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Cambridge Report:

What have we learned about the COVID-19 impact on education so far?

TRANSFORMING SOCIETIES THROUGH EDUCATION

CAMBRIDGE REPORT: WHAT HAVE WE LEARNED ABOUT THE COVID-19 IMPACT ON EDUCATION SO FAR?

At Cambridge, we understand the critical role education plays in human capital development, to create stronger, prosperous and more equitable societies. We work in partnership with governments and civil society organisations, to offer end-to-end support for the implementation of sustainable educational change around the world. Informed by the latest research, we develop customised solutions to suit a country's individual context, need and vision.

We are part of the University of Cambridge, with a wealth of expertise in curriculum, assessment, publishing, teacher training, English language development and stakeholder communications. Our commitment is to provide coherent, evidence-based approaches for achieving greater education outcomes. Together, we can harness the true potential of education systems to equip learners with the necessary skills and knowledge needed for the future.

Here is a summary of what we have learned so far about the pandemic and what we think the main challenges and opportunities will be in the future.

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1 WHAT WE'VE LEARNED FROM THE PANDEMIC SO FAR

1.1 School closures cannot be disconnected from the wider global pandemic

The COVID-19 pandemic crisis is unprecedented – in its scale and its impact. The impact of school closures on young people cannot be disconnected from the wider devastating socio-economic impact of millions of people directly and indirectly affected by the virus: the closure of all non-essential businesses; reduction of travel and international trade; whole sectors of economies in jeopardy; cancellation of public events; unheard-of loss of jobs and livelihoods; social distancing and home working becoming new social norms in record time… Within this challenging context, it is clear that the impact of school closures on young people will go well beyond learning loss.

The scale of the current global socio-economic crisis adds to the severity and the complexity of the impact of school closures on education systems. Governments will be faced with incredibly difficult priority decisions to address multiple competing emergencies in the areas of public health, restarting economies, addressing devastating social impact, and rethinking approaches to education to ensure the COVID-19 generation of school-aged young people is not left behind.

1.2 Education systems were not prepared

From January 2020, governments across the world announced national lockdown one after the other, including school closures; by mid-April 2020, around 90 per cent of schools[1] were closed, affecting almost 1.6 billion learners in 190 countries. The immediate priority of ministries of education everywhere has been to try and ensure access and continuity of learning through distance learning (online and offline).

Ministries have adopted different solutions according to their available resources. Those that already had a robust platform scaled up the provision of online e-learning, while others launched national platforms, or adopted Microsoft Teams/Google Suite for Education, and other distance learning solutions. In countries with low or no tech, other options were adopted, such as broadcasting (via radio) classes that focus on basic literacy and numeracy; producing and distributing self-learning programme books; and shifting lessons to the television.

The overall impression is that education systems everywhere, in richer as well as in poorer countries were not prepared. Ad-hoc solutions were implemented under time pressures, often sidelining teachers in the decision-making process and with limited evidence that the adopted solutions would reach every learner or would provide an effective way to ensure continuity of learning beyond providing access to some form of educational resources.

As it is now becoming clear that the crisis will last for longer than initially anticipated, and that access to education is likely to morph into hybrid models of school attendance that will become the norm for a while, it will be important, as some countries have already started to do, to evaluate whether the solutions put in place during the lockdown have had an impact, assessing what has been positive and what hasn't, in order to start planning more effectively for medium- and longer-term solutions.

1.3 Stark inequalities revealed between and across countries

School closures have revealed stark inequalities in access to education between the rich and the poor, in both richer and poorer countries. The global digital divide is a key indicator of these inequalities. Half of all students out of the classroom – or nearly 830 million learners globally at the peak of the global pandemic – do not have access to a computer; more than 40 per cent do not have internet access at home; nearly 90 per cent of students in sub-Saharan Africa do not have household computers while 82 per cent are unable to get online; in South Asia, only 33 per cent of people have access to the internet. And although having a mobile phone can support young learners in accessing information or connecting with their teachers, there are still around 56 million learners who live in areas that are not served by mobile networks.

