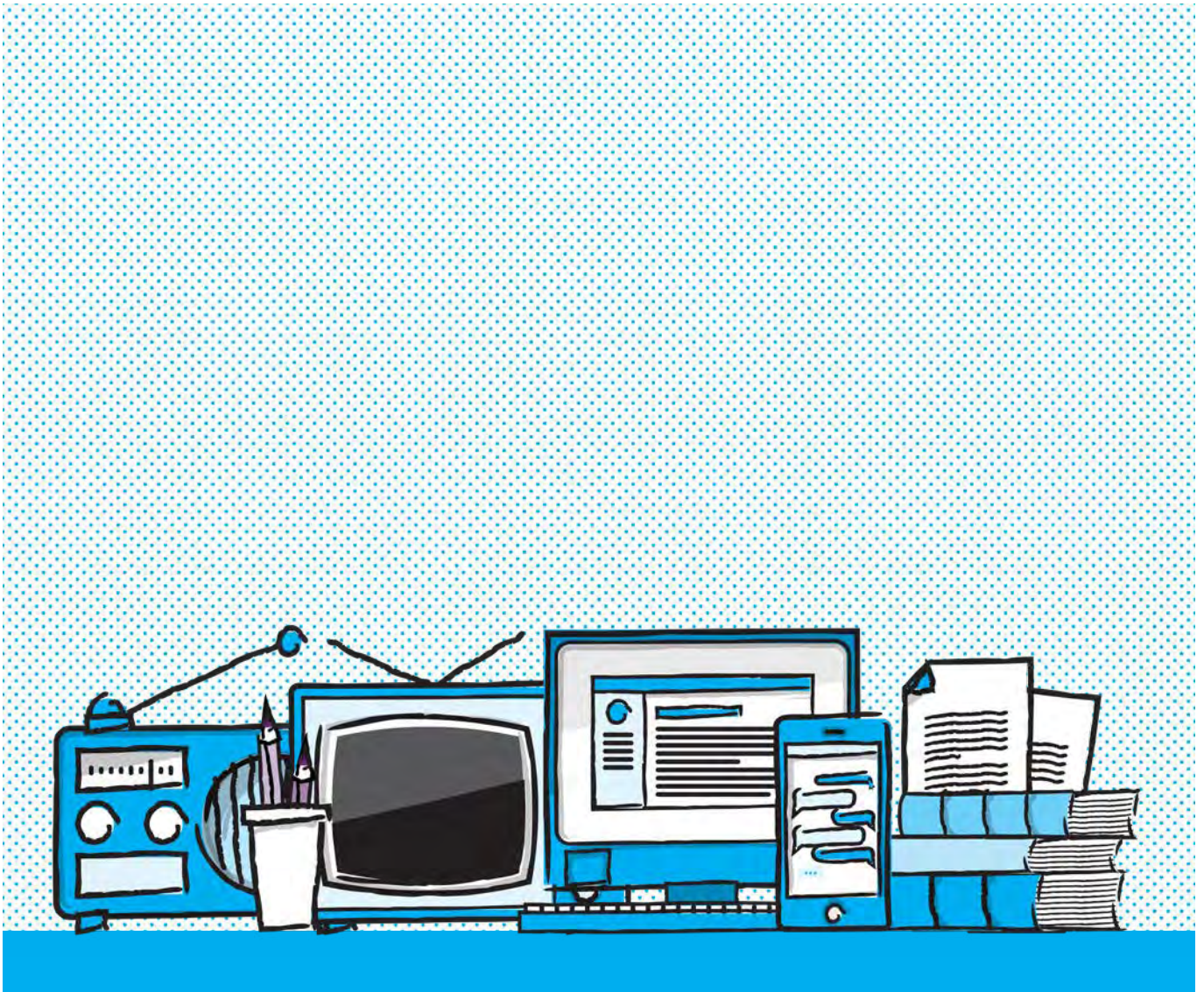


# Introduction

## Resource Pack to Support Remote Learning



# Acknowledgements

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# Contents

<b>1</b>	<b>About the Remote Learning Resource Packs</b>	<b>4</b>
1.1	About this Resource Pack on remote learning	5
<b>2</b>	<b>Establishing the learning purpose for a remote learning programme</b>	<b>7</b>
2.1	Knowing the learners and their context	8
2.2	Defining the learning purpose	11
<b>3</b>	<b>Technology options</b>	<b>13</b>
3.1	Features of remote learning technologies or media	13
3.1.1	Radio	14
3.1.2	Print	15
3.1.3	Television	16
3.1.4	Digital	17
3.1.5	Mobile	18
3.2	Technology options and decision trees	19
3.3	Assessment of available technology	21
<b>4</b>	<b>Developing an effective programme</b>	<b>26</b>
4.1	Access and equity	28
4.1.1	Creating equitable access	28
4.1.2	Ensuring gender equity	31
4.1.3	Providing inclusive education	33
4.1.4	Getting resources to learners in time	34
4.2	Quality of learning and support	37
4.2.1	Meeting learning needs	37
4.2.2	Support learning together	40
4.2.3	Parental/caregiver involvement and time for learning	42
4.2.4	Involving educators	44
4.3	Assessment for learning and programme design	46
4.3.1	Using assessment data to inform programme design	47
4.3.2	Using assessment for learning	48
<b>5</b>	<b>Monitoring for quality assurance</b>	<b>50</b>
5.1	Reach, engagement, and outcomes	50
5.2	Feedback loops	51
<b>6</b>	<b>Looking ahead</b>	<b>52</b>
	<b>References</b>	<b>55</b>

# About the Remote Learning Resource Packs

In response to the challenge to education systems presented by the global COVID-19 pandemic, UNICEF and the World Bank have created a set of seven Resource Packs about remote learning. The packs are designed to support government officials and staff in national and international agencies tasked with designing and implementing effective remote learning opportunities for children in development and humanitarian contexts.

Remote learning is the process of teaching and learning performed at a distance. Rather than having learners meet their teachers in person, learners are distanced from their teacher and possibly their peers as well.

One of the consequences of COVID-19 is that almost every country has had to put in place remote learning programmes. The packs are therefore designed primarily to help you to enhance and improve the effectiveness of existing remote learning programmes.



**This introductory Resource Pack considers the key elements of a 'pedagogy-first' approach to remote learning, starting with the learner and learning, then considering technology options and your programmes' broader approach to supporting learning. It discusses some of the most common considerations that remote programmes often overlook but which, if carefully considered, can lead to improved learning for more children.**



Radio has a long-established position among remote learning modalities, reflecting in part its wide accessibility in many parts of the world including in some of the hardest to reach areas. This pack is designed to support you if you are involved in remote learning using radio and help you to strengthen and improve systems and approaches so that learning outcomes can be improved for all children and young people.



Despite advances in technology, print remains a crucial medium for many learners around the world. This pack discusses some of the major strengths and limitations of print as a medium for delivery of remote learning and identifies some of the approaches that can be taken when planning for the use of print within remote learning.



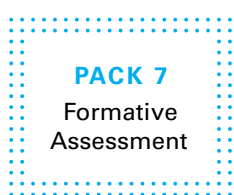
A recent UNICEF survey of 127 countries using technology for remote learning identified that 75% are using edTV. This pack is designed to support you if you are involved in remote learning through edTV. It can help you to strengthen and improve your systems and approaches so that learning outcomes can be improved for all children and young people.



This Resource Pack is intended to help you design new digital remote learning programmes or strengthen existing programmes. This pack will help evaluate your digital learning options by placing your learning purpose and the context of your learners at the heart of your decision making.



There are over 5 billion mobile users in the world today. Unsurprisingly, many countries are turning to mobile technology for remote learning. This pack is about creating and strengthening effective remote learning programmes using mobile technology. It overlaps with the Resource Pack about digital learning.



Children and young people cannot be expected to learn and progress through a remote learning programme with few or no interactions with teachers. This Resource Pack is about creating opportunities for formative assessment in remote learning programmes i.e. opportunities for checking understanding, giving feedback and collecting information to decide what to do next.

# About this Resource Pack on remote learning

## What is remote learning?

For the purpose of this Resource Pack, and the other Resource Packs in this series, remote learning is defined simply as **facilitating learning for children and young people, from a distance**.

## Who is this pack for?

The target audience for this Resource Pack includes World Bank and UNICEF staff, staff at other UN agencies, governments, donors, global partners, implementing agencies (NGOs & CSOs) and government education officials involved in designing and implementing remote learning.

## What is the purpose of this pack?

In 2020, countries around the world introduced remote learning as a crisis-response to the COVID-19 pandemic. This led to an unprecedented change in the provision of education. Most countries found themselves setting up remote learning at break-neck speed and often for the first time at scale. The pace of innovation at scale contributed to large variations in the quality and effectiveness of remote learning programmes. With this in mind, the Resource Pack is intended to help **design new remote learning programmes** and **strengthen existing remote learning programmes**.



# What is in this pack?

This Resource Pack is divided into three sections:

1

## Section 1 – Learning purpose

This section of the pack will help you develop or clarify the learning purpose of your programme. Who are the learners you want to reach and what do you want them to learn? Such considerations are easy to overlook, but carefully building a clear picture of your target learners and their situation will help you develop more appropriate and effective approach. Being clear and realistic about what you want them to learn, taking into account where they start from and the barriers they may face along the way, is also likely to lead to more successful outcomes.

2

## Section 2 – Technology options

You may have a broad range of technology options available for remote learning - from paper-based materials, to broadcast media, or digital materials accessed on smart phones. Identifying which options are most readily available to learners, and how they can best support your learning purpose, is a critical decision. You may well need to deploy more than one option to achieve your goals. This pack will help evaluate your technology options by placing the learning purpose and the context of the learners you want to reach at the heart of your decision making.

3

## Section 3 – Developing an effective programme

Issues of **access to learning**, **quality of learning**, and **assessment for learning** are vital considerations for all education programmes. It may not be possible to address each of these perfectly, but they all have important implications for developing your content, your pedagogy, your support mechanisms, and other elements of your approach. This pack begins to identify and discuss some of the most common considerations that remote programmes often overlook but which, if carefully considered, can lead to improved learning for more children.

# Establishing the learning purpose for a remote learning programme

Common reasons or purposes for using remote learning include:

- Providing continuity of learning during an emergency, such as the COVID-19 pandemic
- Providing alternative learning for hard-to-reach populations or out-of-school youth
- Blending remote and face-to-face approaches to improve the teaching quality, learning outcomes or resilience of your education system.

Your reasons may or may not be similar to any of the above. But whatever reasons or situations are driving the development of your remote learning programme, it is helpful to think about the learning purpose of your programme, before thinking about which technology or media will best help you meet that purpose. Being clear and explicit about your learning purpose will help you make sometimes difficult decisions about what you are going to do and how you are going to do it.

The purpose of this section of the pack is to help you develop a clear understanding of:

- **Who are the learners you are trying to reach and what is their current situation?**
- **What knowledge or skills do they want and need to learn, and what skills, knowledge, resources and people are available to help them learn?**

Learning in schools and well-designed open learning programmes doesn't just depend upon having adequate learning resources or technologies. Learning depends upon a rich ecosystem of actors and relationships working together. Remote learning during emergencies, such as the COVID-19 pandemic, doesn't automatically benefit from such well-developed ecosystems and relationships.<sup>1</sup> Education decision-makers need to think together with other stakeholders about how parents, caregivers, and the wider community can support young people in remote learning.

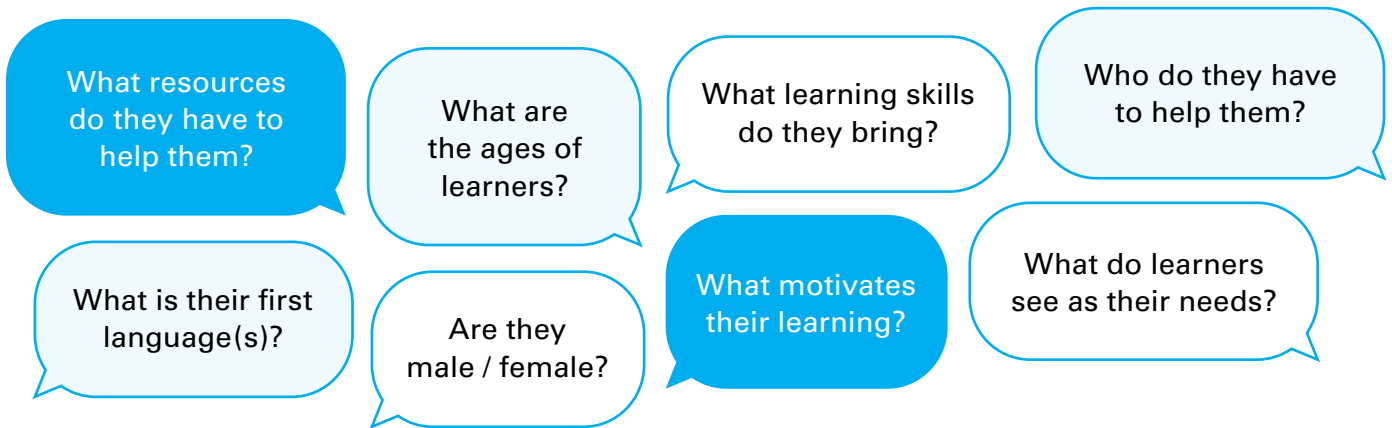
As noted by the World Bank, remote learning innovations using Educational Technology must build upon the foundational understanding that **education is, at its heart, about human connections – between students, teachers, caregivers, principals, and broader communities.**<sup>2</sup> The case studies in these resource packs illustrate how remote learning programmes worldwide have depended upon teachers, parents, and the broader community to enable and support remote learning.

Strengthening human connections through remote learning may also contribute to mental health and psychosocial support for children and young people, during and after the COVID-19 pandemic.<sup>3</sup>

## Knowing the learners and their context

Understanding who the target learners are will help you to design or strengthen a programme to meet their needs through appropriate learning activities, resources and support.

