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THE WORLD BANK
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Radio

Resource Pack to Support Remote Learning

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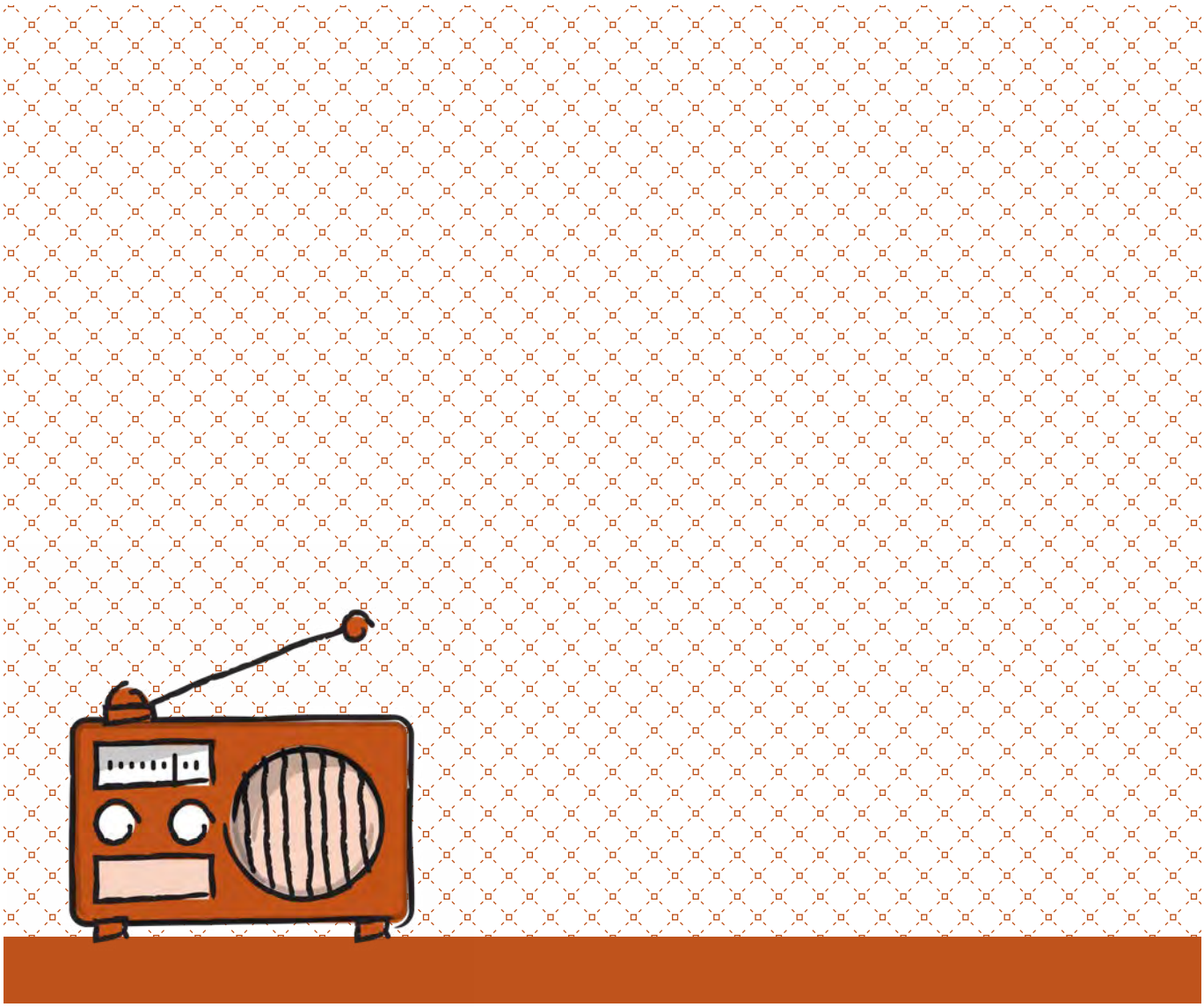

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About the Remote Learning Resource Packs

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.

PACK 1
Introduction

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.

PACK 2
Radio

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.

PACK 3
Print

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.

PACK 4
TV

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.

PACK 5
Digital

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.

PACK 6
Mobile

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.

PACK 7
Formative Assessment

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.

1.1

Purpose of the educational radio pack

This pack is about creating and strengthening effective remote learning programmes using radio.

Radio has a long-established position among distance learning modalities, reflecting in part its wide accessibility in many parts of the world, including in some of the hardest-to-reach areas. During the COVID-19 crisis, the closure of schools and subsequent scramble to provide alternative out of school provision has led many countries in low-resource environments, notably in sub-Saharan Africa and South America, to a massive development of educational radio programming. Radio instruction presents an attractive option because of its relative low cost and its accessibility, reach and familiarity within communities and households. You can find a comprehensive list of global educational radio initiatives implemented in response to COVID-19 school closures, compiled by UNESCO, here.[1]

The goal of this resource pack

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, going forward, learning outcomes can be improved for all children. The pack aims to identify aspects that may have been rushed in the hurry to get things moving during crisis and which may now require a second look, and to build upon some lessons and experiences from around the world.

Use of reflection points

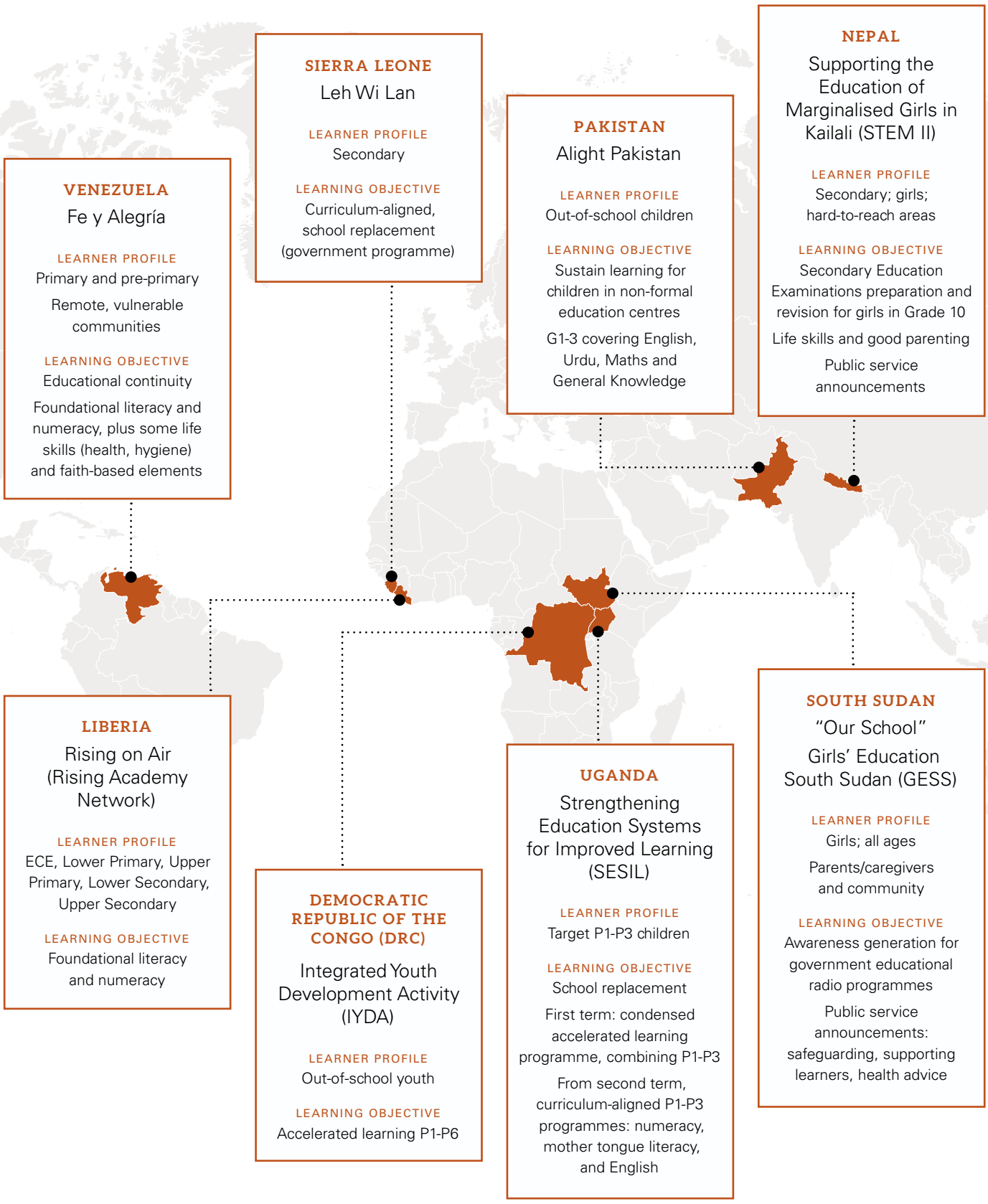
Readers of this pack will be at different stages and iterations of educational radio programme design, development and delivery. The pack does not tell you how or where to start, but offers 'reflection points' – a series of questions and challenges to enable your own stocktake and review, to improve upon where you are now and to build upon the experience and expertise you have gained during the immediate crisis of school closures.

Use of case studies

Using case studies, the resource pack draws out a broad range of responses taken in different country contexts. Some are working at scale, supporting national-level, government-led educational radio programming; others are smaller scale, focused on the targeted needs of a specific group of learners (e.g., girls, or out-of-school youth). Some build from years of delivering educational radio, from which they were able to draw down during the crisis; others demonstrate quick learning on the job as necessitated by COVID-19 school closures. All the cases need to be understood within their specific context and objectives. Together, they provide insights into some successful strategies and promising practices in response to operational challenges commonly faced in using radio for distance learning.

1.2

Case studies included in this pack



VENEZUELA

Fe y Alegría

LEARNER PROFILE

Primary and pre-primary

Remote, vulnerable communities

LEARNING OBJECTIVE

Educational continuity

Foundational literacy and numeracy, plus some life skills (health, hygiene) and faith-based elements

SIERRA LEONE

Leh Wi Lan

LEARNER PROFILE

Secondary

LEARNING OBJECTIVE

Curriculum-aligned, school replacement (government programme)

PAKISTAN

Alight Pakistan

LEARNER PROFILE

Out-of-school children

LEARNING OBJECTIVE

Sustain learning for children in non-formal education centres

G1-3 covering English, Urdu, Maths and General Knowledge

NEPAL

Supporting the Education of Marginalised Girls in Kailali (STEM II)

LEARNER PROFILE

Secondary; girls; hard-to-reach areas

LEARNING OBJECTIVE

Secondary Education Examinations preparation and revision for girls in Grade 10

Life skills and good parenting

Public service announcements

LIBERIA

Rising on Air (Rising Academy Network)

LEARNER PROFILE

ECE, Lower Primary, Upper Primary, Lower Secondary, Upper Secondary

LEARNING OBJECTIVE

Foundational literacy and numeracy

DEMOCRATIC REPUBLIC OF THE CONGO (DRC)

Integrated Youth Development Activity (IYDA)

LEARNER PROFILE

Out-of-school youth

LEARNING OBJECTIVE

Accelerated learning P1-P6

UGANDA

Strengthening Education Systems for Improved Learning (SESIL)

LEARNER PROFILE

Target P1-P3 children

LEARNING OBJECTIVE

School replacement

First term: condensed accelerated learning programme, combining P1-P3

From second term, curriculum-aligned P1-P3 programmes: numeracy, mother tongue literacy, and English

SOUTH SUDAN

"Our School"

Girls' Education South Sudan (GESS)

LEARNER PROFILE

Girls; all ages

Parents/caregivers and community

LEARNING OBJECTIVE

Awareness generation for government educational radio programmes

Public service announcements: safeguarding, supporting learners, health advice

2

Why use radio for remote learning?

2.1

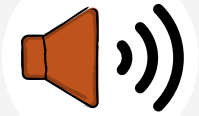
What is remote learning using radio?

Educational radio uses the medium of audio. There is a variety of ways of providing audio content, including:

Audio content broadcast at fixed times on national radio networks, independent radio networks, community radio stations, shortwave and satellite radio

Audio content shared via SMS, WhatsApp, memory cards, audio cassettes, or CDs

Audio content accessed via an Interactive Voice Response system (IVR)



Audio content streamed from the internet, e.g. on YouTube or via downloadable MP3 files

Interactive radio instruction (IRI) and the broader *interactive audio instruction* (IAI) been used to promote and support better classroom-based teaching and learning through providing audio-based guidance to teachers (particularly paraprofessional teachers and untrained or limitedly trained educators) and learners alike.

IRI is a distance education system that combines radio broadcasts with active learning to improve learning and teaching. IRI programs require teachers and students to react verbally and physically to exercises posed within lessons and to participate in group work, experiments, and other activities suggested by the radio program. In an IRI lesson, learners engage in as many ways as possible to practice their new learning. They listen, play, sing, move, dance, answer questions, demonstrate skills to nearby listeners and evaluate each other's skills.

GDL Radio

You can listen to a selection of IRI and IAI programmes developed by a number of different countries to support their learners, with a particular emphasis on early years learning:

https://gdlradio.org/

IAI lessons use the the same content and format as IRI lessons. The only difference is these can be used via different delivery modes other than radio, allowing for greater reach and giving more flexibility to users about when and how frequently they listen. For example, audio content can be

used via mobile phones (e.g. memory cards/podcasts), Interactive Voice Response (IVR), MP3 players/CDs or audio streaming/ downloading.[2]

Evidence points[3] to IRI and IAI improving learning, particularly in Maths, local language, English, Social Studies and early childhood development (ECD) (enjoyment, motor skills, verbal skills, attention) especially in early grades and including marginalized groups.

2.2

Benefits of educational radio

Broadcast radio lessons have proved the quickest option for continuing schooling in many countries during COVID-19, as access to radio – whether state, private, or community – is well established, even in harder to reach areas. 75% of households have access to radios globally, with 80-90% access among households in sub-Saharan Africa[4]. IRI using pre-recorded interactive lessons to reach students (and their parents) has also been successfully used during the lockdown period in many countries around the world[5].

- Educational radio is a relatively **cost-effective** option in the long term for delivering educational content at scale and especially in communities with limited connectivity, digital literacy and electricity, and with hard-to-reach students, such as those in remote rural areas.
- Radio is most popularly used in teaching maths and language-related subjects. Radio can play a key role in **encouraging learners to maintain engagement**, especially where infrastructure is already in place, while also permitting relatively **higher autonomy for the learner** in cases where their dedicated learning time or space is reduced.
- For **children not yet able to read**, e.g., pre-school children, radio can be a great way to deliver content; it can also positively engage learners' imagination.
- **Children learn more when having fun.** Auditory stimulation can be achieved through songs, jingles, sound effects, etc. (e.g., children learning the days of the week in Zambia[6]).
- Radio's portability, transparency to people who cannot read, affordability, listeners' ability to carry out other activities while also listening to the radio, and the general overviews radio programmes provide, render it **highly accessible** and a preferred medium for reaching large numbers of pupils and communities[7].
- Another advantage of radio programming is that given that the recording guides instruction you can potentially reach high quality instruction using untrained community members, parents, or teachers.

