Document overview: The document provides a database of existing phone-based assessment interventions using SMS, IVR and phone calls and their key features. There are two tabs in the workbook:
(1) '**Focus on Student Assessment**' : This tab contains the interventions focused on student assessments using SMS, IVR and phone calls.
(2) '**Use SMS-IVR-Calls (not for SA)**' : This tab contains the interventions, programs, initiatives that focus on using SMS, IVR and phone call technologies but not necessarily for student

Column C- *Country* - Describes the country in which the intervention took place.
Column D- *Region* - Describes the region where the country is located. For example, Afghanistan is in the South Asia region (SAR).
Column E- *Scale* - Describes the scale at which the intervention was implemented, for example, whether in two villages or nation-wide. This column does not exist under the tab 'Use SMS-IVR-Calls
Column F- *Project/Platform Name* - Describes the name of the project or the platform used to implement the technology solutions.
Column G- *Implementor/Donor* - Describes the name(s) of the organistaion that implemented or sponsored the work on remote formative assessments.
Column H - *Year of Implementation* - Describes the year or duration during which the intervention was implemented.
Column I-K- *Short Message Service (SMS), Interactive Voice Response (IVR), Phone Calls* - Describes the technology solution used as a part of the intervention. For example, if an intervention used only SMS and IVR, the respective columns are marked 'yes'.
Column L- *Mode of Assessment (Synchronous/Asynchronous)* - Describes whether the assessment was synchronous or asynchronous. This column does not exist under tab 'Use SMS-IVR-
Column M- *Grade/Level* - Describes the grade and/or the level of education for which the intervention took place. For example, Grade 5/primary level.
Column N- *Number of Participants* - Describes the total number of participants who were a part of the intervention.
Column O - *Frequency of Communication* - Describes how frequently the participants were reached out as a part of the intervention, i.e., daily, weekly, bi-weekly etc.
Column P- *Information on Content Provided/Assessed* - Describes the context about the content that was provided to the participants as a part of interventon. For example, "curriculum aligned revision material in all subjects for primary and secondary learners on any device."
Column Q - *Subject/Skills Assessed* - Describes the subject area or the skills that were assessed as a part of the intervention. For example, numeracy including place value and number operations tasks. This column does not exist in tab 'Use SMS-IVR-Calls (not for SA)'.

Column R - *Modality of Content Delivery* - Describes how the content was delivered to the participants. For example, using SMS, radio, IVR etc.
Column S - *Assessment Tool Used* - Describes the name or provides details of the assessment tools used as a part of the intervention. For example, ASER tool. This column does not exist under the tab 'Use SMS-IVR-Calls (not for SA)'.
Column T- *Assessment Procedure* - Provides details on how the assessment was conducted using SMS, IVR and phone calls. This column does not exist under the tab 'Use SMS-IVR-Calls (not for SA)'.
Column U - *Language of Assessment* - Describes the langauge that was used to assess the participants. This column does not exist in tab 'Use SMS-IVR-Calls (not for SA)'.
Column V - *Results/Impacts/Outcomes* - Describes the impact/outcome of the intervention. This column does not exist under the tab 'Use SMS-IVR-Calls (not for SA)'. For countries where this column is blank, the intervention may still be ongoing or the sources did not provide this information. In such cases, the intervention can still be referred to, to see what was done.
Column W - *Implementation Challenges/Lessons Learned* - Describes the challenges that were faced during the implementation of the intervention and lessons learned as a result of it. This column does not exist under the tab 'Use SMS-IVR-Calls (not for SA)'.
Column X - *Link/Source* - Describes the link/source from where the information about the intervention
Column Y- *Additional Details* - Describes the additional information such as links that may be useful to know about the intervention.

