

THE CHALLENGE

Before the outbreak of the novel coronavirus pandemic, the world was already dealing with a [learning crisis](#), as evidenced by high levels of [Learning Poverty](#). With the spread of the Coronavirus disease (COVID-19), among many disruptions to normal life, 160+ countries have mandated temporary school closures, leaving [~1.6 billion children and youth out of school](#). Extended school closures may cause not only loss of learning in the short-term, but also further loss in human capital and diminished economic opportunities in the long-term. To help mitigate the loss of learning, many countries are pursuing options to utilize remote learning to manage and cope with the crisis.

The World Bank is actively working with Ministries of Education in several countries to support their efforts in providing remote learning opportunities while schools are closed. This guidance note offers principles to maximize countries' effectiveness in designing and executing remote learning. We will continue to update it as useful practical lessons emerge. Other guidance notes delve into more detail on the effective use of radio, television, and mobile technology for remote learning in low-resource environments.

GUIDING PRINCIPLES FOR REMOTE LEARNING

Although nothing can replace an in-person schooling experience, school systems can engage students in meaningful and productive ways to enhance their learning. This is at the core of the World Bank's approach in responding to COVID-19, which aims to ensure *all* children and youth have access to a quality education. To achieve this end, education systems must confront issues of inequity front and center. They must also prepare multi-modal responses, capitalizing on existing infrastructure and utilizing a combination of different learning mediums to ensure students are engaged and learning. Remote learning can ensure that students continue learning through a variety of avenues. While digital technologies can offer a wide set of capabilities for remote learning, most education systems in low- and middle-income countries, including schools, children and/or teachers, lack access to high-speed broadband or digital devices needed to fully deploy online learning options. As such, education systems need to consider alternative ways for students to continue learning when they are not in school, like in the current COVID-19 crisis.

How should countries go about designing and implementing their remote learning strategies?

Here are some general principles and recommendations of what policymakers can do to ensure students continue to learn remotely, despite not being in traditional schooling.¹

Planning for a multi-faceted remote learning model:

1. ***Develop a short- and long-term remote learning plan.*** Policymakers should assess their systems' capacity and resources to support a multi-faceted remote learning model, including a combination of technologies and delivery mechanisms. The short-term plan focuses on emergency response to keep students learning, the medium-term plan prepares for schools to reopen. During this process, policymakers should consult outside stakeholders (e.g. ICT ministries, broadcast regulators/companies, EdTech startups), ensuring the rapid development and scale-up of the designated remote learning modality. Equity should be a top consideration in all planning efforts, as the most vulnerable students are most probably affected disproportionately hard and most likely lack the ability to access digital resources.
2. ***Create an inventory of existing content to be deployed via remote learning (and plan for how to make additional content available).*** Rather than developing new content, which takes significant time and expertise, focus on curating existing (especially free, 'open') content and aligning it to the curriculum. For instance, older radio and television programs may be repurposed. In most cases, content may come from multiple sources; gaps and potential duplication should be expected. Later

¹ For a comprehensive list of recommendations policymakers can follow to rollout remote learning, see this [Remote Learning and COVID-19 rapid response briefing note](#) (from which this shorter guidance note is derived).

in the process, consider translating existing open education resources from other languages or partnering with publishing firms that have existing content.

3. **Organize content to align with existing curricula, ensuring the learning opportunities correspond to educational objectives.** Simply pointing students and teachers to a large repository of materials is not enough; this may be overwhelming and self-defeating. Existing content should be organized so that students, their caregivers, and teachers understand what is available and the sequence in which it should be taught.
4. **Create a virtual helpdesk to support caregivers, teachers, and students.** Helpdesks complement the remote learning model, enabling students and caregivers to ask questions. They are also a conduit to receive feedback and share mass media messaging (e.g. SMS messages share educational radio programming schedule). Virtual helpdesks can be established quickly through various cloud-based tools. If a system is not equipped to establish one, it may consider partnering with a local call center or telecommunications company.

Implementing an offline remote learning model. While technology can be a supportive tool, policymakers should also consider ways that student learning can continue offline.

5. **Utilize printed material for students to learn at home.** Textbooks, printed study guides, reading lists, and projects can be useful in settings with limited technology; however, a key challenge is distributing these materials. When it's not possible to physically deliver these materials, newspapers can be used to deliver content. If technology allows, books and other materials can be distributed electronically (e.g., via social media or WhatsApp).