Interactive radio content in Somalia

Radio is widely available and accessible in Somalia; radio learning has helped bring education to previously unreached children. IRI success in Somalia hinged on well researched, skilfully produced radio programmes. Learners are engaged in physical activities (answer out loud, sing, etc.) alongside radio material which draws strongly from relatable Somali folktales, with lessons delivered through a variety of formats to suit different learning styles (song, drama stories poems, games proverbs and activities):

https://vimeo.com/28642333

Joyful learning in India

Children listen, play, sing, move, dance, answer questions, demonstrate skills to nearby listeners and evaluate each other's skills. IRI helps teachers bring out active learning in the classroom:

https://vimeo.com/29620689

2.3

Potential limitations of educational radio

A number of common challenges of radio as a medium for remote learning are now well documented: the audio format of education delivery may not hold the attention of some children, particularly children with learning disabilities; its ephemeral nature[7] means children cannot pause or listen and play at their own pace; limited multimedia ability and its low interactivity when listened to via a live broadcast; and the difficulty of monitoring its usage (such as through the collection of user-generated data); and, the lack of comprehensive evidence on the effectiveness of radio programming as a learning modality.

Significant numbers of households still do not own or have access to radios

Ensuring access for learners has been a highest-order priority in many countries, with partners working to identify those that have been unable to access radio, and discussions about how to reach more marginalized children taking centre stage.[8]

CASE STUDY

Nepal – STEM II

Using data to inform decisions

In Nepal, the STEM II project surveyed accessibility. Only 37% of the girls had access to a phone and of those, nearly half would be sharing the phone with an adult.

Research indicated widespread radio coverage and, despite being unfamiliar with radio delivery for education, STEM II worked with the three most popular local FM stations, most easily accessed across the region, to deliver their revision lessons.

CASE STUDY

South Sudan – GESS

Mitigating access problems

In South Sudan, radio ownership is more common in urban areas and among more literate households. Poorer and less-educated households are found to have lower access. Recurrent costs of batteries and electricity are constraints to household access.

The GESS project has provided wind-up radios in rural communities and in harder to reach areas. These were intended for group or family listening and sharing, in COVID-19 secure settings.

Young women in South Sudan celebrate World Radio Day.
Photo: GESS

Inclusivity and access are multifaceted challenges and deserve careful consideration. Even considering households with access to a radio, it is important to reflect on how many and how well children are listening. There may be multiple radio users within the household, and the chance of a child having the radio for their use at the precise time their lesson is being broadcast is uncertain. Children with hearing impairments or disabilities that affect their ability to sit and listen to a remote voice bring additional access limitations.

The broadcast signal may be weak in some areas

Local radio stations may offer better access for rural children, these may also be more familiar among households than national FM radio stations. In Nepal, the STEM II project chose to work through three popular local radio stations, building from an established listenership. Even then the project identified coverage gaps, and the radio stations were encouraged to expand access.
In Venezuela, in addition to broadcasting radio lessons in 17 states through 21 community radios, non-governmental organization (NGO) Fe y Alegría worked to increase access in states, municipalities and parishes where there was no radio coverage and to make sure lessons were available through different modalities, to reach all children.

CASE STUDY

South Sudan – GESS

Radio signal is better in urban areas and local radio stations are owned by NGOs, Churches and state governments. To maximize coverage, the GESS project has chosen to partner with a large number of stations – up to 30.

Reflection Point

- Which children can access radio and which children may be left behind? Are you able to build a clear picture of household-level radio ownership or access? What information do you need and how could you gather data to fill gaps?
- How widespread is radio signal connectivity across your country/target area? Is coverage evenly spread across all learners and households, or does it indicate particular access problems for some groups? How can you find out more about coverage?
- Have you or others attempted to expand access? Was this effective? What have you learned from this experience?

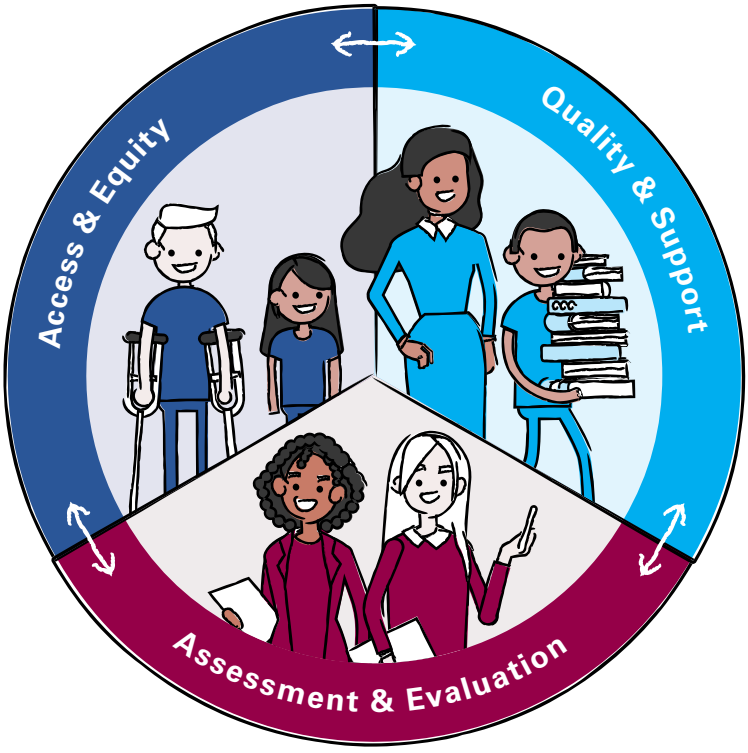
Students learning in Liberia
Photo: Rising Academy Network

Children's home environments are not always conducive to learning

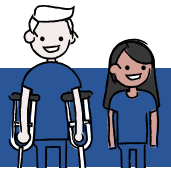
It is worth considering whether in the rush to provide remote content rapidly during 2020, educational radio has, albeit under immense pressures, run up against similar pitfalls encountered in school-based learning, i.e. focusing on important issues around access, but then assuming learning will occur so long as access is achieved.

This third limitation is the lead consideration for this resource pack. It is the limitation which has the biggest impact on children's ability to learn using the radio. Take a look at the table on the next page which lays out different constraints relating to children's home environments.

This pack is all about how you can manage these constraints so that children can learn. It presents a series of promising ideas and approaches that have been tried in educational radio programmes around the world. The pack is structured around three core components of an effective learning programme: **Access & Equity**, **Quality & Support**, and **Assessment & Evaluation**.



Constraints in the learning environment



Access & Equity	
Language Barriers	For pupils with limited proficiency in the language of instruction, the lack of supportive measures available in classrooms, such as visual aids and body language, can make remote radio instruction in an isolated home inaccessible and disengaging.
Differentiating to Meet the Needs of All Learners	Educational radio based on curriculum content alone will be a challenge for a significant number of pupils who are below expected levels for their grade. Are all children able to engage with a sequenced programme from week 1? What happens if they miss some lessons? Is progression a challenge in stand-alone lessons? Differentiation for a variety of levels, learning speeds and needs is a huge challenge for a national radio programme.
Special Educational Needs and Disabilities	Children with special educational needs and disabilities may face additional barriers when learning through radio. For example, children with hearing impairments would not be able to engage with radio provision unless someone in the home can sign for them.
Girls and Safety	School closures can mean children are spending more time at home, potentially facing increased economic hardship or family and emotional problems. These can increase children's risks of early marriage, child labour and all forms of violence.

Quality & Support	
Pupil Interaction with Radio Content	Trying to hear via a potentially crackly radio with noises of a family life and the world happening in the background is not the ideal listening environment to aid learning. IRI is built to facilitate interaction between the pupil and the radio content but without peers or a teacher the level of this interaction is much weaker in an isolated home setting. For example, they may not receive personalised feedback or reward.
Parental and Caregiver Support	Parents may be willing to support, but unable to do so effectively either due to other commitments (e.g. farming or other work) or because of their own challenges with literacy and numeracy. Many will find playing that supportive role very hard.
Community Engagement	Wider social norms, behaviours and beliefs all play a part in how learning is supported in the home.
Teacher Engagement	Design of educational radio programmes often bypass teachers who struggle to find a role for themselves – including as children come back to school. Teachers are often not trained in how to support remote learning using radio.

Assessment & Evaluation	
Assessment and Programme Design	Listenership data can be drawn from radio stations to give a sense of access, but it can be difficult to assess children's engagement with content via radio.
Assessment for Learning	Radio is not an easy technology for diagnosing what learners can do and understand, or to give feedback to individual learners.

Young women recording a programme for Alight's radio education programme, Muallim radio, in Pakistan. *Photo: Alight*

2.4

Stages of educational radio development

Remote learning Resource Pack 1 points to the process for deciding which distance learning modalities might be best suited to your context.

The flow diagram below – developed by the World Bank – illustrates the process of developing educational radio. This is a good guide for those that are starting out. If you have already developed and rolled out an educational radio programme, the graphic provides a useful checklist against which progress can be reviewed – perhaps take a look at each stage to check how thoroughly these have been planned and developed. Are there gaps that might usefully be revisited, tweaked or improved?

This pack touches on each of these stages, recognizing that each is important, but aims to add value to what is available elsewhere: this useful World Bank resource is signposted[9], rather than rehearsed again. It focuses instead a little less on process and a little more on the operational challenges that limit educational outcomes for learners.

To build upon experiences gained by developing and delivering educational radio during COVID-19, this resource pack adds an 'Adapt and improve' stage. Throughout the pack short tasks are offered as prompts to help you reflect on your own programme, and to adapt and improve upon the progress that you have made already.

'How to' resource

This useful online resource gives pithy process guidance to support starting your educational radio programme, including for example some specific considerations around how to record your radio programme.

Rising Academies & EdTech Hub How-to Guide: Delivering high quality radio learning (2020)

Stages of educational radio development*

Preparation

Audience research

Analysis of the educational context to ensure the content is appropriate for the target audience and other factors (e.g. curriculum, policy)

Assessment of technology options and production resources

Development of program design document for each subject and grade level of instruction, including a scope and sequence of programs and program evaluation guidelines

Development

Scriptwriter training

Scriptwriting and initial episode production

Formative evaluation that prepares for the final production of use-ready episodes and supporting material

Production

Audio production of educational radio program (local production, if possible)

Production of supplementary educational material

Delivery

Teacher/caregiver training for use of educational radio

Community sensitization and mobilisation

Delivery of educational radio lessons via one or more delivery modes

Engaging listeners and marketing educational radio lessons

* Source: World Bank Group Education Radio Knowledge Pack. Available from: http://pubdocs.worldbank.org/en/351561596545287034/EduRadio-KnowledgePack-WorldBank.pdf

3

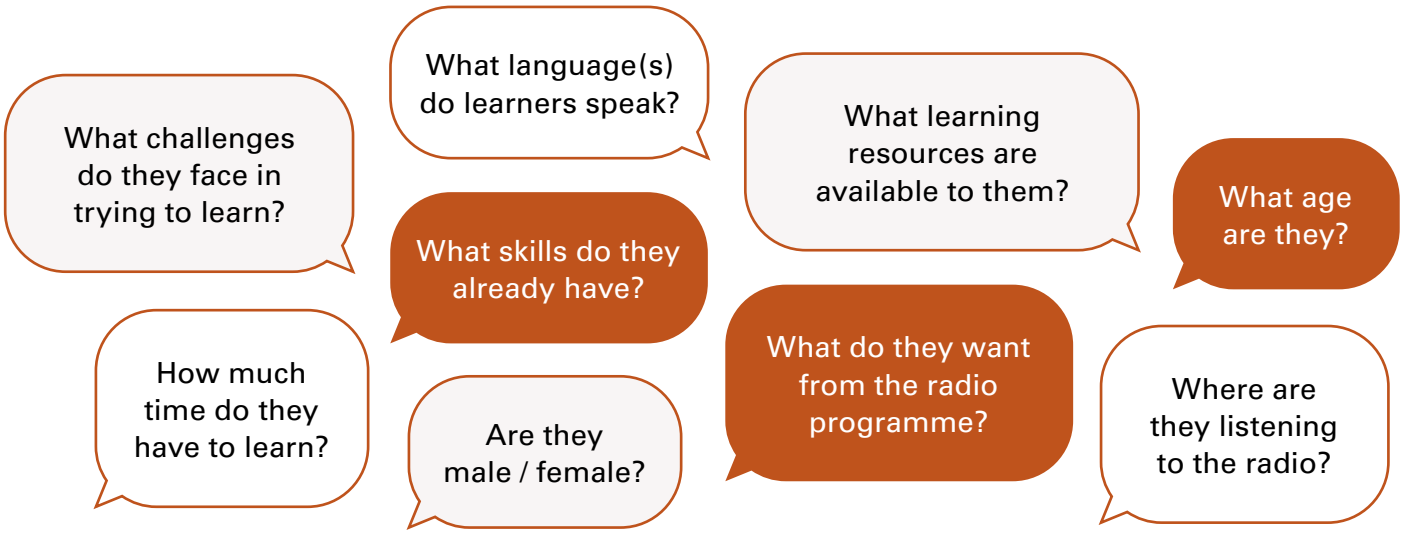
Preparing educational radio programmes

3.1

Knowing your learners and their context

Having a sound understanding of your audience and their context for learning will help you design educational radio content that meets learners' needs and enables them to succeed in achieving their learning outcomes.

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



There are different ways to obtain this information. You can consult existing data sources, for example, the annual school census, or Ministry or project data on pupil demographics. You can also create a 'Learner Profile' (see Task box below). By reflecting on the learner through different lenses, you can gain a deeper understanding of what your learner needs. The Learner Profile tool can be used before you start a new programme. It is also useful for periodic reviews of ongoing programmes, to incorporate new insights you may have gained about the learners.

A better understanding of the children you want to reach enables better programme design to meet their learning needs. For example, if they are in a remote rural area, will they understand or relate well to stories set in an urban context? If they are a female, will they identify with a story that is only about young boys or adult men? If they don't speak the main national language, will they understand the speakers? If they have a specific disability, such as hearing impairment, attention-deficit, physical impairments that preclude long periods of sitting, will they struggle to access and listen to the programme to its completion?

Reflection task

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

The **Learner Profile Tool** maps the different characteristics of your target audience and prompts you to consider how these characteristics might affect engagement with educational radio content. This deeper understanding drives the design and development of education content and any additional teaching or learning supports in ways that are responsive to specific learner needs.

The tool can be revisited at any point during the programme cycle, to incorporate new insights you may gain about the learners or a specific subset of learners as you go along. It might be useful to develop separate profiles for different groups within your target learner population, including children with special educational needs.

To use the tool, simply envision a typical learner and start to map characteristics, as set out through a series of questions in each of the boxes. Once you have charted the characteristics of your learners, start to consider the implications that they hold for the design of your remote learning programme. This can be in terms of identifying and addressing teaching and learner support needs, but also in terms of practical and logistical issues involved in meeting those needs.

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 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 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 within the home?
- Do they need consent of others to use it?
- For how long and how often can they use it?
- If not, is there access to community-shared radios?

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?

Learner Profile Tool

Brief description of targeted learner:

Who are they?

What motivates their learning?

What do we know about their learning?

What resources do they have to help them?

What do learners see as their needs?

What technology do they have access to?

What do we know that is surprising?

What are the implications for learning design?

