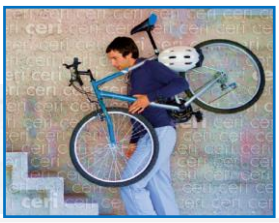


Trends Shaping Education Spotlight 21

Coronavirus special edition: Back to school

The COVID 19 pandemic has disrupted education around the world. As the first shock passes, planning is taking place on two timescales: the short-term challenges in the return to school, and the challenges over the next 18-24 months as systems work to build resilience and adaptability for the future.

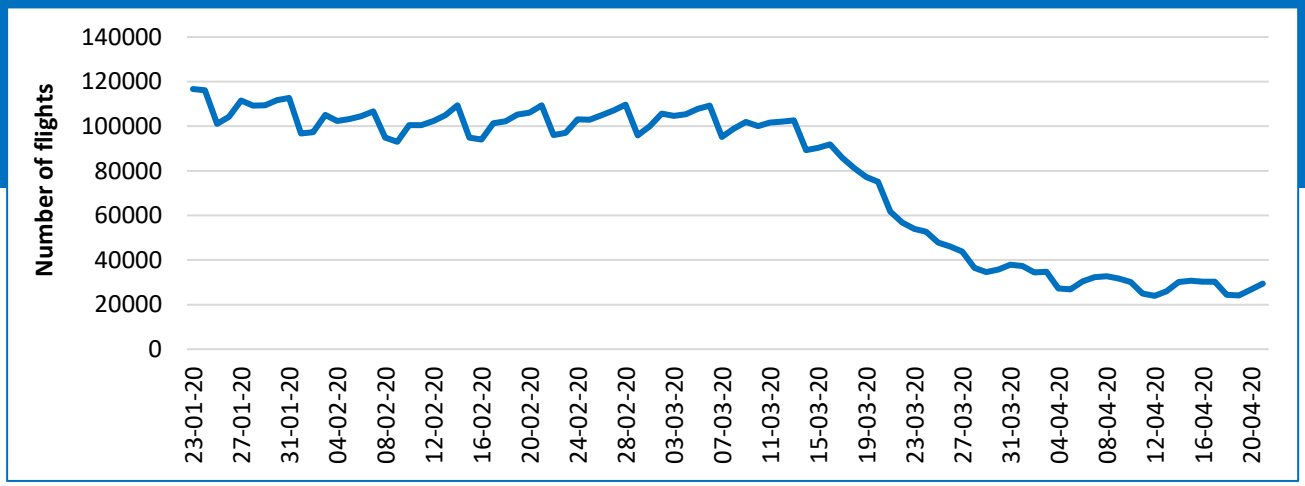
Global pandemic

As our world becomes more inter-connected, so too do the risks we face. The Covid-19 pandemic has challenged the world, with cities and towns at a standstill, borders closed and airports shuttered in an effort to contain the spread of the virus.

Choosing the best defence has not been easy. Although there is an overload of information, there is still much that is unknown. Aggressive testing in South Korea and early lockdown in New Zealand, for example, contained the virus early. But questions remain about how immunity works and the longer term impact of the disease. For countries in lockdown, it is not clear what the best exit strategy is. The economic, social and psychological toll Covid-19 has taken is severe.

Figure 1. Air traffic patterns

Total number of commercial flights per day, January-April 2020



Note: Commercial flights include commercial passenger flights, cargo flights, charter flights and some business jet flights.

Source: Flightradar24 (2020), www.flightradar24.com/data/statistics.

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

Strategic systems

The COVID-19 pandemic fundamentally disrupted schooling in most countries around the world. Responding to the crisis will require strategic and smart systems that can adaptably respond to dynamic challenges at the same time as they steer a course towards established goals. As the first shock passes, education authorities are preparing responses on two timescales: the immediate return to school and the mid-term strategy for the next 18-24 months.

> Disruption is the new normal, at least for the next 18 months

Decision-making in times of uncertainty

One of the challenges to effective planning is that scientific knowledge about COVID-19 is constantly evolving. Operating under enormous pressure in an emergency, Ministries must take decisions, often in the face of competing arguments and with many unknowns. Gaps in our knowledge mean that decisions taken at one point in time may need to be revised as more is understood about the virus. More than ever we see the importance of supporting robust research and development systems, in education as well as public health.

Many systems that closed schools are now preparing to reopen them. Efforts to increase social distancing and reduce mixing between students include closing playgrounds, increasing space between students in class, shortening the school week, staggering school hours and break times across classes. A systematic review found that these kinds of measures can be highly effective at containing the virus (Uscher-Pines et al., 2018). Localised school closures or adjustments in school activities might be as effective in controlling the spread of the virus with less economic and social impact (Viner et al, 2020).

The sobering reality is that, even though scientific knowledge is growing, there is much that is still unknown. There is also an enormous amount of inaccurate information, and "information pollution". What is known is that there is likely to be recurring waves of contagion (van Elsland and O'Hare, 2020), similar to the 1918 H1N1 "Spanish flu", the 1957 H2N2 "Asian flu" and the 1968 H3N2 "Hong Kong flu" (CDC, 2018).

As a result, many countries could face a series of rolling school closures over the next months or even year (Bailey, 2020). In addition to reopening schools, this means that education authorities must simultaneously also decide how best to prepare for potential rolling school closures.

