

## Background Paper for Mobile Learning Week 2020

# Six months into a crisis: Reflections on international efforts to harness technology to maintain the continuity of learning

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## Introduction

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### **An abrupt and unresolved disruption to learning**

The impact of COVID-19 on learning continuity has been nothing short of devastating. Due to global school closures, formal learning either stopped completely or was severely disrupted for the vast majority of the world's students, a situation without historical precedent. Alarming, breaks in learning continuity stemming from the pandemic are hardly resolved. Over half a year into the crisis, UNESCO estimates that one billion children, youth and adults (about two thirds of the global student population) are still facing major interruptions to their learning and schooling, ranging across-the-board school closures to reduced or part-time academic schedules.<sup>i</sup> Many students have already accrued learning losses ranging from six months to one year, a deficit that is likely to ripple through a generation, absent bold remedial actions. The World Bank has projected the financial cost of this learning loss to be as high as USD \$10 trillion or 10% of global gross domestic product.<sup>ii</sup>

### **Technology as the vital link to learning**

In an attempt to respond to the disruption, governments positioned technology as the primary—and, in many contexts, *only*—channel to maintain the continuity of formal learning. Investments poured into efforts to make digital tools the principal hubs of learning, rather than brick-and-mortar schools and classrooms. In countries where digital networks and hardware were unavailable, technology was still the 'Plan B' in the form of TV and radio.<sup>iii</sup> While there have been various technology-enabled distance learning responses, governments focused most of their energies on connected digital technologies, even though the reach of these technologies is far from universal. Today half of the world's population (3.6 billion people) still lack an internet connection.<sup>iv</sup> Yet the benefits of internet-based solutions vis-à-vis radio and TV solutions are considerable: connected digital technologies allow for the possibility of two-way communication, real-time interaction, gamified learning, and much more.

### **Slipping faith in new models of learning**

The COVID-19 educational disruption and response initially gave rise to an optimistic discourse on digital learning and the future of education. Many in the educational community saw the massive global shift to digital learning as a source of innovation and a 'forced opportunity' to reimagine the how, what and where of learning. The scale and speed of the forced transition was seen as a unique, if unexpected, chance to accelerate overdue transformations to inefficient educational models. The catchphrase 'never waste a crisis' became a sort of refrain in many ed-tech circles; the pandemic was an excuse to implement bolder changes than would be possible absent the emergency context. But this view quickly lost momentum as evidence mounted that the move to digital learning was excluding large numbers of learners, amplifying existing educational disparities and posing a risk to hard-won understandings of education as a human right, a public service and a common good.<sup>v</sup> Early expectations for sweeping transformation gave way to more sober assessments of what changes might be realistic in the short-term and the whiplash caused by efforts to pivot education from teacher-led classrooms to technology-facilitated learning centered on families and the home.

## Lessons Learned

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### **Broken continuity of access to formal learning opportunities**

The global shift to technology-dependent distance learning has largely failed to maintain links to formal learning for most students. This is primarily due to learners' inability to access education provisioned through the internet and lower-tech technologies.<sup>vi</sup> For other, more privileged learners links to education were frayed, but not fully broken. These students were able to access remote education of varying quality with varying consistency. For a lucky minority, links to schooling remained relatively strong and the interruption to learning was mild, despite the transition from in-person education to learning delivered through technology. These students tended to live in rich countries and come from socio-economically advantaged families.

### **Mirroring and widening existing divides**

According to UN estimates, nearly 500 million students from pre-primary to upper secondary school did not have *any* access to any remote learning. Three quarters of these students lived in the poorest households or rural areas.<sup>vii</sup> More nuanced data showed finer disparities that traced and functioned to accentuate existing social, economic, gender and geographic fault lines. Analysis from Brookings shows that at the height of school closures, around 90 per cent of high-income countries were providing some form of online remote learning, but only 25 per cent of low-income countries were doing the same.