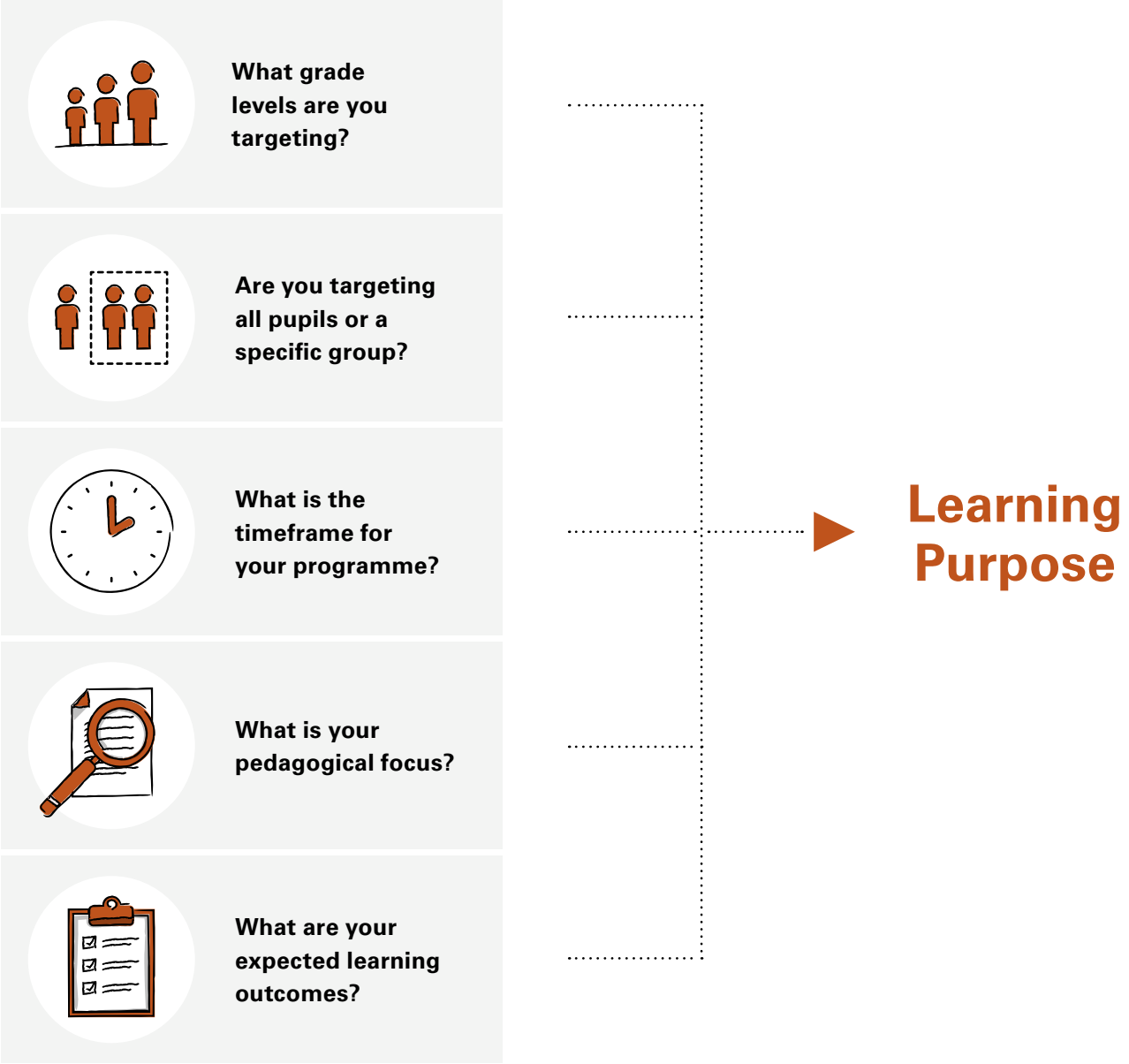
3.2

Defining the learning purpose

The more clearly you are able to define your audience and learning purpose, the easier it will be to develop an effective educational radio programme and the supportive enabling environment to make it effective.

Having gained an understanding of who your learners are, the next step is to reflect on the learning purpose – what do you want these learners 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 content 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.



The case studies in this pack show how these questions can help define quite different learning purposes.

	Uganda SESIL	**Liberia** Rising on Air	**Pakistan** Alight	**Nepal** STEM II
Grade level(s)	P 1-3	ECE, primary, secondary	Out-of-school children	Secondary grade
All/subset of pupils	All pupils	All pupils in Rising-supported schools; could extend globally	All pupils in NFE centres; could extend to all pupils	Girls in project
Timeframe	Full academic year	20 weeks	30 programmes	15 lessons
Pedagogical focus	Core curriculum content	Core curriculum content	Accelerated curriculum	Revise prior learning
Learning outcomes	Deliver the national curriculum in an accelerated form	Keep children engaged with learning and the education system	Sustain learning for children in the NFE centres	Revise prior learning to avoid gaps in learning

During the COVID-19 pandemic and associated school closures, many countries rapidly created radio content, aligned to the national curriculum and delivered to all pupils in multiple grades, nationwide. Whilst many radio programmes were developed within this scope, the learning aims varied slightly and this resulted in differences in radio content produced (see some examples from the case studies below). Being specific about the learning aim will help define the shape and roll out of the radio programme. This may need to be revisited at certain points in time as the context and learning purpose might evolve.

In Uganda, **SESIL** supported government to develop radio content with the intention of providing the best possible school replacement whilst children were out of school. The programme aimed to deliver the national curriculum in an accelerated form.

In Liberia, **Rising on Air** aimed to keep children engaged with the education system. They worked quickly to develop a 20-week learning course with content that was engaging and stimulating. It was aligned to, but did not attempt to cover the full curriculum or replace school.

In Pakistan, **Alight** developed a series of radio programmes with the primary purpose of sustaining learning for children in the non-formal education centres they worked with. Alight chose radio because it was the medium in which they could develop content quickly and at a low cost.

CASE STUDY

Nepal – STEM II

The changing needs and learning context of adolescent girls in Nepal during COVID-19

Understanding learner needs

As part of its initial response to COVID-19, the *Supporting the Education of Marginalised Girls* (STEM II) project in Kailali, Nepal, conducted a rapid needs assessment with project participants. It became clear that the immediate and highest priority was the health and wellbeing of girls, including access to food and health services. The project accordingly shifted and adapted to address those urgent needs.

Continuous student surveys were carried out over the telephone, by the project's social mobilizers, with a focus on three clusters — urban, semi-urban and rural/remote girls. This meant location-specific needs could be identified and interventions be directed towards the most marginalized and vulnerable communities.

Understanding students' wider learning environment

Teachers and other learning environment stakeholders (such as guardians and school management committee members) were also surveyed to assess their own wellbeing, and needs related to supporting or engaging with distance learning. More detail on these assessments is available at Impact of COVID-19 in adolescents girls_ mercycorps.pdf.

By month three of lockdown, the community had gained more familiarity with COVID-19 and initial health concerns reduced. At this point, STEM II specifically concentrated their surveys on access issues (to phones, laptops, tablets, computers and the internet) to assess the viability of virtual learning during school closures.

Further surveys suggested some youngsters were studying by themselves with even a small number finding some online support. Others were doing very little or no study and many were anxious about impending exams and not being ready for them.

Identifying the learning purpose

Grade 10 schoolgirls expressed rising concerns about their forthcoming Secondary Education Examinations (SEE). Thirty-five percent of girls surveyed wanted tuition for the SEE. Although SEE were cancelled in late June, and the immediate stress levels were reduced, STEM II determined it did not remove the need for ongoing educational support as schools remained closed. Potentially the girls would lose a year of schooling and they feared they would forget the work they had done.

STEM II provided a radio-based Grade 10 revision programme for these girls. Having used repeat user surveys STEM II had developed a well-defined learning purpose with a clearly targeted group of learners. When the Nepal government itself later turned to distance learning, the STEM II team was well positioned to assist with learning from their successes in Kailali.

ODK/ONA

The STEM II team used digital data collection platform ODK/ONA, a free and open source Android application which helps collect surveys offline.

Guide: Introduction to Ona – Ona Help Center

Reflection task

Defining your learning purpose

Having clearly articulated your learner profile and learning needs using the Learner Profile tool, it is worth taking some time to ensure you are clear about your learning purpose, i.e.:

- what you want your learners to gain from the educational radio programme you are broadcasting;
- how this builds upon or supports the knowledge and skills they already have; and
- how the radio programme will strengthen or extend these skills.

It is helpful to consider how this learning will be assessed, too, so that learning content and activities can be geared towards achieving this purpose.

As you reflect on these points, try writing a high-level summary (500 words maximum) of why the radio programme is important and what you want to achieve through your remote learning programme. Your statement will serve as a checkpoint throughout the programming cycle (from design to assessment). It will also aid communications with stakeholders and your team, and it will help you identify key communication messages to children, care-givers and communities.

3.3

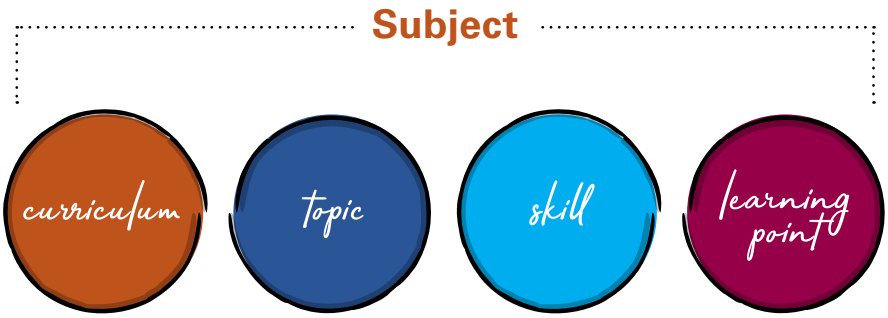
Developing the scope and sequence

Having defined your audience and learning purpose and identifying that radio is a suitable mode of delivery, these can be used to inform the scope and sequence of the educational radio programme.

First consider the learning aim – where do we want the learner to be? To answer that question, you must also consider where the learner is now. The scope and sequence then map the journey to take the learner from where they are now to where you want them to be.

Most educational radio programmes will be aligned to existing subject(s) and curriculum – often the national curriculum. It is unlikely the radio programme can deliver the comprehensive curriculum; therefore decisions need to be made about what content to include – the scope of the programme.

Deploying an e-learning environment in Zanzibar: Digital content curation (EdTech Hub)[10] is a useful guide on how to curate digital content. It recommends developing a skills taxonomy. This involves starting with the **subject** and then breaking it down into **curriculum**, **topic**, **skill** and **learning point**.



TIP

EDC (2020) advises that government and partners need to identify aspects of the curriculum that will have the biggest impact on a learner's future academic progress. Decision makers should involve educationalists, civil bodies and religious groups in the decision-making process to reduce potential opposition to audio content.

The learning points (and learning outcomes) then form the basis for the selection of content. Content might be created or curated. Decisions on which skills and learning points to include can be made by considering your overall learning purpose. For example, it might be appropriate to cover only the foundational skills, or the most common topics in exams, or topics pupils struggle with, or topics pupils enjoy and engage well with.

Key consideration: Limited learning time

If the educational radio programme is being designed to deliver the curriculum usually delivered in school, then limited learning time will be a challenge. Thirty minutes to one hour a day of grade-level programming will struggle to replace a full day of classroom learning. Any more time on radio would be less engaging for pupils. No evidence exists to indicate how much of the school curriculum can effectively be provided through IRI[11]. This challenge can be mitigated by supplementing the radio learning with additional learning resources: for example, community learning groups, printed materials, hotlines and radio call-ins. (See Section 6 for more about supplementary materials.)

CASE STUDY

Uganda – SESIL

Maximising learning time within available resources

How much learning time is available for the education radio programme? Each child can tune in to three radio lessons per week (maths, literacy, English) for their grade group. Each lesson is 30 minutes long. There is a call-in that is part of the same 30-minute lesson slot. Increasing the time allocation further has cost implications and is not an option for this project.

Is this sufficient time for pupils to achieve the learning purpose? It is a bit short, but it is not realistic to think children can sit by radio all day. Radio is in itself insufficient to deliver the whole curriculum and SESIL is also looking at supporting Community Led Learning (CLL) separate from and in addition to the radio lessons. However, CLL involves bringing people together and there is a risk of COVID-19 transmission which would need to be managed. The National Curriculum Development Centre (NCDC) has produced printed materials and they have been distributed, but distribution brings its own challenges and has not yet been able to reach all children.

Key consideration: Sequence vs stand alone

Radio programmes are broadcast on a particular day, at a set time, for a set duration, for example a radio series may occur every Wednesday at 11am for an hour. This helps people remember when to tune in for their favourite show. This is a common way for educational radio programmes to be broadcast too. But for learning broadcasts that are following a curriculum sequence, this presents a risk and a challenge. What happens if a child is unable to listen at the set time for one day, or several days, or even a week? Particularly in subjects where the curriculum builds skills and competencies gradually and sequentially (e.g., maths, reading), missing these broadcasts could cause learning gaps and limit the ability of pupils to follow future lessons effectively. If radio-based learning is following an important sequence over time, rather than being a set of stand-alone broadcasts, thinking about how the risks of missing some of the sequence can be mitigated is a potentially important part of effectiveness.

Sample Schedule

For an example of an educational radio programme schedule see this example from the Ministry of Basic and Senior Secondary Education (MBSSE) in Sierra Leone:

Radio-Teaching-Programme.pdf (mbsse.gov.sl)

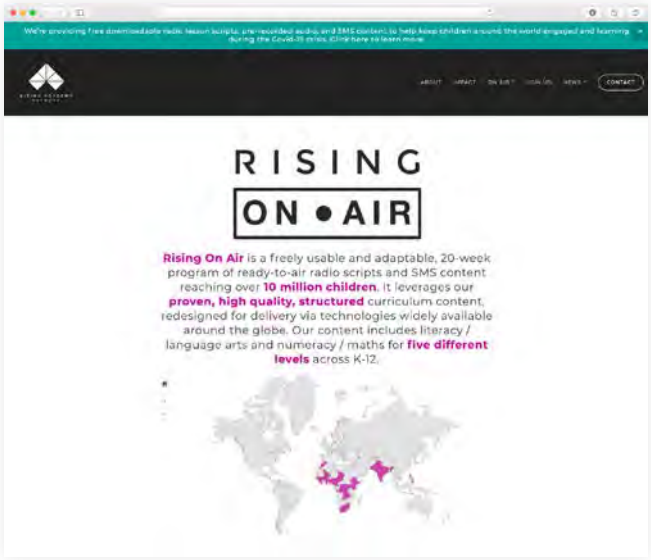
One way to address it is by minimizing the risk of children missing a broadcast. Design from the outset by researching and **selecting a time that would be most suitable to the listeners** and combine this with advocacy and communications to encourage listenership. For example, in Nepal, when choosing timings for the STEM II revision broadcasts consideration was given to what else the girls were involved in during the day and when they would be best able to listen and concentrate enough to understand the lesson. During the day, many were busy with the rice plantation and so mornings and evenings were considered most suitable. In this way, they were able to listen to two lessons in the morning and two other subjects in the early evening.

Broadcast repeats of the show to engage listeners at different times. However, this has cost implications and whilst SESIL in Uganda started with this approach they later needed to cut back due to budget constraints. Another option is to **put the audio file on an additional platform.** For example, in Sierra Leone the radio broadcasts were stored on the Ministry Website. Rising on Air makes its files available to a wide range of partners for adapting and using.

Link back to prior content for reinforcement and coherence. For example, in Uganda, the radio programmes follow a thematic approach. At the start of lesson, the script refers back to the previous lesson to remind and refresh the points it covered. Then the script proceeds with new learning. There are three or four lessons in the same theme, with different subthemes explored in different programmes. Themes such as child protection are included through the lessons in mother tongue literacy, numeracy and English.

Wrap-around support can help learners who have missed a lesson, this also serves to support learners who need more practice to master a skill. For example, you could provide supplementary materials or links to textbooks so pupils can study a missed lesson. Encourage peer listening groups so children can support one another to catch up on missed learning.