The short term: getting schools and schooling back on track

Many countries are now reopening schools, with a set of top priorities for action:

- *Ensuring safety:* school buildings must be disinfected and adequate ventilation of classrooms ensured in an ongoing manner.
- *Assessing progress:* ministries are now adjusting or forgoing exams and assessments (see below). Once back to school, diagnostic formative assessment of all students will be needed to help plan and organise their learning.
- *Mitigating the impact of learning losses:* Some students will have fallen behind and others will have lost learning compared to before school closures. There is increased risk of early school leaving for struggling students. While targeted learning support will be needed, efforts to address learning loss must avoid creating systemic traps for the disadvantaged, for example, large-scale grade repetition.
- *Ensuring well-being (1):* Many students will experience emotional distress from the pandemic, ranging from anxiety to post-traumatic stress symptoms. Some students will have had poor nutrition due to lack of access to school meals. Student mental and physical health will need explicit support in the return to "normal life".
- *Ensuring well-being (2):* Teachers and families may also be struggling with accumulated stress (juggling multiple roles and duties, financial and health-related worries, etc). They will also need support.

Assessing students in the context of school closures (Italy and Spain)

Although the top priorities for the short term are generally agreed, the manner by which to achieve them is not. For example, it is far from clear how to assess the learning progress of students during school closures, especially as not all of them had access to distance education. What is the best approach to assess student progression, transition and graduation? Fernando Trujillo (2020), from University of Granada, offers a set of scenarios to better understand the decisions that may be adopted.

#1. School autonomy	#2. Curricular adjustment	#3. Positive continuous assessment	#4. Unconditional positive assessment
Schools decide on assessment and student progression (e.g. projecting assessments of the 1st and 2nd term)	Redefinition of curricula to set up minimum requirements for the third term of 2019/20	Generalised positive evaluation with minimum requirements (e.g. students deliver some tasks in June)	Automatic grade progression with exceptional remedial support in 2020/21

Some countries have already made decisions on which scenario to use, including two OECD members where the virus has hit hardest, Italy and Spain. In Italy, the solution resembles scenario 4 above, with automatic promotion of students and preparation for an early start to the 2020/21 school year to offer support for students falling behind in particular subjects. In Spain, the central government's proposal is in line with scenario 2: The third academic term will be adjusted to focus on consolidating the learning objectives covered before the pandemic. Decisions on student progression will remain in hands of schools and teachers, to whom the Ministry has reminded the exceptional nature of grade repetition in law.

One essential question for all systems is what to do for students who will be applying for tertiary education. Options currently debated include limiting national exams to an oral evaluation (Italy), postponing the dates of national exams (Spain), or cancelling final exams (national or otherwise) and assessing students on the basis of coursework and teacher assessment of estimated grades pre-pandemic (Canada, France and the United Kingdom).

Sources: Ministry of education, Italy; Ministry of education, Spain

The next 12-24 months: an opportunity to rethink/redo/rewire?

In the medium term, education must address weakness in the system and protect those most vulnerable. Key questions for rethinking and rewiring include:

- *Harnessing innovation:* many teachers and students used a variety of digital tools and had more agency over their teaching and learning. Many have engaged in collective learning in digital classrooms, reaching out to their colleagues/peers and classmates for help. We must take stock of what has worked, what has not, and for whom. Can we use this evidence to rethink ways of organising and delivering the curriculum? Reinforce multidisciplinary and collaborative models of teaching and learning?
- *Reimagining accountability*: adjustments and even cancellation of exams, in many systems previously unthinkable, have opened the door for innovating assessment and certification more broadly. How can we best align assessment methods and tools with emerging ways of teaching and learning? Is it time to rethink evaluation frameworks? What would this mean for our understanding of quality assurance and certification?
- *Remembering the power of the physical world:* in the rush to digital and distance learning, we are reminded of how important our physicality is. Children need to move, play, actively learn. Humans are social, and thrive with face to face connection. A hug emoji is not the same as a hug. How can we balance this "old" knowledge with new digital mechanisms? How can we deliver education that helps children thrive, academically, physically, and psychologically?
- *Supporting the most vulnerable:* School closures reminded us of the fragility of children struggling with a concentration of disadvantage. The equalising power of education is more important than ever. What changes need to be made to allow us to reach even the most disadvantaged and give them the support they need?
- *Reinforcing capacity*: reimagining must go hand in hand with a thoughtful rewiring of systems. What professional development will administrators, school leaders and teachers need for their diverse roles? How can schools better reach out to involve all families, even the hardest to reach? How can they continue building coalitions with other key partners to reinforce strategic thinking capacity and community response?
- *Building system resilience:* How can we reinforce the adaptability and responsiveness of our systems? This is a difficult question. Contingency planning for crisis requires back-ups of essential nodes and services. Yet efficiency is key, especially in times of tight budgets. What is the best balance? And what knowledge and behaviours will be required for educational authorities, school leaders, teachers, students and parents?
- *Preparing resources*: As economic recession looms, political leadership, cooperation and civil society engagement are all key. Hard choices must be made: What resources – including broadband access and service providers – will be necessary for any future closures? What competencies will be needed to deliver newly organised teaching and learning? How will all this be financed, and who chooses among competing priorities?

Students at the centre

While schools are closed in many countries during the pandemic, learning isn't on hold. In many systems, digital tools have allowed students to learn at a distance. For students without internet, lessons are being broadcast on TV or printed work sheets distributed to enable continued learning (World Bank, 2020).