Such disparities in access to digital education are particularly evident in low-income countries but exist everywhere, including in the richest countries in the world; a new report published in February 2020 in the US indicates that around 42 million Americans, twice the official number estimated by the official Federation Communications Commission, have no internet access[2]. Lack of internet access in rural America not only means lack of access to education but also lack of access to home working, telehealth and other essential social and civic needs. "*It's a shame it's taken a pandemic for people to realize if you don't have internet access you're cut off from participation in society*."[3]

1.4 Acceleration of the use of digital technology in education

Digital technology has slowly been introduced in schools for the past thirty years. The past decade has seen an acceleration of the development of new technologies at great speed, making it quite challenging for educators to keep up with changes, to understand the potential of these new technologies in the context of education and to find ways to use them effectively in the classroom. As new technologies have become part of the fabric of twenty-first-century life, their role in education has been increasing significantly and a better understanding of what digital technologies can bring to education has progressively developed as a result.

However, nothing had prepared education systems to entirely reconsider a mostly universal education model based on attending school where learners and teachers work together in a classroom, with a weekly schedule carefully structured within an academic year, with high-stake exams taken by all at the same time, to be replaced in just a few months by entirely new models of education with digital technologies at the centre of it all.

School closures have gone hand in hand in many countries with the rapid expansion of remote learning

1 https://en.unesco.org/covid19/educationresponse

2 https://broadbandnow.com/research/fcc-underestimates-unserved-by-50-percent

3 Quoted in https://www.theguardian.com/world/2020/apr/13/coronavirus-covid-19-exposes-cracks-us-digital-divide

using a range of digital tools. Teachers and school leaders have had to learn and adapt very quickly, usually on their own or with peer support rather than structured professional development. This period of extreme disruption has required teachers to develop new skills and knowledge at an incredible speed.

However, this rapid 'sink or swim' adoption also runs a high risk of embedding detrimental practices that teachers then may have to 'unlearn', creating greater issues down the line in designing more long-term teacher professional development programmes. Additionally, it's likely that technologies that have become widespread during the pandemic might not be those that are best suited in the long term for digital learning.

As new education models are being put in place to allow staged returns to schools adapted for social distancing, it will be essential to reconsider the role and use of new technologies during the school closure period, to learn from and capitalise on what has been learned, the positive and the negative, in order to plan and implement more strategically what is likely to become the new blended education model of the future.



1.5 We can learn from Education in Emergencies research literature

A rapid implementation of remote learning around the world is taking place within the extraordinary context of an unprecedented global pandemic. Levels of stress brought about by the health threat of parents working as essential workers; threat to livelihoods or livelihoods already lost; parents juggling working from home with family responsibilities; reduced time spent outdoors; lack of direct contact with friends and families; lack of access to a comfortable learning environment; missing access to free school meals for the most vulnerable… have created learning environments that are very far from the *safe and stimulating environment* teachers have to create for pupils in their classroom[4] (Department for Education, UK, Teachers' Standards).

These extraordinary circumstances forced on learners and teachers by the current COVID-19 pandemic pose a problem for those who are used to using evidence and research to inform their response to challenges in education systems. Lack of evidence is due to both the unusual nature of the current crisis and the difficulty of conducting research in these conditions. The education in emergencies (EiE) literature offers usable lessons and insight into the kinds of challenges and needs these conditions create, and potential solutions that have addressed these issues.

Key insights from EiE literature reviewed in the context of the development of the Learning Passport, a partnership between the University of Cambridge, UNICEF and Microsoft[5], include:

- **Heterogeneity:** We can expect to find, and need to respond to, a similarly diverse range of conditions and needs generated by the pandemic and responses to it. There will be consistencies between those affected by the crisis, but specific learners' and teachers' needs will vary according to pre-existing socio-economic and political conditions (including gender, disability and race/ethnicity), and the way these intersect with new challenges during the pandemic (and are potentially exacerbated by it).
- **Social and Emotional Learning:** The EiE field is driven by the objective of providing a sense of normality through routine, knowledge acquisition and skills acquisition, and interventions are commonly approached with the need for rapid restoration of conventional learning as a priority, with a secondary emphasis on the importance of psychosocial support (PSS). Students may find the disruption,

4 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/665520/Teachers__Standards.pdf

5 https://www.cambridge.org/gb/educationreform/learning-passport

isolation and wider context of widespread illness and death traumatic, although hopefully to a lesser extent than for displaced or refugee learners. Responses within education systems should not only be sensitive to but respond to this need.

