Report

Overview of emerging country-level response to providing continuity under COVID-19

What steps are being taken to reach the most disadvantaged students during the period of Covid-19 school closure?

Tony McAleavy, Chris Joynes, Emma Gibbs & Kate Sims

With input from Ed Gaible, Jamie Proctor and Rob Rodney

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Section 1: Executive Summary

Scope of study

- This report provides a rapid summary of country-level responses to the management of school closures in 2020, with a focus on the needs of disadvantaged students and the role of technology.
- We consider low-income, middle-income and high-income countries.
- We take a broad view of ‘disadvantage’ recognising that it presents itself in several different forms: socio-economic status, ethnicity, language group, gender, geography (including the challenges of remote rural communities), special educational needs and disability. Some students are subject to multiple disadvantage such as children in poor households with disabilities living in remote locations.
- We have looked for references to all aspects of disadvantage in country-level responses but we have not given prominence to gender. We recognise, of course, that many girls and young women are subject to serious disadvantage but the needs of girls and young women in the context of school closure is the subject of another report published in tandem with this report.
- We recognise that access to food is immensely important for many disadvantaged students during the Covid-19 crisis, but arrangements to ensure continuity in feeding are outside the scope of this study.
- Our starting point was the collection of Covid-19 country-level response documents curated by IIEP-UNESCO on Planipolis: the portal of national education plans and policies. We were also guided by the catalogue of country-level ‘edtech’ responses to Covid-19 identified by the World Bank. We supplemented plans from these sources with additional documents found through searches and personal recommendations.

Key themes

In seeking to provide for disadvantaged students during school closures, governments should begin by systematically auditing the ‘digital divide’ and design a distance learning regime that is fit for context.

In the context of school closures, equity problems arise when disadvantaged students lack access to the essential resources prescribed for distance learning. There is a need for a blend of high-tech (online learning), low-tech (radio and TV broadcasting) and no-tech (hardcopy workbooks) educational provision. The exact mix depends upon the capacity of the education systems. Papua New Guinea, Chile and South Korea each developed a distinctive distance learning solution that was based on a systematic audit of the available technology, identifying the exact dimensions of the digital divide. The result was a ‘fit-for-context’ solution. In Papua New Guinea, online learning is entirely unrealistic for most learners and students in remote communities will require hardcopy workbooks. In Chile, online learning is feasible in most urban areas, but not in remote rural areas, where workbooks are needed instead. South Korea possesses a digital infrastructure permitting almost all students to participate in online learning.
Meanwhile, in Iran, there was a misalignment between ambitious high-tech solutions and the access difficulties faced by disadvantaged rural communities.

During the design and implementation of the distance learning regime, governments should prioritise the needs of highly vulnerable, disadvantaged students, such as children with disabilities.

We found that many low-income countries paid relatively little attention to the needs of students with special educational needs and disabilities. There is a grave danger that this already marginalised group will be further disadvantaged by the school closure crisis. There are examples of promising practice in the response of middle-income and high-income countries. For instance, the government of Costa Rica instructed specialist teachers to adapt the mainstream resources provided for distance learning so that they are accessible for students with disabilities. In all countries, there is a need for disaggregated data, enabling policymakers to understand how students with different disabilities are engaged with education during a time of school closures.

There is a need to ensure that the distance learning of disadvantaged students is properly monitored and that quality assurance mechanisms give a ‘voice’ to disadvantaged students and their families.

In the first phase of the school closure crisis the emphasis was typically on continuity rather than quality of learning. Many country plans say relatively little about monitoring and the importance of granular data relating to the level of engagement of disadvantaged students, analysed in terms of different dimensions of disadvantage. Policymakers should ensure that clear metrics are established so that the effective provision of education to disadvantaged students can be carefully measured. Policy should be regularly reviewed and, if necessary modified, in response to issues that emerge the monitoring data. Monitoring and quality assurance mechanisms should give a ‘voice’ to students from disadvantaged backgrounds and their families.

Governments should take action to close the household-level technology gap between disadvantaged and more privileged students, while recognising that remote learning requires skilful teaching as well as appropriate technology.

In many low-income countries, there are plans to distribute radios to disadvantaged households. Teachers require guidance and training on how students can engage with radio or TV in the absence of a classroom teacher as mediator and guide. In some high-income countries, considerable resources have been devoted to the distribution of internet-enabled devices. These approaches were intended to ensure more equitable access to distance learning. There has been little attention to the question of how to ensure that the new equipment will be used effectively. There is a substantial body of relevant research which emphasises the need for skilful teacher mediation if students are to benefit from new technology.
For disadvantaged students, access to online learning can be enhanced through effective public-private partnerships with technology companies.

In line with World Bank guidance, many governments have been active in negotiating arrangements with private sector telecommunications companies and internet service providers to reduce or eliminate household costs associated with online learning. In a few cases, there have also been schemes to increase internet connectivity in remote rural areas.

There is a need to providing role clarity for teachers and other professionals so that they understand their responsibilities for ensuring the learning continuity of disadvantaged students.

Disadvantaged students need personal support from education professionals during school closures. In several jurisdictions, there have been impressively high levels of specificity about the responsibilities of teachers. One good example is the Amazon region in Brazil, where teachers have been given clear instructions as to how they should enhance student engagement with educational broadcasting. School leaders have a key role to play in monitoring the engagement of disadvantaged students in remote learning and providing feedback to higher authorities on any problems and on the effectiveness of external support. The responsibility of key ‘middle tier’ officials, such as district education officers, should be unambiguously stated.