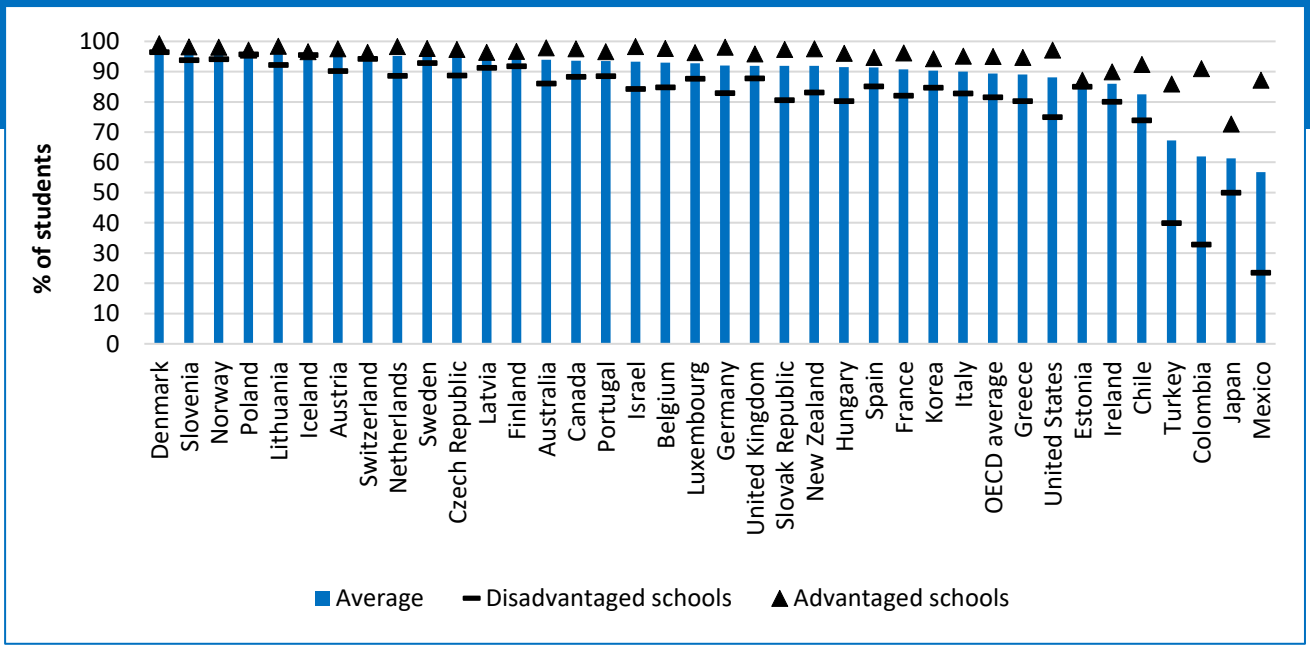
Addressing the learning needs of all learners

A key concern is how to compensate for the lost instruction time and its potential effects on learning. Research on school breaks, where children have a gap in formal education, show that it is the most disadvantaged who have the greatest risk of learning loss. Estimates suggest it can take up to 6 weeks of adjustment time for these students to be mentally and physically ready to re-engage with the curriculum after a summer break (Forsey, 2017).

An additional concern is that unequal access to and support for digital learning risks widening learning gaps. While on average across the OECD 9 in 10 students have access to digital devices and Internet at home, students in advantaged schools are 15% more likely to have access to a computer for school work than their peers in disadvantaged schools (Figure 2). In addition, in many homes devices may need to be shared among parents and siblings, impeding many students from following lessons during school closures.

Figure 2. Access to access

Percentage of students that have access to a computer they can use for schoolwork



Note: socio-economically disadvantaged (advantaged) school is a school whose socio-economic profile (i.e. the average socio-economic status of the students in the school) is in the bottom (top) quarter of the PISA index of economic, social and cultural status amongst all schools in the relevant country/economy.

Source: OECD (2020a), "Learning remotely when schools close: How well are students and schools prepared? Insights from PISA", www.oecd.org/coronavirus/en/.

Digital technology, opportunities and risks

An enormous number of exciting digital innovations emerged from the first response to the pandemic (OECD, 2020b). We can continue to build on these, reflecting on two questions:

How can we continue to reinforce digital resources to support learning for all? 15 years-olds across the OECD most commonly had access to the internet through smartphones, with about 3 mobile phones per 2 computers or 1 tablet available in the household on average (OECD, 2019a). The type of device has implications for learning: While smartphones and their apps are now more common than computers, not all devices have the same impact on learning, and using apps is not a generic digital skill. In anticipation of potential future disruptions, education ministries are working to:

- ensure access to devices for all children
- support the development of digital pedagogical resources and better understand the interplay between type of device and particular pedagogical challenges
- work with other ministries and industry to establish affordable and widespread broadband, so that no children are left behind.

We do not yet know the extent and impact of exposure to digital risks

How can we continue to safeguard schools and students against digital risks? During the pandemic most students spent more time in digital environments, many less supervised. They potentially had more exposure to cyber risks, and indeed some authorities are warning of a sizeable increase in the number of complaints to cyber risk tip lines and other monitoring and help services.

Both parent and child skill levels are important for student resilience to digital risks. However, some risks require government or industry action (OECD, 2020c) while other safeguards require levels of digital literacy that many adults do not have. Disadvantaged students, already more likely to share a device with siblings, are less likely to have skilled parental oversight (Burns and Gottschalk, 2019).

In the rush to go digital as a response to COVID19, not all schools and systems were able to review privacy agreements or the security of digital products and platforms. As a result schools are using a wide range of products, not all with sufficient student security or privacy.

The impact on children of misinformation and disinformation, access to adult content and data breeches highlight the need for clear age restrictions and safety by design. In addition, monitoring adherence to existing measures is crucial. Examples include the European General Data Protection Regulation (GDPR), which stipulates the right to the protection of personal data and covers all individuals within the EU and EEA as well as the export of their personal data outside of these areas. In the United States, the Children's Online Privacy Protection Act (COPPA) applies to children under 13 years of age, including children outside the USA, if the company is based in US territory.