To really understand the learners, you will need to test existing assumptions and gather information on learner characteristics and context. You may seek answers to questions such as:



Information can be gathered in different ways. For example, you can consult existing data sources, such as Government or project databases. You can also interview target learners, teachers and community members, who will be able to give rich and different perspectives. If you are seeking to strengthen or expand an existing programme, collecting insights from those already participating in the programme can be a powerful way to review your original design assumptions.

Understanding how and why technologies and media are being used by children and/or their caregivers and what other education, health and entertainment programming is reaching your target group can help you to design relevant and accessible programmes.

You will find it helpful to know about other technology or media programmes that are already reaching the learners or communities in your target groups. Even if these programmes are not about education, they may provide insights into what is possible or what people find helpful. It will help to know if learners are using technology themselves, and if caregivers or other community members are using technologies in ways that could benefit learners.

There are lots of ways you can find out about other technology or media programmes in your area. For example, through project reports, newspaper articles, online surveys, social media discussions, blogs and interviews on TV or radio.

Understanding the learners' context includes understanding the challenges that they face. Challenges may include sensory or cognitive impairments; discrimination because of gender, ethnicity or language; or specific problems learners face because of poverty or geography. Some of these issues are considered in [Section 4.1 – Equity of access to learning](#).



Children learn more and are more likely to stay in school if they are first taught in a language that they speak and understand.<sup>4</sup> World Bank, Loud and Clear: Effective Language of Instruction Policies for Learning. Available at: <https://www.worldbank.org/en/topic/education/publication/loud-and-clear-effective-language-of-instruction-policies-for-learning>



## Reflection task



### Learning is active and must start with where the learner is.

The **Learner Profile Tool** helps you identify the important characteristics of the learners you are trying to reach (your target audience) so that you can think about how they might affect their engagement with remote learning. Knowing more about your target audience will help you design an accessible programme that addresses their needs and interests.

To complete the tool, imagine a typical learner in your target audience. Then, ask yourself questions about the learner. Make a note of the characteristics you think of and then think about the implications of these characteristics on the programme you are designing. For example, what do the characteristics tell you about when they will have time for learning, who is at home or in the community who could help them if they get stuck, or what kind of content will interest them?

#### Who are they?

- How many learners with this profile are you likely to have on your programme?
- What are their age(s)?
- Are they female and/or male?
- What is their first language(s)?
- Do they have families around them?
- Where are they (e.g. rural homestead, urban shanty)?

#### What motivates their learning?

- Why are they learning?
- What do they want from the programme?
- What challenges do they face in trying to learn?
- What interests and experiences do they bring that are relevant?

#### What do we know about their learning?

- What learning skills do they have (e.g., reading ability)?
- What experience do they have of self-study?
- Are their parents/caregivers willing and able to help them learn?
- Is there anyone else who can help them to learn?
- Will they be able to interact with other learners?

#### What do learners see as their needs?

- What is important to the learners, their contexts and their goals? (List 3 - 5)

#### What do we know that is surprising?

- What have you learned from speaking to learners and those who support them? (List 3 - 5)

#### What are the implications for learning design?

- What is the learning purpose that meets these learners' needs?
- What style of learning will be most appropriate for these learners?
- What size, nature and content of learning materials will be relevant and feasible for study?
- Who will provide them with support? What type of support and how much support will be possible?
- How will materials and support reach these learners in ways that are timely, feasible and affordable?
- How will their progress be assessed?

#### What resources do they have to help them?

- How much time will they have available for study?
- Where, when and how will they be learning?
- What learning resources and media can they access?
- Will they have access to local facilities, e.g. study groups, libraries?
- Who will pay any expenses or fees?

#### What technology do they have access to?

- Can they access a radio/ TV/mobile phone/internet within the home?
- Do they need consent of others to use them?
- For how long and how often can they use them?
- If not, is there community-shared access?

# Learner Profile Tool



Brief description of targeted learner:

Who are they?

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What motivates their learning?

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What do we know about their learning?

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What resources do they have to help them?

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What do learners see as their needs?

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What technology do they have access to?

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What do we know that is surprising?

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What are the implications for learning design?

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## Defining the learning purpose

Thinking about what learners need to be able to do at the end of the programme helps you to design activities that prepare learners to succeed and finds ways of assessment that promote learning.

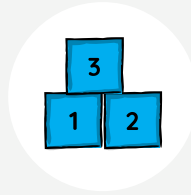
Having gained an understanding of who the learners are and their context for learning, the next step is to reflect on the learning purpose - what you want them to know, understand or be able to do. Without defining this clearly, there is a danger that the approach will not reach the target audience, the learning activities and resources will not be sufficiently tailored to their needs and the delivery mechanism may miss opportunities to support learning. Below are some questions you can ask to help define your learning purpose.



**What age, grade or group of learners are you targeting?**



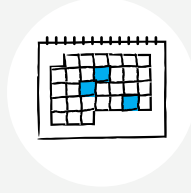
**What relevant knowledge and skills do these learners already have?**



**What skills do you want these learners to practise and / or advance?**



**What are your expected learning outcomes?**



**Why is it important that these learners gain these skills now and for their futures?**



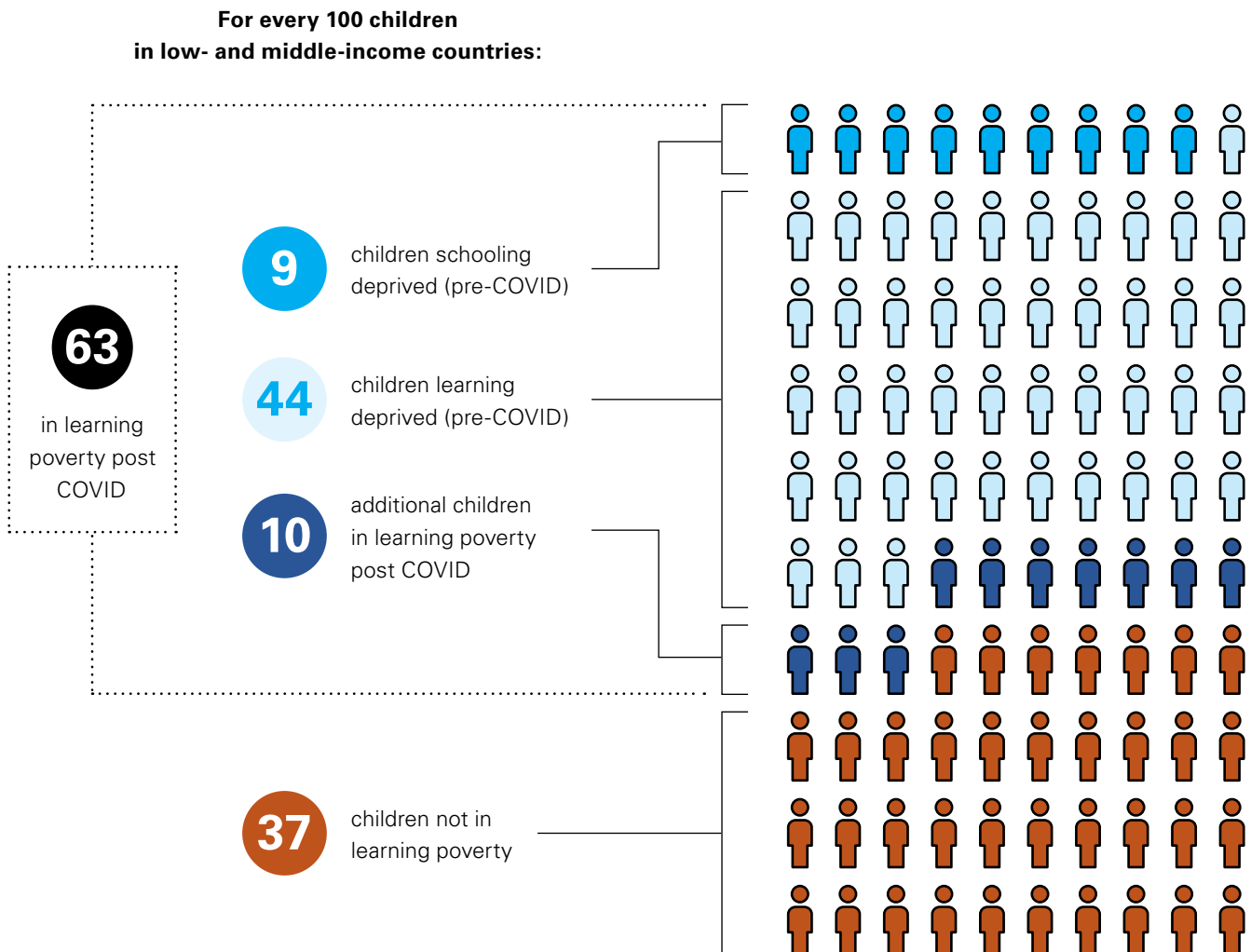
**What is the timescale available for learning?**

It's important not to assume all learners will be where the curriculum expects them to be, at any given age or learning stage. In particular, you may need to think about how your programme can strengthen learners' literacy and numeracy skills to access or catch-up in other curriculum areas.

## Learning poverty

UNESCO data shows that many children complete primary education without becoming confident in basic reading and number skills.<sup>5</sup> The World Bank refers to this as learning poverty.<sup>6</sup>

It is estimated that in Low and Middle Income Countries, over half of all children were in learning poverty before the pandemic and two-thirds of all children will be in learning poverty afterwards – as illustrated in the diagram below.<sup>7</sup>



It is crucially important that remote learning programmes are realistic about what they want learners to learn – taking into account where they start from and the barriers they may face. Encouragingly, research shows that even very young children approach learning as competent, active agents of their own development. One illustration of this is the enormous capacity for children to help each other learn, as seen in this account from a learning champion in Zimbabwe:

*What I do is, when they come with their books and pens, they write the activity down first and as for those who did not understand clearly—they get help from those who have understood. That is when you realise that some of them, when they are reading from their books, they quickly understand it... in that way I will be able to see their performance and quickly identify those who need help so that they can get help from others in the group.<sup>8</sup>*

A girl shows off the online platform on which children and parents in Timor-Leste can access a range of audio-visual material to help students continue learning during ongoing school closures.

Photo: UNICEF / Bernardino Soares



### 3

## Technology options

### 3.1

## Features of remote learning technologies or media

The five remote learning technologies or media covered by this series of Resource Packs are presented below, with some examples of their use and a brief summary of their strengths and weaknesses. In practice, many remote learning programmes combine several different technologies or media in a 'multi-channel' approach. For example, a TV broadcast might be accompanied by printed materials containing learning exercises and SMS message campaigns to raise awareness or to provide interactivity through simple quizzes. Cross country qualitative research finds that multichannel strategies that coherently articulate the different modalities to deliver remote learning were perceived as potentially more effective to facilitate teacher-student feedback and formative assessments if contents were aligned to the curriculum and learning sessions were taught consistently across all channels.<sup>9</sup>



### 3.1.1

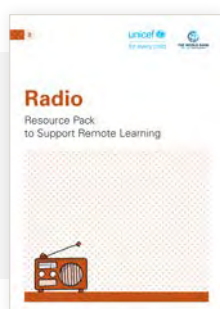
## Radio



Radio, as with television, can provide a mix of specialist education programming and regular programmes with educational content. Such broadcasts can include links to other channels for interactivity where this is feasible.

In Mexico, Radio Educación offers offline (broadcast) as well as online radio (radio on demand) from the Government of Mexico. It is aimed at both children and adults. This is a dedicated channel set up for education. In Palestine (West Bank and Gaza) an existing radio channel was repurposed.

Using educators as broadcasters, it replaced its regular broadcasts with educational content for learners during the pandemic. Specialist teachers were also used in Argentina where Seguimos Educando broadcasts on radio (and TV). The programmes are supported by print materials, which are delivered to homes of students. They include materials for the family.<sup>10</sup>



#### FURTHER DEVELOPMENT

See [Remote Learning Resource Pack 2](#) to find out more about remote learning using radio.

A young boy in Venezuela with the print materials he received to help continue learning at home

Photo: Fe y Alegria, Venezuela



A girl reads a book produced by the Ministry of Education and UNICEF in Timor Leste to help children continue learning while schools are closed.

Photo: Bernardino Soares/UNICEF



### 3.1.2

## Print

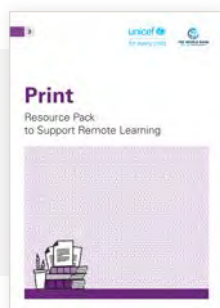


The print medium is familiar to learners of all ages. It is relatively easy to use and can be studied at any speed and at any time. Print does not require learners to have access to any particular technologies or media devices in the home. Print can be used by learners studying in many different contexts, and there is little or no expense for the learners.

In terms of access, print is frequently identified as the most equitable means of reaching learners, particularly in low-resource settings. For example, under COVID-19 school closures, national and local educational strategies in Afghanistan<sup>11</sup> and Pakistan<sup>12</sup> prioritized print-based materials to reach learners in locations with poor internet connectivity and mobile phone coverage. UNICEF's response strategy in Bangladesh focused on the provision of print-based materials for learners in refugee camps, as print materials were seen to be more accessible than alternative means.<sup>13</sup>

The World Bank's Read@Home<sup>14</sup> program has developed a manual to help countries select storybooks, engage parents to read with children at home, and use innovative approaches to deliver and procure books. Packages and approaches are aligned to government distance learning programs and curricula to ensure continuity.

Finally, in comparison with other media, print-based materials may be relatively cheap to design and develop. Many educators and authors are likely to be familiar with producing learning materials in print. However, the costs of large-scale printing and the challenges of national or regional distribution, particularly during emergencies, may make other approaches less costly or quicker to mobilise.



#### FURTHER DEVELOPMENT

See [Remote Learning Resource Pack 3](#) to find out more about remote learning using print.