Governments should build coalitions with parents or caregivers and non-government organisations to support continuity of learning for disadvantaged students.

Partnership with parents and other caregivers is an essential precondition for successful remote learning, but this can be particularly challenging for poor families and parents of children with disabilities. Many governments recognise this. Governments should use all available media to promote an understanding of the distance learning model and ways in which parents and caregivers can support learners. In New Zealand, the ministry of education has taken steps to engage with the families of Pacific Island heritage, broadcasting short radio programmes which explore different facets of family support for student home study. Helpline services can play an important role. In Jamaica, the National Parenting Support Commission is running a national network of parent helplines with a focus on support for disadvantaged families. The helpline service is intended to assist families both in terms of continuity of learning and in other issues, such as difficulties accessing food during the current crisis. Non-government organisations can play an important part in provision of support. In South Africa, a not-for-profit organisation has organised a national parent WhatsApp support line for families with children with disabilities.
Section 2: Evidence and Policy

Promising policy intended to reduce the ‘disadvantage effect’ during the period of school closure

We reviewed country-level responses to the Covid-19 crisis and attempted to identify activities, promoted by policymakers, which were intended to reduce the risk of disadvantaged students suffering disproportionately from school closures. We took a broad view of ‘disadvantage’ recognising that it presents itself in several different forms: socio-economic status, ethnicity, language group, gender, geography (including the challenges of remote rural communities), special educational needs and disability. We did not give prominence in our enquiry to gender. We recognise, of course, that many girls and young women are subject to substantial disadvantage but the needs of girls and young women in the context of school closure is the subject of another report published in tandem with this report.

In identifying sources we made substantial use of the collection of Covid-19 country-level response documents curated by IIPE-UNESCO on Planipolis: the portal of national education plans and policies. We were also guided by the catalogue of country-level ‘edtech’ responses to Covid-19 identified by the World Bank. We supplemented plans from these sources with additional documents found through searches and personal recommendations.

We sought to identify key activities which have been prioritised by thoughtful policymakers during the period of school closure. We categorised these activities as follows. Collectively, they constitute elements of a theory of action. They are as follows:

- Systematically auditing the digital divide and designing a distance learning regime that is ‘fit for context’;
- Prioritising the needs of highly vulnerable, disadvantaged students, such as children with disabilities;
- Taking action to close the household-level technology gap between disadvantaged and more privileged students;
- Reducing the digital divide through public-private partnership with technology companies;
- Providing role clarity for teachers and other professionals so that they understand their responsibilities;
- Building coalitions to support continuity of learning for disadvantaged students.

Collectively, these activities constitute elements of a theory of action for effective provision of education in the context of school closure. We considered that this theory was promising but incomplete because a key activity was missing. There is a need also to ensure that the distance learning of disadvantaged students is properly monitored and that quality assurance mechanisms give a ‘voice’ to disadvantaged students and their families. Many country plans say relatively little about monitoring and the importance of granular data relating to the level of engagement of disadvantaged students, analysed in terms of different dimensions of disadvantage.
A distance learning solution based on a systematic audit of the ‘digital divide’

It seems likely that the experience of disadvantaged students during school closure was made better or worse by the extent to which the distance learning model adopted by their education system recognised the scale of the digital divide in that particular context. There is a strong argument that effective policy for the management of school closures should be based on a thorough initial understanding of the technology capacity of the existing system.

The school closure plan for Papua New Guinea (PNG) was based on a careful analysis of the technology capacity of a large sample of schools. The national ministry of education undertook a rapid assessment of the Covid-19 situation, in which headteachers from 404 schools were interviewed. The assessment indicated that most schools faced very significant barriers to delivering remote learning, including limited student access to radio, basic feature phones or smartphones, television or internet. Over 72% of headteachers reported that fewer than half of their students have access to electricity at home and only 22% of school leaders reported that most of their students had access to radio.¹

Figure 1 Papua New Guinea: Headteacher responses to the question: "What type of support would be best to help students at your school with home-based learning?’ (n= 404)²

When asked what the priorities should be for resourcing effective home learning, the overwhelming majority of headteachers identified no-tech resources as the most helpful type of support:

*Headteachers strongly recommended physical home learning materials: student activity books, writing materials, textbooks and reading books as home learning support. They did not recommend TV, radio, online or SMS for lessons. This finding was consistent across sub-sectors.*³

The government policy recognised these concerns and accepted the importance of a substantial ‘no-tech’ emphasis on the provision of printed workbooks, supplemented by educational radio broadcasting. It stated:

*Distribution of curriculum material is costly and challenging given the geographical landscape but may represent the only method of distributing learning materials to students in some communities with limited access to alternative technologies.*⁴

The government of Chile based its distance learning solution on a review of the online capacity of different communities. The data indicated a marked disparity between the generally good level of connectivity in many urban areas and the typically poor connectivity in many disadvantaged rural communities. During the planning process, the Chilean authorities identified 3,700 rural schools which were situated in places with limited or no connectivity. Based on this audit, the ministry of education designed a twin-track strategy. Children in most households were expected to participate in online learning via a new platform, *Aprendo en línea*. Through a partnership with the national telecommunications company, Athena, access to the platform was provided free of charge. The same course material that was available online was also printed in hard copy and distributed to students attending the 3,700 remote rural schools.⁵