Ensuring student well-being

Ensuring child well-being, both emotional and physical, is a key concern post-crisis. With routines and habits disrupted, children and youth have been exposed to stressors including reduced social contacts and physical mobility and worries about the potential loss or hospitalisation of loved ones.

Extreme events like pandemics can have enduring effects on psychological well-being (Wang et al., 2020). Confinement and quarantine can stimulate traumatic stress responses in children, for some to clinical levels (Sprang and Silman, 2013).

Isolation may impact how children regulate their behaviours and emotions and can increase vulnerability (Burns and Gottschalk, 2019). While confinement allows children to spend time with their families, it can also exacerbate family stress. There are increased reports of domestic violence. For children for whom school was a safe haven away from abusive or violent homes, and for children without homes, school closures had compounding effects to the stress they already experience on a daily basis.

On the physical level, confinement can reduce physical activity, increase sedentary time and lead to irregular sleep patterns (Wang et al., 2020). As the structured environment of school helps children regulate healthy behaviours, the lack of routine when school stops can have negative health consequences (Brazendale et al., 2017).

In addition, children can lack adequate childcare, have limited access to food (whether this is nutritious food, or simply enough food), and some may have reduced access to fun or enriching activities that they would normally have access to during school time (Stewart et al., 2018).

Child well-being after shock: New Zealand post-earthquake

To help with mental health issues in communities affected by the 2010 Canterbury earthquake and 2011 aftershock, New Zealand adopted Mana Ake, a programme for children aged 5-12 years. It consists of specialist Kaimahi teams with diverse skills such as counsellors, psychologists and social workers who work with teachers and families to support children experiencing issues like anxiety, social isolation and grief.

As part of the lead-up to New Zealand's first Wellbeing budget in 2019, this programme was broadened to more communities. Evaluations of the initial waves of Mana Ake suggest it can have significant social outcomes and value for money, as well as sustainable collective impact (Savage et al., 2018).

For more information: Mana Ake

How can schools work to ensure the emotional well-being of students post-crisis? When school is back in session, supporting the emotional, physical and social well-being of students should be prioritised, especially for those most at risk.

The link between physical and emotional health and academic success is clear. As many countries enter difficult economic times, efforts should be made to continue and boost social programming such as free school meals and emotional counselling, prioritising the well-being of all students.

The importance of teacher professionalism

Teachers are, more than ever, expected to be innovators and game changers.

From Day One of the pandemic teachers had to adapt to a new context and pace, take on increased responsibilities for ensuring student well-being, and for many, also learn new digital tools. Preparing for the next months and years requires rethinking key elements of teacher professionalism: knowledge, collaboration, and autonomy, as well as the prestige of the profession (OECD, 2020d). Reflecting on these issues is also critical for ensuring teachers' well-being in the long run.

New knowledge for new roles and responsibilities

Teachers' roles and responsibilities may be quite differently balanced when schools reopen. While facilitating student learning remains a priority, providing emotional support to students, parents and families and participating in strategic planning and decision-making will likely take more space than before. To fulfil the multiple roles, the teaching profession needs to continue updating their knowledge and competences, including knowledge on:

- *Instruction*: Differentiated instruction to adjust to the individual learning losses and gains during school closure, digital tools to facilitate personalised and collective learning.
- *Assessment*: to evaluate progress, identify learning needs as well as provide formative feedback to students and build their self-assessment skills.
- *Learning*: Knowledge to identify students' emotional issues and intervene to support students and mitigate problems.
- *Leadership for change*: Knowledge to effectively engage with colleagues and key partners, such as parents, to collectively lead learning.

Teachers' numerous roles and responsibilities require time. Yet, in many OECD countries, teachers' work time is primarily regulated by teaching hours (OECD, 2019b). Formally recognising time spent outside the classroom in service codes and working regulations would help teachers fulfil fundamental professional roles without doing excessive work hours (OECD, 2019b).

It takes a village: Building collective knowledge

Teachers' multiple roles need to be reflected in teacher education as well. Yet, criteria informing entry, selection, certification and hiring of teacher candidates too often neglect affective and motivational competences (OECD, 2019c). Key elements such as student emotional well-being is not required content in formal teacher education in many countries (Burns and Gottschalk, 2019); and only about one in three teachers report that teacher-parent cooperation was part of their professional development (OECD, 2019d).

Participating in professional networks is a powerful way to develop and build collective knowledge for teachers, although it is not the most common form of teacher collaboration

(OECD, 2019d). To build teachers' collective knowledge, networks require sufficient resources, supportive leadership and:

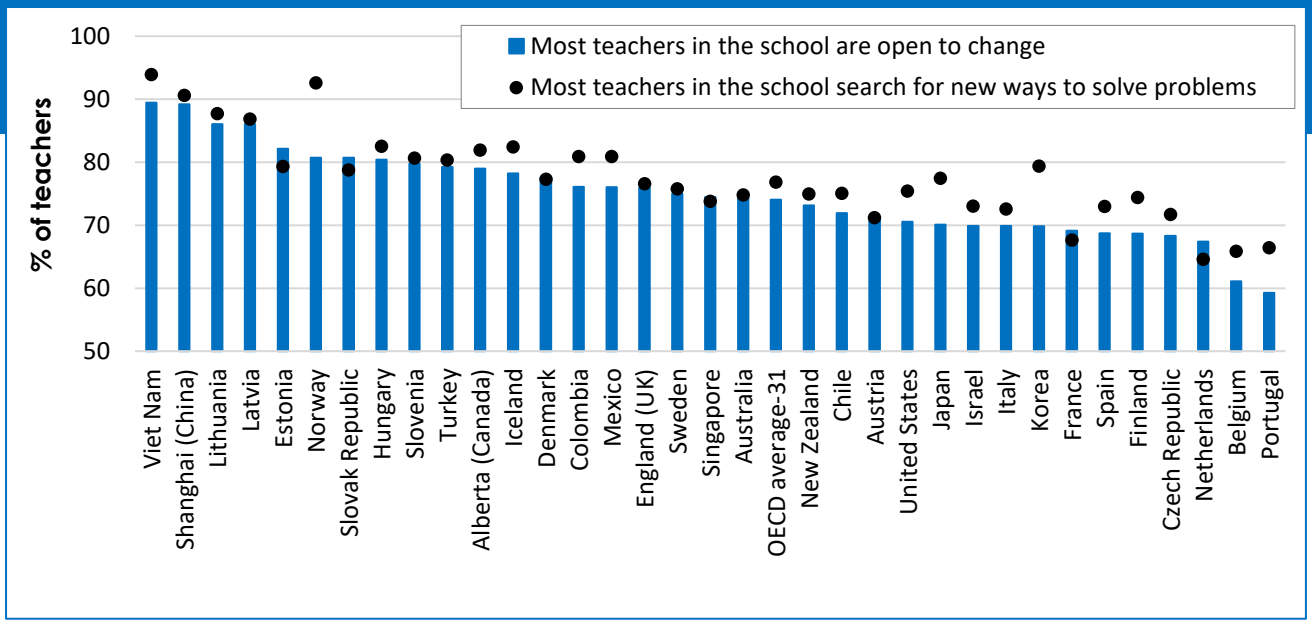
- Identifying who in the network has specialised knowledge and connecting members based on the expertise needed to be shared.
- Ensuring knowledge flows into the network from researchers, teacher educators, and other professionals (e.g. mental health experts).
- Seeing evidence and innovation as an eco-system and developing mechanisms (e.g. collective enquiry or design-based research) to develop innovative solutions for identified needs (Révai, 2020).

Teachers in the driver's seat: actively adapting and driving change

Effectively overcoming this crisis involves more than reacting to change. It also requires teachers to actively engage in the re-design of teaching and learning. Teachers are ready for this challenge, reporting in TALIS that they are open to change and find new ways to solve problems (Figure 3).

Figure 3. Teachers as game changers

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



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

Yet, **how can we best support teachers in taking on the various roles we expect of them – as content experts, as tutors, as colleagues?** For instance, while acknowledging the importance of exploring new ways of doing, elements like enquiry, research and innovation are not commonly listed in teaching standards (CEPPE, 2013), suggesting that few countries prepare their teachers sufficiently for coping with unforeseen situations.

While standards are mostly used for quality assurance, their inherent value lies in their use to reflect on and create dialogue around teachers' knowledge and professionalism (Révai, 2018). Countries could engage stakeholders in developing or revising standards to reinforce teachers' adaptability for future crisis. This process should go hand in hand with rethinking teacher education programmes to develop these competences.

Future-oriented teaching standards (Singapore)

Singapore's standards for graduate teachers demonstrate a range of knowledge, skills and dispositions future teachers need to be equipped with to drive innovation and experiment. These are some extracts from its graduate teaching standards:

Core Competences	Definition
4. Cultivating Knowledge with: *ii. Reflective Thinking*	[…] The teacher: • seeks opportunities to grow professionally; and, • is aware of major areas of research on teaching and of resources for professional learning.
iii. Analytic Thinking	The teacher demonstrates a capacity to engage with problems. The teacher: • identifies possible cause-and-effect relationships, develops plans to respond, prioritises tasks in order of importance, and carefully monitors responses; • makes and defends complex choices and decisions; and, • frames, analyses and synthesises information in order to solve problems and provide solutions.
iv. Initiative	The teacher seeks opportunities to take initiative to improve his/her professional practices. The teacher is aware of the value of, and need for skills in innovation and entrepreneurship.
vi. with a Future Focus	[…] The teacher recognises that, in a rapidly changing world, the ability to experiment with and advocate for new practices will be a core professional capacity.
7. Knowing Self and Others: *iv. Resilience and Adaptability*	The teacher: • is tough in spirit, able to persevere in times of challenge, keeping a positive disposition; • stays the course though there may be obstacles to surmount (he/she is optimistic); • is able to think on his/her feet and make decisions appropriate to the situation at hand; and, • encourages and teaches her/his pupils to be resilient and adaptable.

For more information: National Institute of Education (2013)

Strong and responsive school communities

Schools will need to focus, jointly with families and the broader community, on three crucial areas as they move forward: 1) reinforcing safety and trust; 2) ensuring student well-being and learning continuity; and 3) building resilience through collective reflection, enhanced collaboration and distributed leadership.

Hygiene, social distance and communication

Ensuring safety is imperative when reopening schools. Measures include cleaning and disinfection of physical infrastructure (CDC, 2020), reinforcing hygiene practices such as hand washing and sneeze etiquette; and teaching and implementing social distancing measures within the school (UNICEF, WHO, IFRC, 2020; Uscher-Pines et al., 2018).

Transparent and timely communication with the broader school community is key. Parents need information about the reopening date, timetable for the first weeks, new safety and hygiene measures, and services to support children and parents. Virtual meetings, blogs or chat groups allow parents to interact, share experiences and support each other.

> Smooth communication with families is key to building trust and cooperation

Communication with families must be carefully managed to reduce potential confusion and distress caused by misinformation (Stuart et al., 2013). The community should know which sources they can trust (e.g., the WHO, national institutes responsible for disease control and prevention) and what services are available (e.g. community testing, therapeutic and educational support). In addition to building trust, involving parents and community members in coordinating services or translators can save time for busy educators and also help connect with less involved parents.