Child and mother watching lessons together in Kenya

Photo: UNICEF, Translieu Nyaberi

### 3.1.3

## Television



Television can be engaging, combining education and entertainment. For example, *Akili and Me*, produced by the Pan-African social enterprise in Tanzania, *Ubongo*, is an animated series that has been shown to support young learners' social and emotional development.<sup>15</sup> Television can also reach mass audiences and promote intergenerational learning. One example of this is *Sisimpur*, a localized version of *Sesame Street* in Bangladesh.<sup>16</sup>

The development of high quality creative TV programming requires highly skilled producers and can be expensive. It is easier to simply record regular lessons and broadcast them. China Education Television's "Same Class" uses live broadcasts of selected schoolteachers who cover the curricula of all grades of education. Similarly, Morocco's *Athaqafia* television channel broadcasts educational lessons on a daily schedule covering the national curriculum, with broadcast lessons supported by a website and mobile applications. Indonesia's *TV Edukasi*, owned by the Ministry of Education and Culture (MoEC), has gone one step further and broadcasts two channels: one for teachers, and one for learners.<sup>17</sup>

However, quality is crucial. 'Chalk-and-talk' teaching has been linked to low learning outcomes and global learning poverty. Broadcasting 'chalk-and-talk' lessons is unlikely to help learners progress.<sup>18</sup>

Television also offers limited opportunities for interaction and participation; watching may be passive. Many learners will need the help of an adult or peers to mediate between the broadcast content and their own understanding, particularly if the child does not speak or fully understand the language of instruction.



#### FURTHER DEVELOPMENT

See [Remote Learning Resource Pack 4](#) to find out more about remote learning using television.





While schools in Jordan are closed, students in grades 4-9 receive weekly activities to work on at home.

Photo: Learning Bridges, UNICEF Jordan



Teacher training via mobile phone, Bangladesh.

Photo: English in Action

### 3.1.4

## Digital



Remote learning programmes worldwide have established online repositories of digital resources. In some cases these resources are bespoke for particular countries, curricula or contexts; in others, existing resources are curated to meet particular learning purposes. These digital repositories have been seen as a way to widen access, to create more flexible learning opportunities, and to distribute and re-use content developed for broadcast on radio or TV. They have also been used to offer supplemental print or broadcast media with study-guides, timetables, and guidance for parents/caregivers on how to support children’s learning at home.

Digital solutions for remote learning have the potential to provide rich opportunities for learning, using a variety of media and interactive learning activities. The most fully featured platforms or tools might also offer interaction with educators and peers, file sharing, and tools for individualised learning and collaborative work.

Pratham, India<sup>19</sup> curated a repository including over 5,000 videos, 500 games and 400 stories in 12 languages. Parents are encouraged to offer ‘a little fun, a little learning’ through hands-on activities at home, guided by these resources.

iCampus, Ghana<sup>20</sup> developed one-hour lessons organised around a video and a quiz for Senior High School students. The curriculum emphasises increasing the number of girls attaining higher education degrees in science, engineering and maths. The videos were also broadcast on TV.

#Learning Will Not Stop, India<sup>21</sup> curated videos, lesson guides and worksheets for remote learning, sending these to learners in grades five through ten via WhatsApp. Students initiated ‘village learning circles’ to learn together with children who couldn’t access digital materials themselves.



#### FURTHER DEVELOPMENT

See [Remote Learning Resource Pack 5](#) to find out more about digital remote learning.

## 3.1.5

### Mobile



Mobile phone access and use is increasingly widespread. In some cases, household ownership of mobile phones may be greater than that for TV or radio. For example, when the state of Edo, Nigeria, was considering options for remote learning, it chose mobile technology partly because 91% of households had access to mobiles, while access to TV was at 69% and radio 46%.<sup>22</sup>

Mobile technology can also deliver rich opportunities for learning, using a variety of media and interactive learning activities. Mobile apps can offer personalized and adaptive teaching, spaced repetition, assessment for learning through rapid feedback, peer learning and peer assessment. Several distinct models of mobile learning are seen in the case studies.

- **Sophisticated learning apps**

BYJU, India<sup>23</sup> has developed sophisticated multi-media apps. The student learning journey is guided by the use of data analytics and assessment activities.

- **Learning materials from an online repository distributed through social media**

Edo-Best@Home, Nigeria<sup>24</sup> has curated learning materials on an online repository. This content is also shared with learners through WhatsApp, using interactive text messages for students to self-assess their learning.

- **Providing mobile devices preloaded with learning content or apps**

OneTab Hub Heroes, Uganda<sup>25</sup> has distributed bespoke tablet computers to mothers in disadvantaged communities. Learners carry out a mixture of short tests and guided learning using the preloaded OneCourse app.

- **No-tech learning activities shared through phone calls or SMS**

Remote Learning, Botswana<sup>26</sup> sent regular numeracy activities via SMS to parents' mobile phones. Some learners also receive follow-up phone calls. The programme halved the number of non-learners in numeracy.



#### FURTHER DEVELOPMENT

See [Remote Learning Resource Pack 6](#) to find out more about remote learning using mobile technology.

## Technology options and decision trees

A number of organisations have produced decision trees to help you choose appropriate technology options for your programme. You might want to look at several of these to see which, if any, you find most helpful for your situation.

The World Bank [EdTech Decision Tree](#)<sup>27</sup> is very simple and essentially guides countries with less than 50% internet penetration to focus on broadcast technology. The only circumstances in which it recommends using digital resources are when a) your internet penetration exceeds 50% and b) you have an existing online learning system such as Moodle, Teams, or Google classroom. However, none of the case studies in the digital and mobile resource packs used such online learning systems, preferring instead to make content available through mobile apps, YouTube and social media platforms such as WhatsApp. Most decision makers found these were more equitable approaches than online learning systems, especially in contexts where learners access digital content on mobile phones without affordable, reliable, broadband connections to the internet. Where internet penetration is high, the World Bank recommends curating open educational resources and optimising all content for mobile-first.

RTI's [EdTech Decision Tree](#)<sup>28</sup> is significantly more complex. It assumes you have already decided to use mobile or digital technology before making decisions about a) the kinds of engagement or features you want to use, and b) the exemplars of different kinds of app or digital tool that can support such engagement. If your target learners have ready access to a smartphone or computer and the internet for several hours a day, you may find this helpful.

The UNICEF and Innocenti [Decision Tree](#),<sup>29</sup> like the World Bank model, starts with whether your target population have affordable internet connectivity, but without suggesting a particular threshold for choosing mobile/digital or broadcast media.

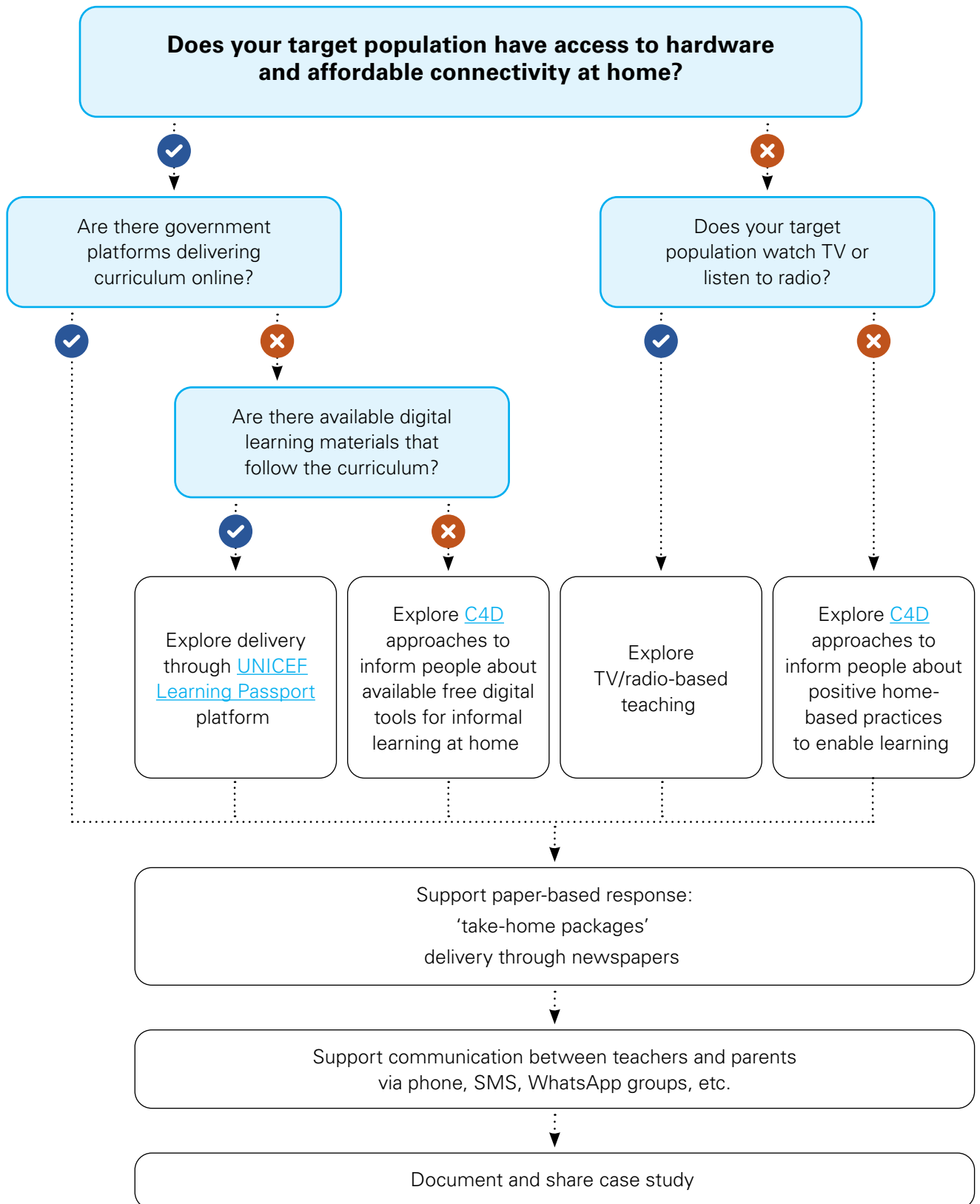
Decision trees typically set decisions up as being *either/or*.

In many of the case studies in these packs, decision makers have chosen *both/and*, using multiple channels to maximise opportunities for learning and reach.

Whether you choose to use digital or broadcast media, the UNICEF decision tree recommends complementing your approach with *both* paper *and* mobile-based learning to maintain contact with parents and learners through phone calls, SMS or WhatsApp.

Beyond identifying which technologies to use, your challenge will be in *making the best use* of the technologies available to learners, in their homes, schools, and communities. *Teaching quality is more important than how lessons are delivered.*<sup>30</sup>

# UNICEF and Innocenti Decision Tree



UNICEF (2020) Remote Learning COVID-19 Response Decision Tree.  
[https://inee.org/system/files/resources/UNICEF\\_COVID19\\_DECISION\\_TREE\\_V8\\_CLICK\\_HERE.pdf](https://inee.org/system/files/resources/UNICEF_COVID19_DECISION_TREE_V8_CLICK_HERE.pdf)

## Assessment of available technology

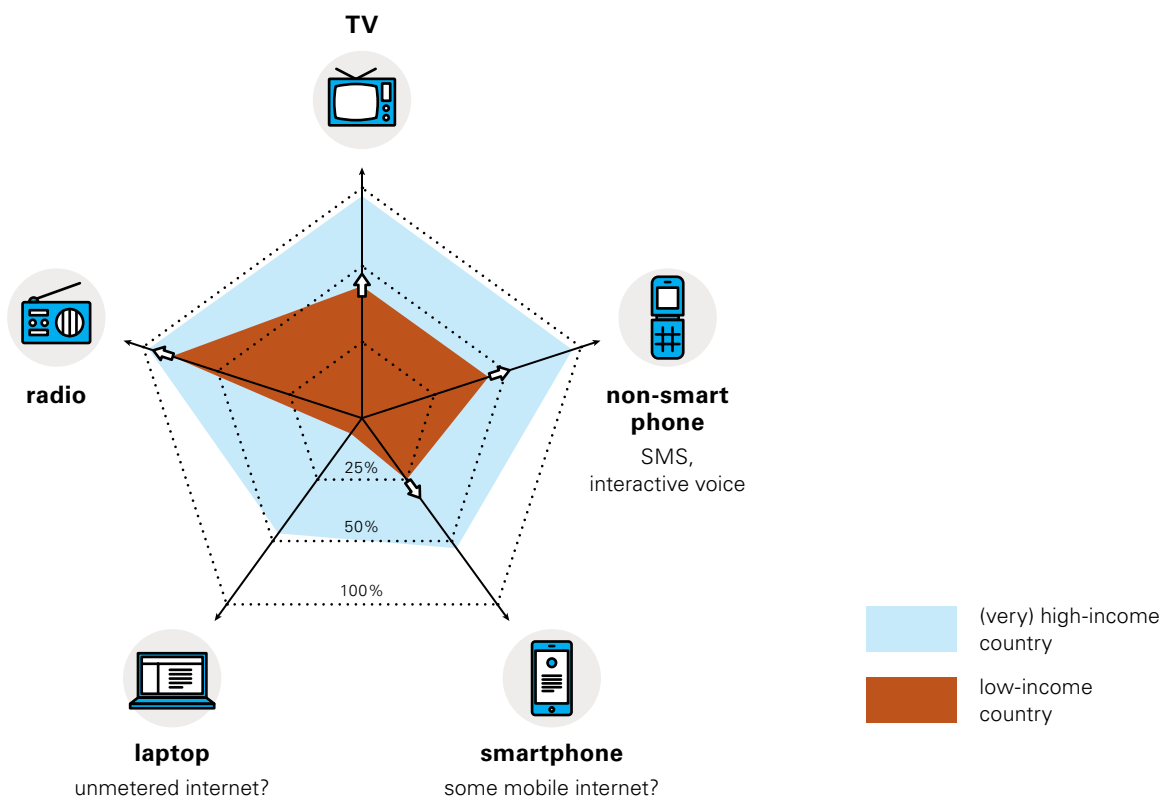
Your assessment of available technology should begin with the outcomes of your work on the Learning Purpose in [Section 2](#). Your understanding of the learners and their context ([2.1](#)) will include the kind of access, experience, and literacy children and their caregivers have in relation to different technology options. It will also include the ways in which available technologies are currently being used by learners, their households, and their communities. This is a good starting point from which to begin evaluating the available technology options.

Your understanding of the learning purpose of your programme ([2.2](#)) will also shape your assessment of available technology.