In South Korea, an initial audit was undertaken of the connectivity available to every single one the country’s 5.4 million school students, via school contact with every household. This indicated that the great majority of students had good online access and access to a suitable device that they could use personally. However, 223,000 students were identified as lacking access to an internet-enabled device. The ministry of education therefore organised a loan scheme for all these students and financial support to cover additional internet connection bills for disadvantaged households. There was no need for a no-tech ‘safety net’, because all students were able to participate in online learning. Class teachers were obliged to check the engagement

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² Ibid.
³ Ibid.
⁴ Ibid.
level of all students every day. According to the figures that were reported from schools to the ministry, 98.8% of students in South Korea were engaged in online school study in South Korea during the period of school closures. This figure is no different to pre-crisis attendance levels and indicates high participation levels for students from disadvantaged backgrounds and those with special needs and disabilities.\(^6\)

The approach taken in Iran was more problematic and appears to have been based on an over-optimistic view of the digital divide, without adequately accounting for the problems that students in disadvantaged rural communities would face in attempting to participate in online learning. The government of Iran launched an ambitious national distance learning project for school students on 4 April 2020, using a new national e-learning platform called SHAD. Students were invited to enrol and were then able, in theory, to attend synchronous and asynchronous classes with their local schoolteachers. The state-owned French broadcasting company, France 24, has undertaken an investigation into the reach of SHAD using Iranian sources. Data from an official Iranian report indicates that two weeks after launch, only 50% of teachers and 25% of students nationally had been able to enrol. The enrolment levels were lower still in poorer provinces. In Sistan and Baluchestan, a relatively disadvantaged province bordering Pakistan, only 7% of students have connected to SHAD. France 24 suggest that the plan was far too ambitious for the level of digital access in Iran. Use of SHAD requires a smartphone with internet access. According to 2017 government statistics, 28% of Iranians had zero or limited internet access. This average figure hides the fact that internet connectivity and use is much more prevalent in urban rather than rural areas.\(^7\)

These case studies, from PNG, Chile, South Korea and Iran, are a reminder that every country has its own version of the digital divide. Effective policy in the context of school closure depends upon the existence of good quality data and a commitment to use that data to design a distance learning solution that is well adapted to the specific national context.

**An emphasis within the solution design on highly vulnerable, disadvantaged students, such as children with disabilities**

Covid-19 has the potential to be a global disaster for children with special needs and disabilities, particularly in low-income countries. The scale of the overall challenge to education systems creates an enormous risk that progress towards more inclusive school provision worldwide will be stalled.

The problems facing many children with disabilities were considerable before the crisis. It was recently estimated that over half of all the primary and secondary school age students who are

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out of school anywhere in the world were children with disabilities.\(^8\) Those who were already marginalised before the pandemic are now even more at risk.\(^9\)

Our review indicates that the degree of emphasis on disability issues within policy responses to the Covid-19 crisis has been mixed at country level. We could find little evidence in low-income country contexts that the communication issues relating to children with disabilities were a priority during the early stages of the crisis. UNICEF advice on messaging about the prevention of the spread of the virus to people with disabilities, including children, emphasises the need for multiple, accessible formats for public health messaging.\(^10\) Our rapid review of country-level policy documents did not reveal many examples that corresponded with this good practice.

Although the overall picture is disquieting, there are some jurisdictions in low-income countries that have taken the needs of children with disabilities seriously within the early stages of the planning process for school closures. The Covid-19 response plans for Somalia and PNG both provide examples of proposed interventions that place marginalised children, including those with disabilities, at centre stage. The government of Somalia has identified the most vulnerable learners as internally displaced persons, girls, and children living with disabilities. It states that ‘special emphasis’ will be placed on meeting the needs of marginalised students for food and learning continuity. The plan proposes that vulnerable groups should be the priority for the distribution of radios and that measures ‘for ensuring inclusion of children with disabilities in distance learning’ will be a focus for the Covid-19 response. It is proposed that the needs of children with disabilities should be a ‘standing item’ when any aspect of the intervention is being considered:

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\text{All activities implemented under this plan need to directly encourage and ensure the participation of children living with disabilities in implemented education activities and furthering the inclusiveness of education activities.}\]

Proposals for the management of school closure in PNG recognises that distance learning poses distinctive problems for ‘the most marginalised children including children with disabilities. The PNG approach itemises the pre-existing barriers in the country to fully inclusive education provision, which will need to be borne in mind when reflecting on the needs of children with disabilities in the context of school closures, such as:

- Lack of awareness of the rights of children with disabilities
- Lack of competent teachers trained to provide disability-inclusive education


• Limited specialist disability services e.g. health, rehabilitation and early intervention services
• Greater need for adaptive technology and equipment.
• Greater need in terms of support for parents.  

While the governments of Somalia and PNG have prioritised disability issues in these statements of intent, plans from many other low-income jurisdictions devote little attention to the needs of children with special needs and disabilities.

Compared with low-income countries, the plans of middle-income and high-income countries are more likely to place a substantial emphasis on support for continuity of learning for students with disabilities and special educational needs. Guidance from the government of Costa Rica instructs specialist teachers to adapt the mainstream resources provided for distance learning ‘so that they are accessible for students with disabilities’. Guidance from the ministry of education in Chile devotes substantial attention to special needs. The Special Education Unit within the ministry has curated resources for teachers, students and parents which have been made available via its portal. The Chilean advice to schools provides highly specific guidance on plans to ensure continuity in the process of identifying and assessing individual high-level special needs.

In South Korea, all students with disabilities were individually assessed before the school closures. Some home visits were made to check that students with disabilities were engaged and had access to necessary adaptations. Government data indicates that almost all students with special needs and disabilities participated in the distance learning programme during school closures.