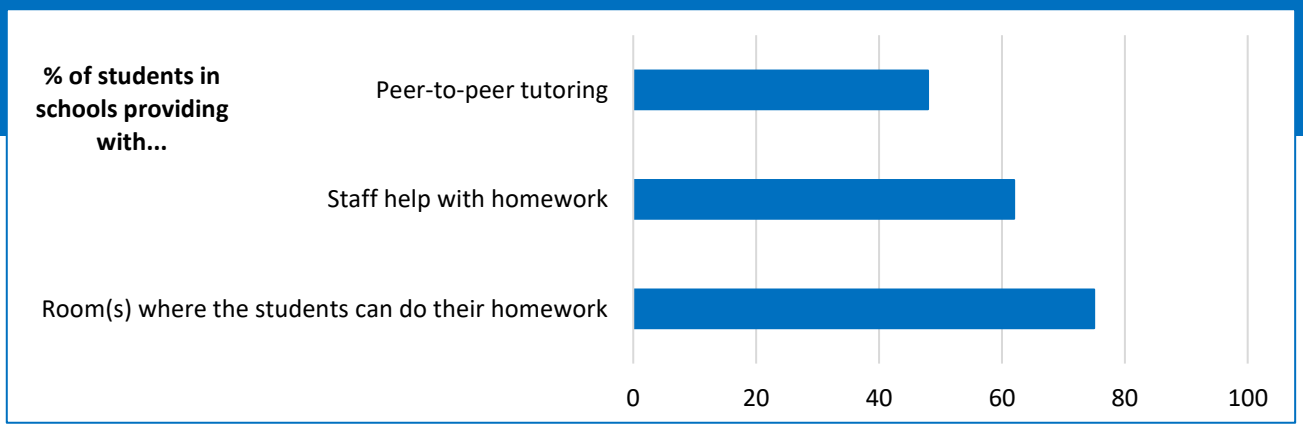
While changes to daily behaviour are crucial for the collective good, some people may become less vigilant and cooperative as the crisis lengthens (Qualls et al., 2017). Schools can help counteract this by regularly reminding students and parents of social distancing measures, hygiene practices for schools and home and, if available, the value of vaccination. Children can act as messengers, raising awareness about safety and precautionary measures among relatives (OECD, 2019e). Teachers also play an important role: Not only are they the providers of information, they also increase the legitimacy of child-delivered health messages as families are aware that the information comes from a reliable source (Onyango-Ouma et al., 2005).

Schools as social fabric: Support systems for students and families

To help address expected learning gaps when students return to classrooms, many schools can resume, strengthen or set up forms of individualised study help for students. There is room for growth – as Figure 4 shows, although three-quarters of students had a place for study in their schools, learning support via school staff or peer mentoring was less common.

Figure 4. Schools providing students with support for studying

Percentage of students in schools providing the following forms of study help, 2018



Source: OECD, PISA 2018 database, www.oecd.org/pisa/data/.

Schools are also a place for socialising and they play an important role in fostering student belonging. When physical distancing is required, social and emotional connectedness may become more necessary. For many children and adolescents, resuming school is about reuniting with friends, direct contact with peers, access to shared activities including playgrounds and sports, so important for physical and emotional health. Achieving this while respecting social distancing measures is a delicate balance.

So too is choosing the best strategy for the return to class. A later return date or reduced school hours may, for example, allow families to take time to cope with the loss or hospitalisation of a loved one and to overcome separation anxiety. On the other hand, longer school hours via after school programmes, for example, help parents return to work, especially single parents, and can offer struggling students extra support to catch up. However, this may be difficult for a number of reasons, including resources and available personnel, especially in those systems where schooling has a concentrated schedule and widespread access to non-formal learning opportunities is lacking (OECD, 2019f).

All-day schooling (Germany)

Offering remedial academic support and a space for students to come together may require of schools to extend their hours beyond formal learning time. All-day schools in Germany (Ganztagsschulen) offer a model for inspiration. These ensure that at least 7-8 hours of formal and non-formal learning activities are provided per day a minimum of three days a week. Under the direction and supervision of the school management, they offer much needed custody for children and provide them with school meals on top of cognitive and social stimulation.

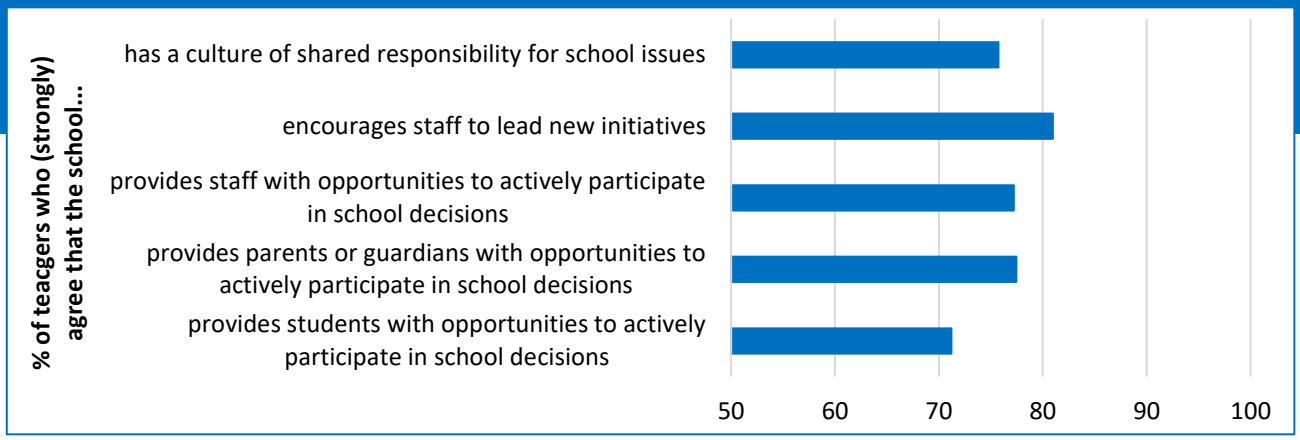
For more information: www.ganztagsschulen.org/

