), *Guidance Notes, School Emergency and Disaster Preparedness*, https://www.preventionweb.net/files/15655_1msshguidenotesprefinal0313101.pdf. [86]

Vaughan, N. (2014), "Student Engagement and Blended Learning: Making the Assessment Connection", *Education Sciences*, Vol. 4/4, pp. 247-264, http://dx.doi.org/10.3390/educsci4040247. [83]

Vaughan, N. (2007), "Perspectives on Blended Learning in Higher Education", *International Journal on E-Learning*, Vol. 6/1, pp. 81-94, https://www.learntechlib.org/primary/p/6310/. [82]

Viennet, R. and B. Pont (2017), "Education policy implementation: A literature review and proposed framework", *OECD Education Working Papers*, No. 162, OECD Publishing, Paris, https://dx.doi.org/10.1787/fc467a64-en. [10]

WISE and Salzburg Global Seminar (2020), *Education Disrupted, Education Reimagined*. [23]

Worlbank (2020), *How countries are using edtech to support access to remote learning during the COVID-19 pandemic*, https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic. [57]

Xu, S. and Y. Li (2020), "Beware of the second wave of COVID-19", *The Lancet*, Vol. 395/10233, pp. 1321-1322, http://dx.doi.org/10.1016/s0140-6736(20)30845-x. [91]