The government of France has placed considerable stress on the need for education continuity during the period of school closures for students with special needs and disabilities. The ministry of education ensured that communications were established with all students with disabilities via school special needs coordinators, medical professionals and social care staff. The focus has been on ensuring that individual students have any adaptive technology they need and are in receipt of accessible learning resources. There is a high level of role-specificity: classroom assistants, for example, have been instructed to focus on maintaining daily contact with families of vulnerable children. The government has instructed interdisciplinary formal reviews of individual cases of students with special needs to continue using videoconferencing means.

12 Papua New Guinea (2020)
15 Unesco Webinar (2020)
The needs of students with disabilities in France were factored into the design of the national online learning platform, *Ma classe à la maison*, which was launched during the period of school closure. On this platform, teachers are encouraged to create small group virtual classes for students with special needs. The specific needs of different groups have been considered. For example, educational continuity for deaf students has been assisted by features of the platform that facilitate the use of French Sign Language, and the educational TV programmes that are being broadcast are all supported by Teletext captions for students with hearing impairments.

In France, disability issues have also been highlighted in the support available for teachers. From the beginning of the period of school closures, the ministry website for teachers, Éduscol, and regional online 'academies' for teacher professional development have both prioritised approaches to teaching students with disabilities. Éduscol has centrally curated a range of resources from the regional academies linked to special needs and disability. Each regional academy has set up a dedicated specialist helpline for the parents of children with disabilities.

South Korea and France provide examples of impressive practice in provision for all students, including those with disabilities. By contrast, we have observed that many low-income countries have so far not made this key disadvantaged group a priority. There is considerable concern among those who research and advocate for children with disabilities that they will suffer substantially and disproportionately from the current period of disruption. The Inclusive Education Initiative (IEI) is conducting a global survey of frontline views about the experience of learners with disabilities during school closures. The questionnaire used by IEI provides, in effect, a checklist that policymakers can use to identify and mitigate the risks of harm to this particularly vulnerable group of students (see below).

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### Covid-19: The Risks of Harm for Children with Disabilities

**Inclusive Education Initiative**

1. They will fall behind in learning due to inaccessible distance learning modalities.
2. They will not have accessible educational materials.
3. They will not know how to use the technology appropriately to continue their learning.
4. They will not go back to school once they reopen.
5. They will not access basic nutritional needs that are typically provided for at school.
6. They will not have access to important therapies, services, or accommodations that they typically receive at school.

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17 Ibid.
The ability of any jurisdiction to provide a good education for students with disabilities is circumscribed by the availability of accurate, segmented data. In recent years, the United Nations Washington Group on Disability Statistics has pioneered the use of cross-nationally comparable measures of disability. The school closure crisis provides an opportunity for national governments to improve the mapping of children with disabilities using the tools provided by the Washington Group, and thereby make benchmarking against other countries more effective and future provision much more inclusive.\(^1\)

**Taking action to close the household technology gap between disadvantaged and more privileged students**

Many governments concluded that having designed a distance learning approach with a technological dimension, there was an urgent need to supply the key technologies to disadvantaged households which lacked the right equipment and connections. Moves to close the technology gap depended on context. The governments of many low-income countries have sought to provide radio sets to disadvantaged households, while many middle-income and high-income countries have tried urgently to increase household-level access to internet-enabled devices.

Low-income country governments have been encouraged to consider the distribution of radios to enable access to educational broadcasts. The purchase and distribution of radios to disadvantaged students has been identified as an area of eligible expenditure by the Global Partnership for Education (GPE).\(^2\) Radio remains the most commonly available and accessed technology across the globe. UNESCO reports that 75% of households globally have access to radio, and in sub-Saharan Africa, between 80% and 90% of households have access to a working radio set. Local community radio offers flexibility in the languages of instruction. In terms of education-specific design, models including Interactive Radio Instruction (IRI), an instructional approach that uses one-way radio to reach students and their parents or teachers via pre-recorded, interactive lessons, have been long established. IRI has been used successfully in many countries.

While radio is manifestly a relevant technology for continuity of learning in low-income settings, policymakers may make naïve assumptions about the extent to which simply providing a radio and broadcasting content will lead to quality learning outcomes. These issues have been helpfully explored by Simon Richmond from Education Development Center in a recent article.\(^3\) Richmond points out that ‘effective Interactive Audio Instruction relies on multiple supporting factors that need to be in place’. The conventional model for IRI assumes that the content will be mediated in a classroom by a face-to-face teacher or other adult. In the context of school

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closures, new ‘facilitators’ are required, such as parents or older siblings, who will need some guidance on their roles. Effective educational radio usually also requires the provision of accompanying workbooks, which will require printing and distribution systems.

One question that policymakers and education officials should ask is how far local teachers can be expected to use SMS messaging or social media (or in some contexts online communication) to monitor and support learner engagement with radio or TV instruction.

Although there is little evidence of plans to distribute TV sets, TV broadcasting of education content also features prominently in plans for continuity of learning in both low-income and high-income contexts. In relation to the current pandemic, the World Bank is cataloguing examples of educational TV and has developed a rapid response guidance note on using educational television programming during school closures.

The same questions and potential problems arise when educational broadcasting uses TV rather than radio. Historically, educational TV has usually been broadcast into classrooms with adult face-to-face facilitation. How can students use the broadcasts in the absence of a teacher? Are there ways in which teachers can support the use of the programmes remotely? Will workbooks be provided aligned to the TV broadcast content?