Sierra Leone Ministry of Basic and Senior Education website



Rising on Air website

CASE STUDY

Nepal – STEM II

The timing of broadcasts was selected to provide four lessons, one in each of four subjects, split into two per morning and two per early evening, over consecutive days. This meant delivery was concentrated into a little over two weeks as there were 15 lessons for each subject and lessons were aired on six days of the week. This concentration of effort seemingly worked well and held pupils' interest in the short term. The content was designed as revision prior to examinations; it seems also to have worked well to clarify and embed some of the classroom learning. However, there is a great deal to take in through a medium that requires good listening and concentration skills by individuals working alone.

3.4

Designing learning content

The Universal Design for Learning[12] provides three key principles for any inclusive learning programme that should underpin educational radio content as well:

- provide multiple means of representation of information;
- allow children multiple means of action and expression; and
- provide multiple means of engagement.

At first, this may seem more challenging to achieve over radio than in a classroom. Throughout this pack, there are examples of how to make radio an active learning process for all children. The Inter-agency Network for Education in Emergencies (INEE) has published a series of COVID-19 Briefs, produced by Humanity and Inclusion, which provide some excellent tips on how to develop content and do it well. The box below highlights some key messages around developing radio content, and provides a link for you to follow up.

TIP

Make radio lessons as much like a classroom as possible, but keep the programming interactive and engaging for learners.

- It is important that lessons remain short (around 20 minutes each is ideal) and that students are encouraged to have a break between lessons.
- Keep it simple and don't overload the content.
- Spend the first 2-3 minutes with an introduction about the topic and the key learning to be targeted in the lesson.
- The bulk of each lesson should not be longer than 10-15 minutes, and this should be split up into shorter sections of a few minutes each to keep learners motivated.
- Make sure that learners with learning disabilities are able to follow the content with regular repetition, use of key words, and use of activities.
- Break up the content through motivating short songs or poems to keep listeners' interest up.
- Ensure that the listener is being posed some questions which they have time to answer (in a workbook or orally at home, if accompanied by a parent/ sibling/ support person).
- Spend the last few minutes in a summary wrap-up of the key messages.
- Involve students as part of the radio lesson. They would need to be briefed by the radio presenter/teacher first, and they could then ask live questions to the teacher on the radio show, so it sounds more like a real classroom.

COVID-19 Brief no 4

10 tips for supporting TV and Radio lessons

View PDF

CASE STUDY

Venezuela – Fe y Alegría

Creating age-appropriate content to engage learners: pre-primary and primary radio lessons

Sixty-minute programmes are broadcast daily, structured in age specific blocks of time. The first block is for all the family, with entertainment for everyone (dancing, singing, fun facts, riddles, recipes, etc.). Then, a second block is for younger children (pre-primary), a third block for the first three grades of primary, and a fourth block is for the last two grades of primary.

Fe y Alegría tried to maintain the structure of face-to-face classes, with warm-up activities that invited brainstorming, using fun facts, music and singing, and sometimes breathing exercises, when possible related to an overarching theme for the week. Activities were adopted to promote problem-solving, research, logical thinking, reading and writing. Finally, wrap-up activities were planned so that children could draw conclusions, present an analysis, explain and summarize what they had learned, or capture it using strategies and resources such as concept maps or drawings.

It was a challenge to keep the children curious and engaged on the radio. They achieved this through different sounds, music and by having different people (radio hosts, teachers, students) take turns to speak during the radio lesson, to prevent it from being too boring or repetitive. In just one month in November, around 70 children were guests on the radio lessons, coming from different states and municipalities throughout the country. Guest teachers also rotated on the radio broadcasts, to make it easier for the children to stay engaged, listening to different voices and different ways of speaking and accents from various parts of the country.

Instituto radiofonico Fe y Alegria, recording La Radio Educativa
Photo: Fe y Alegria, Venezuela

Designing new content versus using existing content

One of the Principles for Digital Development is 'Reuse and Improve'. You do not always need to create content from scratch; it is useful to first look at what already exists. EdTech Hub[13] provides useful guidance on this.

EDC provides guidance on reusing IRI/IAI programmes during humanitarian crises[14]. While advocating for repurposing wherever possible, its comprehensive article makes it very clear that repurposing requires planning and careful thought, before setting out the options for doing it well. The case study box below shows how EDC achieved this in DRC as a response to COVID-19.

CASE STUDY

Democratic Republic of the Congo (DRC) – IYDA

Reusing existing radio materials

IYDA has around 130 Accelerated Learning Programme (ALP) centres and a further 30 or so vocational training centres, where, under normal circumstances, learning is face-to-face. In the professional training centres (CAPs), geared to older youth and adults (up to age 35) they teach mainly basic literacy and numeracy. In March 2020, when the pandemic reached DRC, the schools were closed and IYDA had to change its modus operandi in response.

Youth in the ALPs were studying for the equivalent of the last year of primary and were preparing to sit the national examinations. Being in their third semester made the timing critical for these students.

Fortunately, EDC had the products of an older IRI project to turn to. PAQUED, and an even earlier project – Pour une Approche Globale de l'Education (PAGE) – had developed three primary school IRI series. These series provided curricula-based, grades 1-6 language and mathematics programming for learners in formal schools. They had also produced a short series guiding community leaders, families and others on the organization and management of community schools. To train the teachers in the new modality, they had also made a series for grades 1-6 teachers on how to conduct IRI/IAI in their classrooms.

When faced with the COVID-19 crisis, IYDA therefore had a significant amount of material to use as the basis for making a quick change in delivery modality. The material was not perfect, as they were now working in the accelerated learning environment, rather than in the formal system, but they were able to make light modifications to the programming, thereby making its rebroadcasting feasible for a new audience. IYDA broadcast the grades 5 and 6 IRI lessons to help prepare learners for the primary exit examinations.

Alongside the repurposing of the materials, IYDA also paid attention to the public service announcement (PSA) angle to ensure parents were made aware of the opportunity and would encourage their youngsters to listen.

Further information from EDC can be found here: Interactive Radio and Audio Instruction Resources: Democratic Republic of Congo (DRC) | Education Links (edu-links.org)

Scriptwriting

Scriptwriting is a skilled task and should be planned and resourced well. Ideally, a team of curriculum experts, Ministry staff, and radio producers should work together to develop the learning content and scripts. Scripts should be tested with teachers and a diverse group of children. In Uganda, NCDC co-ordinated an inclusive approach involving teachers, international experts, and the government's Gender Unit and Special Needs Department.

Scriptwriting can carry significant expense, especially when it involves a variety of experts. In Liberia, Rising on Air filled a government funding gap by quickly mobilizing its team of international curriculum experts to draft scripts to be reviewed and edited by a Liberian team, including government and children. Rising's initial spend was less than US $350,000 on the content – if that reaches 12,000,000 children worldwide as they expect – the cost will be 3 cents per child. As the government received its own emergency funds, Rising gradually handed the process over.

Where to see good radio lesson content

Wherever possible, an open approach to radio development should be adopted. Open standards, open data, open source and open innovation form one of the Principals of Digital Development. An open approach can increase collaboration, avoid duplicating work that has already been done and maximize resources[15].

Two excellent, open-access sources are:

- **Rising on Air**[16]

  The Rising Academy Network provides pre-recorded audio content, downloadable scripts and SMS packages for English and maths at the following levels: Early Childhood, Lower Primary, Upper Primary and Secondary. This site also hosts materials for radio-based TPD.

  RISING ON • AIR

  ARABIC: risingacademies.com/onair-arabic

  ENGLISH: risingacademies.com/onair

  FRENCH: risingacademies.com/onair-francais

Providing an anchor to the education system is crucial when schools close; the longer you wait, the higher the chances children will not return. Rising On Air allows partners and government to mobilise quality radio and SMS content quickly, and importantly, in their own voice. I am impressed by the growing community working together on this project.

— George Werner

Former Minister of Education, Liberia

- **Audio Now! Responding to COVID-19**[17]

  EDC provides access to some practical tools, including videos showing IAI in action around the world. It lists its existing IAI programs, covering literacy, maths, social studies, science, foreign and second language instruction and life skills, in a variety of languages. The EDC team invite you to contact them for access for use during the COVID-19 crisis.

CASE STUDY

Pakistan – Alight

Developing radio content quickly and effectively in an emergency context

Young girls listening together to Muallim Radio, Alight Pakistan
Photo: Alight

Alight aimed to support remote learning through radio for children in non-formal education centres. The team began with a decision about which curriculum to use, which student learning outcomes (SLOs) to focus on and which textbooks. In the backs of their minds was the prospect of broadcasting nationally and so they decided to select SLOs from the national curriculum (which is the basis for slightly adapted curricula and textbooks in every province in Pakistan).

The criteria for selecting SLOs were largely guided by what Alight felt could be taught via radio, in situations where children would have a wide variety of materials and none. So, for example, in language it focused more on developing vocabulary, comprehension and grammar and less on reading skills.

Having selected SLOs, Alight started developing scripts for programmes in four subjects – Urdu, mathematics, English and general knowledge for children in grades 1-3. To speed up the development process, it identified experienced teachers from private and public schools in Pakistan to prepare the scripts. Due to lockdown, the Alight team could not get to recording studios or even meet and work together, so they recorded the first few lessons on their phones and these were then edited by the professional editor.

In April, Alight approached the education department in Gilgit-Baltistan with its radio programme. The Secretary of Education in Gilgit-Baltistan set up a committee to review the 30 programmes Alight had developed. The committee comprised graduates from education programmes at the Aga Khan University. The committee proved to be really useful; because they were educators, they were able to provide lots of feedback that resulted in a much better set of radio programmes.

The education department gave the go-ahead for programmes to be broadcast. Starting in April, they were broadcast once a day between 5 and 6 p.m. by two local private FM stations and one MW station of Radio Pakistan.

Over time, Alight improved the content. When the lockdown eased feedback was obtained from children and teachers as well. Stories, poems and games were added – including local games adapted for radio - and they added children into the cast of performers. Children liked these additions.

Producting radio in
Freetown, Sierra Leone
Photo: Rising Academy Network

CASE STUDY

Liberia – Rising on Air

Developing radio content quickly and effectively in an emergency context

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 à 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.

Reflection task

What do you think successful radio content sounds like?

Choose and listen to a radio lesson using the links to the right. While you are listening ask yourself the following questions:

- Did you enjoy listening to the radio lesson? What did you like or dislike?
- Are the learning objectives clear? Do you think children would learn from the radio lesson?
- Do you think this radio lesson would motivate students to engage? What works well/less well?
- As you listen, consider whether the speaker attempts to describe tricky concepts. What techniques did they use? In your opinion, does it work well for the intended learners?
- Would the lesson work well for some children better than others? What knowledge would children need to have in order to learn during this lesson? (e.g. are early childhood lessons accessible for children who have not yet achieved literacy?)
- Did you find the radio lesson engaging and fun? What teaching techniques have worked particularly well - have they used song, dance, storytelling effectively? What about pauses and question and answer sections? What could be improved?
- Does the teacher/presenter speak clearly and slowly?
- Do you think children would require someone present or alongside them to help guide their learning?
- What are the main conclusions you can draw from this for your own content development?

Radio lessons: in English (sample)

Rising Academies - Rising On Air

Radio lessons: in Arabic and local languages (South Sudan)

Radio Programmes: Girls' Education South Sudan

Radio lessons: in Spanish (Venezuela)

La Escuela en la Radio - Radio Fe y Alegría Noticias

4

Developing an effective radio programme

4.1

Access and equity

You need to be sure that all children and young people can engage with the educational radio programmes. Exclusion and inequality will likely be exacerbated if the listeners from already marginalized and vulnerable groups, such as girls, ethnic minorities, and persons with physical or learning disabilities, are not able to listen to or learn well from the radio programmes. There is a known gender digital divide in developing countries, with women and girls having less access to internet and technology devices than boys and men[18]; this may extend to radio access.

Radio is commonly recognized as a widely accessible form of communication. It is important to map out access and ensure that radio can be broadcast to all communities. In Sierra Leone, the government mapped where the Ministry broadcast reached and the Leh Wi Lan project supported by covering broadcast fees in more remote places, ensuring national coverage. During the Ebola pandemic, many NGOs provided radios to communities and households that did not have radio access, and these could also be used during the COVID-19 pandemic.

Even when children have access to a radio and the educational radio programme, inequalities can exist in their ability to access the learning. An effective radio programme needs to consider the inequalities from the outset and plan to produce and deliver diverse and inclusive content. The next section poses some considerations to make your learning content more inclusive.

4.1.1

Differentiating to meet the needs of all learners

Pupils do not learn at the same speed or in the same way and so a skilled teacher should provide differentiated learning opportunities to help maximise learning for each individual. We know from learning assessments that in many low- and middle-income countries many pupils are below expected curriculum learning levels, especially when the curriculum is not differentiated. Radio programming that seeks to translate the curriculum or lesson plans into time-bound, radio-based lessons risks rapidly becoming out of reach and inaccessible to many of those it is aiming to support if the realities of the mismatch between pupil competency level and curriculum expectations are not considered. Differentiation to meet the different needs of learners has to be built in from the beginning.

Promising solutions adopted by the case study projects

Reinforce foundational skills and prior learning

Prior learning can be reinforced throughout the programme. For example, a recap at the beginning, summary at the end and taking time to include reminders or repetition throughout the programme. In Uganda, SESIL adopted this approach. Radio can also be used specifically for revision or re-enforcing foundational skills. In Nepal, STEM II provided radio content that was revision of work the girls should already have covered in class rather than all new. To incorporate the needs of all the students, the radio classes had to cover basic topics before proceeding on to more complex issues.

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.

— Mamta

Grade 10 student, Nepal

Source: Revising with the radio – Mercy Corps https://drive.google.com/file/d/1KhBuY-kFrHdcYXLil3_zuPCKb5v3AOzy/view

Involve a diverse group of children

Try to involve children from diverse backgrounds and with different abilities in the development of your radio scripts. This could include girls, boys, children from different locations and ethnicities, children from different socio-economic backgrounds and children with disabilities. They can be involved in testing the scripts or included as actors in the presentation, as well as contributing their views to evaluations. To do this, ensure you take an inclusive approach and help all children to contribute fully; be aware of which children are speaking out and which may need encouragement.

Multi-grade versus single-grade programmes

A common point of entry to tackle this challenge is deciding who the radio broadcast is for and how it will be delivered. You might consider grouping grades, e.g., P1-3; this often lowers costs and is easier to schedule with the radio station. In Sierra Leone this was perceived as an opportunity to teach at the right level because it provided both foundational skills and more advanced learning within one programme and greater diversity in content to meet the needs of pupils across the three grades. In Uganda, the grouping was found to be a constraint and the design was changed to single grade radio programmes (P1, P2, P3, etc.) to enable more targeted content at each grade. In both multi-grade and single-grade sessions, adopting the principles of multi-grade teaching can be an effective way of differentiating to meet all learners' needs. This is the approach used by Alight in Pakistan.

Creating differentiated learning content that is tailored to specific needs of different children is challenging. Universal Design for Learning[19] offers more guidance to make learning truly inclusive. The box below provides some more examples and ideas on how to differentiate your radio content.

TIP

How to differentiate radio scripts

During COVID-19 many educational radio programmes focused on producing content quickly and whilst developers knew differentiation was important, they did not fully differentiate scripts. This is a growth area for many!

In Pakistan, Alight started differentiating scripts by posing differentiated questions to storytelling: a simple 'listen for words beginning with the letter F' was extended to more complex questions of grammar.