Implementing a broadcast remote learning model: In contexts where broadband access is not widely available or where online learning is simply not a viable option, these mediums, which can be paired with additional learning materials such as text messaging supplements/reminders, digital downloads, low-cost newspaper inserts to maximize student engagement, should be considered:

6. **Utilize educational radio.** Radio can be used to deliver the curriculum in an engaging and interactive way, by asking learners to react to questions and exercises through verbal response. This medium reaches a wide audience and no prior skills are needed by caregivers/students. This is particularly useful in settings where other connectivity options are unavailable and education radio stations exist. In settings where such stations *do not* exist, initial costs are high as preparing content and adapting it for a radio audience is time and labor-intensive, though these costs taper off significantly after the initial scripting is complete. Once established, radio programming schedules must be communicated to reach the appropriate audiences.
7. **Utilize educational television.** Television is the fastest way to deploy lecture-based classes, as high-quality teachers can be recorded without much additional training. Television can be used in multiple forms, including on-demand (prerecorded lessons) and edutainment. Students can then watch recordings or re-runs of these lectures, providing an opportunity for them to review or catch up if they missed anything. This is particularly useful in settings where most of the population has access to a television and education channels exist. Like radio, in settings where education channels *do not* exist, initial costs are high as producing lectures for a television audience is time-intensive and costly. Once established, programming schedules must be communicated to ensure they reach the appropriate audiences.

Implementing an online/mobile remote learning model: In contexts that have the infrastructure, funding, and capacity to host the technology, these options should be considered:

8. **Increase access to digital resources, by improving connectivity.** For countries with the infrastructure and bandwidth, improving connectivity is the first step in reaching a large audience and mitigating access inequities. Partnering with mobile operators, telecom providers, and other providers to increase access to digital resources is a crucial first step if a country is considering an online option (read on for [ten practical examples](#) of what this looks like in practice).
9. **Provide a consolidated, one-stop-shop to access content.** A central online portal can provide a consolidated listing of available content, tools, apps and platforms, together with supporting materials and guidance for students, teachers and caregivers. For instance, most universities use their learning management system (LMS) as central platform to communicate,

instruct, support, learn, and integrate other technologies, like video conferencing, in the LMS.

10. **Make content available through a variety of devices.** Online learning tools and platforms should run on a variety of operating systems and software applications. Given the near ubiquity of mobile phones in many households, and the low availability of other technologies (especially desktop and laptop computers), ensuring that online learning opportunities can be accessed using mobile devices can be critical to ensure access by the widest possible user base.
11. **Support the use of low bandwidth (including offline) solutions.** Mandating that online learning opportunities be optimized for low bandwidth and poor latency conditions is advisable. Promoting the availability of downloadable tools and approaches can be similarly quite useful, particularly when schools have the means to convert educational content into digital formats and load them onto devices.
12. **Videos can offer valuable learning resources, provided the availability of sufficient bandwidth and engaging content.** Simply recording a teacher giving a long lecture and make it available online for students often find that only the most highly motivated and engaged students can absorb the content, with limited impact. Best practice holds that shorter content is more easily accessed by students.

Sustaining a remote learning model: In most settings, policymakers will use a combination of these remote learning models to support students. The main challenge for policymakers is to balance the delivery of content (lectures, reading materials, videos), with assignments (individual and collective), to make learning engaging and more effective.

13. **Provide supplemental guidance and support on how to use and access remote learning content to students, caregivers, and teachers.** Simply making content available to students is not enough. Teachers and caregivers need to be able to easily understand how to access and use it. Ideally, families and teachers should be given written guidance on how to access content, what related expectations are, and where to find additional information. This information can be communicated through the virtual help-desk or advertised via newspaper.
14. **Use multimedia to share information about remote and online learning opportunities.** Even if learning materials are only offered in one way (e.g. printed materials, radio or TV, online learning content, phone-based apps), multiple media channels (including text messages) can be used to alert students, families, and communities of which materials are available and where to find additional support or guidance.

Delivering remote learning for different education levels: When considering different education levels, the delivery of content must be multi-modal, with different technologies used for different education levels. For instance, older students have a higher propensity for independent learning, lending themselves to online learning. Conversely, younger students require more audio/visual stimulation, lending themselves to radio and television.

15. **Early Childhood.** The predominant remote learning tools for young children are television and radio, including edutainment programs. In contexts with high connectivity, television programs and instructional videos can be streamed online.
16. **Primary.** The predominant remote learning tools for primary-age children are television, radio, and online videos. Teachers tend to communicate with their students through SMS/Social Media. Learning Management Systems can also be used for communication, collaboration, and videoconference facilitated “check ins.” More activities are online for upper primary.
17. **Secondary.** The predominant remote learning mode for secondary students is online. In some countries, radio and television are used to supplement online learning, and may play a more dominant role, depending on the country’s digital infrastructure and connectivity.
18. **Higher Education.** The predominant remote learning mode for tertiary students is almost entirely online. Typically, this is facilitated through a Learning Management Systems and synchronous video conferencing systems.

ADDITIONAL RESOURCES

The World Bank is actively working with Ministries of Education around the world to support their efforts to provide remote learning opportunities for students while schools are closed. In support of this work, the World Bank is [cataloguing emerging approaches](#), which captures how education systems are responding around the world.

In tandem, it has put together a [list of resources](#) and platforms designed to identify helpful technological solutions to support remote learning. This comprehensive list prioritizes those resources and solutions that are free (or freemium), offline friendly, or are available in more than one language. It includes educational resources, including reading materials, lesson plans, online libraries, and initiatives to deliver content and textbooks to students and their caregivers. These documents, and many more, are available on the World Bank's dedicated [Remote Learning, EdTech & COVID-19 web site](#).