For example, Pratham's learning purpose in their programme *Do it! A little learning, a little fun*, includes engaging children in hands-on activities at home, so that learning is enjoyable and active. One of the reasons they choose digital video as a key learning resource is because it is easier to show learners practical activities than to describe them. Learners can also stop and repeat different steps of an activity as needed. See for example this model-making activity on joints, for science students aged 8-14 years.<sup>31</sup>

You may find Radar charts a helpful way to provide a quick overview of the availability of different technologies among learners you are aiming to reach.<sup>32</sup> The example shown here compares the situation in hypothetical high- and low-income countries. Of course, depending upon your situation and the learning purpose of your programme, you may consider national level technology access like this, or you may need to think about what the radar chart would look like for the particular communities or groups that you are targeting.

### Example of a Radar chart: High- vs. low-income countries (illustrative) from Haßler et al. (2020)



This chart compares the values for a low-income country (orange) with the values for a (very) high-income country (blue). In low-income countries, it illustrates:

- While less than 100% of households have one radio, many households can use and access radios.
- A fair number of households have TVs and non-smartphones.
- The number of households with smartphones will be low, and the number of households with laptops will be even lower.
- Even if a household has access to a device, the use of that device may not be shared equally available among household members. Depending on the culture, girls / women or boys may be disadvantaged.

The chart is annotated with arrows to show the possible changes to the current situation that could be brought about by the application of an emergency remote learning plan. In this chart it shows some improvement possible in radio, TV and non-smartphones.

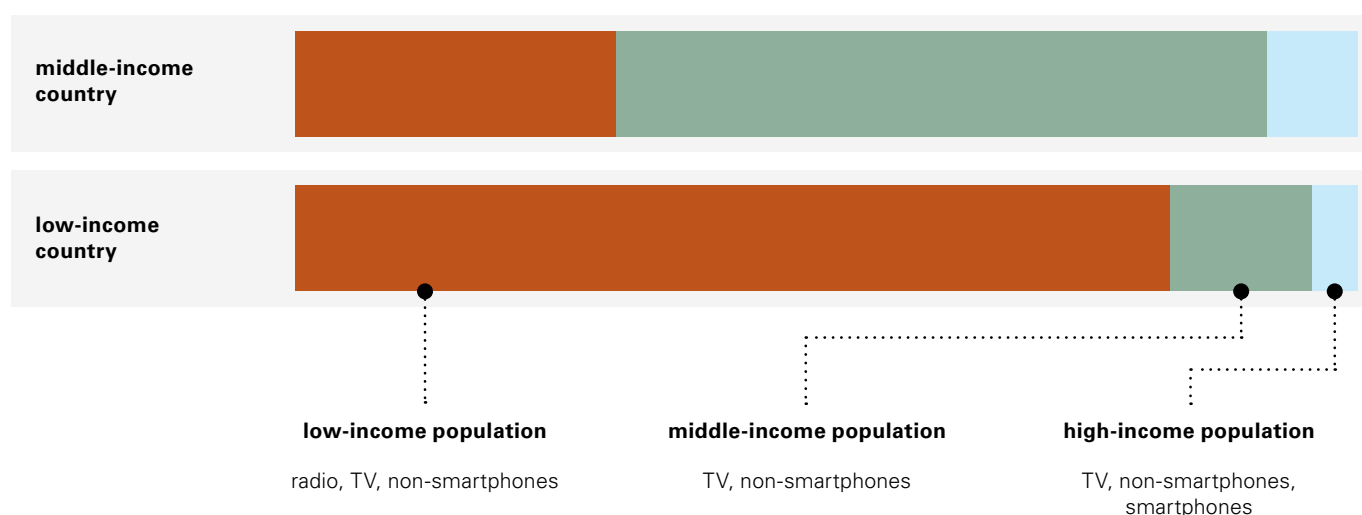
The most effective distribution of technologies is likely to be one that brings greater equity of access to all, rather than providing specialist technology for a few. If it is possible to provide systemic support to improve access to technology, think about which technologies might have the widest and most equitable reach.

*The most likely extension is a wider use of existing technologies. In low-income settings, for instance, more students may try to acquire a radio or a non-smartphone while very few people will be able to afford a laptop.<sup>33</sup>*

Note that the chart does not show the variation within the country. For example, there will probably be differences in access between urban and rural areas. Also, within in the same household, girls or younger siblings may be at a disadvantage through being given a lower priority in the use of EdTech tools.<sup>34, 35</sup>

One way of thinking about this is to consider the ‘layers of access’ and the numbers of learners that fall into each ‘layer’.

### Layers of access<sup>36</sup>



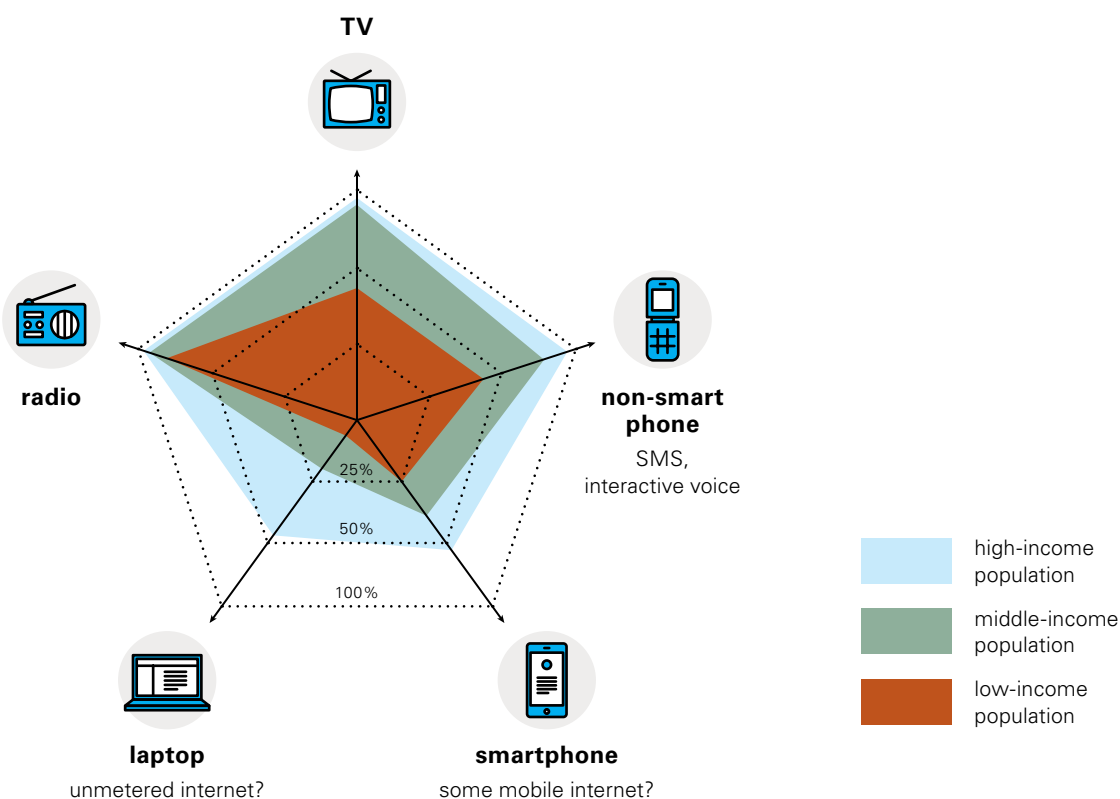
The figure above illustrates that a low-income country will have a higher proportion of low-income learners compared to a middle-income country. These will probably have access to radio, TV and non-smartphones, but not to smartphones or computers. The figure is only illustrative and each country or system will differ. For example, in Pakistan, it was found that low-income families did not tend to have radios.<sup>37</sup>

The World Bank Group’s TC360 data provides information about mobile network coverage<sup>38</sup> and subscriptions<sup>39</sup> at regional and national levels. Of course, such high level overviews may hide wide disparities between regions, genders, or socio-economic groups. GSMA (2020) provides a useful summary of current mobile internet connectivity<sup>40</sup>, including the barriers and drivers for connection and use. GSMA also provides network coverage maps<sup>41</sup> by country. Where internet connectivity and/or smartphone coverage is poor or not available, plans need to be made to make the best use of print, TV, radio, and use of non-smartphone methods, e.g. SMS and voice calling.

An approach that mixes media may be more appropriate than relying on a single technology. Such a mix would need to consider the proportion of learners in each income group.<sup>42</sup>

Programme planners will need to consider the access to different media or technologies for learners from different income levels. The Radar chart below shows each of three layers, and the access they have to the different tools. For example, it shows that almost everyone in the low- and middle-income layers has access to TV (blue and green lines almost at 100%) whereas less than 50% of the low-income population do (orange line).

### Radar chart on technologies: layering of populations within one country (illustrative)<sup>43</sup>



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Teleschool Pakistan Channel  
Time Table, Subjects  
& Other Information  
(Teleschool PTV  
Channel Info)

As an example of how one country responded to the specific context the case study below looks at Pakistan. Here, widespread television ownership allowed this medium to be used to provide greater equity of access to learning. Each country will have a different pattern of access; plans need to reflect this.



#### CASE STUDY

#### Pakistan

In Pakistan<sup>44</sup>, a national plan was drawn up that recommended ways in which hard-to-reach learners may access remote learning. These included both the range of EdTech tools that were available and the range of types of learners. In doing so, it looked at how each tool may be used to increase access to remote learning for each type of learner. Examples of the recommendations include:

- Ensuring that all learners can access printed learning materials at home.
- Combining the use of television, mobile phone-learning and online learning so that all learners access education through at least one of these media.
- Television, with existing and new programming, has a good reach as TV ownership is widespread across both urban and rural communities, and in affluent and slum areas.
- The high rate of ownership of non-smart mobile phones provides a system for remote learning and interaction with educators via phone calls and messaging. This provides a platform for both skills development and social support.
- Radio has a lesser reach due to the low rates of ownership in rural communities.







## 4

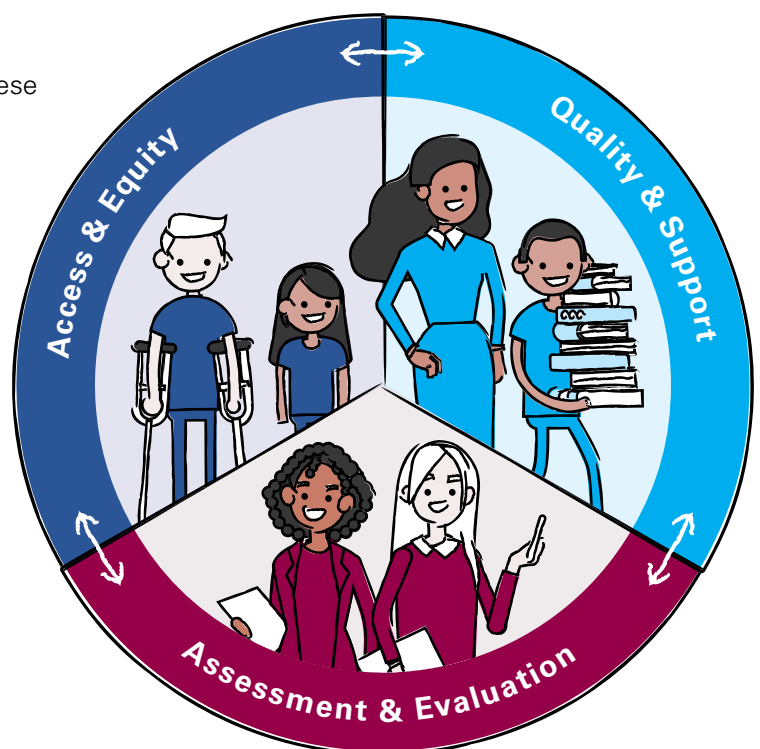
# Developing an effective programme

This section of the resource pack provides key considerations to design and strengthen effective remote learning programmes. It illustrates ways in which different programmes have responded to these considerations in the context of their technology choices. You will find more examples in each of the resource packs for specific technologies or media: TV, Radio, Mobile, Digital and Print, as well as in the assessment resource pack.

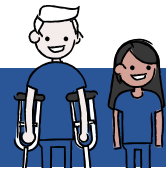
These considerations are grouped into three broad areas:

- **Access and equity**
- **Quality of learning and support**
- **Assessment and evaluation**





Whichever technology options are chosen, these three broad areas are critical to strengthen and improve programmes so that learning outcomes can be improved for all children.



## Developing an effective programme







### Access & Equity

 <b>Getting resources to learners in time</b>	Enabling learning to keep learning, in a timely manner
 <b>Inclusive education</b>	Ensuring learning for all, including learners with disabilities and special needs
 <b>Gender issues</b>	Ensuring girls can and do benefit from remote learning, including through gender-responsive pedagogy
 <b>Equitable access</b>	Ensuring equitable access for children from low-income households, rural as well as urban learners





### Quality & Support

 <b>Meeting learning needs</b>	Providing learning activities that are relevant, appropriate, motivating, at the right level
 <b>Learning together</b>	Creating opportunities for learners to interact with others, including peers, parents or teachers
 <b>Parental involvement and time for learning</b>	Including parents and helping them provide practical and emotional support to learning
 <b>Involving educators and the community</b>	Promoting and supporting remote learning through school and beyond



### Assessment & Evaluation

 <b>Assessment and programme design</b>	Using assessment evidence to ensure programmes address learners' needs
 <b>Assessment for learning</b>	Using assessment activities and feedback to help guide and strengthen learning

## 4.1

# Access and equity

By August 2020, some six months after schools around the world began closing due to the COVID-19 pandemic, UNICEF estimated that globally around a third (31%) of all children had not been reached by remote learning programmes, rising to almost a half of all children (48-49%) in Sub Saharan Africa. The issue of access is also one of equity. In every country, the majority of learners excluded from remote learning programmes come from the poorest households.

You need to ensure that all children and young people can engage with your remote learning programme. Exclusion and inequality will likely be exacerbated if the learners are from marginalized and vulnerable groups, such as lower-income households, rural communities, girls, ethnic minorities, and persons with physical or learning disabilities.