- **Teachers:** Responses to crisis contexts are usually more successful where teachers are supported in terms of their own well-being (they will be facing the same challenges as their students), their ability to contribute and create solutions, and with suitable and effective resources.
- **Teaching and Learning Materials:** While radio and television learning initiatives have been used in EiE contexts, most interventions rely on the rapid development and distribution of printed material. Increasingly common is the use of digital materials, including those using mobile telephony, though findings suggest that:
  a) infrastructure in most contexts of displacement is inadequate for delivery of most solutions of this kind
  b) digital divides in many contexts of displacement make the effectiveness of digital responses limited in delivering learning equitably
  c) the most powerful uses of digital technology centre around education management, coordination and communication, rather than delivery of learning materials.
- **Coherence:** curricula that stand the best chance of effective enactment in these conditions are:
  a) internally logical and straightforward for teachers and learners to follow
  b) facilitating 'piecing together' of learning that may be delivered inconsistently.

Responses within the current pandemic could consider inclusions of this kind, both to confront challenges or difficulties students may be experiencing but also to contextualise and make content relevant. Education systems can also play a part in controlling the spread of the disease through improving public information.

2 WHAT ARE THE KEY CHALLENGES FOR THE FUTURE?

2.1 Not reversing progress made in meeting SDGs for Education

Addressing global inequalities in access to education has been a global priority since the 1990s. The international Education for All (EFA) initiative committed to achieving education goals, including: *Ensuring that by 2015 all children, particularly girls, those in difficult circumstances, and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality.*[6] The EFA initiative is now incorporated into the 2030 Agenda for Sustainable Development Goals. The latest update in 2019 indicates that: *Despite the considerable progress on education access and participation over the past years, 262 million children and youth aged 6 to 17 were still out of school in 2017, and more than half of children and adolescents are not meeting minimum proficiency standards in reading and mathematics.*[7]

Despite falling short of meeting its target, considerable progress has been achieved in the past two decades in achieving the SDGs. The main concern now is that this progress could be reversed as a result of global school closures as the long-term negative impact on the most vulnerable in the poorest countries, girls in particular, is well documented. Global collaboration and partnership will be essential to limit the potential reversal on progress and ensure that resources, data and expertise are pulled together and shared in the most effective way. UNESCO Director General Audrey Azelay has summarised this powerfully in the call to form the Global Coalition for Education: *Never before have we witnessed educational disruption at this scale. Partnership is the only way forward.*[8]

2.2 Avoid rushing back into 'business as usual' education

As schools are gradually reopening, ministries are keen to find ways to address anticipated 'learning loss'. The negative impact of school closures during the summer holidays on learning is well documented and school programmes take this into account at the

6 https://en.unesco.org/gem-report/report/2015/education-all-2000-2015-achievements-and-challenges

7 https://sustainabledevelopment.un.org/sdg4

8 https://en.unesco.org/covid19/educationresponse/globalcoalition

beginning of the school year. As a result, there is a general recognition that, despite all the solutions put in place in the past few months to ensure continuity of learning, learners are likely to be behind on expected learning as defined in national curricula.

A range of solutions are being put forward, from opening schools in the summer; extended school days; catch-up programmes for vulnerable children; accelerated programmes, streamlining of curricula; repeating the academic year... The main characteristic of all these solutions is that they are mostly focused on academic loss and fail to take into account the wider context in which the learning loss has taken place, even as the actual learning environment in which the return to learning is taking place looks quite different from what learners have been used to because of the measures taken to make schools safe.