In several middle-income and high-income countries, there has also been emergency action to distribute digital devices to students living in disadvantaged households. Strategies for the provision and distribution of internet-enabled devices vary from context to context. In general, this approach has been used in countries where device ownership and connectivity is comparatively high, and so the government’s focus is on ‘topping up’ access to devices, giving the relatively small number of students without them access to the same resources as their peers. Devices are largely provided by national or local government, with some provision by civil society organisations or donations from the private sector.

Some of these efforts to distribute devices have involved substantial effort and cost. Perhaps the most substantial intervention has been in Germany, where Chancellor Angela Merkel launched a federal scheme offering to provide families in need with 150 Euros per child to purchase equipment to assist their participation in online learning. A total of 500 million Euros was made available for this programme. Despite the scale of the expenditure, this measure has been

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widely criticised in the German media as being ‘too little, too late’. In Austria, there is a national scheme allowing students to borrow a laptop or tablet for the duration of school closures. In England, laptops and tablets are being provided by the government for students from vulnerable families on the case list of a social worker and disadvantaged students in Year 10. In Scotland, the devolved government has allowed local government authorities to purchase and lend out internet-enabled devices, such as laptops and tablets. In Croatia, the infrastructure was already well set-up for distance learning, following a recent programme to distribute tablets to all secondary school students. In the context of the current crisis, the focus of the Croatian government has been on providing tablets to primary school students and distributing SIM cards to disadvantaged students so that they can access the internet during the crisis.

In April 2020, President Macron of France personally launched a scheme to provide digital devices to high school students from 80 highly disadvantaged urban neighbourhoods. Speaking at the launch, Macron underlined the risks of increasing inequalities for the most vulnerable populations during the period of school closure: ‘The current situation widens inequalities. Too many children, especially in working-class neighbourhoods and in our countryside, are deprived of school without having access to digital technology and cannot be helped in the same way by parents’.

The New York City Department for Education has embarked on an ambitious plan to lend 300,000 internet-enabled iPads to students across the city. Distribution is being conducted using an online service and requests can be made either by individuals or by schools on behalf of their students. Priority is being given to the students most in need, as determined by a short applicant questionnaire. Qualifying criteria in order of priority are:

- Problematic living conditions (e.g. for students living in homeless shelters, or students living in temporary housing or foster care);
- Students with disabilities;
- Students with English as a second language;

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• Students who qualify for free (or reduced cost) lunches.

While the equity and rights case for the systematic provision of internet-enabled devices to disadvantaged students is strong, it is important that policymakers do not make simplistic assumptions about the learning benefits that are likely to arise from the distribution of hardware. The pre-crisis evidence base relating to academic outcomes and the provision of technology devices to students is mixed. Simply providing access to additional technology does not, by itself, provide a panacea or magic bullet. Across high-income, middle-income, and low-income countries, research findings indicate that there is no simple, predictable relationship between access to hardware and better academic outcomes. Within the evidence base, there are, however, examples of promising practice and, in certain conditions, positive learning outcomes can result from increased provision of digital devices.

The International Initiative for Impact Evaluation (3ie) conducted a systematic review of education interventions in low- and middle-income countries35. This 2015 study reviewed the best available evidence across a broad range of intervention areas, including a meta-analysis of evidence concerning computer-assisted learning interventions. The largest body of evidence in this category concerned programs which provided laptops to students, such as the One Laptop Per Child program (implemented in Argentina, Ethiopia, Mexico, Mongolia, Peru, Rwanda, and Uruguay, amongst other countries). Overall, the evidence from the review of interventions demonstrated mixed impact on literacy outcomes and some positive but minimal effects on numeracy outcomes. Further, within the overall meta-analysis were studies of several computer-assisted interventions which had a significant negative effect on learning outcomes. A narrative synthesis conducted by the authors concluded that these negative outcomes were most often in cases where computer-assisted learning replaced conventional teacher instruction, rather than being offered in addition to normal teaching (such as after-school computer-assisted instruction). One of the major weaknesses of the programmes reviewed was that the devices often broke down. The review also found that many of the interventions did not seek to integrate the new technology with existing learning approaches. Often laptops and software were provided, but no training was given to demonstrate to teachers how they could integrate these tools in their normal teaching practice.36

In high-income countries, studies of large-scale device distribution schemes have also produced mixed results for student learning outcomes. In the USA, several large-scale evaluations have found mixed or inconclusive results for so-called ‘one-to-one’ initiatives, where each student in a government school is provided with a laptop or tablet on a 24/7 basis.37 In many cases,

disappointing results were attributed to teacher capacity to integrate technology into their teaching.

Overall, there is strong evidence that suggests that the large-scale distribution of technology currently taking place during the pandemic is not a guarantee of educational continuity and good outcomes. Key dependencies are alignment with the curriculum and teaching quality. The evidence suggests that provision of laptops is more successful and more likely to impact on learning outcomes when:

1. Software and educational resources provided on the devices are good quality and well-aligned to the curriculum
2. Teachers are trained, both about the nature of the technology itself and in best practice strategies for using the technology while teaching at distance.  

There is a need for governments to ensure that online content is a good fit with the national curriculum requirements. In South Africa – where educational websites have been ‘zero-rated’ to ensure access for all – the platforms selected for the ‘zero-rated’ status are those which are aligned to the national curriculum. There is also the potential for these computer-assisted interventions to be more impactful, if steps are taken to ensure quality both in teaching inputs and in the content provided through devices.

The evidence suggests the need for combined approach: promoting effective technologically enabled teaching while providing reliable hardware and better connectivity. Current country-level plans for expanding access to devices lack detail about teacher capacity and teacher professional learning.