Ideas that might be tried to differentiate your scripts include the following:

- Provide different explanations of concepts.
- Use different activities for the same learning objective.
- Provide multiple options for practicing concepts – e.g., sing a song, write a note, draw a picture.
- Predict misconceptions and address them in the radio content.
- Encourage pupils to take ownership of their learning by asking them how they feel. Do you feel you achieved the learning outcome? What do you think you need to practice before the next session?
- Signpost learning at the right level. For example, at the end of the show a presenter can suggest that pupils who found this difficult or want more practice can tune in to show X (the lower grade) whilst pupils who found it too easy or need a more challenging lesson can tune in to show Y (a higher grade). The radio programme can also signal where children can get more support or practice in their homes and communities; for example, 'try counting to 5 with someone in your home.'

4.1.2

Considering special educational needs (SEN) and disabilities

Radio broadcasts rely exclusively on aural content delivery - words, songs, stories, poems etc. For some children this will present a real access challenge. Children with a hearing impairment, for example, may not be able to engage with radio content, unless someone in the home can sign for them. Organisations of Persons with Disabilities (DPOs) and other local NGOs may be able to help provide this support.

Humanity and Inclusion's Guidance Note 4, 10 tips for supporting TV and Radio lessons[20], provides an excellent overview of the huge disadvantages facing children who are deaf or hard of hearing, children with other learning challenges that affect their interactions with sound, such as autism, or emotional disturbances, and also those children who do not speak or understand the language of transmission.

Simple solutions exist, but these must be planned and budgeted for. Humanity and Inclusion's brief outlines effective ways of addressing the challenges. These include consideration of the additional supports (written transcripts, sign language videos) for children who are deaf; use of phones/SMS and face-to-face visits to support understanding for children with intellectual or communication disabilities; and ensuring that government awareness-raising campaigns about radio lessons are also geared to persons with disabilities. In Uganda, NCDC provided printed, self-study materials to compliment the radio content. These were translated into Braille and distributed to learners by inspectors via village committees.

Persons with disabilities should be involved throughout the entire process of designing, producing, delivering and evaluating the radio programme. Working with DPOs offers a local network of expertise to ensure the radio meets the needs of children with disabilities. Additionally, presenters with disabilities themselves or characters with disabilities included in the educational radio content can support diversity and inclusion.

There is an opportunity to address negative social norms through the radio content and portray people with disabilities positively in storylines, challenging negative stereotypes about them. In South Sudan, GESS used the International Day of Persons with Disabilities to deliver inclusive messages across South Sudan using social media and radio.

4.1.3

Considering language barriers

Radio is a relatively easy education platform to deliver education content in the mother-tongue, and consideration needs to be taken of supporting pupils with limited proficiency in the formal language of instruction. In a classroom setting, these children will benefit from inherently supportive measures such as visual aids and teachers' body language; the absence of these can make remote instruction in an isolated home inaccessible and disengaging. Some parents and community members may be well placed to provide support, but others may themselves not have the language skills to be able to understand radio content and support children's learning.

You might consider including some of the following approaches to address this:

- Where it is not possible to cover all languages, select languages to reach as many of the most marginalized as possible. See case study below on how this was achieved in South Sudan.
- Work with local radio stations to broadcast in multiple languages. See case study below on how this was achieved in Uganda.
- Include pauses in the instructions to allow for translation in the home or community.
- Use didactic strategies such as spaced repetition for language learning.[21]
- Provide supplementary materials in relevant languages.

CASE STUDY

Uganda – SESIL

Working with local authorities to deliver radio in 11 local languages

In the districts where SESIL operates, there are 11 official local languages. Education policy is to learn in the mother tongue in early primary (P1-P3), and from P4 upwards the medium of instruction is English. The radio programme was designed to reflect the education policy and a decision was made to broadcast in local languages. SESIL funded the local language translations. In some locations, where multiple languages are spoken, broadcasts were aired in two languages.

In Uganda, the scripts were written with support of SESIL in English and then needed to be translated to 11 local languages. Producing in multiple languages involved working with the Local Language Boards. The Language Board is appointed by district council, following guidelines of NCDC. Its members include teachers and they are trained and mandated to do translations. Where any translation is needed, the Chair of the relevant Language Board is contacted, and the board assigns a translator. It is important to use the Language Board or else other translators' work might be queried and programmes be rejected.

One issue that has arisen has been the dialect of the actors. Sometimes this has presented difficulties to listeners, as different dialects of the same language are used in different districts. Some children have reported this as a comprehension issue. Whilst it might have been desirable to include multiple actors for each language to represent local dialects and cultures, the project had to be pragmatic and it was felt this was the best that could be achieved within budget and time constraints.

CASE STUDY

South Sudan – GESS

Selecting languages to reach as many of the most marginalized children as possible

Since 2013, GESS has been using radio to reach parents, girls, teachers and the community as a whole with a view to improving understanding and the recognition of the value of girls' education, raising awareness and removing barriers to education.

GESS produced a factual magazine programme in 9 languages – simple Arabic, Toposa, Lotuko, Zande, Bari, Nuer, Dinka, Acholi and Madi. These were selected through a thorough consultative process considering 64 local languages from 10 states.

The consultation process comprised several stages of selection, and choices were made so as to reach as many of the most marginalized as possible. Poor educational indicators were noted, cultural knowledge was taken into account; for example, which language would be most appropriate for tackling negative practices and radio coverage. Language was also important in the selection of the radio stations for broadcasting. States selected the one or two most suitable languages and then GESS cross-referenced the data with its own experiences and surveys of need and, finally, the national Ministry for Gender and the Department of Inclusive Education were asked to agree the language or make the final selection.

In some cases, there are enough similarities in one language that it can be well understood by those who might more normally use another national language.

4.1.4

Considering girls and safety

Education provides an opportunity to tackle harmful barriers to girls' empowerment. You might want to include messages that challenge harmful social norms and promote both the reduction of violence against girls and gender equity within your educational radio programmes. Alongside crises such COVID-19, it is recognized that school closures increase children's risk of abuse, early marriage, child labour and rape. In Uganda, these issues were addressed mainly in parents' radio programmes, more directly than in the programmes directed at children. Content encouraged better understanding of violence and violence to children, supported children to speak up, and promoted information about referral pathways (local government and village pathways). Key messages were also embedded in scripts for children's programmes, such as advice that if they feel they have been abused they should speak to any adult they trust. In Nepal, STEM II worked alongside the local governments' distribution of 30,000 leaflets to the communities in the project area to reinforce the safeguarding messages in radio programmes.

Before listening to this programme, I never cared about the gifts that my children were given and I never asked who was giving them. After listening I began thinking that maybe these people want something in exchange and might even impregnate my girls. So, I talked to them about not accepting gifts from strangers.

— Parent

Eastern Equatoria Torit,
South Sudan
(GESS - Stories from the field)

During 2020, of course, many educational radio programmes incorporated public service messages to help keep citizens safe through the COVID-19 pandemic. In South Sudan, these provided accurate and useful information, to help people adopt healthy behaviours to save lives and help stop the spread of the virus.

Reflection task

Public health scripts regarding COVID-19

Read this PSA script from South Sudan, which includes three PSAs:

PSA 1 Topic: Parents supporting learning at home

PSA 2 Topic: Social Distancing – Children

PSA 3 Topic: Washing hands – Children

- How does this compare to public health messages that you have broadcasted?
- Who do you think this script targeted?
- Do you think it was effective?
- How might it need adapting for your context?

Reflection task

Maximizing access and equity through educational radio

It is challenging to respond to differentiated learning needs through educational radio. Children may be tuning in with very different starting points, and you may have a mismatch between curriculum standards and pupil levels in your particular context or with a subset of learners.

Do you feel that you have been able to respond to this challenge successfully through your educational radio programme, or, is this an area that now needs further strengthening?

- You might like to review the approach taken in the **SESIL project in Uganda** (read the case study here). This project supported the government's roll-out of national educational radio programmes, choosing to enhance offerings in appropriate local languages, and ensuring support materials (e.g., Braille materials) were distributed to children with visual impairments.
- In contrast, the **STEM II project in Nepal** took a targeted approach to a subset of learners (girls revising for formal school examinations). Content was pitched to the learning needs of the slowest learners so that all girls' needs were met (read the case study here).

As you read the case studies and reflect upon your own experiences consider the following points:

- Were differentiated learning speeds and abilities considered when developing radio content? What data or information was helpful in supporting this?
- What operational challenges are evident in ensuring access and uptake of radio lessons by children with additional needs, or more marginalized children?
- What approaches were tested in content development, or through additional support and outreach measures? Do you think these would work well in your context or would you need to adapt?
- Has language of instruction been an important consideration? What language(s) were lessons broadcasts in, and were a mixture of languages used? What factors drove broadcast language choice? Do you think these were the right choices in this context or would you consider an alternative approach?
- Have choices around equity and access had a notable impact on the learning outcomes of the programme?

4.2

Quality and support

4.2.1

Maximizing pupil interaction with radio content

For some children, particularly those not yet able to read, radio can be a great way to deliver content; it can also positively engage learners' imagination. Auditory stimulation can be achieved through songs, jingles, sound effects, etc., which are particularly effective for engaging younger, pre-literate learners.

IRI is built to facilitate interaction between the pupil and the radio, but without peers or a teacher the level of this interaction is much harder to achieve in home settings.

Below are some points to consider in making your radio content more interactive.

Promote a positive listening environment in the home

Being surrounded by the noises of family, life and a world outside whilst trying to hear a potentially crackly radio is not the ideal listening environment to aid learning. Many households will need some practical guidance on how to set up a learning space for children to be able to engage with their radio lessons.

At design stage, you might use surveys to find out about the environment in which children will be listening. Sensitize parents to release children from chores, set up a space similar to a classroom with a flat surface to write on and materials for writing where possible, and create a space free from disruption; there could be a reminder at the start of every session or the message could be conveyed in radio programmes aimed at adults/parents. Messaging can be reinforced through SMS, newspaper, and paper materials. The adaptations below, provided by EDC[22], present a good overview of solutions for improving learning conditions for children listening at home.

Original Structure	Adaptation
Listeners are gathered in classes and will complete activities in pairs and small groups	Listeners gather in community settings with as many members as appropriate. If public gatherings are problematic, listeners participate with family. Older relatives roleplay as classmates.
A teacher is present to guide participation	Parents / older siblings roleplay as the teacher and oversee the participation of the learners. Provide radio-based training for facilitators. Create support system via website, hotline, short code text, WhatsApp groups, community radio programming.
A blackboard is on hand to write out assignments	Find other surfaces to write on, including flipcharts, cardboard, notebook paper, or the earth.
Listeners in classrooms enjoy a quiet listening environment free from distraction	Sensitize parents to: • Release children from chores during broadcast time • Setup the learning space to mimic a classroom as much as possible • Protect the space from interruption by siblings, neighbors, or animals

Fun and engaging presenters

Along with developing good content and scripts consider how to identify 'good teachers' to voice your radio programmes - **the script is only as good as the telling of it.**[23] Alight Pakistan identified experienced teachers from private and public schools in Pakistan to prepare scripts. Effective teaching practices can help listeners to be actors in their own learning process, and not just an audience. A good teacher can deliver the content clearly, slowly, with humour and enthusiasm. You might want to think about the pace of speech, posing questions, using pauses for students to consider the material, drawing on play and games, and the use of practical exercises and encouragement of problem-solving using real-life scenarios. Children respond positively to motivation and reward. You can consider ways for the teacher to provide praise and feedback.

In Liberia, Rising Academies Network research has indicated that audio delivery is effective – the challenge is getting the children to listen and maintain concentration. The more interesting and engaging the lessons the easier that is. Rising has found that two people in conversation works better than an individual talking. Inclusion of songs and student voices also has a positive effect. Rising want to do research that looks at the difference a moderator (be that teacher/ facilitator or parent) with a small group of children might make.

Hooks to draw children in

Consider what 'hooks' might draw children to the programme, e.g., a routine they can identify with; a 'theme' or 'act of fun' they can engage with; or an activity they know they have to take forward and will get feedback on at the next session. In Pakistan, the Alight programmes linked to children's textbooks: for example, at the end of a programme the presenter would say something like "Now go to page 23 and do the exercise at the bottom of the page." Later, Alight developed a workbook to accompany the radio programmes and to provide extra practice for children enrolled in the NFE centres.

Involving pupils

Pre-recorded content can be delivered as 'live' sessions, in which interaction is built into its structure through call-in and quiz sessions. Students with access to phones might call and engage with facilitators/teachers during the broadcast – the chance to discuss what they are learning with a peer or a teacher can be particularly helpful for any children who are struggling to keep up. Half the programme can be dedicated to this.

Pre-recorded content can also be made available to use on-demand, distributed as podcasts, on YouTube or directly in memory cards etc. In Nepal, the STEM II team recognized that there would be benefit to repeating the radio lessons and therefore posted the lessons to Facebook to make that possible for at least some of the girls to access. In Liberia, youngsters can also text or call into the radio programme. Such messages are recorded and analysed, and are often about clarity, speed or expressing thanks.

CASE STUDY

Uganda – SESIL

Interactive and relevant content engages children to want to listen in week after week

The radio lessons in Uganda are built on a set of principles for remote delivery that aims to make the lessons as stimulating and interactive as possible, so that the children want to listen to every episode.

To address the challenge of weak-interaction, the radio programme includes story-telling, songs, counting games, local references and connections to daily life. Children use the songs during the lessons and are encouraged to use them outside the lessons too.

Initially, the radio programme started with two host teachers. Following feedback, it changed to have children, as well as the teacher, to make it a more realistic and engaging 'lesson' setting. In the broadcast, the children answer the question the teacher asks. Also, a call-in was added at the end of each broadcast.

The dialogue and direct instructions prompt pupils to reflect on questions and where possible discuss with their older siblings. Older siblings are encouraged to be listening to the broadcasts to provide this face-to-face support to the pupil while they are listening to the broadcast lesson. 'Homework' is given to the children to practice before the next lesson, and to encourage participation across the household. This homework is being differentiated: for example, if a Year 1 pupil is practising additions of single digit numbers, older children are given two- or three-digit sums to practise.

4.2.2

Parental and caregiver support

Any form of self-directed distance learning is challenging for students and families, and radio is no exception. Many children are not used to listening to the radio – although often their caregivers are – and children need to be prepared to engage with this medium, with help from parents and caregivers.

Social norms, behaviours and beliefs all play a part in how learning is supported in the home. Many caregivers have expressed concerns that radio learning is not feasible, due in part to cultural expectations on girls within the home. Girls' additional cleaning, cooking and care responsibilities limit their availability for radio-based learning. Parental and caregiver buy-in is a key enabler.

Even when parents and caregivers want to support radio learning, many will find playing that supportive role very hard, either due to other household and livelihood commitments or because of their own challenges with literacy and numeracy.

CASE STUDY

Nepal – STEM II

In Nepal, STEM II provides teaching and learning on life skills and safety for girls. When the medium of delivery changed to radio in the home this broadened the audience of these key messages for girls' education and empowerment. Now, information can also be provided to parents and they can see/ experience at first hand what it is the girls are learning. It also offers the opportunity for boys to engage with the learning content and some SEN youngsters might find it easier to access than going into school.

Promising solutions to engage parents and caregivers

Identify technology bottlenecks

How can you help – is there a way to provide radios or batteries to those without? How can we support households with limited radio signal or those that find it difficult to tune in to the required radio station? Can you facilitate sharing of devices between families? This is something GESS found effective in South Sudan.