S.No	Country	Region	Scale
1	Afghanistan	SAR	two villages

2	Africa (Rwanda, Kenya, Ghana, Ivory Coast)	AFR	No information
3	Africa (Uganda, Rwanda, and Kenya)	AFR	No information
4	Bangladesh	SAR	No information

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5	Bangladesh	SAR	Nationwide

6	Botswana	AFR	nine out of ten regions

7	Côte d'Ivoire	AFR	A rural village in the Adzopé Department

8	Ghana	AFR	No information
9	India	SAR	Nationwide

10	India	SAR	New Delhi

11	India	SAR	150 Villages in Uttar Pradesh

12	Kenya	AFR	No information

13	Kenya	AFR	105 Bridge schools located in major cities of Kisumu in the west, the capital city of Nairobi in the center, and the eastern coastal city of Mombasa
14	Kenya	AFR	No information

15	Nepal	SAR	No information

16	Niger	AFR	Dosso and Zinder regions
17	Nigeria	AFR	Edo State (1,500 public primary and junior secondary schools)

18	Nigeria	AFR	Sokoto state
19	Nigeria	AFR	Borno and Yobe states

20	Nigeria	AFR	No information

21	Pakistan	SAR	five urban and rural areas of Islamabad

22	Pakistan	SAR	three districts of Punjab
23	Papua New Guinea	EAP	Rural elementary schools in two provinces, Madang and Simbu

24	Sierra Leone	AFR	No information
25	United States	NA	No information

26	Zambia	AFR	Chipata and Lundazi districts of Zambia’s Eastern Province
27	Zimbabwe	AFR	No information

Project/Platform Name	Implementor/Donor
Mobile Literacy Project	Afghan Institute of Learning (AIL), UNESCO, U.S. Afghan Women's Council, Creating Hope International

Eneza Education	No information
Educate!	No information
Bangladesh Virtual Interactive Classrooms (BVIC)	Catholic Relief Services/Niger, (CRS/Niger), Tufts University, the University of Oxford, and Systéme d'Information sur les, Marchés Agricoles (SIMA), Örebro University (Sweden) and Bangladesh Open University, with support from the Swedish Program for ICT in Developing Regions (Spider) at Stockholm University

BBC Janala	BBC in partnership with the UK Department for International, Development (DFID)

No information	Center for Global Development, University of Oxford, University of Colombia, RTI International and Young 1ove

Allô Alphabet	Jacobs Foundation Fellowship, Institute of Education Sciences, U.S. Department of Education, Eneza Education

Viamo	Viamo
No information	Pratham

No information	Central Square Foundation (CSF) and Saarthi Education

Digital School Program	Pratham and Education Above All (EAA)

M-Shule	No information

No information	Center for Reinventing Public Education (CRPE), Innovations for Poverty Action (IPA), NewGlobe Education, Brown University
ElimuLeo	Precision Development (PxD), Young 1ove, IPA, and the Kenya Institute for Curriculum Development (KICD)

Low-tech Intervention for Foundational Education (LIFE)	Ministry of Education, Science and Technology, Local Govt, Teach for Nepal

Alphabétisation de Base par Cellulaire (ABC): Mobiles 4 Literacy	Catholic Relief Services, Tufts University, Oxford University, UC-Davis Hitachi Fondation CITRIS
EdoBest Program	Ministry of Education, Universal Basic Education Board (SUBEB), LGEAs, World Bank

Northern Education Initiative Plus (NEI+)	Creative Associates International, USAID, Education Development Center, Florida State University, Overseas Strategic Consulting, Value Minds, Civil Society Action Coalition on Education for All, Reading Association of Nigeria, Federation of Muslim Women's Associations in Nigeria.
Addressing Education in Northeast Nigeria (AENN)	FHI 360, USAID, Save the Children, Viamo, Nigerian Government, Local NGOs

EdoBest	No information

Broad Class: Listen to Learn	The Communicators (Pvt.) Limited, POWER99 Foundation, Marymount University

Bunyad: Mobile-Based Post Literacy Programme	Punjab Department of Literacy and Non-Formal Basic Education, Lahore; BUNYAD Foundation, Lahore; Dhaka Ahsania Mission Pakistan, Islamabad; Mobilink Pakistan; Nokia Pakistan
SMS Story	Australian Government, Voluntary Services Overseas, Papua New Guinea Department of Education