### 4.1.1

## Creating equitable access

As the World Bank states, equity does not necessarily imply 'treating everyone the same.'

*Equity sometimes requires investing more resources to ensure that children who live in rural areas, have a disability, or are from a linguistic minority have the same-quality service as anyone else.*<sup>46</sup>

Approaches to maximise reach and improve equity of access can include:



### Using the technology or media most widely available to your target learners

It's important to base this understanding on evidence from your target group, rather than making assumptions. The results can sometimes be surprising, as in the example of EdoBest below.



### Combining a range of different technologies or media

This ensures that children who cannot access learning through one approach might still be able to learn through another. For example, several programmes repurpose the same audio or video content across digital and radio or TV platforms to maximize reach.



Globally, **72%** of schoolchildren unable to access remote learning live in their countries' poorest households.

UNICEF Remote Learning Reachability Factsheet, 2020.<sup>45</sup>



### **Using social media to send learning resources directly to parents/caregivers or volunteers**

One of the most frequent adaptations to increase equitable reach, has been to shift from expecting learners to access and find digital content on a repository themselves, to proactively sending content to caregivers through social media such as WhatsApp.



### **Backing up digital, TV, or radio programmes with print resources and mobile support**

As seen in [3.3](#), regardless of whether remote learning programmes use digital, TV or Radio, UNICEF recommends also providing paper-based learning resources and using mobiles to maintain contact with parents and support learning at home – through phone calls, SMS or WhatsApp groups.



### **Exploring low-tech/no-tech remote learning approaches**

Many learning activities can be done without any technology – such as writing a story in literacy or solving a puzzle in numeracy. Remote learning technologies can be used to share ideas for such activities with learners or caregivers, even though no technology is required to do the activity. If the idea or instructions for the activity can be expressed clearly and concisely in a few sentences, such no-tech activities can be passed on by word of mouth, copied by hand onto bits of paper, or shared through relatively low-tech means such as SMS messages or WhatsApp groups.



### **Using learners' mother tongue language**

It's critically important that learners understand the language used in your learning materials. Many learners may benefit from use of their mother tongue or by ensuring the use of second languages is kept simple and accessible. Working with local radio stations is one way to deliver content in multiple languages. See the case study below on Uganda. Another strategy is to slow the pace of second language use, building in pauses for translation of audio or video materials, and using repetition of key points.

## EXAMPLES



### Nigeria - Edobest@home

Edobest@home<sup>47</sup> was originally intending to use radio broadcasts as their main remote-learning channel. They changed to delivering audio-lessons by mobile when data showed more households had access to mobiles (91%) than to TV (69%) or radio (46%). To increase equity and access, mobile networks implemented zero-rate data tariffs for the online repository providing audio-lessons, activities, storybooks and quizzes.



### Bangladesh - LCFA<sup>48</sup>

The use of print-based media for the delivery of the programme in the Rohingya refugee camps at Cox's Bazar was strongly shaped by contextual resource factors. Access to mobile telephones and internet coverage is extremely limited in the camps. There are few televisions and the electricity supply is unreliable.



### Zimbabwe - IGATE/CHILD<sup>49</sup> and Botswana – Remote Learning<sup>50</sup>

Both sent learning activities to caregivers or learning-champions, using short text messages sent via SMS or WhatsApp. These activities helped children strengthen and actively maintain their literacy and numeracy skills.



### Nepal - Revising with the Radio<sup>51</sup>

Programmes were produced in learners' mother tongue and teachers repeated key points regularly. One grade ten student said: *'I found the science lessons easier to understand because they were in Nepali. The teacher repeated content and provided good examples which made it easier to understand.'*



### Uganda - SESIL<sup>52</sup>

Eighty percent of the population can access radios in Uganda, but there are eleven official languages. To ensure equitable reach, SESIL broadcast radio programmes in all eleven official languages. Scripts were written in English then translated into local languages in collaboration with Local Language Boards appointed by district councils. Working with local radio stations enabled programmes to be broadcast in the languages used by local communities, using different languages in different regions.

## 4.1.2

### Ensuring gender equity

Gender refers to the socially constructed roles, responsibilities, and identities for girls, boys, women, and men and how these are valued in society. They are culture-specific, and they change over time. Gender identities define how girls, boys, women, and men are expected to think and act. (WHO, 2011). Crises, such as the COVID-19 pandemic, have the potential to magnify existing differences gender equity. It is important to examine context and note that girls and boys of different ages, of different socio-economic backgrounds, and from rural or urban households experience different risks and different constraints in learning access and dropout risks.<sup>53</sup>

Adopting gender-sensitive pedagogies in remote learning materials and support can mitigate the risks of further excluding and marginalising girls. Gender sensitive pedagogy places the learning level and local context of the girl at the heart of the programmes approach to teaching and learning. The need for gender sensitive pedagogy is recognised as one of the key lessons learned from programmes within the FCDO Girls Education Challenge portfolio (GEC, 2019).

Underlying gender issues, such as attitudes towards girls' education, the unequal burden of household chores, or the risks of teenage pregnancy during school closures may present significant barriers to all forms of girls' emergency remote learning.

A study by UNESCO and the Equals Skills Coalition found that girls are often '*...excluded from the digital space and are less likely to know how to operate smart devices, navigate the internet, use social media and understand digital safety*'.<sup>54</sup>

Emergency remote learning programmes should consider how they can improve opportunities for girls' access and participation, to avoid amplifying gender inequalities.

A rapid review<sup>55</sup> of evidence on gender and COVID-19 responses by the EdTech hub drew four key findings:

1

Girls typically have less access to technology than boys, at home or school, due to gendered assumptions about competence, enjoyment or risk.

2

Increasing girls' access to technology can be disproportionately empowering, with benefits beyond formal education.

3

Parents and educators can act as gatekeepers preventing girls' access to EdTech – education programmes need to address both of these groups.

4

Mobile phones may provide opportunities to overcome persistent gender and infrastructure challenges.



## EXAMPLES



### Zimbabwe - SAGE

SAGE<sup>56</sup> used print-based remote learning to reach vulnerable girls who have never been to school or have dropped out before the completion of their basic education. Through a combination of print-based materials and targeted community-level support interventions provided across 132 settings, the programme has reached over 21,000 highly marginalized out-of-school adolescent girls aged 10-19.



### Zimbabwe - IGATE/CHILD<sup>57</sup>

Many of the target girls had little if any access to learning technologies themselves, or in their homes. The project recruited local community Champions who were willing receive activities via WhatsApp messages and share these with local children. Champions were mostly women who had previously volunteered to promote girl's education.

*'I just wanted to help the girl child. I am an old lady... My main objective was to assist, to empower, the girl child.'*

— Champion, IGATE/CHILD, Zimbabwe



### 4.1.3

## Providing inclusive education

While “...inclusive education is commonly associated with the needs of people with disabilities... inclusion is broader in scope.”<sup>58</sup> The challenge of inclusion is to embody the principle that every learner matters, and matters equally. Inclusion doesn’t mean treating everyone the same.

Some children may need additional help or support to be able to participate in learning. As the World Bank notes:

*Equity sometimes requires investing more resources to ensure that children who live in rural areas, have a disability, or are from a linguistic minority have the same-quality service as anyone else.*<sup>59</sup>

People with long-term physical, intellectual or sensory impairments are amongst the most excluded groups, especially during and after emergencies. Emergency situations may have a greater impact on people in these groups, who can be excluded from educational responses for a variety of factors including physical, social and attitudinal barriers.

The INEE Thematic Brief on Inclusive Education<sup>60</sup> recommends mainstreaming inclusion by identifying groups at risk of exclusion and taking action to mitigate this risk. Actions could include ensuring the curriculum is appropriate and relevant for those with disabilities, and ensuring teachers have appropriate skills to support learners with special needs. For example, hearing impaired learners could be assisted through written transcripts of audio resources, and the inclusion of sign language in video materials.

Data collection and monitoring can help—gathering and disaggregating data on inclusion can help to identify groups who under-represented in remote learning programmes, as well as those who are enrolled.

#### EXAMPLES



#### Turkey – Özelim Eğitimdeyim (I am special, I am in education)<sup>61</sup>

The programme designed an app to support students with a wide range of special education needs, including sensory impairment, delivering adapted versions of content from the national online repository.



#### Jordan – Learning Bridges<sup>62</sup>

By utilising the user-friendly Padlet app to support its print-based study programme, UNICEF Jordan’s ‘Learning Bridges’ programme has enabled a broad approach to interactivity within the programme materials. This includes providing streamable and downloadable ‘audio’ versions of workbooks for learners with sight impairments or low levels of reading and comprehension.

**Ubongo Kids** and **Sesame Street** introduced characters into their TV programmes who have medical conditions and children with disabilities. Studies discovered that this promoted positive perceptions of people with those conditions and abilities amongst viewers.



#### 4.1.4

### Getting resources to learners in time

The choice of learning technology or media can have significant consequences in terms of how quickly remote learning programmes can reach children and provide continuity of learning.

*Online platforms have often been the first to be rolled out to enable children to continue learning from home; indeed, they are generally the most effective learning modality in getting some form of learning up and running. However, they have the lowest reach.*

*In some countries, online platforms reach less than 10 per cent of the population.<sup>63</sup>*

At the other end of the spectrum, print resources potentially have the greatest reach and most learners don't need any costly technology to use printed materials. But the distribution of physical print-based materials can be costly, labour intensive and time-consuming. It can also involve substantial logistical challenges, particularly in emergency situations where 'lockdown' limits programmes' ability to move people or materials between towns and regions.

Solutions for expediting the distribution of print resources include:



**Postal distribution to individuals or schools**



**Using schools as local distribution hubs**



**Harnessing community-level networks and volunteers to distribute materials to households**



**Digital distribution to local hubs for local printing, collation and physical distribution**



#### EXAMPLES

##### **Colombia – My Hands Teach You<sup>64</sup>**

In response to the closure of Early Childhood services under COVID-19, Colombia's 'Instituto Colombiano de Bienestar Familiar' (ICBF) has developed a print-based programme called 'My Hands Teach You', targeting the parents and caregivers of more than 1.7 million vulnerable children aged 0-5. One of the challenges was the distribution of materials in a context of social distancing, which required communicating with parents, designating pick-up times and locations to avoid contagion, and training ICBF's personnel to follow biosecurity protocols. The issue was alleviated by decentralising the organisation of the distribution process through ICBF's 33 regional offices and 197 zonal centres, enabling the materials to reach households even in the most remote areas.



##### **Liberia – Rising on Air<sup>65</sup>**

Using its team of international curriculum experts, Rising Academies Network created a 20-week programme of free, downloadable, ready-to-air radio scripts – 20 weeks of content for core subjects for five age groups across K-12: ECE, Lower Primary, Upper Primary, Lower Secondary, Upper Secondary. The process Rising usually follows is: its international team sends 'generic' Rising on Air script → in-country team edits for local context → text developed → practice → record → media edit → submit completed audio to Ministry → broadcast → collect feedback from end users. The quality of the materials is tested during the design stage. This includes bringing children into the office where the team observes them, learning from their interest and reactions to scripts. Of course, script writing is a skilled task and can be costly. In Liberia, Rising invested its funds in this as it had the right team and could develop and broadcast quickly. The government applied for and received emergency funding, but that took some time to come through so Rising led the process in the beginning and kept it moving forward in the interim, working with other local partners collaborating with the Ministry.





## 4.2

# Quality of learning and support

### 4.2.1

## Meeting learning needs

*Starting where learners are* is one of the most important aspects of meeting learner needs. Being clear and realistic about what you want them to learn, taking into account where they start from and the barriers they may face along the way, is also likely to lead to more successful outcomes. But meeting learner needs is wider than this; it means ensuring that learning resources are motivating and engaging to use, that activities are relevant to the local context and culture, and that children understand the language used.

Traditional education systems have been criticized for an approach in which students may be seen as 'blank slates' or 'empty vessels' that passively receive, memorise and repeat knowledge given to them through their teacher.<sup>66</sup> This is not how people learn.

Decades of international research have shown that even very young children are involved in their learning as *competent, active agents of their own development*.<sup>67</sup>



### **Learning should harness a young person's interest and develop their identity.**

Activities should be designed to develop curiosity and identity - using of open-ended and creative tasks, and engagement with their context, community and culture. This might include song, dance and artwork and, for older learners, practical tasks that help them become useful members of their community, assisting in responses to the emergency.

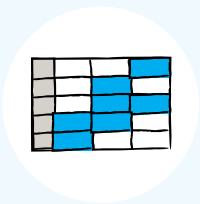
Remote learning programmes will not be effective if they assume that it is sufficient to 'transmit knowledge' to learners – whether through broadcast media, mobile phones, the internet, or printed materials. Children need to be given opportunities to actively make sense of and apply the knowledge or skills that they are learning. Remote learning programmes need to guide children through *learning activities* that are purposeful, relevant, engaging, and enjoyable.



### **Learning should be active.**

For greater understanding, resources should stimulate learners to be engaged with learning through activities. Young people can learn from watching a television broadcast. But their understanding will be deeper if they are required to *do* something as a result.

As well as learning activities, active learning might also involve children in setting goals, planning how they will learn, and assessing their progress. Children also benefit from a regular time and place for learning.<sup>68</sup>



### **Learning activities should have a routine, structure and rhythm.**

School provides a structured environment for learning. Remote learning programmes also need a rhythm to the day and the week. This can be done through scheduling of broadcasts or by structuring the presentation and release of digital material materials and activities.

Meeting learning needs is also about making the best use of the remote learning technology or media being used and playing to the strengths of that approach.

## EXAMPLES



### India – Pratham

Pratham<sup>69</sup> included ‘fun’ and ‘activity’ as key aspects of their learning purpose – digital content has been designed to be enjoyable and engaging and includes over five hundred age-appropriate games. As part of *Do it: a little fun, a little learning*, a network of 100,000 volunteers share daily learning activities with parents and caregivers - using WhatsApp or SMS messages. Rather than present recordings of ‘chalk and talk’ lessons, video and audio clips help parents engage children in hands-on activities, doing and making things at home – such as ‘grain art’ for primary children.<sup>70</sup>



### Jordan – Learning Bridges<sup>71</sup>

UNICEF is working to provide print-based remote learning to primary-school learners who, for a variety of systemic issues, already had very low instructional hours even prior to school closures under the COVID pandemic. In approaching this issue, the programme has worked with the Ministry of Education to slim down existing curriculum objectives and develop a cross-curricula approach to remote learning that focused on the most relevant and appropriate content from across four core curriculum subjects of English, Arabic, Maths and Science.