Some experts have pointed out that the hardware is only part of the equation. Welcoming the distribution of laptops to some disadvantaged students in England, Sarah Horrocks of the London Connected Learning Centre said, ‘It’s a step in the right direction, and we hope it will be extended to the least advantaged children across all age groups. At present, however, the challenge remains for educators to adapt to remote learning to ensure that children are not left behind because of individual circumstances’.

The research related to the impact of the provision of devices is consistent with evidence relating to effective online teaching and learning. In our recent review of effective pedagogy for remote teaching and learning, we highlighted the importance of virtual ‘teaching presence’ in a distance

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40 Snilstveit (2015), Goodwin (2011)

Disadvantaged students, studying remotely and often lacking home support, will require the highest possible level of interaction with teachers via the available technology. Providing a radio or a laptop is not enough. Without frequent quality teacher interaction, disadvantaged students are unlikely to thrive.

**Reducing the digital divide through partnership with private sector technology companies**

Effective policy in the use of education technology requires government to engage proactively with the technology sector. This is particularly the case when the focus is on greater educational equity because private sector access charges can easily lead to the exclusion of disadvantaged learners. Our review suggests that many ministries of education have been working closely with mobile operators, telecom providers, internet service providers and other companies to increase access to digital resources while schools are closed. Given the expense of connectivity, many governments have targeted efforts and resources towards reducing the costs of internet access for socio-economically disadvantaged students.

The World Bank has provided guidance and examples of how governments can work with internet and mobile data providers to improve connectivity, including among the most socio-economically marginalised. The Bank recommends, for example, that ministries work with mobile operators to designate that data related to specific educational websites or applications be charged a zero tariff (i.e., that no data charges will apply when these resources are accessed).

Many governments have negotiated special internet access during the Covid-19 crisis. In Canada, TELUS, a major telecommunication provider, is providing disadvantaged households with two months of free internet access. The Association for the Development of Education in Africa has identified several country-specific examples of the principles advocated by the World Bank in action in the context of the current crisis:

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• In Morocco, the government is arranging free internet access to portals and platforms used for distance education. The initiative is a partnership between the education ministry and the three main telecommunications companies operating in the country.
• In South Africa, the government has reached agreements with network providers to zero-rate platforms that have approved educational content.
• In Zambia, the government has made a request to internet providers that they lower the cost of ‘bundles’, so that more Zambians can afford to access the internet during this time. The company, Zamtel, is providing subscribers with free ‘bundles’ on Tuesdays, Thursdays and Sundays.
• In Cote d’Ivoire, discussions are underway with the tech company, ENEZA, to grant reduced subscriptions to families during the Covid-19 pandemic.
• In Kenya, the telephone company, Airtel, have partnered with an online education provider, Longhorn, to provide their subscribers with free access to the education platform during the Covid-19-related school closures.

Since the onset of the Covid-19 crisis, there have been examples of public-private partnerships to improve internet connectivity, with a focus on ensuring that all students, including those in remote rural areas, can access online learning resources:

• In China, a rapid two-week planning and implementation process mobilised major telecom service providers to boost internet connectivity services for online education, especially for the under-served regions. In addition, the government sought to upgrade the bandwidth of major online education service platforms.47
• In Kenya, the Ministry of Information and Communication Technology, Kenya Civil Aviation, and Google Loon are helping to expand internet connectivity across remote rural areas in Kenya by using Loon balloons, which hover at high altitude, carrying 4G base stations to enhance signal coverage.48

**Ensuring role clarity for the different system actors, particularly teachers**

The likelihood of a smooth and effective process to support learning continuity for disadvantaged students during school closures is increased by a high level of role-specificity for key education professionals, particularly teachers.

An encouraging emphasis on role clarity and accountability is emerging in some countries. The Amazon region. The Amazon region in Brazil – which is four times larger than Germany and home to many extremely remote and disadvantaged communities that can only be reached by

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boat or air – benefits from a long tradition of blended learning, with the work of local teachers in elementary schools enhanced by TV programmes broadcast from the regional capital, Manaus.49

The starting point of the approach used in Amazon region is the principle that students cannot be expected to engage with broadcast lessons as autonomous self-directed learners: they need a teacher. The teacher’s prime responsibility is to ensure that students are engaged with the broadcast lessons and are making progress. Beyond this, the teacher must assist any students with internet access through the provision of virtual lessons, using free platforms and the curation of additional resources that can be accessed online. From this base, during the period of school closures, the regional government has set out the core responsibilities of local teachers – see below.

Core Responsibilities of Local Teachers During School Closure:
Amazon Regional Government, Brazil50

- Maintain regular contact with students, parents and guardians, via instant messaging or other means of distance communication, providing guidance to them regarding the strategies for the continuity of learning.
- Mobilise students to attend classes through educational TV and/or on the educational platforms provided.
- Follow the transmissions of the TV classes that students are viewing and by means of instant messaging or other means of distance communication provide guidance to support student learning and engagement with the broadcast content.
- Undertake assessment activities.
- Create, when it is possible, virtual classes on free platforms.
- Identify relevant films, websites and other resources for students with internet access.

A high level of specificity regarding the role of teachers during school closure can also be found in guidance issued by the government of Costa Rica.51 Government guidance in Costa Rica defined the ‘actions expected of teachers’ in the context of closures. The initial requirement was to conduct an audit of the extent to which each individual student in their tutor group had access to learning technology and to provide school managers with this information. Teachers were responsible for the design of learning and assessment activities during school closures and were expected to be monitoring the engagement and assessing the academic progress of each student.