Rising Academy Network	Rising Academies
Mobile Learning for All (Cell-Ed)	Cell-Ed, Centro Latino in Los Angeles

Makhalidwe Athu	USAID, Creative Associates
Viamo	World Vision, Aktion Deutschland Hilft, Save The Children, ECHO & MoE

Year of implementation	Short Message Service (SMS)	Interactive Voice Response (IVR)	Phone Calls
2011	Yes	No	No

2013-present	Yes	No	No
No information	Yes	No	No
No information	Yes	No	Yes

2008-2013	No	Yes	No

2020-present	Yes	No	Yes

Feb-May 2019 Dec 2019-Feb 2020	No	Yes	No

No information	Yes	No	Yes
2020	Yes	No	No

2020	No	No	Yes

2019-present	Yes	No	Yes

No information	Yes	No	No

October-November 2020 (7 weeks)	No	No	Yes
2020 (two weeks)	Yes	No	No

November 2020-present	Yes	No	Yes

2008-2010	Yes	No	No
2018-present	Yes	No	No

2015-present	No	Yes	Yes
2018-present	Yes	Yes	Yes

2018-present	Yes	No	No

2014-present	No	Yes	No

2009-present	Yes	No	No
2013	Yes	No	No

May 2020-August 2020	Yes	No	Yes
2014-present	Yes	Yes	No

2015-2016	Yes	Yes	Yes
No information	No	Yes	No

Phone-b

Mode of Assessment (Synchronous/Asynchronous)	Grade/Level	Number of Participants (if mentioned)
Asynchronous	Adult education	50 participants (25 from each village)

Synchronous	Primary and Secondary	No information
Asynchronous	Secondary education	No information
Synchronous	Grade 9 - Higher Education	No information

Asynchronous	Adult education	No information

Synchronous	Grade 5	4,550 learners

Synchronous	Grade 5	No information

Synchronous	No information	For English: 500 For Math: 300
Synchronous	All	

Synchronous	Ages 2-11	300 children

Synchronous	Secondary education (Grade 8 and 10)	2,000 learners

Synchronous	Grades 4-8	11-13K learners

Synchronous	Grade 3, 5, and 6	8,319 students
Asynchronous	Primary education	No information

Synchronous	Grades 3-5	Baseline was conducted on 1800+ randomly selected students from full sample between Dec 2020-Jan-2021

Asynchronous	Adult education	6700
Asynchronous	Primary and Junior Secondary	No information

Synchronous	Grades 1-3	40,000
No information	Out of school children	3,700

Asynchronous	K-12	No information

Synchronous	Kindergarten, Grade 1	120

Asynchronous	adolescent girls	No information
Asynchronous	Grades 1-2	2,478

Synchronous	Primary	4,399 students from 25 government primary schools
Synchronous	Adult education	No information

Asynchronous	Grades 2-3	1,200
Synchronous	ECCE	10,000

ased Forma

Frequency of Communication
Daily

Self-paced
No information
No information

Weekly/Self-paced

Treatment arm 1: Weekly SMS with a "problem of the week"

Treatment arm 2: Weekly live phone calls from instructors supplemented these SMS text messages. These calls averaged 15-20 minutes in length and provided a direct walkthrough of the learning activities sent via text message.

No information

Daily
Daily

No information

Phone calls: daily (~20 mins) for first 3 weeks and then twice a week
SMS: weekly starting 4th week