Communication with parents/caregivers is critical

- Think about the messages that might help parents see the value of supporting education and learning at home, especially for girls.
- Can you time radio lessons to fit household schedules? Respect and accommodate competing demands on time.
- Think about how best to communicate clearly and simply to parents about when radio lessons are available and how to listen in. Use channels parents are already engaging with: for example, use advertisements in popular local newspapers and consider working with community leaders.
- Identify the most effective way (e.g., SMS/WhatsApp, radio, or newspaper) to provide caregivers regular, low-tech, text- or voice-based prompts on how to support children's ongoing learning through radio. Provide opportunities for parents to ask their own questions as well.

I quarrelled with my children all the time when I used to see them reading books and I would give them a lot of work just to keep them busy, but after listening to the radio, I reduced the workload so they can concentrate on their books and I check that they study and not play.

— Roberta Lino

Eastern Equatoria Torit, South Sudan
(GESS – stories of change from the field)

Accessible and engaging radio content can reduce demands on parents

- Creating stimulating content for learners, pitched appropriately for each age group, is critical to keeping their attention and engagement.
- Don't expect children to have resources (e.g., paper or books) in their home. Design the learning content to be completed without resources. Where possible provide workbooks to accompany the radio programme but ensure these can be distributed to all children's homes.
- Provide complementary learning sources (including counselling or psychosocial support, helplines and radio phone-ins). Let parents know how to access these.

CASE STUDY

Venezuela – Fe y Alegría

Creating 'little schools' at home

The radio sessions delivered by NGO Fe y Alegría include tips and advice to parents on how to support their children in remote learning, and how to accommodate their home to make it easier for children to study.

Content is geared to parents and caregivers, who must take an active role in the education of children. For this, Fe y Alegría drew on its experience with adult literacy programmes to create appropriate content and messaging.

The aim was to empower the family as a whole to enable students to listen to the radio and engage with its content. Its teaching teams have devised tools that promote children's learning through activities they 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.

CASE STUDY

Uganda – SESIL

Helping parents/caregivers with practical and accessible ways to support their children

Parents/caregivers are not teachers. Without support, they may very likely lack the ideas, skills or confidence to support their children with remote learning. In Uganda, SESIL supported government to develop a caregiver support radio programme. This aimed to sensitize caregivers to the educational radio programme and provide tips and advice on how they could support their children's learning. Providing guidance to caregivers over radio is a more accessible medium than written guidance for caregivers with limited literacy skills.

Scripts for the parent/caregiver radio programme include reminders of the education radio programme transmission times and advice on organizing and supporting children's home listening, including how siblings can support. The parent/caregiver programme provides ideas for caregivers who may be struggling with home learning and also encourages the sharing of good practices and what has worked well for others. The programme reinforces positive role models for children and encourages parents to be open to questions from their children, which further helps to strengthen their relationships around learning, and forms a safer environment for children. All broadcasts are targeted at the most disadvantaged households so do not assume that there are any resources at home.

Parents are also encouraged to engage in the children's educational radio programme. Firstly, there is a call-in after each lesson where caregivers can call in with any questions they have. Relevant questions are then addressed in the next radio programme, providing an opportunity to tackle practical challenges as well as learning points. Secondly, caregivers are encouraged to support 'homework' after the lesson. This is a simple task requiring no resources. Parents and older siblings are encouraged to support the pupils - for example, "try practicing counting to five with someone in your home."

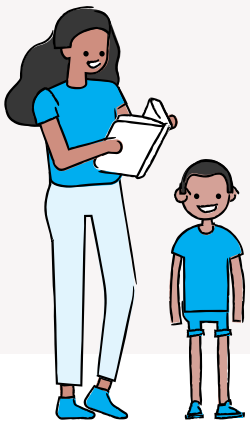
Receiving SMS messages in Sierra Leone.
Photo: Rising Academy Network

TIP

Follow-on resources

A whole package of approaches can be used to support parents and carers. Rising Academy Network has used mobile phones to complement radio lessons through: SMS engagement nudges, messages to families to remind them of schedules, a hotline service for student and parent queries, and also working with teachers to support regular check-ins with children, thus minimising the reliance on parental support. They developed phone call scripts to help teachers cover a number of topics, from wellbeing and safeguarding to access troubleshooting: https://www.risingacademies.com/onair

Demystify the role parents are expected to play – EDC outlines some quick solutions for helping parents take on the role of home teachers: https://www.edc.org/sites/default/files/WB-IAI.pdf



4.2.3

Community listening groups

Community listening groups offer an interactive and stimulating learning environment. Look for safe ways to set up facilitation for learners, peer learning and discussion, perhaps through a shared radio space, and small groups coming together to learn. Have you considered how parents or caregivers, relatives, older siblings or perhaps a community member might be able to roleplay a teacher and help facilitate learner participation[24]?

In Liberia, **Rising on Air** found that parents often organize children to listen in small groups – with the youngsters from next door or with their cousins and so on. This is particularly important for the earlier grades and here the parents remained as part of the group; indeed, the material was designed on the basis that parents would be actively involved and available for the early grades. Anecdotal evidence of this is seen through many photos of groups of young children huddled round the radios.

In Nepal, **STEM II** encouraged communities to discuss the topics of the life skills broadcasts among themselves. Anecdotal evidence indicates that family and community groups got together to listen to the programmes, for example, mothers and daughters. Further support was also available as some schools opened their libraries and created spaces for the girls to spend time together and find their teachers for questions.

In Pakistan, **Alight** worked with the education department, and instructed the 60 teachers at the NFE centres in Gilgit-Baltistan to listen to the programmes, tell children about them and to meet a few children each day to talk about what they'd learnt.

In Venezuela, strong community organizations have been used effectively in helping to disseminate learning materials to children, particularly in more remote communities. This has enabled reach to out-of-school children that might otherwise have been hard to access.

Teaching Aids, Content, and Guidance

The Ubongo Toolkits platform is being constantly updated with (free-of-charge) teaching aids, content and guidance for caregivers to use at home to support learning for kids, covering different subjects and themes.

CASE STUDY

Democratic Republic of the Congo (DRC) – IYDA

Working with community volunteers

Prior to COVID-19, the IYDA project had recruited 130 youth volunteers. These literacy volunteers are older youth who have graduated and, with some training, are able to provide support to youngsters in school with after-school tutoring sessions and extracurricular activities, in normal times.

These volunteers supported the radio learning of out-of-school youth. When the IRI was broadcast on the radio, these volunteers followed up to make sure the beneficiaries had been listening, had understood and had the opportunity to ask questions. They would also act as facilitators or 'fixers' as necessary. An example of this is where a student had no access to a radio, a volunteer would take the student to another home or village where they would have access. Youth volunteers were also able to pull work from the work manuals used by students in formal schooling for the listeners to use as homework in support of the IRI. They were able to provide feedback on what learners could and couldn't do and played an important role in monitoring and improvement.

The project was recognized when it received visitors from the government and the provincial ministry who saw the youth volunteers at work. They appreciated the value of the role these youth volunteers play and proposed to other actors to use the same approach. The officials noted the value of the feedback and interactions the volunteers were able to provide – something which other programmes did not have, making it much harder to know what was happening in the field.

CASE STUDY

South Sudan – GESS

Pivoting community radio in response to COVID-19

Children and adults listen to community radio broadcasts in South Sudan. *Photo: GESS*

'Our School' is played on 32 partner radio stations across South Sudan. In October 2020, GESS reached a total of 2,915 individuals from 52 school communities through family listening groups.

Before COVID-19, a key component of the established GESS project was an educational radio programme that supported girls' enrolment and learning in school and tackled some of the barriers that girls face. Small community groups were brought together to listen to a broadcast or to an audio recording (when timings were potentially tricky, or radio coverage was not sufficient). Groups of around 15 adults would discuss the messages in the broadcast. These community members would then enact and spread the key messages from the show more widely.

With COVID-19 and school closures, some messages became less relevant. The team quickly reviewed their materials and selected those episodes that retained most relevance – one about using the school holidays wisely lent itself to the new situation, for example. It was possible to pivot and piggyback broadcasts without starting from scratch.

'Our School' is broadcast once a week and repeated again the week after. Following the broadcast, the radio station encourages discussion via call-in. Parents, girls and others raise issues, make comments and ask questions. Trained facilitators steer the radio conversations. During COVID-19 these open discussions reflected concerns and advice relating to the pandemic and school closures, in addition to the behavioural change messaging around girls' education. Discussion reinforced the messages in the broadcast, enabling parents to hear, reflect and respond to other parents' and community members' concerns.

Different generations are now listening and learning together. GESS encourages families to listen together, and as a result more groups are being reached - girls, young women, parent/carers and others in communities. This was supported through distribution of radios and audio equipment, which have been shared and passed from one family to another. Listening together enables a greater level of sharing in understanding and a collective development of ideas around the value of educating girls.

Reflection task

Quality and support

When you designed the programme, did you do any kind of assessment or study to find out about the environment in which children will be listening? If you did, how did that affect the decisions you made about your programme? The questions below are intended to help steer your reflection.

If you didn't, how might you go about developing this contextual understanding now?" You might want to review the experiences of a couple of case studies to help reflect on this. For example, in South Sudan, the GESS project was able to piggyback and build upon partnerships and community networks that were well-established before the COVID-19 crisis. You can read the case study here. In Venezuela, the NGO Fe y Alegría already had existing radio programmes for adult literacy and some experience of working with early childhood and primary education. This meant they were able to adapt very quickly to a new radio audience. You can read the case study here.

- **What was done to help make the listening environment conducive for learning?** Is there any evidence of whether differences in listening environment has affected children's ability to listen – and to learn?
- **Were activities geared towards preparing children that were unfamiliar with the radio?** Were parents central to this? Did you notice discernible differences in need and success across ages or subjects?
- **Were attempts made to sensitize parents/caregivers to the purpose, schedule and expectations of educational radio broadcasts?** If so, what were the key messages and do you think this successfully created a more conducive learning environment for children? Have there been any unanticipated benefits (e.g., parents listening to and benefitting from broadcasts themselves)?
- **Was the radio learning time supplemented by anything else?** E.g., helplines/hotlines to assist with any problems related to accessing radio broadcasts?
- **Was piggy-backing other local initiatives a viable option to help reach more children and parents?** E.g., working with community groups, religious leaders, other civil society organizations or the private sector?
- **What were the key cost decisions, and how was value for money achieved?** What impacts did this have on reach, quality, and delivery and, ultimately, students' learning?

4.2.4

Teacher engagement

IRI programmes are not designed to replace the teacher. They are typically designed for use with both learners and their teacher together. They often include teacher training to prepare the teacher to facilitate radio learning effectively. In a context where the teacher cannot act as the facilitator, for example, during COVID-19 and school closures, it remains important to consider how teachers can be engaged in children's learning outside of school, through radio. Teachers need to feel that the radio programme is complementing their own efforts to meet learning goals for all children. Teachers' voices and experiences can add value to the radio programme. Below are five ways to include teachers in educational radio:

Involve teachers in design, development, production and evaluation of the radio programme

The day-to-day interactions that teachers have with pupils in the classroom provides them with a unique and critical understanding of education reality. Any radio programme should seek to bring this into the design, implementation and evaluation in order to best meet pupil needs. In Nepal, the project selected teachers for the four core subjects (maths, science, English and Nepali). These teachers had responsibility for preparing the content and were given support in the distance learning and radio methodology, being advised on when to summarize, the correct speed of dialogue, pronunciation and so on. The teachers were fully involved in discussion/ planning regarding appropriate content of the broadcasts during the workshops.
In some countries, teachers have been included in radio hotlines so they can answer questions posed by pupils related to their radio learning. Teachers are well placed to clarify misconceptions and aid understanding. In return, teachers strengthen their understanding of how children can learn outside of school, through radio.

Train teachers as facilitators of radio learning

Some radio programmes will be designed to be implemented with a facilitator, often a teacher. The teacher will support learners to participate in activities delivered through the radio programme. This does not require a skilled teacher and is well suited to untrained or volunteer teachers. The teacher will require some orientation, which could be provided through face-to-face training, a teacher radio programme before the learner programme, or a written guide. EDC provides more guidance on this from their vast experience training teachers and facilitators to support IRI.[25]

Involving teachers

Interesting examples of how to engage teachers in remote learning can be found by searching (*teachers) in the World Bank education continuity stories database.

The crisis has brought local teachers together, where we take turns to prepare and deliver lessons through the radio station.

— Shanti Kandel

a secondary school teacher from Nepalgunj, teaches lessons in Nepali at the local radio station every Sunday

Source: Nepal steps up remote learning during COVID-19

Encourage teachers to listen to radio content to support their own subject knowledge and pedagogy

In Sierra Leone, Leh Wi Lan School Support Officers were no longer going into school to coach teachers and instead set up WhatsApp groups for teachers professional discussion. They reminded teachers to tune into the educational radio programmes and then held a discussion on the content. By listening to radio, teachers are able to sharpen their subject knowledge, especially useful for teachers who are untrained or are not subject specialists in the subject they teach. They can listen to good examples of learner-centred pedagogy. A facilitated discussion forum enables teachers to reflect upon what they observed, what could work well in their own classroom and any challenges they might face.

Deliver teacher professional development over radio

Many teachers have been trained entirely through radio or have participated in one-off radio TPD sessions. Evidence shows radio broadcasts can successfully train teachers in student-centred pedagogy[26]. During COVID-19, Rising on Air developed a radio-based teacher professional development programme. It aims to deliver continuous professional development to teachers whilst schools are closed and builds skills and motivation, so they are ready to resume teaching when schools re-open. The course contains six modules and can be seen on the Rising on Air website (https://www.risingacademies.com/on-air-teacher-professional-development).

Help teachers monitor learning and build the bridge between home and school learning

During COVID-19 many projects recognised this as a desirable outcome but did not have the time or resources to address it. Maximizing learning time through fun and engaging opportunities both at home and at school is desirable in any context; it is all the more important when schools cannot provide required education to students either because they are temporarily closed or for other reasons. For a teacher to effectively support their student's learning and help them progress it is beneficial for them to be able to engage with radio learning taking place in the home. This might be on an individual level through marking pupils work and talking to them over the phone. Or it might be at a cluster level, perhaps holding a learning review with a parent representative from the class and/or community. Radio programmes can assist by making any learning data available to teachers; the teacher may review individual learner progress or it might just be a snapshot of what is happening nationally so they have an understanding of levels of participation and where there is learning progress and gaps.

Reflection task

The role of teachers in educational radio programming

Have you considered the following?

- COVID-19 has potentially changed the role of the teacher. What measures have you undertaken to define this change and convey your expectations of this changed role to your teaching force?
- Do your teachers understand the potential role remote learning could play in enhancing and reinforcing learning, even after the return to the classroom?
- Do your teachers understand which parts of the curriculum (SLOs) are covered by the radio programme in your country and what they need to do to reinforce them?
- Do they understand what will not be covered?
- Have you given or do you intend to give them guidance about how to accelerate learning so children can catch up on learning loss?
- How have you assisted them in that understanding? Is there a teachers' guide? Is there a module in your Continuous Professional Development programme explaining and supporting this? Will you introduce remote learning into pre teacher training courses?
- How do your teachers learn about what is being provided as support to communities and parents, so they gain some understanding of the learning taking place outside of the classroom and are able to refer to it in their own teaching?
- How have you or will you encourage teachers to see a critical new role for themselves and their profession going forward?

4.3

Assessment and evaluation

A successful educational radio programme should consider how it will use evidence to continuously adapt and improve. The Principles for Digital Development[27] are a useful reference for creating, adapting and improving radio programming.