51 Costa Rica Ministry of Education (2020)
The ministry in Costa Rica sets out expectations regarding a range of distance learning ‘scenarios’, linked to the level of technological access of each student. The teacher is expected to provide teaching to support students in four situations:

1. For students with internet access and a device at home, teachers are expected to provide synchronous and asynchronous online opportunities, but with an emphasis on the use of platforms that were free of charge.
2. For students who have access to a device but with reduced or limited internet access, teachers were to provide asynchronous engagement opportunities with minimum consumption of data.
3. For students who have technological devices but no connectivity, teachers would provide USB storage devices containing digital work guides.
4. For students who do not have technological devices or connectivity, teachers would provide support in the use of printed materials.\(^\text{52}\)

In addition to expectations about the duties of teachers, the guidance in Costa Rica provided specific detail about the responsibilities of other professionals. The guidance regarding the work of school directors is very detailed. The box below provides a summary of the expectations for school leaders, which involve both upward feedback to the authorities on frontline issues regarding implementation and downward feedback to teachers regarding the quality of their plans for remote teaching. The focus is on the welfare of all students, but disadvantaged students are likely to benefit from this systematic approach.

<table>
<thead>
<tr>
<th>The Role of the School Director During School Closure: Costa Rica(^\text{53})</th>
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<tr>
<td>• <strong>Promoting</strong> technology to support learning and communications based on an accurate view of the extent to which the student body has access to technology.</td>
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<td>• <strong>Using</strong> technology for institutional management and effective team meetings with teaching and non-teaching staff.</td>
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<tr>
<td>• <strong>Coordinating</strong> the lending of computers to staff and students and the response when there are technological problems at institutional level.</td>
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<tr>
<td>• <strong>Analysing</strong> the effectiveness of the school’s distance learning offer, including the analysis of concerns expressed by students, parents and staff.</td>
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<tr>
<td>• <strong>Providing</strong> feedback to the authorities on the support provided by the ministry.</td>
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<tr>
<td>• <strong>Reviewing</strong> the quality of teacher planning during the period of school closure.</td>
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<tr>
<td>• <strong>Participating</strong> in virtual meetings called by higher authorities.</td>
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</table>

Problems arise when role clarity is lacking. There appears to have been a degree of uncertainty about responsibilities in the early days of the school closure crisis in **Pakistan**. The International Rescue Committee (IRC) Pakistan has undertaken a rapid cross-sectoral review of the impact of

\(^{52}\) Ibid.  
\(^{53}\) Ibid.
the Covid-19 crisis in four provinces of the country.\textsuperscript{54} This involved telephone interviews with adults in selected households, community leaders and provincial government representatives. The results suggested that many school students were undertaking no academic work at all during the period of school closure. Community leaders across the four provinces indicated that, on average, about 60\% of school students were not involved in any form of home learning during school closure. They estimated that half of the 40\% of school students who were engaged in some home study were studying at home entirely because of the initiative of their parents and were not engaged with their teachers. Only an extremely small minority were engaged with their schools via social media or online learning. This picture was confirmed by representatives of provincial government, who stated that the great majority of public and private schools were not yet actively promoting continuity of learning at local level.

Building coalitions to support continuity of learning for disadvantaged students

The likelihood of disadvantaged students thriving is increased when governments seek to harness the power of parents, the wider public and non-state organisations, working together to maintain continuity of learning.

Clearly parental support for effective home learning is key and disadvantaged parents and caregivers will require more assistance than others. The government of New Zealand has been particularly intentional in seeking to win the support of parents for home learning, with an emphasis on parents and children in disadvantaged households. Families of Pacific Island heritage are, in relative terms, a disadvantaged group within New Zealand society. They speak a variety of Pacific languages. Between April and June 2020, a ten-week series of short radio programmes was broadcast in a range of languages, exploring different facets of family support for student home study.\textsuperscript{55}

Many countries have set out to provide parental helplines to assist parents and caregivers. In Jamaica, the National Parenting Support Commission is running a national network of parent helplines. The helpline service is intended to assist both in terms of continuity of learning and other issues, such as difficulties accessing food during the current crisis.\textsuperscript{56}

Local community leaders and local government officials have a potential role to play in mobilising parental support for effective home learning. In Uganda, in April 2020, the permanent secretary of the ministry of education wrote to all town clerks across the country explaining ‘what is expected during lockdown’ regarding their engagement with all parents and caregivers:


The parents/guardians should be effectively sensitized about the importance of continued learning during the lockdown to ensure that they give learners adequate time to engage in educationally beneficial activities.  

In **South Africa**, a national parent WhatsApp support line, using multiple community languages, has been established for families with children with disabilities, provided by a non-profit organisation called Inclusive Education South Africa. The organisational website invites parents to engage with trained facilitators on any of the following topics:

- Planning routines for home learning
- Supporting children with disabilities with homework set by the school
- Providing stimulating learning for pre-school children with disabilities at home.

In **France**, a national non-state organisation called Article 1 has provided, with government endorsement, an academic mentoring system for high school students in disadvantaged neighbourhoods. This scheme is known as #RéussiteVirale and it brings together volunteer university students and high school students in need of an academically proficient friend. Using social media platforms, the mentors engage with the school students, offering subject-related dialogue and wider mentoring.