Building resilience: Strengthened collaboration and distributed leadership

As the crisis continues, shared responsibility within schools and between schools and the wider community can help education services to act on as many fronts. These include precautionary health measures, exceptional demands on staffing and budgets and adjustments to curriculum and assessment methods. Preparing for potential future closures while addressing current urgencies requires clear leadership as well as adaptability, coordination and trust. As shown in Figure 5, shared decision making was already present in many schools before the crisis.

Figure 5. Teachers' views on decision making in schools

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements, 2018



Source: OECD, TALIS 2018 Database, www.oecd.org/education/talis/talis2018tables.htm.

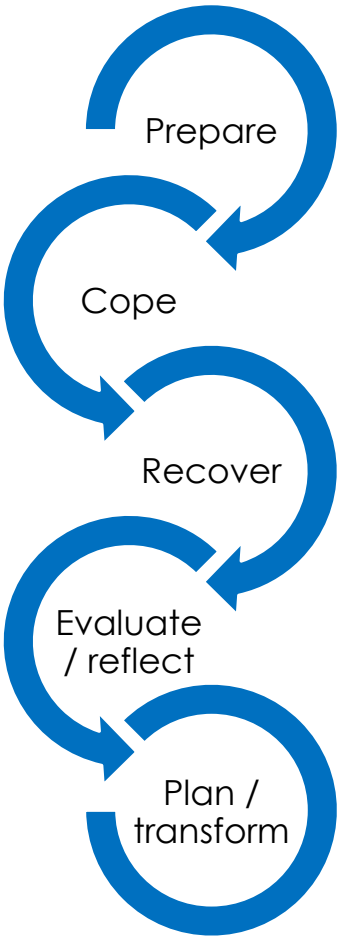
But the figure also reminds us that there is room for improvement. Collaboration does not stop with the school personnel. Learners can voice their concerns and needs, and assume responsibility for certain school tasks (Freiberg, 1999). At the classroom level, students in many schools already contribute by taking responsibility for moderating small group work or coordinating the homework of their peers for specific subjects. Additionally, peer engagement and collaboration may extend across grades: for instance, with older peers supporting younger ones to advance in their learning goals. Such practices, if consolidated while schools are open, may then be implemented during remote schooling to support a more complete and effectively organised instruction. **Can this crisis help us revisit the organisation of learning in schools?** It is worth considering.

It is encouraging that, on average across the OECD, 77% of teachers indicated that their school provides parents with opportunities to actively participate in school decisions and that these proportions increased significantly since 2013 in 13 countries and economies (OECD, 2020b). At the same time, more needs to be done to overcome remaining barriers such as inconvenient timing and conflicting work hours, usually flagged as the main impediments for many parents (OECD, 2019a). One very immediate concrete example: involving parents in the creation or revision of a schools' emergency plan can boost emergency preparedness (WHO, 2009) while contributing to increase families' own emergency preparedness.

Towards the future: Building resilient systems and schools

Schools around the world are going back to business but not back to normal. Strict measures of hygiene and social distancing are now the new norm. Schools are asked to ensure the learning needs of all children are met at a time that learning disparities widen. Teachers are also increasingly tasked with supporting children and adolescents physical and psychological health. And while parents have stepped forward en masse to help support the learning of their children, not all parents can play this role. We must act swiftly to avoid widening the gap between advantaged and disadvantaged students.

In addition to the immediate steps for reopening schools, education must also start preparing for potential future waves of contagion and school closures. We must learn from what is being tested now, and also use this time as window of opportunity to rethink and rewire our systems. For reorganising learning and assessment to serve the needs of all students, including the most vulnerable. For enhancing networking for teachers to continue to build their knowledge and capacity as game changers. For reinforcing collaboration for families, communities and schools to share information and coordinate effectively. The initiatives and investments made now can have positive long-term effects on our education systems and society at large.



Source: Adapted from Azzi-Huck and Shims (2020), "Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping, and planning for recovery", https://blogs.worldbank.org/.

References

Bailey, J. (2020), "Covid-19 closed schools. When they should reopen?", EducationNext, www.educationnext.org/ (accessed on 15 April 2020).

Brazendale, K. et al. (2017), "Understanding differences between summer vs. school obesogenic behaviors of children: the structured days hypothesis", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 14/1, http://dx.doi.org/10.1186/s12966-017-0555-2.

Burns, T. and F. Gottschalk (eds.) (2019), *Educating 21st Century Children: Emotional Well-being in the Digital Age*, Educational Research and Innovation, OECD Publishing, Paris, https://doi.org/10.1787/b7f33425-en.

CDC (2020), "Cleaning and Disinfection for Community Facilities: Interim Recommendations for US Community Facilities with Suspected/Confirmed Coronavirus Disease 2019 (COVID-19)", Centre for Disease Control and Prevention, www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html (accessed on 6 April 2020).

CDC (2018), "Past pandemics", Centre for Disease Control and Prevention, www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html (accessed on 14 April 2020).

Centre of Study for Policies and Practices in Education (CEPPE), Chile, (2013), "Learning Standards, Teaching Standards and Standards for School Principals: A Comparative Study", *OECD Education Working Papers*, No. 99, OECD Publishing, Paris, https://doi.org/10.1787/5k3tsjqtp90v-en.