4.3.1

Collecting and using evidence

Data gives you a picture of what is happening and where to look next to find out more and improve. If the data tells you children are not listening, you might want to find out why; if it tells you learning is improving in a certain location, you might want to find out why, and build on the success.

Reach and listenership

Radio stations can provide data on number of listeners and when they are listening. Unlike other technology platforms, though, it can be difficult to measure engagement with the content. Just because the radio is playing doesn't tell you who is listening, if they are learning and why (or why not). For this reason, feedback loops are advisable to better understand listener behaviours.

Feedback loops

Who is listening to your programme, who they are listening with, and what do they think about the programme? From this, you can assess whether your radio programming is achieving its objectives. Where possible, feedback should be sought from learners, parents/caregivers, teachers/school, community members and leaders. It can be captured during both design and implementation phases and the findings used to adapt the programme where relevant. During COVID-19, face-to-face interviews or focus groups were not possible in many contexts meaning feedback was collected remotely, through SMS surveys, phone calls or toll-free hotlines.

CASE STUDIES

Nepal – STEM II

In Nepal, the STEM II project ran periodic surveys. Data from the third and fourth assessments indicated that **70% and 76%** of respondents, respectively, did indeed listen to the project radio messages.

Liberia – Rising on Air

In Liberia, early initial results from a random control trial (with Rising on Air and Centre for Global Development) has indicated that **60%** of sampled youngsters are listening for an hour a day equating to two lessons – one each of two subjects.

Uganda – SESIL

Research on listeners in Uganda showed the poorest children were twice as likely *not* to have heard lessons.

Reflection task

Feedback loops

- Look at the Rising on Air Liberia case study. Consider when, how and with whom they built feedback loops. What is the impact of this?
- Have you been getting feedback on your radio programme? At what points did you get feedback? Are there more opportunities to get feedback and usefully use and share the feedback?
- Think about the diversity of your listeners. How can you ensure you reach as diverse a group as possible for feedback? How will you ensure all respondents are empowered to contribute feedback?

CASE STUDY

Uganda – SESIL

Being data-driven

In Uganda, the educational radio programme is continually adjusting based on weekly surveys and research. Two hundred calls per week are made by district support staff to households to monitor and evaluate the radio uptake. Questions are asked to better understand access to radio and seek parents'/caregivers' perceptions on children's learning and participation. Learner safety and wellbeing is an important aspect and parents are also asked about learner safety and violence in the community. The calls are randomized as far as is practical. The aim was to get feedback from as many people as possible as quickly and frequently as possible so findings can be used to improve the radio programme.

Survey results are presented in a weekly dashboard for review by the project and stakeholders. Radio content is developed for a full academic year so there is opportunity to use feedback to amend and improve the next batch of scriptwriting, to adjust programming, inform the Ministry's and local government's planning and decision-making etc.

Broadcasts have been changed to be more interesting to learners. This includes small, specific changes like the selection of stories appropriate to children's ages. Changes have been structural: the programme changed from an accelerated curriculum (grouping P1-P3 together) to an individual grade curriculum, as this was deemed more suitable to learners' needs. Over time, children's and parents' voices have been increasingly incorporated. Some children are included as presenters alongside the teacher, and answer questions rather than the teacher. A call-in has been added at the end of each broadcast. Parents mainly phone in and they can ask questions; questions are usually about the learning content presented. In the associated parents programme, calls can be challenging, e.g., what alternatives are there to beating children?

SESIL has not measured pupils' learning, but in terms of keeping children involved in learning, it has been successful. Children are understanding it and feedback from parents is generally positive. So, overall, the SESIL project is supporting the government's educational radio programme to achieve its learning objective.

4.3.2

Assessing learning

When radio is used for distance learning, it can be challenging to measure learning outcomes. Radio is effective for communicating expectations and setting assessment tasks or questions, but not so adept for diagnosing what learners can do and understand or for giving feedback to individual learners.

Educational radio may broadcast content at a specific time every day and follow a sequence. Without some form of accompanying individual assessment, there is a danger that some learners will just continue listening in sequence, regardless of whether they have understood the content or developed the skill.

For remote learning to be successful, content and delivery mechanisms need to contain elements of assessment and feedback so that learners remain motivated, are able to progress and don't feel isolated. For educational radio this can be built into the content or structure of lessons but then supplemented through other media, as in Venezuela.

CASE STUDY

Venezuela – Fe y Alegría

Formative assessment in Escuela en la Radio (School on the Radio)

Short formative assessment tasks have been included in each block of learning. Each small session of 15 minutes ends with wrap-up activities to allow the children to check their learning, draw conclusions, present an analysis, explain and summarize what they have learned, or capture it using strategies and resources such as concept maps or drawings. These small assessment exercises are captured in writing by the children.

Parents are encouraged during the radio programme to check these exercises with their children and to give them feedback.

In addition, a teacher is available once a week to answer questions and provide guidance on how the student should continue learning. Parents and children can either participate in these sessions in person as they are organized in the school, or they can call a national phone number that has been put in place for voice messages and calls, for questions or comments. Children were also able to prepare some homework and send them by voice message or WhatsApp. Teachers then responded and gave feedback and guidance for further learning.

A common approach is to do this via phone calls, and a resource developed by the Centre for Global Development can support you with this: Practical Lessons for Phone-Based Assessments of Learning[28].

A key challenge with using phones is that it is limited to households with a mobile phone and network coverage. This means that voices from the poorest households may not be included.

An alternative approach is through combing radio lessons and printed manuals with support from community-based learning volunteers as was successfully tried by the IYDA project in DRC.

Gathering evidence on learning is useful to inform the next phase of learning. If schools are re-opening or groups of learners are going back to school, understanding if and what they have learned can inform where the curriculum should resume. Similarly, evidence on what has worked can be used by government to develop a strategy and plan for resilience planning and continued remote or blended learning: more on this below.

FURTHER DEVELOPMENT

Practical considerations for assessing learning are further developed in Remote Learning Resource Pack 7: Assessment.

EXAMPLE

Sierra Leone – Rising Academies

Assessing learning using the phone – Rising Academies experience

Rising has done some assessment of numeracy and literacy over the phone in Liberia and elsewhere. In Sierra Leone, it found children to be 'moving forward', which was a better-than-expected result. More evaluation work is required, however, in order to attribute it to radio or other elements of intervention (SMS, phone tutorials, etc.). When the children get back to school more assessment of learning will be done.

For some simple examples of an assessment tool see Rising & EdTech Hub - How-to Guide: Delivering High Quality Radio Learning_(2020)

5

Managing your costs to achieve value for money

Radio is generally considered one of the most cost-effective distance learning modalities – particularly when compared to other technologies like television or digital (requiring investments in laptops or tablets, connectivity, electricity, etc.). It has the capacity to deliver at scale and to people with limited literacy. Fixed costs remain the same, no matter the number of listeners. Audio content can be repurposed and reused.

Does educational radio represent good value for money in your context compared to other compelling investment choices in the education sector? Below are some important considerations relating to radio costs.

Broadcast infrastructure

Radio broadcasting is well established in many countries. Broadcaster fees and the wider broadcast policy environment will impact on upfront costs. Depending on how open the broadcasting sector and communications regulatory environment will determine cost competitiveness[29].

Broadcast fees can become expensive when trying to provide national coverage. This is the reason Leh Wi Lan was only able to cover the costs of broadcasters whilst schools were closed, and it was no longer a priority when schools reopened.

A more sustainable model you might be able to consider would be to create a long term partnership with broadcasters where high quality content is provided for free, a large number of listeners are regularly tuning in and advertising provides a source of revenue so that broadcaster fees can be reduced. Another option could be to support your education ministry or department to build its own recording studio and radio station; this is what happened in Sierra Leone in response to Ebola. In Liberia, the government is now also looking at its own radio station.

CASE STUDY

Nepal – STEM II

Working in partnership to secure funding

In part Mercy Corps were able to re-allocate some project funds to pivot their COVID-19 response and new educational radio programme. A collaboration with Good Neighbors International helped increase the budget envelope, in addition to improvements to quality of the educational radio recordings.

Establishing partnerships with the radio stations was also critical. Mercy Corps reached an agreement with local radio stations to subsidize the broadcast costs. Broadcasters were persuaded that providing community messaging on health and safety during the pandemic was an essential social investment. Also persuasive was the rationale that supporting children's education during school closure was an important future investment, and by working with local teachers to create the lesson content it ensured both relevance and low-cost. These factors - alongside the fact that this content once created would be available for future use - convinced broadcasters to subsidize costs.

Radio content

The planning, writing, testing and production of radio content has upfront costs, including training the scriptwriters and actors. In Nepal, STEM II teachers were paid for their input on radio work. In Liberia, Rising Academies supported the Ministry of Education by being able to provide skilled curriculum writers who could deliver quickly and recorded the content in their own make-shift studio. This filled a gap whilst government sourced emergency funding. In Sierra Leone, the European Union (EU) provided the funds for content development workshops.

Once a series has been developed, the materials should be made open source and the lessons can be broadcast over and again with minimal recurrent costs[30].

The use of off-the-shelf lessons is the cheapest option, with costs increasing according to how much time and effort is required to make changes to editing the content, e.g., editing to align with curriculum changes, update, add culturally contextual references and music, etc., before testing and producing it. EDC[31] advises that cutting out content is cheapest, then overdubbing, and adding in new content the most expensive.

Supplementary materials and additional support

Printing and distribution costs are considerations for supplementary paper-based resources. Purchasing and distributing audio devices may also be important, with additional cost considerations for children with SEN.

You can think about what's already in place and consider piggybacking on other local initiatives as a good way of keeping distribution costs down and yet still be able to reach children and parents. Are you able to work with community groups perhaps, religious leaders, or other civil society organizations or businesses with an established local presence? Can some materials or information be distributed without physical delivery? Broadcast schedules for example can be communicated via SMS texts and community radio announcement to keep costs down.

CASE STUDY

South Sudan – GESS

Pivoting and pragmatism to achieve value for money

Finance for and the cost of activities played a significant role in decisions about what GESS would do in the face of COVID-19.

The costs - of both time and money - of producing high quality lessons and broadcasting them through radio was prohibitive (the early grades reading programme alone would cost over $3 million) and would have required GESS to sacrifice lesson quality or other parts of their programme to fund this. Decisions were taken that GESS was best placed to support the successful roll out of Government education radio programmes, rather than create their own materials. Priority was given to existing project components and making them resilient to school closures – focusing on teacher incentives, the purchase and distribution of radio equipment, and pivoting community engagement and radio programming to support the national effort.

GESS supported the costs of broadcasting and provided equipment to make listening possible in family and community groups. GESS found new ways to reach hard-to-reach communities using audio and trained local facilitators, thereby improving the quality for the listener. They distributed wind-up radios saving the costs of batteries. Families were encouraged to share equipment – passing radios from one to another.

Supporting national efforts of the Ministry of Education

If you are not already working within government, it is desirable to work with the Ministry of Education from the outset. This might include participating in government working groups, aligning to the national strategy and supporting the ministry by filling funding or implementation gaps they might have. This will help ensure alignment and avoid duplication of efforts and funds.

Where collaboration with government has not been possible at the outset, another opportunity is piloting and developing educational radio programmes that can then be absorbed by the Ministry of Education or indeed the skills and lessons learned can be incorporated into the ministry's national approach.

CASE STUDY

Nepal – STEM II

Supporting government to scale up from targeted success

In Nepal, the government itself turned to distance learning in response to the closure of schools and, given its head start, the STEM II team was able to assist. Having quickly taken the initiative to use radio as the mode of instruction, once they recognized it as the most viable means under the circumstances, STEM II was then able to share experiences gained. They worked collaboratively with government and non-government institutions through the National Distance Learning Cluster and the Regional Distance Learning Cluster to establish further solutions.

CASE STUDY

Pakistan – Alight

Complementary programming

In Pakistan, approximately 6 months into the pandemic, the Federal Ministry of Education and Professional Training (FMOFPT) contacted Alight to say that they wanted to broadcast the radio programmes to complement the remote learning programmes the Ministry were broadcasting on television. They signed an MoU with Alight and programmes have been broadcast in all provinces by Radio Pakistan – as "Radio School". Around the same time, the Literacy and Basic Education (L&BE) Department in Punjab requested that teachers in 11,000 nonformal education centres (managed by L&BE) use the radio programme to help children catch up and practice skills they might have forgotten and to prepare them for promotion to the next grade.

6

Integrating with other remote learning approaches

The challenge for educational radio – or any form of remote learning, is to engage, motivate and support children when they may be struggling, feeling isolated and tested by demands of self-study.

Throughout this pack solutions and options are presented that involve other forms of supplementary remote learning. What might be feasible in your context?

For **children in higher grades** who are learning more complex content, supplementary materials such as workbooks and reference materials may be particularly important to support their learning. In Sierra Leone, Leh Wi Lan had already distributed pupil handbooks aligned to the secondary school curriculum. Radio content was later aligned to this also. The handbook then allowed pupils a way of revisiting and practicing what was covered on the radio in their own time and at their own pace. These materials are also available on the ministry's 'E-learning portal' setup with free zero-data access during COVID-19.

Children with SEN may be wholly reliant on supplementary materials and support to engage with radio content. E.g. sign language interpreters, or written transcripts for children with hearing impairment. In Uganda, supplementary learning materials were provided in Braille for children with impaired eyesight.

All children and their caregivers are likely to benefit from preparation tips and schedule reminders, which may or may not be best delivered via radio, but also through SMS, WhatsApp messaging, local newspaper inserts, school, local council or shop noticeboards, etc. It is easy to underestimate this need. In Pakistan, despite a TV announcement by the Prime Minister, Alight found very few people initially knew about the national educational radio programmes. The Federal Ministry of Education and Professional Training (FMOFPT) subsequently rebroadcast them alongside a communications plan to ensure provisional education departments knew about them.

Replicating classroom interaction and enabling teacher-student feedback and encouragement through SMS, telephone hotlines, email, social media or virtual helpdesks, and video messaging are all good options. Teachers can be engaged to lead question and answer sessions. In Liberia and Sierra Leone, Rising on Air used mobile phones to support learning through SMS messages and a hotline for parents and pupils.

Young girls listening together to Muallim Radio, Alight Pakistan
Photo: Alight

These supplementary approaches are best achieved in partnership with other local stakeholders. OPDs, NGOs, health workers, local businesses etc., can all help to directly support children or distribute materials. The challenge arises in co-ordinating efforts so that timings align and they reach all children without duplication. If a radio lesson is materials dependent, the materials need to arrive on time, or risk confusing and potentially losing learners who feel they cannot keep up.

If materials are being piloted it is important to map out provision and ensure the same children are not receiving multiple learning platforms whilst others are receiving none. The Ministry of Education is well positioned to manage this co-ordination but can be supported by partners. In Sierra Leone, the Ministry of Basic and Senior Secondary Education established an Education Emergency Taskforce with 'continuous distance learning' as one of its 5 priority pillars with the purpose of co-ordinating partners to advise and support the government's COVID-19 response and recovery.

TIP

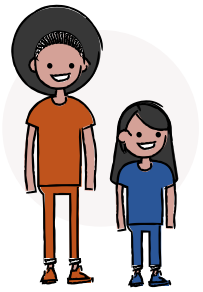
Innovations in delivering support materials to hard-to-reach learners during a pandemic

Deliver to small local businesses or local government offices that remain open, let communities know to travel and pick up their copies. Local bus companies might be able to help deliver, or mobile companies such as bottling companies, drinks deliveries or shop delivery trucks. Innovation might also take the form of low cost inserts in local newspapers or digitized materials if that works locally, and text-based communications.