**Post-script: the need for quality assurance of provision for disadvantaged students**

In this report, we have highlighted approaches found in country-level plans for school closure during the Covid-19 pandemic. One potentially important activity that was given relatively little attention was the quality assurance of provision. High levels of monitoring and accountability are implicit in the approaches found in countries such as France and South Korea, where regulations required professionals to track the engagement of every single disadvantaged student. In countries such as Chile and Costa Rica, there are expectations that there will be strong internal quality monitoring undertaken by school leaders. One country, the UAE, has gone further than this form of internal monitoring and intends to roll out a national programme of external review of school provision, including the quality of provision for students with special needs. This is in-keeping with the views of one accountability expert, Melanie Ehren, who has argued that the quality of learning during lockdown should be inspected by national inspection agencies.

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58 Inclusive Education South Africa (2020) IESA support for parents http://www.included.org.za/iesa-support-for-parents-learning-at-home-during-sa-lockdown/
59 Reussitevirale (2020) Available at: https://reussitevirale.fr/ (accessed 5th May 2020)
60 Communication from Education Development Trust, Dubai
It is understandable that in the first phase of the management of the Covid-19 crisis the focus was typically on access and continuity rather than quality. If school closures are prolonged there becomes an urgent need to focus on data and quality. Policymakers should ensure that clear metrics are established so that the effective provision of education to disadvantaged students can be carefully measured. Monitoring and quality assurance mechanisms should give a ‘voice’ to students from disadvantaged backgrounds and their families. The user perspective should be used to review and improve provision.
Section 3: Recommendations for policymakers

1. **Ensure that the remote learning regime is appropriate for the specific technological capacity of the educational system and can be accessed by disadvantaged students.**

In a situation of school closure, policymakers should review the mix of ‘high-tech’ (online learning), ‘low-tech’ (radio and TV broadcasting) and ‘no-tech’ (provision of workbooks and textbooks) educational provision and ensure that it is fit for the local context. In most countries, there will be a need for a low-tech ‘safety net’ for disadvantaged households and remote communities. The provision of all elements of the distance learning regime will require systematic project management, including logistics, with clearly defined responsibilities and timelines and sufficient resourcing. Effective radio or TV broadcasting is likely to require the provision of supplementary online or hard copy worksheets and assignments.

2. **Prioritise the learning continuity of highly vulnerable students such as children with disabilities.**

Policymakers should ensure that granular data relating to student engagement is collected and analysed and tagged, so that the level of involvement of different vulnerable groups is under constant, well-informed scrutiny. All modes of remote teaching and learning should be reviewed and modified to maximise the engagement of students with different forms of disability (recognising, for example, the needs of students with such conditions as visual and hearing impairment, learning difficulties, Autistic Spectrum Disorder and cerebral palsy). Policymakers should seek to ensure that students with disabilities have the best possible adaptive technology and other equipment at home. Insofar as is practicable, processes for the multi-disciplinary (education/health/social care) identification and diagnosis of high-level needs should continue using online methods.

3. **Establish effective public-private partnership to minimize the cost of distance learning for disadvantaged students.**

Governments should encourage telecommunications companies and internet service providers to waive charges for digital access to educational resources.

4. **Provide guidance to teachers on effective remote pedagogy**

Distributing equipment to disadvantaged households without advice to teachers relating to the use of the equipment is unlikely to be effective. Teachers are likely to need guidance on the use of radio or TV broadcasting, because education broadcasting has traditionally been used in classroom contexts with face-to-face adult facilitation. Teachers are likely to need guidance on online teaching and learning, as it is not possible to successfully mimic the largely synchronous engagement of the face-to-face classroom. Whether the modalities of learning are high-tech, low-tech or no-tech, if the learning of disadvantaged students is to be maintained, teachers are
likely to need guidance on the crucially important question of how student work can be assessed during a period of school closure.

**5. Provide role-specificity for education professionals with clarity about responsibility for disadvantaged students.**

The duties of all actors in the education system need to be precisely defined to ensure clarity about their respective responsibilities. Teachers and other staff (such as classroom assistants) should be directed to ensure maximum contact with all vulnerable students. Teachers should be directed to do all in their power to monitor the ‘attendance’ of all vulnerable students. In situations where radio or TV are key learning modalities, the role of local teachers in ensuring engagement with educational broadcasting should be clearly articulated. The role of school leaders in monitoring problems relating to disadvantaged students should also be clearly communicated. The responsibility of key ‘middle tier’ officials, such as district education officers, should be unambiguously stated.

**6. Build coalitions with parents/caregivers and non-state organisations.**

Policymakers should take steps to establish good communications and partnership with parents and other caregivers during a period of home study, clearly explaining how families can support their children’s learning. Parental helplines should be established, with skilled facilitators able to offer advice to parents of students experiencing different forms of disadvantage. All available means should be used to communicate with specific disadvantaged communities using community languages and enlisting the support of community leaders. The resources of non-state organisations should be enlisted, such as the insights and communication channels of bodies representing people with disabilities and organisations of community volunteers.

**7. Put in place effective monitoring and quality assurance systems which give a ‘voice’ to disadvantaged students and their families.**

Policymakers should ensure that clear metrics are established so that the effective provision of education to disadvantaged students can be carefully measured. Policy should be regularly reviewed and, if necessary modified, in response to issues that emerge the monitoring data. Ministries should develop a quality assurance policy so that the quality of provision at individual school level is subject to both internal and external review. Quality assurance should be undertaken using a transparent framework of expectations that defines good provision for all students, including those who are disadvantaged. Monitoring and quality assurance mechanisms should give a ‘voice’ to students from disadvantaged backgrounds and their families.
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