### Zimbabwe – IGATE/CHILD

IGATE/CHILD<sup>72</sup> sent regular foundation-skills activities in numeracy and literacy, to community champions, via WhatsApp. Champions convened informal ‘learning circles’ for learners to do the activities together. The no-tech activities were designed to be accessible (low threshold) but allow children to take an idea as far as they can (high ceiling), while having fun. As one volunteer Champion said: *Their attendance can actually tell you that they really love learning because the number of attendances keeps increasing.*



### Uganda – SESIL

SESIL<sup>73</sup> maximised learner engagement and participation in their broadcast radio lessons through including storytelling, songs and counting games. Radio lessons included ‘homework’ activities for learners to complete between broadcasts.



### Peru

In Peru<sup>74</sup> learners were expected not just to passively view TV lessons. Each lesson was designed for students to do in their homes, interacting with their families and environments and using a portfolio of evidence to showcase their learning.





## EXAMPLES



### India – Telangana remote learning and village learning circles<sup>75</sup>

To ensure students without other forms of accessing remote learning lessons were not left behind, older students and peers within communities took the initiative to start in-person student-led “Village Learning Circles.” These started as the lockdown was lifted in India, when small gatherings were allowed, but schools had not begun. Village Learning Circles are student-led lessons for peers or younger children in groups of 5-10. Students used any space available, meeting in homes, churches, temples, community centres, panchayat offices or even fields. The programme has set a goal of having 50,000 Village Learning Circles before schools reopen to ensure continuity for all their students.



### Zimbabwe – SAGE

SAGE<sup>76</sup> supports learner interaction for vulnerable girls through a range of interventions, including weekly community-based learning sessions, regular home visits from community teachers, and print-based self-study activities that are designed to encourage independent group-based learning.



### Uganda – SESIL

SESIL<sup>77</sup> includes direct instructions prompting learners to discuss questions with older siblings where possible. Older siblings are encouraged to listen to broadcast with their brothers and sisters and provide face-to-face support during the radio lesson.



### Zimbabwe – IGATE-T/CHILD

Here a champion talks about children using the no-tech daily learning activities together in informal learning circles:

*What I do is, when they come with their books and pens, they write the activity down first. And as for those who did not understand clearly—they get help from those who have understood. That is when you realise that some of them, when they are reading from their books, they quickly understand it... those who need help... they can get help from others in the group.*



### 4.2.3

#### **Parental/caregiver involvement and time for learning**

Enabling parents and caregivers to be actively and effectively involved in their children's remote learning may help overcome several of the challenges already discussed: helping make time and space for learning and encouraging learning-together; supporting language, literacy and numeracy skills; reducing girls' chore-burden, raising girls' aspirations and expectations, and enabling children's access to learning technologies and resources.

Parents can actively promote and support children's opportunities to learn by:

- making time and space for learning at home
- making mobile phones, TV or radio available for learning
- communicating with teachers via WhatsApp, SMS or voice calls
- joining in with learning activities or showing interest in what the learner has done
- carrying out learning-assessments and celebrating success
- sending children to learning circles or other opportunities for 'learning together'.



## EXAMPLES

### Bangladesh – LCFA<sup>78</sup>

Under COVID-19, UNICEF Bangladesh's LCFA programme for Rohingya refugee children in the Cox's Bazar camps has switched from a daily face-to-face programme to a home-based learning programme. The programme has developed a structured programme of home study, supplemented with guidance for caregivers, with the primary objective of maintaining daily learning practice through scheduled study time.



### Colombia – My Hands Teach You<sup>79</sup>

This program gives a key educational role to parents and caregivers of vulnerable children. The caregivers help children aged 0-5 to learn by using print-based pedagogical kits. They are supported in their tasks by teachers who provide bi-weekly telephone guidance through phone calls lasting 20-40 minutes.



### Ecuador – Fe y Alegría<sup>80</sup>

The radio sessions expect parents and caregivers to take an active role. Fe y Alegría drew on its experience with adult literacy programmes to create appropriate content and messaging for caregivers. The aim was to empower the family as a whole to enable students to listen to the radio and engage with its content through activities learners can perform at home, together with parents. This is not limited to foundational skills, but also includes life skills, physical exercise and games (singing, dancing, etc.) as a means for children to develop autonomy during the learning process.

## 4.2.4

### Involving educators

International guidance on emergency remote learning encourages education systems to provide remote learning materials for students and training for teachers on how to use them. There is less guidance about how schoolteachers might support remote learners. There may be an assumption that teachers will continue to support their learners through remote learning, but this is not always possible. Where it is possible, this is a dramatic shift for teachers, whose teaching experience has previously been in school classrooms.

The answer is likely to involve a mosaic of different approaches from a variety of contexts. Where online teaching is not possible, teachers can use social media platforms, messaging services, SMS and voice calls to keep in touch with learners and their caregivers. Where teachers are resident in a community, they have other options and may be able to share print resources, set activities and review learners' work.

#### EXAMPLES



#### Madhya Pradesh, India - #Ab Padhai Nahi Rukegi (#Learning Will Not Stop)<sup>81</sup>

The programme uses WhatsApp to deliver learning resources to students via parents' mobile phones. Over two million parents participated. The Ministry asked teachers to call five students every day, to help learners access the materials and answer their queries, recording their contact on a google-form. Teacher support and frequent teacher-parent interaction were critical to students' participation.



#### Bangladesh - BRAC pilot of remote learning through basic phones<sup>82</sup>

Teachers hosted twice-weekly telephone lessons for groups of four or five learners at a time. Initially focused upon psycho-social support, the lessons moved onto a core curriculum of Bangla, English and Mathematics, with story time and drawing.





A teacher in Bangladesh shows her students how to use instructional materials to learn English

Photo: EIA

## 4.3

# Assessment for learning and programme design

The design and implementation of remote learning programmes needs to be based on ‘what works’. Educators find out about what works by collecting and analysing data or evidence. Probably the most important evidence to collect is evidence about children’s learning, including evidence from learning assessments.

- In what ways is your programme design being informed by assessment evidence?
- Are there additional sources of evidence about children’s learning that you could draw upon or generate?
- What kind of assessment activities or tools are being used day-to-day, by learners or the adults supporting them, to support learning and celebrate success?



### 4.3.1

## Using assessment data to inform programme design

It is tempting to start planning emergency remote learning programmes by thinking about technology, apps and media or by looking at the formal curriculum and thinking what should be taught. It is better to start by thinking about the learners, their readiness to learn, and their current knowledge and skills. Widespread learning poverty means there are often marked gaps between where learners 'should be' according to the formal curriculum and where most learners 'are' in the development of their knowledge and skills. How can assessment data inform remote learning programme design and content?



#### EXAMPLE

#### Zimbabwe - IGATE-T/CHILD<sup>83</sup>

IGATE-T/CHILD used recent numeracy and literacy survey data to inform learning design. Data showed 58% of grade 7 children could not do subtraction, and 96% could not comprehend a simple story. The daily learning activities, delivered by WhatsApp, were designed to be 'low threshold, high ceiling' so that most learners could participate. Even then, local volunteers often had to improvise activities for those with the lowest literacy or numeracy levels.

## 4.3.2

### Using assessment for learning

Assessment for learning places the focus on improvement, giving feedback to learners to improve learning. There is a strong body of evidence that such approaches can dramatically improve learner engagement and learning outcomes.<sup>84</sup>

Seeing progress as a result of their own efforts is very motivating for learners and encourages them to keep learning. Opportunities for assessment can arise naturally through a wide range of participatory games and activities, as well as quizzes and tests. They can arise from learners talking with siblings or peers as they do activities together, in the home or in community learning circles. And they can arise through discussing their ideas or what they are doing with parents or educators.

#### EXAMPLES



##### India - BYJU<sup>85</sup>

Children learn independently on a mobile phone app. BYJU have recently added a data-analytics layer to be able to create individualized learning experiences for learners across the K-12 age range. Students' use of specific app features or courses is analysed to provide individualized feedback and to tailor future learning content, based upon previous course completion.<sup>86</sup>



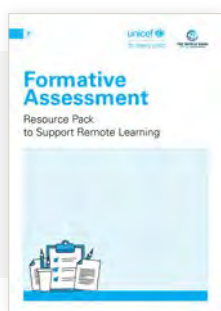
##### Nigeria - Edo-Best@home

Edo-Best@home have developed a series of interactive quizzes for every grade from ECD to primary 6. The quizzes can be accessed via QR Code online, via WhatsApp, or SMS.



##### Peru - Aprendo en casa<sup>87</sup>

The remote learning programme required pupils to showcase their learning through building a portfolio of evidence from the activities they completed as a result of the TV lessons.



#### FURTHER DEVELOPMENT

[Resource Pack 7](#) in this series is about Assessment for Learning (formative assessment) in remote learning programmes. It includes more information about involving teachers, parents and other caregivers in children's learning.





# Monitoring for quality assurance

## 5.1

### Reach, engagement, and outcomes

USAID identified best practices in monitoring from recent remote learning programmes.<sup>88</sup> Their review covers a range of modalities, including radio, television, mobile and online learning. The reviewed programmes often used printed texts in accompaniment or on their own. Most of the remote learning programmes reviewed were aimed at primary-aged learners. The USAID report recommends programmes monitor three critical aspects of implementation:



**Reach** captures information about the extent of learners' access to your remote learning programme. This might include evidence about access to technology (such as mobile phones or radios) and infrastructure (such as network coverage) as well as learning programmes, content, and support. How well do the numbers, or the proportion, of learners reached compare to the intended numbers?



**Engagement** assesses the extent to which learners participate in the programme as intended, including the degree to which learners found the activities and support for learning relevant, helpful, and motivating. Engagement might also include finding out about how often learners used your programme, and for how long.



**Outcomes** considers what difference taking part in the programme made to learners. This could be in terms of maintaining or improving learners' knowledge or skills. It might also include other indicators around social and emotional support and well-being.

You may find it helpful to refer to the full report for a more in-depth discussion of monitoring and evaluation approaches and recommendations.

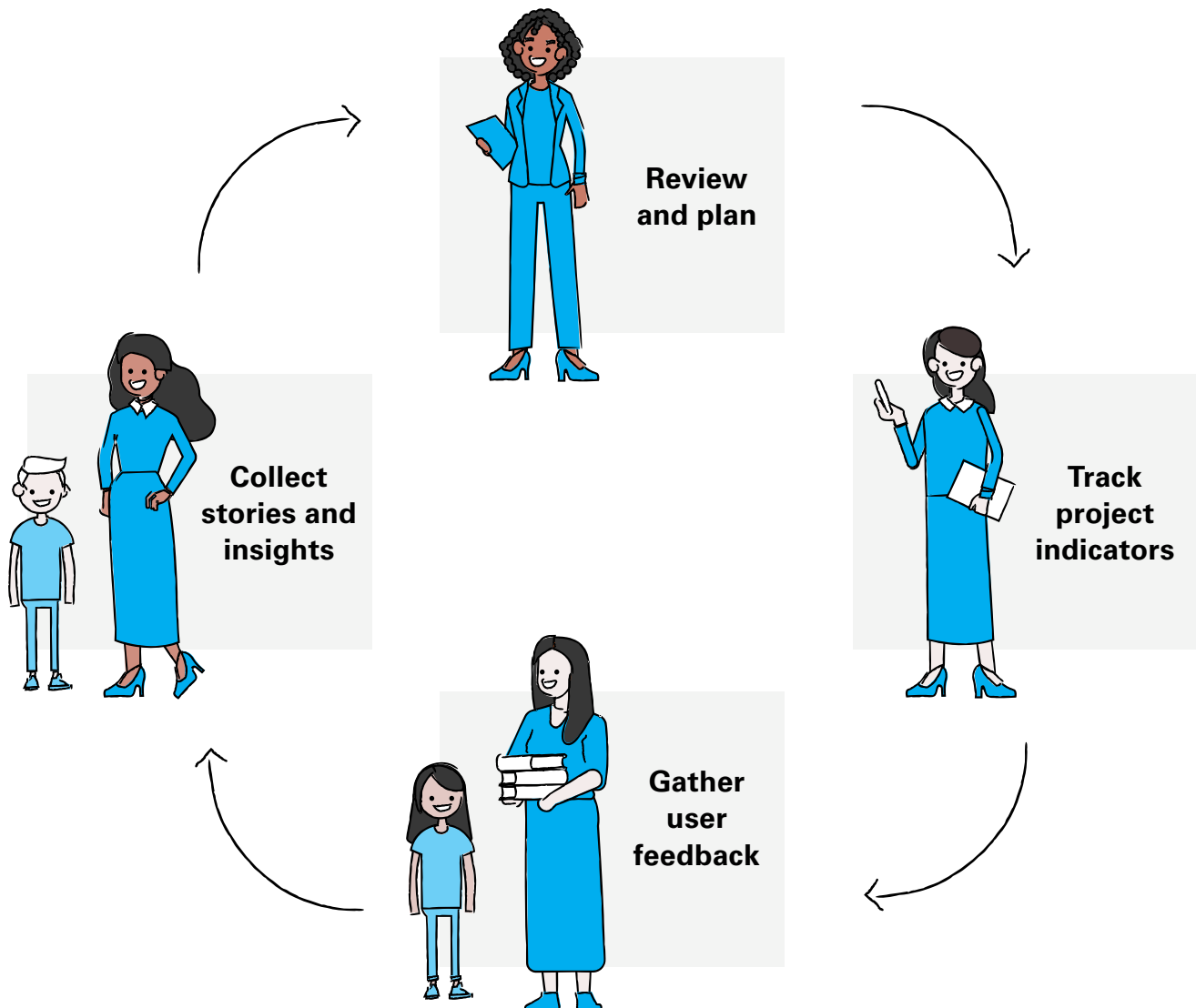
## Feedback loops

The USAID report also recommends integrating in-person approaches (such as testing activities face-to-face or interviewing learners, caregivers, and educators) with remote data collection (such as online, telephone, or SMS surveys, and photographs contributed by users).