### **Insufficient reach of technologies, including 'low-tech' solutions**

The types of technologies deployed to maintain learning continuity during the pandemic largely reflected a country's development status. According to UNESCO-UNICEF-World Bank survey data, two thirds of low-income countries used radio for primary education, compared to less than half of upper-middle-income countries. Three quarters of lower-middle income countries used TV programmes to provision primary education, while only one third of low-income countries did the same. Most high-income countries, on the other hand, mobilized synchronous or asynchronous online learning platforms to support remote teaching and learning.<sup>viii</sup> In high-income countries, digital learning offerings covered over 80 per cent of the population but less than 50 per cent in low-income countries.<sup>ix</sup> These shortfalls were attributable to digital divides and other hurdles, including technical barriers such as insufficient access to electricity, and human barriers such as limited education and digital literacy.<sup>x</sup> Even simple technologies like TV and radio were rarely inclusive or equitable, even if they helped vastly expand the reach of educational content. Survey data indicates of that for the poorest 20 per cent of households only 7 to 30 per cent of families owned a radio and just 5 to 22 per cent had a TV.<sup>xi</sup>

### **Human as well as technical challenges**

While access to connected technology is a prerequisite for distance learning, it is, in or of itself, insufficient to ensure educational continuity. The success or failure of approaches rested on people as much as networks and devices. The crisis has shown that the human dimensions of distance learning—from the ability of teachers to use digital tools to the administrative capacities of education officials to procure and scale up digital learning solutions—pose serious barriers to the effective provision of

technology-dependent education.<sup>xii</sup> Reengineering education systems to move learning to technology portals requires new skills, outlooks and competencies from virtually everyone involved in education.

### **Dependence on families**

In practice, efforts to assure learning continuity at a distance through technology were dependent on the active engagement of families. This was especially true for families with young learners. Parents had to help their children navigate digital learning portals and establish schedules and routines for education, tasks that were previously managed by teachers and schools. During lockdowns, the home environment became as essential to academic success as the school environment had been. In this context, distance learning, unsurprisingly, worked more effectively for learners with parents that had time and necessary skills sets—both pedagogical and technical—to support education. Learners with parents that could not provide this hands-on support, whether because of work obligations or limited language or IT proficiency, were at a disadvantage. This situation supercharged inequities, even if it may have, at least for some families, strengthened the relationship between parents and their children in the education process. Many parents also developed greater familiarity with what their children were learning and improved family connections with schools and teachers.

### **Education entails more than curricular study**

The unexpected closure of schools heightened awareness that, despite a growing reliance on digital mediums, human contact is at the heart of learning. The forced shift to distance learning convinced many educational stakeholders that technology (at least in its current iterations) cannot easily replace the experience of being in school with in-person interaction. Nor can technologies replace the teacher who remains central to the educational process. The pandemic forced recognition that much of the learning that takes place in physical and social space of schools—with others through play, sports, art, and extra-curricular activities—is not purely academic and probably poorly suited for remote delivery through technology. Learning, as a human experience, is rooted in social interaction and processes.<sup>xiii</sup> Even where distance learning ‘works’, it tends to gloss over social and civic learning.

### **New questions about technology dependence**

The COVID-19 crisis has highlighted society’s reliance on technology, both in the realm of education and beyond it. The sudden shift to distance learning has forced families around the world to use technologies that they did not ask for and often did not chose, raising serious ethical issues. How is privacy assured? Who owns learning data? What would usually be fundamental considerations—regarding inclusion and control—tended to take a backseat to pressures to roll out here-and-now solutions. Yet on the positive side, students, teachers and families saw flickers of the ways technology might make learning more differentiated and personalized and, in some cases, accommodate greater choice and autonomy (although others saw previews of how it might reinforce top-down control of education). The collective attempt to embrace a new educational paradigm however flawed and however brief invited people to more critically consider the structures, content, methods and spaces that define the educational experience.

### **Effectiveness and engagement as a black box**

In instances where students are able to access distance learning solutions to maintain the continuity of their learning, very little is known about the impact of these solutions.<sup>xiv</sup> Engagement with TV and

radio broadcasts is challenging to monitor and, harder still, is measuring learning gains associated with these mostly one-directional technologies. Online platforms allow for greater data collection and, if carefully developed and implemented, can provide detailed information about learning progress. Yet robust monitoring and measurement of gains from technology-dependent distance learning was and remains rare. There is also a growing body of evidence that sustaining student attention in purely digital platforms is more difficult than in face-to-face environments, a factor that may contribute to drop off and fall off from distance learning.<sup>xv</sup>

### **Varied relevance for students of different age**

Technology-dependent distance learning is, on the whole, better suited for older students who can better regulate their own learning than it is for younger students whose regulation is less autonomous. Simply put, pre-primary or early primary school students cannot follow a distance learning curriculum without careful and sustained parental oversight, such that distance learning for this age-group is another name for home schooling. Older students require fewer interventions, but even for this group long hours spent in front of digital screens is often perceived as a burden and a poor substitute for in-person school-based learning. It comes as no surprise that the most promising programs to assure the continuity of learning through technological means have been at the level of higher education.