As well as the socio-emotional dimension, consideration should be given to the fact that learning loss might have been affected much more than anticipated by teachers. A working paper[9] on the long-term impact of an average of 14 weeks of school closures as a result of the 2005 earthquake in Pakistan shows that students at all levels lost between 1.5 and 2 years of schooling. This fascinating research that took place over a period of 4 years also shows that the negative impact on learning loss is 2 to 3 times worse for children whose mothers have not completed primary education.

A key challenge for ministries in the planning of the return to schools will be to accept that the disruption caused by the school closures due to the pandemic is different from the type of anticipated learning loss faced by schools each year after the return from the summer break. Increased drop-out rates, lower enrolment and failure to transition from primary to secondary have also been raised as concerns quite widely. Planning should include guidance and support for teachers and parents in understanding how to support young learners progressively back into learning, and avoid trying to get straight back to where they left the curriculum before lockdown in a rush to catch up before learners are ready to move on with their learning.



2.3 Identifying the most effective ways to use technology to improve education for all

New technologies are a challenge in education in the sense that although we can intuitively hypothesise how they could help improve access to and quality of education, the reality is that the available research literature identifies key pedagogical risks in moving to remote learning, including practical aspects such as the need for interactivity, timely feedback to learners, and a social component. These risks are increased at the lower educational stage, where traditional face-to-face interaction is required for effective socio-emotional development.

Those risks can be mitigated by carefully blending different approaches, but in the current context ministries have been formulating and scaling solutions in real time, with an emphasis on providing access and content to learners without much time for consideration of what is working and what is not. An overwhelming amount of content has been made available for free, but with little curation so far to match these resources to national curricula or specific country needs, leaving this task to teachers also having at the same time to develop new technical skills with limited or no support.

Investing in new technologies is expensive, not only because of the costs related to infrastructure and equipment and the associated training costs, but also because of the level of expertise required for effective procurement and the current limited availability of models or approaches to distance learning at system level. The crisis brought about by the COVID-19 pandemic will have an impact on governments' financial resources in individual countries all over the world and as a result also on global development and aid organisations. The main challenge will be to identify the most appropriate and effective ways to invest in technology to improve education for all.

9 Andrabi, T., Daniels, B., Das, J. 2020. Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005. RISE Working Paper Series. 20/039. https://doi.org/10.35489/BSG-RISE-WP_2020/039

2.4 Defining what is meant by developing 'resilient' education systems

Resilience is usually associated with character education and defined as 'grit', the ability to bounce back in the face of adversity, a key personal skill to succeed in life. As education systems are confronted with the disruption brought about by the pandemic, 'resilience' has become the new buzzword to describe what longer-term strategies for education systems all over the world should focus on, i.e. to develop 'resilient systems'. A key challenge for education systems will be to define what they mean by 'resilience', as this concept can be interpreted in a range of different ways with different implications and challenges. Different interpretations could be:

- Equating resilience with the ability to continue to deliver education when attendance at the usual place of learning is not possible. Within the context of this definition, the main focus would be to develop a digital infrastructure for remote learning on a large scale, including a suitable platform, model for delivery, digital content aligned to the national curriculum, teacher training programmes, etc.
- Resilience could also be interpreted as the ability to adapt quickly to unpredicted circumstances. Within the context of this definition, the priority could be on developing a framework for education in emergency, which would define what should be taught and how in times of crisis.
- Resilience could also mean to design education systems in such a way that they could withstand crises, what some are calling 'building back better'. Within the context of this definition, the approach could involve reconsidering the purpose of education in the context of societies where the use of new technologies is revolutionising the way we live and work; this would involve rethinking curricula and assessment to focus more deeply on what are the essential skills, qualities and knowledge learners should develop, while also developing models of blended learning that would not only make education systems more adaptable in times of crisis but also improve the quality and experience of education for all.