You may find it helpful to think of monitoring as a feedback loop, where you draw upon:

- project indicators (such as figures for reach),
- user feedback data (such as participant surveys), and
- stories or insights gathered (such as participant interviews, online comments, focus groups).

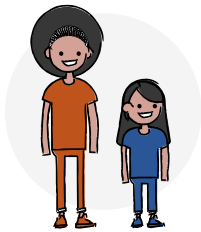
Looking across these different sources and kinds of information can help you identify issues. You can then address these through action planning. As you implement these changes, you begin another feedback loop, leading to iterative improvements in your programme.



# Looking ahead

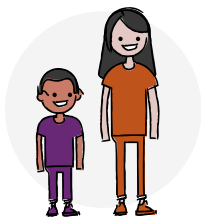
Although schools have begun to reopen, for many children, this will not mean an immediate return to pre-COVID-19 patterns of education. Remote learning in some form may continue to be useful as children return to school and try to catch up on lost learning. Expanding and improving remote learning may also be desirable as countries aim to improve equitable access to quality education for all children, and to strengthen resilience for future emergencies.

There are at least three scenarios in which remote learning has an important role to play:



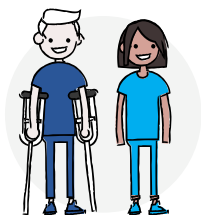
## Returning to school after long periods of absence

Children return to school. They may need additional support to catch up on learning, or regain confidence using knowledge and skills learnt before the pandemic.



## Integrating remote learning into education systems

Remote learning experiences during the pandemic brought forward discussions around the ways in which education can become available in different delivery modes and methods. Considering that teachers and students have been exposed to new delivery modes and methods during the crisis, as the pandemic subsides there is an opportunity to integrate remote learning and face to face, classroom instruction (UNESCO 2020). There is also an opportunity to think about creating new pathways for learning for children and young people, including for children and young people who are out of school.



## Remote learning to create resilience

Partial and ongoing school closures mean that remote learning will continue to be an essential education platform for many children and young people for the foreseeable future.

Beyond the current pandemic, the climate emergency, conflict and economic turmoil are just a few of the shocks that will affect children's learning in the coming decades. Remote learning could help education systems, schools, educators, children and their families become more resilient – both in terms of continuing education and withstanding shocks more generally.

The current situation in Zimbabwe illustrates all three scenarios well.



#### EXAMPLE

### Zimbabwe

Reflecting upon research evidence of remote learning in Zimbabwe at the end of 2020, the CHILD research team anticipated an ongoing role for new and more dynamic forms of learning, distributed across home, school, and community:

*When proposing this study, the research team initially focused on the immediate short-term context. Six months later, schools are just beginning a phased re-opening. Re-opening will not mean a full return to pre-Covid patterns of education in the short-to-medium term. Learning is unlikely to return to its original boundaries of lesson time and the classroom. We anticipate an ongoing need for more fluid and mosaic approaches that incorporate learning in school, at home, and in the community for many children, for some time to come.<sup>89</sup>*

Six months later, in April 2021, schools are beginning to reopen fully. Yet for many learners, the situation will not return to 'normal' pre-COVID patterns for some time to come. In the foreword to the new education strategy, the Secretary for Primary and Secondary Education observes that *the primary and secondary education sector seeks to mainstream open and distance learning... for each and every learner... It is envisaged that this strategy will facilitate continuous and inclusive learning, at school, home, within school-led community settings, and through online platforms, particularly during emergencies.<sup>90</sup>*



Remote learning may have been seen as ‘an emergency stop-gap measure’ during the COVID-19 pandemic. But the massive expansion of remote learning over the last year also creates opportunities to reimagine educational practices and possibilities during the learning recovery phase and beyond. UNESCO, UNICEF, and the World Bank have launched a joint mission – Mission: Recovering Education – focused on three priorities: bringing all children back to schools, recovering learning losses, and preparing and supporting teachers during the pandemic and beyond.<sup>91</sup> The case studies in this Resource Pack offer possibilities and directions to think differently about education, and how we can build back better through new approaches to teaching and learning.

# References

## Get more guidance

- EdTech Hub (2020) Best Practice in Pedagogy for Remote Teaching.  
<https://edtechhub.org/wp-content/uploads/2020/04/summary-research-best-practice-pedagogy-remote-teaching.pdf>
- USAID (2020) A roadmap for measuring distance learning. A review of evidence and emerging practices.  
<https://www.edu-links.org/resources/roadmap-measuring-distance-learning>

## World Bank Knowledge Packs about remote learning

- World Bank (2020). Education TV Knowledge Pack with a focus on low resource settings.  
<http://pubdocs.worldbank.org/en/267791593613610668/Education-TV-Knowledge-Pack-WorldBank-Edtech-Team.pdf>
- World Bank (2020). Education Radio Knowledge Pack with a focus on low resource settings.  
<http://pubdocs.worldbank.org/en/351561596545287034/EduRadio-KnowledgePack-WorldBank.pdf>
- World Bank (2020). Mobile Distance & Hybrid Education Solutions Knowledge Pack.  
<http://pubdocs.worldbank.org/en/685691598013656403/WorldBank-EdTech-Team-Knowledge-Pack-MobileDistance-HybridEducationSolutions-version2.pdf>
- World Bank (2020). Remote Learning response to COVID-19 Knowledge Pack.  
<http://pubdocs.worldbank.org/en/925611587160522864/KnowledgePack-COVID19-RemoteLearning-LowResource-EdTech.pdf>
- Innovation Ecosystem  
<http://pubdocs.worldbank.org/en/466031598013786493/World-Bank-EdTech-Innovation-Ecosystems-Knowledge-Pack-July17.pdf>

## Read more evidence and expert advice

- World Bank (2020-2021) OECD Education Continuity Stories.  
<https://documents.worldbank.org/en/publication/documents-reports/documentlist?colti=Education%20Continuity%20Stories>
- Education Endowment Foundation (2020) Remote Learning. Rapid Evidence Assessment.  
[https://educationendowmentfoundation.org.uk/public/files/Remote\\_Learning\\_Rapid\\_Evidence\\_Assessment.pdf](https://educationendowmentfoundation.org.uk/public/files/Remote_Learning_Rapid_Evidence_Assessment.pdf)
- World Bank Group (2021) The changing role of teachers and technologies amidst the COVID 19 pandemic: key findings from a cross-country study.  
<https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>
- GSMA (2020) The State of Mobile Internet Connectivity.  
<https://www.gsma.com/r/wp-content/uploads/2020/09/GSMA-State-of-Mobile-Internet-Connectivity-Report-2020.pdf>
- EdTech Hub (2020) Policy Brief. Education in Emergencies: Rapid Evidence Review.  
<https://edtechhub.org/wp-content/uploads/2020/10/Education-in-Emergencies-v3.pdf>
- World Bank Group (2020) Reimagining Human Connections. Technology and Innovation in Education at The World Bank.  
<http://documents1.worldbank.org/curated/en/829491606860379513/pdf/Reimagining-Human-Connections-Technology-and-Innovation-in-Education-at-the-World-Bank.pdf>
- EdTech Hub (2020) A five-part education response to the COVID-19 Pandemic.  
<https://docs.edtechhub.org/lib/JLEWADHF>



### Establishing the learning purpose for a remote learning programme

1. Hodges C., Moore S., Lockee B., Trust T. and Aaron Bond (2020) *The Difference Between Emergency remote Teaching and Online Learning* <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
2. World Bank (2020) *Reimagining Human Connections. Technology and Innovation in Education at the World Bank*. Washington, D.C.: World Bank Group. <http://documents1.worldbank.org/curated/en/829491606860379513/pdf/Reimagining-Human-Connections-Technology-and-Innovation-in-Education-at-the-World-Bank.pdf>
3. UNICEF (2020) *Responding to the Mental Health and Psychosocial Impact of COVID-19 on Children and Families*. Child Protection Learning Brief #2. UNICEF. <https://www.unicef.org/media/83951/file/MHPSS-UNICEF-Learning-brief.pdf>
4. World Bank (2021) *Loud and Clear: Effective Language of Instruction Policies for Learning*. <https://www.worldbank.org/en/topic/education/publication/loud-and-clear-effective-language-of-instruction-policies-for-learning>
5. UNESCO (2017) *More Than One-Half of Children and Adolescents Are Not Learning Worldwide*, Fact Sheet, Paris, UNESCO Institute for Statistics. <uis.unesco.org/sites/default/files/fs46-more-than-half-children-not-learning-en-2017.pdf>
6. World Bank (2019) *ENDING LEARNING POVERTY: What will it take?*, Washington DC, World Bank [Online]. <http://hdl.handle.net/10986/32553>
7. Azevedo, Joao Pedro. 2020. *Learning Poverty: Measures and Simulations*. Policy Research Working Paper; No. 9446. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/34654> License: CC BY 3.0 IGO.
8. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub [Online]. <https://docs.edtechhub.org/lib/HZRHPNI5>
10. World Bank (2020), *Remote learning, distance education and online learning during the COVID19 pandemic: A Resource List* <http://documents1.worldbank.org/curated/en/964121585254860581/pdf/Remote-Learning-Distance-Education-and-Online-Learning-During-the-COVID19-Pandemic-A-Resource-List-by-the-World-Banks-Edtech-Team.pdf>
11. Ministry of Education (Afghanistan). (2020). Alternate Education Service Delivery COVID-19 Emergency Response Plan. [https://reliefweb.int/sites/reliefweb.int/files/resources/moe\\_covid-19\\_alternative\\_learning\\_plan\\_-\\_english\\_9\\_april.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/moe_covid-19_alternative_learning_plan_-_english_9_april.pdf)
12. Aga Khan Development Network (AKDN) (2020) AKDN pulls together in response to the COVID-19 pandemic <https://www.akdn.org/project/akdn-pulls-together-response-covid-19-pandemic>
13. UNICEF Bangladesh (2020). Urgent need to secure learning for children across South Asia <https://www.unicef.org/bangladesh/en/press-releases/unicef-urgent-need-secure-learning-children-across-south-asia>
14. World Bank (2021). Read@Home: Materials Guidance. <https://www.worldbank.org/en/topic/education/brief/read-at-home>
15. IDELA (2019), *Sesame Street for a New Generation? Social Emotional Learning with Akili and Me* <https://idela-network.org/akili-and-me-social-emotional/>
16. Khan M, Chakraborty N, Rahman A, Nasrin T. (2007) *Follow-up (wave II) evaluation of the reach and impact of Sisimpur: a technical report*. Vol. 2007 Bangladesh: Associates for Community and Population Research (ACPR)
17. World Bank (2020), *Remote learning, distance education and online learning during the COVID19 pandemic: A Resource List* <http://documents1.worldbank.org/curated/en/964121585254860581/pdf/Remote-Learning-Distance-Education-and-Online-Learning-During-the-COVID19-Pandemic-A-Resource-List-by-the-World-Banks-Edtech-Team.pdf>
18. Haßler, B., Khalayleh, A., & McBurnie, C. (2020a). *A five-part education response to the COVID-19 pandemic* (EdTech Hub Helpdesk Response No. 5). <https://doi.org/10.5281/zenodo.3756012> <https://docs.edtechhub.org/lib/JLEWADHF>
19. Pratham (2020) <https://www.youtube.com/c/PrathamOpenSchool/about>
20. iCampus Ghana: <https://icampusghana.com/>
21. World Bank (2020) *Education Continuity During the COVID Crisis. India: #Ab Padhai Nahi Rukegi (#Learning Will Not Stop)*. <https://oecdeditoday.com/wp-content/uploads/2020/09/India-Learning-Will-Not-Stop.pdf>
22. Munoz-Najar, A., Osa Oviawe, J.(2020). Nigeria: Edo-BEST@Home <https://oecdeditoday.com/wp-content/uploads/2020/11/Nigeria-Edo-BESTat-Home.pdf>

### Technology options

9. Barron Rodriguez, Maria; Cobo, Cristobal; Munoz-Najar, Alberto; Sanchez Ciarrusta, Inaki. 2021. *Remote Learning During the Global School Lockdown: Multi-Country Lessons*. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/36141> License: CC BY 3.0 IGO