### **Repurposing of established channels and platforms**

When digital channels worked, they tended to move through widely-used and corporate-controlled communication platforms, such as WhatsApp, Facebook, and Zoom.<sup>xvi</sup> These multipurpose utilities offered digital spaces that people understood and could access seamlessly. More education-focused platforms such as Google Classroom and Moodle also helped assure learning continuity and offered greater functionality to support learning. But overall, people generally turned to what they already knew—established TV and radio broadcast channels, mainstream social media platforms, and standard email—rather than pivot to unfamiliar technologies, platforms and software. At the global level, distance learning was largely an exercise in repurposing of general-use communication tools for education.

## **Discussion Questions**

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### **1. Recalibrating and rethinking technology's relationship to education**

Since the shift of the distance learning, many people have positioned technology as a threat to the vitality of public education and an engine of educational inequity. This discourse was active well before the pandemic but has gained momentum since school closures shattered any lingering doubts that there is private infrastructure and corporate ecosystem on which public education is increasingly dependent. Well-intentioned efforts to maintain learning during the crisis have, arguably out-of-necessity, hitched themselves to a complex machinery of government and non-government-controlled devices, broadcasts, networks, systems, content, and platforms. What is the way forward? What actions or policies are needed to ensure technology supports education yet, at the same time, does not undermine its status as a global public good, existing outside a market logic?

## **2. Addressing the elephants in the room: Inclusion and equity**

Technology-dependent distance learning strategies supported learning continuity for a few, but left a majority behind. Why then are governments around the world continuing to turn to it as a solution for preserving links to education? Kenya broke this mold by canceling classes until 2021, the year schools are expected to reopen. It chose not to rollout formal and compulsory distance learning because so few learners would be able to access these opportunities due to human and technical barriers.<sup>xvii</sup> If the right to education is dependent on connectivity, then must connectivity also be a right? And if digital networks and technology are becoming primary instead of secondary channels for learning, how should they be controlled and regulated?

## **3. Moving beyond access: Understanding effectiveness and relevance**

What is known about the effectiveness of distance learning for ensuring pedagogical continuity? Research too often looks at connectivity as a binary concept—connected or unconnected—and leaps to simplistic assumptions that connected children and youth will use internet portals for learning. Productive, regular and sustained use of connected technology for learning is the most important indication of its value and benefit for educational purposes. In reality, many people who have access to connectivity rarely use it for education or other empowering purposes, even as governments scale up efforts to encourage this behavior in response to school closures. What data is needed to better understand how well or how poorly distance learning is working for those who can access it? Relatedly, how can data shine light on learner engagement in new digital mediums? Tracking student clicks and time-on tasks from backend dashboards can help, but this tends to paint a limited picture of effectiveness and engagement. What will help going forward?

## **4. Making technology an ally of social, civic and emotional learning**

Few question that technology can help facilitate mastery of formal curricula, even if there are heated debates about to what extent, with what models, which subjects, and for which students—and, beyond this, how technology-dependent approaches compare to other approaches? However, there are significant doubts about whether and the degree to which technology can advance some of the more human-centered aspects of education and learning: building empathy, improving interactions with peers and adults, understanding and regulating emotions. Is this an area that somehow exists beyond or outside technology and digital mediums? If current paradigms of technology-enabled distance learning failed to give appropriate weight to social, civic and emotional learning, how, if at all, can these paradigms be adjusted to correct this shortcoming?

## **5. Possibilities beyond technology?**

In hindsight, the uniformity with which countries turned to technology-dependent distance learning as a response to school closures is rather remarkable. With few exceptions, the playbook to assure learning continuity was broadly the same: provision educational content through a technology portal, whether the internet, TV or radio. Perhaps this was the only option in light of the restrictions on in-person contact. Conversely, it may have reflected groupthink and limited imagination. Are there other approaches that might have been possible or might still be possible? Was there a model that would have given greater weight to inclusion and equity by being less reliant on technology that is far from universally accessible?

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