These are just some examples of how 'developing resilient education systems' might be interpreted. Each of these examples comes with different risks and challenges, from rushing to invest heavily in developing digital capabilities to the detriment of other, potentially more effective, solutions to improve access to quality education; failing to address long-term issues by focusing exclusively on current challenges; to trying to reform too many parts of the system at the same time with the inherent risk of misalignment detrimental to the coherence of the whole system. Finally, a common risk to all solutions would be working outside of a robust evidence base, since there is limited evidence available for some of the most radical (and even less radical) solutions.

3 WHAT ARE THE OPPORTUNITIES FOR THE FUTURE?

3.1 Opportunity to address pre-existing issues

The crisis has exacerbated issues that were already there in many countries, poor as well as rich, and provides an opportunity:

- to look for solutions that address inequalities in access to quality education that exist in most countries, rich and poor, which have been shockingly revealed during the pandemic
- to reconsider and avoid repeating past approaches and ambitious plans of education reform that might not have had the expected impact to increase access and improve quality of teaching and learning
- to reassess how to effectively involve all stakeholders, including teachers and school leaders, learners, parents and communities, civil society and the private sector, in designing solutions suitable to local contexts
- to design evidence-based solutions informed by well documented research such as the body of Education in Emergencies research literature and research programmes currently taking place in a number of countries, for example the international Research for Improving Systems of Education (RISE) programme in Ethiopia, co-lead by the REAL Centre[10] together with the Ethiopian Development Research Institute; the Learning Passport partnership between the University of Cambridge, UNICEF and Microsoft, etc.

10 https://www.educ.cam.ac.uk/centres/real/

3.2 Opportunity to fast-forward education to meet the needs of future generations

Periods of profound crisis usually bring about intense disruption which in turn tend to bring about significant change. The current crisis is likely to become one of the world's most significant periods of disruption as the World Bank predicts that *The pandemic is expected to plunge most countries into recession in 2020, with per capita income contracting in the largest fraction of countries globally since 1870*[11]. With this level of disruption comes the opportunity to reconsider the purpose of education and to transform it to meet the need of tomorrow's societies.

↘ Reducing the content of basic education curriculum and making it relevant

A recent trend in education reform programmes around the world has been to review national curricula in order to reduce the amount of content in an effort to provide more space and time on the one hand to focus on reinforcing acquisition of foundational knowledge and skills, and on the other hand to embed the concept of development of deep learning. Ensuring secure acquisition of foundational skills is essential for learning progression and being able to learn independently, which is one the of most important skills needed to ensure lifelong learning in a world where advances in technology are making this an essential skill more than ever before.

During the COVID-19 crisis, many teachers have realised that they won't be able to continue delivering the expected curriculum and have had to question and decide, on their own or with the support of their peers, what is more important for them to focus on and how to make learning relevant to their learners in these difficult times. This experience shared by many teachers provides an opportunity for ministries around the world to review their curricula with the aim to reduce the amount of expected content; to focus more strongly on foundational skills and deep learning; and to make content more relevant to learners' lives to increase engagement and in turn encourage progress.



↘ Placing skills and character qualities at the heart of the curriculum

Although it is still unclear what long-term socio-economic changes will result from the current crisis, it is likely to accelerate pre-existing trends such as the increasing use and development of digital technologies (AI; robotics; internet of things) in all sectors (health and social care; education; manufacturing; public services; business; finance…) as a direct result of the imposition of social distancing.

This will have an increasing impact on the nature of the skills required by the labour market. The *Global employment trends for youth 2020: Technology and the future of jobs* indicates that employers are currently seeking to fill more entry-level vacancies in health and social care than in the information technology sector… However, even for these and other non-technical roles, such as customer services and sales, applicants are expected to have computer literacy and a good knowledge of office software.[12]

Alongside the obvious need to consider digital capability as one of the basic education foundational skills, it is likely that what is often referred to as 'twenty-first-century skills' will also have to become more predominant in education: *In this ever-changing global environment, young people require resilience and adaptability – skills that are proving to be essential to navigate effectively through this pandemic. Looking into the future, some of the most important skills that employers will be looking for will be creativity, communication and collaboration, alongside empathy and emotional intelligence; and being able to work across demographic lines of differences to harness the power of the collective through effective teamwork.*[13]

11 https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world

12 https://www.ilo.org/global/publications/books/WCMS_737648/lang--en/index.htm

13 https://www.weforum.org/agenda/2020/03/4-ways-covid-19-education-future-generations/

↘ Bringing forward sustainability as a key theme in curricula

The crisis is bringing forward the sustainability agenda that has been growing in the past few years among young people, galvanised by Greta Thunberg's example to get involved. An article for the Harvard Business Review in March 2019 was warning that *Young People Are Leading the Way on Climate Change, and Companies Need to Pay Attention*[14].