Forsey, A (2017), "Hungry holidays: A report on hunger amongst children during school holidays", All-Party Parliamentary Group on Hunger, https://feedingbritain.files.wordpress.com/2015/02/hungry-holidays.pdf.

Freiberg, H. J. (Ed.) (1999), *Beyond Behaviorism: Changing the Classroom Management Paradigm*, Allyn and Bacon, Boston.

NIE. (2013). *Graduand Teacher Competencies.* National Institute of Education, Singapore. www.nie.edu.sg/docs/default-source/td_practicum/te21---gtc.pdf.

OECD (2020a), "Learning remotely when schools close: How well are students and schools prepared? Insights from PISA", www.oecd.org/coronavirus/en/.

OECD (2020b), "Education responses to covid-19: Embracing digital learning and collaboration", www.oecd.org/coronavirus/en/.

OECD (2020c), "Growing up online: Addressing the needs of children in the digital environment." *Policy Brief*, OECD Publishing, Paris, www.oecd.org/sti/ieconomy/growing-up-online.pdf.

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

OECD (2019a), *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/5f07c754-en.

OECD (2019b), Working and Learning Together: Rethinking Human Resource Policies for Schools, OECD Reviews of School Resources, OECD Publishing, Paris, https://doi.org/10.1787/b7aaf050-en.

OECD (2019c), *A Flying Start: Improving Initial Teacher Preparation Systems*, OECD Publishing, Paris, https://doi.org/10.1787/cf74e549-en.

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

OECD (2019e), "A healthy mind in a healthy body", *Trends Shaping Education Spotlights*, No. 17, OECD Publishing, Paris, https://doi.org/10.1787/eb25b810-en.

OECD (2019f), "Out-of-school-hours services", OECD Family dataabse, www.oecd.org/els/family/PF4-3-Out-of-school-hours-care.pdf.

Onyango-Ouma, W., J. Aagaard-Hansen, and B. Jensen (2005), "The potential of schoolchildren as health change agents in rural western Kenya", *Social Science & Medicine*, Vol. 61, No. 8, pp. 1711–1722.

Qualls, N. et al. (2017), "Community Mitigation Guidelines to Prevent Pandemic Influenza — United States, 2017", *MMWR. Recommendations and Reports*, Vol. 66, No. 1, pp. 1-34, http://dx.doi.org/10.15585/mmwr.rr6601a1.

Révai, N. (2020), "What difference do networks make to teachers' knowledge?: Literature review and case descriptions", *OECD Education Working Papers*, No. 215, OECD Publishing, Paris, https://doi.org/10.1787/75f11091-en.

Révai, N. (2018), "What difference do standards make to educating teachers?: A review with case studies on Australia, Estonia and Singapore", *OECD Education Working Papers*, No. 174, OECD Publishing, Paris, https://doi.org/10.1787/f1cb24d5-en.

Savage, C. et al. (2018), *The Evaluation of Wave Six Whānau Initiatives for Te Pūtahitanga o Te Waipounamu*, Research, https://static1.squarespace.com/static/548669c2e4b0e9c86a08b3ca/t/5b20404f1ae6cf43f6d29056/1528840319694/Wave+6+Evaluation.pdf.

Sprang, G. and M. Silman (2013), "Posttraumatic Stress Disorder in Parents and Youth After Health-Related Disasters", *Disaster Medicine and Public Health Preparedness*, Vol. 7, No. 1, pp. 105-110, http://dx.doi.org/10.1017/dmp.2013.22.

Stewart, H., N. Watson and M. Campbell (2018), "The cost of school holidays for children from low income families", *Childhood*, Vol. 25, No. 4, pp. 516-529, http://dx.doi.org/10.1177/0907568218779130.

Stuart, K. et al. (2013), "Managing temporary school closure due to environmental hazard", *Management in Education*, Vol. 27, No. 1, pp. 25-31, http://dx.doi.org/10.1177/0892020612468928.

UNICEF, WHO and IFRC (2020), *Interim Guidance for COVID-19 Prevention and Control in Schools*, United Nations Children's Fund, New York, www.unicef.org/reports/key-messages-and-actions-coronavirus-disease-covid-19-prevention-and-control-schools.

Uscher-Pines, L. et al. (2018), "School practices to promote social distancing in K-12 schools: review of influenza pandemic policies and practices", *BMC Public Health*, Vol. 18/1, http://dx.doi.org/10.1186/s12889-018-5302-3.

van Elsland, S. and R. O'Hare (2020, 17 March), "COVID-19: Imperial researchers model likely impact of public health measures", Imperial College London, www.imperial.ac.uk/.

Wang, G. et al. (2020), "Mitigate the effects of home confinement on children during the COVID-19 outbreak", *Lancet*, Vol. 395, No. 10228, pp. 945-947, http://dx.doi.org/10.1016/S0140-6736(20)30547-X.

WHO (2009), "Pandemic influenza preparedness and response: A WHO guidance", World Health Organisation Global Influenza Programme, Geneva, www.who.int/influenza.

World Bank (2020), "How countries are using edtech (including online learning, radio, television, texting) to support access to remote learning during the COVID-19 pandemic", www.worldbank.org/en/topic/edutech/ (accessed on 14 April 2020).

For more information

Contact **Tracey Burns (tracey.burns@oecd.org)**

See **OECD (2019), *Trends Shaping Education 2019*, OECD Publishing**

Visit *www.oecd.org/edu/ceri/spotlights-trends-shaping-education.htm*

www.oecd.org/edu/ceri

All photos © Shutterstock/www.shutterstock.com Zorro Stock Images, Fizkes, CGN089

This paper is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.