7

Looking ahead

In 2020, countries around the world introduced remote learning as a crisis-response to the COVID-19 pandemic. For many children, the re-opening of schools will not mean an immediate or full return to pre-COVID-19 patterns of education. There are at least three scenarios in which remote learning has an important role to play. Learning gained from experiences during the COVID-19 crisis/coping phase can be applied to each of these scenarios.



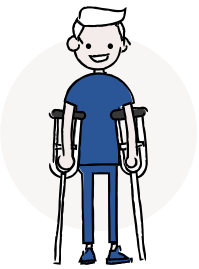
Using remote learning to help children back into school

As 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. Development of educational radio programmes during the crisis presents a significant resource which can be leveraged for use both in the classroom and remotely to support catch-up and mitigate learning losses. This may be most pertinent for specific geographies or particular groups of learners and may change over time.

The involvement of headteachers and teachers prior to re-opening is critical in preparing for re-opening. Understanding who had access to educational radio, and who did not, can underpin effective re-enrolment. Formative classroom assessment – this can be just an informal survey – will help teachers to adjust instruction to the students' level and to provide constructive feedback to students, which is crucial for learning recovery.

Large-scale assessment is best suited to support informed system-wide decision-making to support schools and students, including to inform resource allocation to schools and students who need it the most even in the context of tight fiscal space due to economic repercussions of the pandemic. High-stakes examinations, which are often used for certification of studies or selection to the next level of education, may need to be adjusted in the context of school reopening.[32]

In Sierra Leone, a teacher survey is gathering information on teacher awareness of the educational radio programme and how it is being used by pupils. This is being used to ensure teachers are better informed for when schools reopen.



Integrating or blending remote learning into education systems

Remote learning experiences gained during the pandemic have brought forward discussions on the potential for different teaching modes and methods within national education systems. Now that teachers and students have been exposed to new delivery modes and methods, such as educational radio, there is an opportunity, as the pandemic subsides, to integrate remote learning with face-to-face instruction.

Investments in educational radio programmes should not be wasted. Radio broadcasts can be repeated and made available via open access sites, such as online radio archives, so they can be easily reused.

There is an opportunity to think about new pathways for learning for children and young people, particularly for more marginalized or hard-to-reach children and young people.

Consideration will be needed to provide guidance and incentives for teachers and educators to integrate educational radio broadcasting into lesson plans once schools reopen.

CASE STUDY

Venezuela – Fe y Alegría

Planning for the future – reaching remote learners and sustaining blended learning

Fe y Alegría were able to produce Escuela en la Radio very quickly in response to the COVID-19 crisis. After almost a year, they are now in a process of review. To strengthen the design and delivery of what this engaging educational radio programme for early childhood and primary aged children, and to sustain it into the future, Fe y Alegría recognize several areas for deeper focus, and reflection:

- Monitoring and evaluation of the programme, both for access and learning outcomes.
- Involve families more in the design and implementation of the radio programme
- Further improve interactivity between children, teachers and the family
- Engage a larger number of teachers in designing and producing the content, including covering local languages to better reach indigenous communities. For this, Fe y Alegría recognize a teacher training need.
- Build teachers capacity to incorporate the radio lessons into their daily work, to complement their classroom-based teaching.

The media have communicated Escuela en la Radio, and multiplier effects are evident – other states and community radios have reached out to collaborate. By tailoring their offer to the indigenous communities' needs, and making sure part of what is offered is in relevant local languages, they will be able to reach more children from vulnerable groups and indigenous communities.

Post pandemic, this presents a real alternative to both reach out-of-school children and to consolidate a blended-learning offer for all children, with attendance in formal school and radio lessons in complement. In some locations, schools cannot have a teacher working every day, so radio lessons are potentially able to cover those days that a teacher is not available.

Fe y Alegría and UNICEF are now in conversation with the Ministry of Education to plan for the future. Broadcasting through the national radio channel would mean reaching all 24 states easily, and a blended learning strategy after the end of the COVID-19 crisis offers sustainable learning opportunities to more children.

CASE STUDY

South Sudan – GESS

Looking to the future

The Ministry of General Education and Instruction (MOGEI) plan is to reopen schools to all in April 2021 – two months into what would have been the new school year. Options under discussion include:

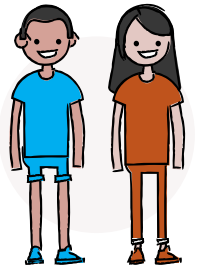
- Children may repeat a year.
- The first six months teaching might cover the lost year's curriculum and the second six months cover the next year's curriculum.
- The school timetable could be extended.

Expecting extra work from teachers is very difficult in current circumstances. Rocketing inflation has meant the value of teacher salaries has decreased very significantly. Many teachers have migrated to their home villages where they can grow crops to eat etc. to carve out a subsistence living.

Other solutions will most likely be needed and there may be an ongoing need for radio and audio supplements.

Responding to constraints experienced in 2020 will be important.

- Reaching learners where the community environment is unconducive to learning is one challenge. Patiently sitting, listening and then discussing learning points has proved difficult in some rural settings, particularly where education levels are low and the social value of education is not established. Pre-recorded programmes may be preferable to radio programmes, so that they can be stopped at any point for discussion or clarification.
- As the national radio stations' reach is not as good as it might be, further consideration should be given to the expanded use of local stations.



Remote learning to create resilience

The potential for new shocks to children's learning is ever present. Partial and ongoing school closures mean that remote learning will continue to be a necessity 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.

Educational radio has proven that it can be mobilized quickly to meet a global crisis and could continue to form an integral part of any national education system to help increase resilience to future shocks and emergencies. Many educational radio programmes aired during COVID-19 were not created from scratch; they built upon work that had already been started and were then re-purposed for the context of COVID-19. We suggest that education ministries consider using the extensive educational radio content developed during COVID-19 beyond the short term as has proven effective in DRC, Sierra Leone and Liberia.

CASE STUDY

Uganda – SESIL

In Uganda, SESIL's priority was to align with the Ministry of Education and Sports (MoES) and to support NCDC to develop materials for lower grades. These grades had been neglected in early discussions based on budget.

Working through NCDC meant the programmes could go nationwide and cover every child in the country. NCDC produced materials quickly.

It was important to support and not to compete with or undermine the government effort. It was decided it was better to do this than to pursue potentially higher international standard programme designs separately, which would not have the same reach as an activity of NCDC and MoES.

Over time, focus is on strengthening the system so the next round of materials are improved. This helps ensure good value for money, building the system and materials to support greater resilience to any future emergency response.

Reflection task

Are there things you could invest in now to better prepare for the future?

1. Review and further develop existing radio content. What is the ongoing process for updating? Where will this be stored for future use? Who needs to be involved?
2. Review educational radio capacity gaps and your essential design, development, and delivery networks (with broadcasters, script writers, producers, teachers); what investments are needed for this to work more smoothly?
3. How well did community mobilization work? Are there lessons to draw? Have potential collaborations and partnerships emerged that could be harnessed?

Key Resources

Get more guidance

- World Bank Group (2020), Education Radio Knowledge Pack

  http://pubdocs.worldbank.org/en/351561596545287034/EduRadio-KnowledgePack-WorldBank.pdf

- Rising Academies and EdTech Hub (2020), How-to Guide: Delivering High Quality Radio Learning

  https://docs.edtechhub.org/lib/DU497D8A

See and listen to example radio programmes

- UNESCO, National Learning Platforms and Tools

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

- Global Digital Library (GDL) Radio

  https://gdlradio.org/

- Rising Academies, Rising on Air

  https://www.risingacademies.com/onair

Read more research and expert advice

- EDC, Audio Now! Responding to COVID-19

  https://www.edc.org/audio-now

- Damani, K. and Mitchell, J. (2020), Radio: Rapid Evidence. EdTech Hub. 10.5281/zenodo.3948149

  EdTech Hub, 2020

- Humanity and Inclusion (2020), Guidance Note 4, TV and Radio Learning 10 tips for supporting TV and Radio lessons

  https://inee.org/system/files/resources/IE%20series%20of%20briefs%20%234%20tv%20radio_ENGLISH.pdf

- McBurnie, C. (2020), 'Using Interactive Radio Instruction to mitigate the educational impact of COVID-19: a curated resource list' (EdTech Hub Helpdesk Response No. 6)

  https://docs.edtechhub.org/lib/A3T2DQ4D

- GRID3 (2021), Using data analytics to improve radio coverage and enhance education access during disease outbreaks in Sierra Leone.

  https://grid3.org/news/radiocoverage-educationaccess-sierraleone

- Center for Global Development (2021), Teaching and Testing by Phone in a Pandemic.

  https://www.cgdev.org/publication/teaching-and-testing-phone-pandemic

- Center for Global Development (2021), Sierra Leone - Distance Learning During COVID-19 (Qualitative Research - Final Report).

  https://www.cgdev.org/sites/default/files/CGD-background-paper-sam-kpakra-sierra-leone-distance-learning.pdf

Endnotes

About UNICEF's remote learning Resource Packs

1. UNESCO, National Learning Platforms and Tools. Available from: https://en.unesco.org/covid19/educationresponse/nationalresponses
2. World Bank Group Education Radio Knowledge Pack. Available from: http://pubdocs.worldbank.org/en/351561596545287034/EduRadio-KnowledgePack-WorldBank.pdf

Why use radio for remote learning?

3. Ho and Thukral (2009) referenced in Damani, K. and Mitchell, J. (2020), Radio: Rapid Evidence. EdTech Hub. 10.5281/zenodo.3948149 EdTech Hub, 2020
4. UNESCO, Statistics on Radio. Available from: http://www.unesco.org/new/en/unesco/events/prizes-and-celebrations/celebrations/international-days/world-radio-day-2013/statistics-on-radio/
5. Burns, M., (2020) School, interrupted: 4 options for distance education to continue teaching during COVID-19, Global Partnership for Education: Education for All Blog. Available from: https://www.globalpartnership.org/blog/school-interrupted-4-options-distance-education-continue-teaching-during-covid-19
6. EDC – Zambia 'Days of the week' audio can be accessed here: http://idd.edc.org/resources/audio/days-week
7. Refer to McBurnie, C. (2020). *Using Interactive Radio Instruction to mitigate the educational impact of COVID-19: a curated resource list* (EdTech Hub Helpdesk Response No. 6). Available from: https://docs.edtechhub.org/lib/A3T2DQ4D for a full review of the benefits of educational radio.
8. UNESCO, Statistics on Radio. Available from: http://www.unesco.org/new/en/unesco/events/prizes-and-celebrations/celebrations/international-days/world-radio-day-2013/statistics-on-radio/
9. World Bank Group Education Radio Knowledge Pack.

Preparing educational radio programmes

10. Groeneveld, C., Kibga, E., & Kaye, T. (2020). *Deploying an e-Learning Environment in Zanzibar: Feasibility Assessment* [Technical Guidance]. EdTech Hub. https://doi.org/10.5281/zenodo.3941727
11. World Bank Group Education Radio Knowledge Pack. Available from: http://pubdocs.worldbank.org/en/351561596545287034/EduRadio-KnowledgePack-WorldBank.pdf
12. The Universal Design for Learning, available from https://www.cast.org/impact/universal-design-for-learning-udl
13. Groeneveld, C., Kibga, E., & Kaye, T. (2020). *Deploying an e-Learning Environment in Zanzibar: Feasibility Assessment* [Technical Guidance]. EdTech Hub. https://doi.org/10.5281/zenodo.3941727
14. Richmond, S., (2020), Repurposing-Established-Radio-Audio-Series, EDC. Available from: https://main.edc.org/sites/default/files/Repurposing-Established-Radio-Audio-Series.pdf
15. Principals for Digital Development - see: https://digitalprinciples.org/
16. Rising on Air - available from: https://www.risingacademies.com/onair
17. EDC, Audio Now - available from: https://www.edc.org/audio-now

Developing an effective radio programme

18. GSMA (2018) Women continue to be left behind: Sizing the mobile gender gap in 2018, Mobile for Development, available from https://www.gsma.com/mobilefordevelopment/programme/connected-women/women-continue-left-behind-sizing-mobile-gender-gap-2018/
19. The Universal Design for Learning, available from https://www.cast.org/impact/universal-design-for-learning-udl
20. Humanity and Inclusion (2020), Guidance Note 4, TV and Radio Learning 10 tips for supporting TV and Radio lessons. Available from INEE website: https://inee.org/system/files/resources/IE%20series%20of%20briefs%20%234%20tv%20radio_ENGLISH.pdf
21. Şendağ et al., 2012, cited in Damani, K. and Mitchell, J. (2020), Radio: Rapid Evidence. EdTech Hub. 10.5281/zenodo.3948149 EdTech Hub, 2020, available from: https://edtechhub.org/wp-content/uploads/2020/09/Rapid-Evidence-Review_-Radio-1.pdf
22. Christina, R. and Richmond, S. (2020), Learning at home in times of crisis using radio, EDC. Available from https://www.edc.org/sites/default/files/WB-IAI.pdf
23. McKenna (1993) looks at the role of humour and play in learning, while Rodero (2012), Şendağ (2018) and Elekaei (2019) discuss various ways in which stimuli affect attention and their effects on the learning process. For further information, see Damani, K. and Mitchell, J. (2020), Radio: Rapid Evidence. EdTech Hub. 10.5281/zenodo.3948149 https://edtechhub.org/wp-content/uploads/2020/09/Rapid-Evidence-Review_-Radio-1.pdf

Endnotes

24. See Ubongo's Response to COVID-19: Supporting Caregivers and Kids to Learn at Home, Blog, (2020). Available from: https://www.ubongo.org/ubongos-response-to-covid-19-supporting-caregivers-and-kids-to-learn-at-home/

25. Richmond, S., (2020), Repurposing-Established-Radio-Audio-Series, EDC. Available from: https://main.edc.org/sites/default/files/Repurposing-Established-Radio-Audio-Series.pdf

26. Ho, J., & Thukral, H. cited in McBurnie, C. (2020). *Using Interactive Radio Instruction to mitigate the educational impact of COVID-19: a curated resource list* (EdTech Hub Helpdesk Response No. 6). Available from: https://docs.edtechhub.org/lib/A3T2DQ4D

27. Principles for Digital Development, available from: https://digitalprinciples.org/

28. Noam Angrist, Peter Bergman, David K. Evans, Susannah Hares, Matthew C. H. Jukes, Thato Letsomo, 2020. "Practical Lessons for Phone-Based Assessments of Learning." CGD Working Paper 534. Washington, DC: Center for Global Development. https://www.cgdev.org/publication/principles-phone-based-assessments-learning

Managing your costs to achieve value for money

29. Damani, K. and Mitchell, J. (2020), Radio: Rapid Evidence. EdTech Hub. Available from: https://edtechhub.org/wp-content/uploads/2020/09/Rapid-Evidence-Review_-Radio-1.pdf

30. Richmond, S., The Case for Learning by Radio: Teacher support, wide accessibility and hands-on experience in the classroom, EDC. Available from: https://www.edc.org/sites/default/files/Case-Learning-Radio.pdf

31. Richmond, S., (2020), Repurposing-Established-Radio-Audio-Series, EDC. Available from: https://main.edc.org/sites/default/files/Repurposing-Established-Radio-Audio-Series.pdf

Looking ahead

32. Luna-Bazaldua, D, Levin V, Liberman, J, (2020), Learning in the time of COVID-19: the role of learning assessment in reopening schools. World Bank Education for Global Development Blog. Available from: https://blogs.worldbank.org/education/learning-time-COVID-19-role-learning-assessment-reopening-schools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