## Endnotes

23. Sangwan (2020) Coronavirus: EdTech unicorn BYJU's free offer sees 150pc jump in new students. <https://yourstory.com/2020/04/edtech-unicorn-byjus-students-free-access-coronavirus>
24. Munoz-Najar, A., Osa Oviawe, J.(2020). Nigeria: Edo-BEST@Home <https://oecdeditoday.com/wp-content/uploads/2020/11/Nigeria-Edo-BEST-at-Home.pdf>
25. Hello World (N.D.) Hub Heroes, our newest project <https://www.projecthelloworld.org/hub-heroes-our-newest-project/>
26. Angrist, N., Bergman, P., Brewster, C. and Matsheng, M. (2020) *Stemming Learning Loss During the Pandemic: A Rapid Randomized Trial of a Low-Tech Intervention in Botswana*, CSAE Working Paper, Oxford, Centre for the Study of African Economies. <https://www.ssrn.com/abstract=3663098>
27. World Bank (2020). Remote Learning response to COVID-19 Knowledge Pack. <https://pubdocs.worldbank.org/en/925611587160522864/KnowledgePack-COVID19-RemoteLearning-LowResource-EdTech.pdf>
28. RTI (2020) *Going Virtual Considering Access, User Engagement, and Content in Making the Right Technology Choice for Your Audience* [https://ierc-publicfiles.s3.amazonaws.com/public/resources/RTI\\_DecisionTool\\_GoingVirtual\\_30Apr20.pdf](https://ierc-publicfiles.s3.amazonaws.com/public/resources/RTI_DecisionTool_GoingVirtual_30Apr20.pdf)
29. UNICEF (2020) *Remote Learning COVID-19 Response Decision Tree*. [https://inee.org/system/files/resources/UNICEF\\_COVID19\\_DECISION\\_TREE\\_V8\\_CLICK\\_HERE.pdf](https://inee.org/system/files/resources/UNICEF_COVID19_DECISION_TREE_V8_CLICK_HERE.pdf)
30. Education Endowment Foundation (2020) *Remote Learning: Rapid Evidence Assessment*, London: Education Endowment Foundation. [https://educationendowmentfoundation.org.uk/public/files/Remote\\_Learning\\_Rapid\\_Evidence\\_Assessment.pdf](https://educationendowmentfoundation.org.uk/public/files/Remote_Learning_Rapid_Evidence_Assessment.pdf)
31. <https://www.prathamopenschool.org/catalog/ResourceView/5ee2da94-c054-47dc-abe1-6236b3eb35d4>
32. Haßler, B., Khalayleh, A.,McBurnie, C. (2020) *A five-part education response to the COVID-19 Pandemic* [https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al\\_2020\\_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf](https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al_2020_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf)
33. Haßler, B., Khalayleh, A.,McBurnie, C. (2020) *A five-part education response to the COVID-19 Pandemic* [https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al\\_2020\\_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf](https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al_2020_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf)
34. David, R., Pellini, A., Jordan, K., & Philips, T. (2020). *Education during the COVID-19 crisis: Opportunities and constraints of using EdTech in low-income countries*. Zenodo. <https://doi.org/10.5281/zenodo.3750976>
35. Haßler, B., Khalayleh, A.,McBurnie, C. (2020) *A five-part education response to the COVID-19 Pandemic* [https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al\\_2020\\_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf](https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al_2020_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf)
36. Haßler, B., Khalayleh, A.,McBurnie, C. (2020) *A five-part education response to the COVID-19 Pandemic* [https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al\\_2020\\_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf](https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al_2020_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf)
37. Baloch, I., Kaye, T., Koomar, S., & McBurnie, C. (2020). *Pakistan Topic Brief: Providing Distance Learning to Hard-to-reach Children* (EdTech Hub Helpdesk Response No. 17). <https://doi.org/10.5281/zenodo.3885606>
38. World Bank (2021) TC360 Data on percentage of population covered by mobile networks [https://tcdata360.worldbank.org/indicators/entrp.mob.cov?country=BRA&indicator=3403&countries=MEX,SUR,CRI,GRD,VEN,%0BPAN,LCA,ARG,COL,DMA,VCT,ATG,DOM,%0BPER,VIR,ECU,CUB,CHL,BRB,JAM,KNA,%0BBLZ,PRY,GUY,URY&viz=line\\_chart&years=2012,2016&compareBy=region](https://tcdata360.worldbank.org/indicators/entrp.mob.cov?country=BRA&indicator=3403&countries=MEX,SUR,CRI,GRD,VEN,%0BPAN,LCA,ARG,COL,DMA,VCT,ATG,DOM,%0BPER,VIR,ECU,CUB,CHL,BRB,JAM,KNA,%0BBLZ,PRY,GUY,URY&viz=line_chart&years=2012,2016&compareBy=region)
39. World Bank (2021) TC360 Data on mobile phone subscriptions per 100 population [https://tcdata360.worldbank.org/indicators/entrp.mob.cov?indicator=3403&viz=line\\_chart&years=2012,2016&compareBy=region](https://tcdata360.worldbank.org/indicators/entrp.mob.cov?indicator=3403&viz=line_chart&years=2012,2016&compareBy=region)
40. GSMA (2020) *The State of Mobile Internet Connectivity* <https://www.gsma.com/r/wp-content/uploads/2020/09/GSMA-State-of-Mobile-Internet-Connectivity-Report-2020.pdf>
41. GSMA (2021) *Network Coverage Maps* <https://www.gsma.com/coverage/>
42. Kimenyi, E., Otieno, J. & Kaye, T. (2020). *Building effective COVID-19 Education Response Plans: Insights from Africa and Asia*. (EdTech Hub Helpdesk Response No. 15). DOI: 10.5281/zenodo.3884302. <https://docs.edtechhub.org/lib/6W2UWE89>
43. Haßler, B., Khalayleh, A.,McBurnie, C. (2020) *A five-part education response to the COVID-19 Pandemic* [https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al\\_2020\\_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf](https://docs.edtechhub.org/lib/JLEWADHF/download/ZDSZUWLC/Ha%C3%9Fler%20et%20al_2020_A%20five-part%20education%20response%20to%20the%20COVID-19%20pandemic.pdf)
44. Baloch, I., Kaye, T., Koomar, S., & McBurnie, C. (2020). *Pakistan Topic Brief: Providing Distance Learning to Hard-to-reach Children* (EdTech Hub Helpdesk Response No. 17). <https://doi.org/10.5281/zenodo.3885606>

### Developing an effective programme

45. United Nations Children's Fund, "Covid-19: Are children able to continue learning during school closures? A global analysis of the potential reach of remote learning policies using data from 100 countries." UNICEF, New York, 2020. <https://data.unicef.org/resources/remote-learning-reachability-factsheet/>
46. World Bank Group (2020) Realizing the Future of Learning: From Learning Poverty to Learning for Everyone, Everywhere (English). Washington, D.C. World Bank Group. <http://documents.worldbank.org/curated/en/250981606928190510/Realizing-the-Future-of-Learning-From-Learning-Poverty-to-Learning-for-Everyone-Everywhere>
47. Edo State Universal Basic Education Board (2021) <https://subeb.edostate.gov.ng/home-school/>
48. Open University (2021). *Supporting Adolescent Girls' Education* <http://www.open.ac.uk/about/international-development/SAGE>
49. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub [Online]. <https://docs.edtechhub.org/lib/HZRHPN15>
50. Angrist, N., Bergman, P., Brewster, C. and Matsheng, M. (2020) *Stemming Learning Loss During the Pandemic: A Rapid Randomized Trial of a Low-Tech Intervention in Botswana*, CSAE Working Paper, Oxford, Centre for the Study of African Economies [Online]. <https://www.ssrn.com/abstract=3663098>
51. Mercy Corps (2020) *Revising with the Radio* <https://nepal.mercycorps.org/4685-2/>
52. World Bank (2020) *Education Continuity During the COVID Crisis. Uganda: Popow's Radio Response to Covid-19*. <https://oecdeditoday.com/wp-content/uploads/2020/06/Uganda-POPOW-radio.pdf>
53. <https://www.brookings.edu/blog/education-plus-development/2021/09/22/what-do-we-know-about-the-effects-of-covid-19-on-girls-return-to-school/>
54. UNESCO & EQUALS Skills Coalition (2019). *I'd blush if I could: closing gender divides in digital skills through education*. UNESCO. Paris. <https://unesdoc.unesco.org/ark:/48223/pf0000367416.locale=en>
55. Webb et al. (2020) *Rapid Evidence Review: Girls Education and EdTech*. EdTech Hub. London. <https://zenodo.org/record/3958002#.YEjXA-anx24>
56. Open University (2021). *Supporting Adolescent Girls' Education* <http://www.open.ac.uk/about/international-development/SAGE>
57. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub [Online]. <https://docs.edtechhub.org/lib/HZRHPN15>
58. UNESCO (2020) *Global Education Monitoring report 2020: Inclusion and Education: All means all*. Paris. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000373718>
59. World Bank Group (2020) Realizing the Future of Learning: From Learning Poverty to Learning for Everyone, Everywhere (English). Washington, D.C. World Bank Group. <http://documents.worldbank.org/curated/en/250981606928190510/Realizing-the-Future-of-Learning-From-Learning-Poverty-to-Learning-for-Everyone-Everywhere>
60. INEE (2010) INEE Thematic Issue Brief: Inclusive Education. Inter-agency Network for Education in Emergencies. <https://inee.org/resources/inee-thematic-issue-brief-inclusive-education>
61. World Bank (2020) *Education Continuity During the COVID Crisis. Turkey: Özelim Eğitimdeyim (I am special, I am in education)*. <http://documents1.worldbank.org/curated/en/674151604563578583/pdf/Turkey-Ozelim-Egitimdeyim-I-am-Special-I-am-in-Education.pdf>
62. UNICEF Jordan (2020) *Learning Bridges* <https://www.unicef.org/jordan/education/learning-bridges>
63. UNICEF (2020) *Guidance On Distance Learning Modalities* <https://www.unicef.org/rosa/reports/guidance-distance-learning-modalities-reach-all-children-and-youth-during-school-closures>
64. World Bank (2020) *Education Continuity During the COVID Crisis. Colombia: Mis Manos te Enseñan (My Hands Teach You)*. <http://documents1.worldbank.org/curated/en/687211598345115273/pdf/Colombia-Mis-Manos-te-Ense%C3%B1an-My-Hands-Teach-You.pdf>
65. World Bank (2020) *Education Continuity During the COVID Crisis: Sierra Leone and Liberia: Rising Academy Network on Air*. <https://oecdeditoday.com/wp-content/uploads/2020/05/Sierra-Leone-Liberia-Rising-Academy-Network.pdf>
66. Freire, P., 1970. The "banking" concept of education.
67. National Academies of Sciences, Engineering, and Medicine (2018) *How People Learn II: Learners, Contexts, and Cultures*, Washington DC, The National Academies Press.
68. Reimers, F.M., and Schleicher, A. (2020) *A framework to guide an education response to the COVID-19 Pandemic of 2020*. Harvard Education. [https://globaled.gse.harvard.edu/files/geii/files/framework\\_guide\\_v2.pdf](https://globaled.gse.harvard.edu/files/geii/files/framework_guide_v2.pdf)

## Endnotes

69. Pratham (2020) Connecting with Children – Learn and Fun! <https://www.pratham.org/covid-19-response/connecting-with-children-learn-and-fun/>
70. Pratham Open School – Grain Art 2: <https://www.prathamopenschool.org/catalog/ResourceView/1eb142cd-5f59-466a-aadc-cad567994a1a>
71. UNICEF Jordan (2020) *Learning Bridges* <https://www.unicef.org/jordan/education/learning-bridges>
72. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub [Online]. <https://docs.edtechhub.org/lib/HZRHPN15>
73. World Bank (2020) *Education Continuity During the COVID Crisis. Uganda: Popow's Radio Response to Covid-19*. <https://oecdeditoday.com/wp-content/uploads/2020/06/Uganda-POPOW-radio.pdf>
74. Ministerio de Educacion Peru. Aprendo en casa: Plataforma educativa. <https://aprendoencasa.pe/#/>
75. World Bank (2020) *Education Continuity During the COVID Crisis. India (Telangana): Remote learning and village learning circles for disadvantaged students*. <http://documents1.worldbank.org/curated/en/5933311602484323396/pdf/India-Telangana-Remote-Learning-and-Village-Learning-Circles-for-Disadvantaged-Students.pdf>
76. Open University (2021). *Supporting Adolescent Girls' Education* <http://www.open.ac.uk/about/international-development/SAGE>
77. World Bank (2020) *Education Continuity During the COVID Crisis. Uganda: Popow's Radio Response to Covid-19*. <https://oecdeditoday.com/wp-content/uploads/2020/06/Uganda-POPOW-radio.pdf>
78. UNICEF (2020). *Bangladesh: Preparation and Response to Covid 19* <https://www.unicef.org/bangladesh/en/preparation-and-response-covid-19>
79. World Bank (2020) *Education Continuity During the COVID Crisis. Colombia: Mis Manos te Enseñan (My Hands Teach You)*. <http://documents1.worldbank.org/curated/en/687211598345115273/pdf/Colombia-Mis-Manos-te-Ense%C3%B1an-My-Hands-Teach-You.pdf>
80. Fe y Alegria (2020) <https://feyalegria.org.ec/>
81. World Bank (2020) *Education Continuity During the COVID Crisis. India: #Ab Padhai Nahi Rukegi (#Learning Will Not Stop)*. <https://oecdeditoday.com/wp-content/uploads/2020/09/India-Learning-Will-Not-Stop.pdf>
82. BRAC (2020) How BRAC is supporting Bangladesh to continue education in a pandemic. <http://blog.brac.net/how-bangladesh-is-continuing-education-in-a-pandemic/>
83. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub <https://docs.edtechhub.org/lib/HZRHPN15>
84. William, D. (2011) 'What is assessment for learning?', *Studies in Educational Evaluation*, Assessment for Learning, vol. 37, no. 1, pp. 3–14 [Online]. DOI: [10.1016/j.stueduc.2011.03.001](https://doi.org/10.1016/j.stueduc.2011.03.001)
85. Sangwan (2020) Coronavirus: EdTech unicorn BYJU's free offer sees 150pc jump in new students. <https://yourstory.com/2020/04/edtech-unicorn-byjus-students-free-access-coronavirus>
86. Amazon (2014) BYJU'S Uses AWS to Deliver Cutting-Edge Content to 15 Million Students. <https://aws.amazon.com/solutions/case-studies/byjus/>
87. Ministerio de Educacion Peru. Aprendo en casa: Plataforma educativa <https://aprendoencasa.pe/#/>

### Monitoring for quality assurance

88. USAID (2021) A Roadmap for Measuring Distance Learning. A review of evidence and emerging practices. <https://www.edu-links.org/resources/roadmap-measuring-distance-learning>
89. Power, T., Buckler, A., Ebubedike, M., Tengenasha, M., Jama, M., Ndlovu, A., Mukoyi, J., Ndou, M. and Mubaira, S. (2021) *Community Help for Inclusive Learning and Development (CHILD): A Study of How Mobile Phones Were Used to Recruit and Equip Community Volunteers to Support Children's Learning During Covid-19 School Closures in Zimbabwe*, London, UK, The EdTech Hub <https://docs.edtechhub.org/lib/HZRHPN15>
90. Ministry of Primary and Secondary Education (2021) *Strategy for the Equitable Provision of Inclusive Continuous Quality Teaching and Learning at All Times and During Emergencies*. Ministry of Primary and Secondary Education, Zimbabwe.
91. World Bank (2021) Mission: Recovering Education 2021. <https://blogs.worldbank.org/education/mission-recovering-education-2021>