The visible reduction of carbon emissions during lockdown and the resulting improvement in air quality in a number of large industrial areas around the world provide an opportunity to reconsider how to approach climate change and sustainability in education, issues that research shows are a priority as well as sources of stress for 'generation alpha' (children of millennials)[15].

This momentum provides an opportunity to review approaches to curricula to make them more relevant to young people by linking what they are learning directly to the world around them and help achieve the ambition of many countries to increase the number of young people choosing sciences and other subject areas vital for combating climate change and building sustainability as their main educational pathway.



↘ Reconsidering high-stakes assessment

The cancellation of national exams in most countries around the world has been one of the most disruptive aspects of school closures. A whole generation of young people has missed the opportunity to demonstrate their knowledge and skills in exams carefully designed to assess them in a valid, reliable and fair way. Instead, exams have been cancelled, postponed or replaced by teacher assessment based on evidence of work done in the classroom, which had not been designed for this purpose.

As it is starting to look like a possibility that national assessments might be affected for at least another year because of the prolongation of social distancing and the scale of learning loss in 2020, there is an opportunity to have a complete rethink of high-stakes summative assessments in the future: their purpose, their format and their mode of delivery. This will be part of the work taking place around resilience of education systems in ministries around the world. Some of the changes introduced to address the assessment crisis created by the pandemic, such as schools' calculated grades (with evidence based on internal tests and other forms of learners' classwork) and statistical standardisation by national assessment authorities, are likely to generate further developments that could become the new approach to high-stakes assessment in the future or a more robust alternative in times of crisis.

↘ Rethinking the role of teachers in education

With schools being closed, parents have had to step in and be involved with their children's learning in new ways, from having to create a suitable environment and structure for learning to becoming more aware of what and how children learn and interact with their teachers and peers. With this has come a reappreciation of the complexity and importance of the role of teachers, which is one of the positive outcomes of the pandemic in a number of countries.

At the same time, teachers have had to develop new ways of reaching and interacting with their students and their families, as well as with their classes. As many teachers have developed new skills in record time, it will be important for teachers, schools and ministries to reflect on what has been learned and assess whether some of the approaches could be retained to increase access and improve the quality of teaching and learning.

It is possible, for example, to imagine that the use of recorded lessons or online practice resources might be effective in some instances, allowing teachers to have more time to support struggling learners or challenge high-achievers individually while others are learning independently. A new vision of learning in schools could be reinvented, blending a range of technologies and traditional face-to-face lessons with the teacher at the centre of it all.

14 https://hbr.org/2019/03/young-people-are-leading-the-way-on-climate-change-and-companies-need-to-pay-attention

15 https://www.weforum.org/agenda/2020/03/4-ways-covid-19-education-future-generations/

4 CONCLUSION

The COVID-19 pandemic is affecting education systems all over the world. Although immediate efforts have focused on finding ways to ensure continuity of learning, it is clear from our engagement with ministries around the world that many are unsure of how to assess the effectiveness of the solutions put in place so far, given, in many cases, the lack of available baseline data prior to the pandemic. Governments are also simultaneously considering longer-term implications and actively seeking support and collaboration in finding solutions to address wider underlying solutions in what is likely to be a significantly reduced global financial environment. With its wealth of expertise and commitment to provide coherent, evidence-based approaches to improve education outcomes, Cambridge will be keen to support governments in assessing the impact of the pandemic on their education systems and to help them design effective solutions that address their current and future challenges.



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