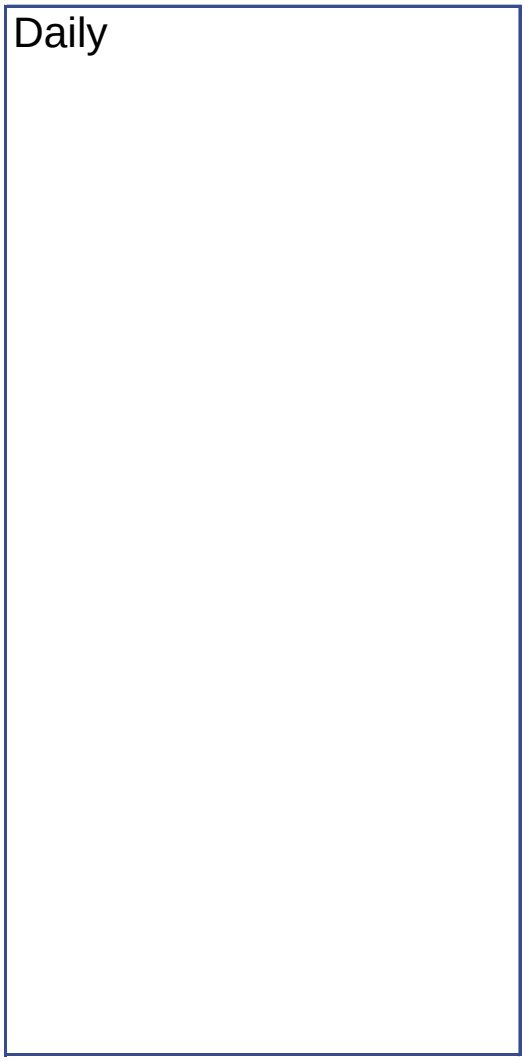
No information

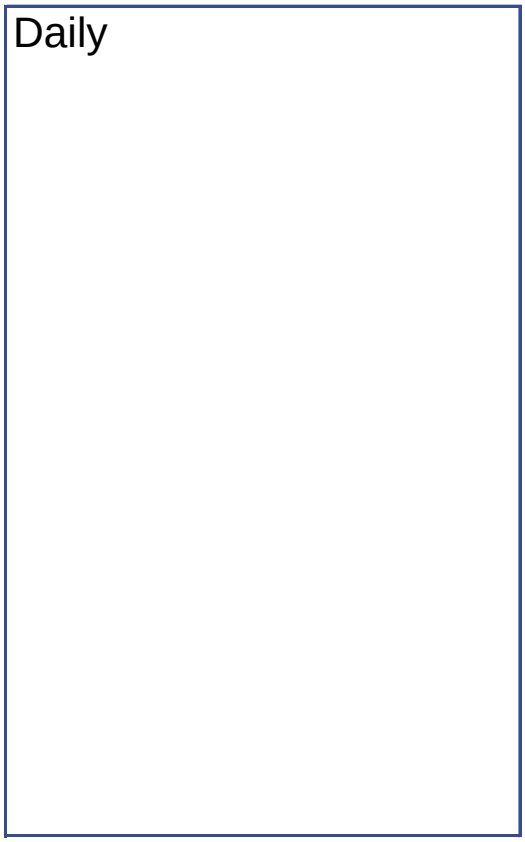
Weekly
No information

No information

Daily (Students attended classes five times a week, for three hours a day.)
No information

Four times a week
No information


Daily


Daily

Daily
No information

Three treatment arms: (1) SMS messages 2 times per week; (2) SMS messages two times per week plus live calls from a public teacher 1 per week on math and 1 per week in reading; (3) SMS messages two times per week plus live calls from a private teacher 1 per week on math and 1 per week in reading
Self-paced

Weekly- 3 messages a week
Once a week

ative Assessments (SMS, I

Information on Content Provided/Assessed

AIL teacher trainers developed the curriculum for the texting class from June-Oct 2011.

It provides curriculum aligned revision material in all subjects for primary and secondary learners on any device. A virtual tutor provides access to curriculum-aligned content in all subjects for learners in primary and secondary on SMS and on the Web.
Locally developed and relevant content
A learning management system (LMS) installed through mobile phones works to ensure an interactive, student-centered pedagogy. Using LMS, students interacted with their teachers and peers and could also self-assess, ask questions during classes, etc. Students took courses and learned lessons on various subjects, including the English language, through the provision of educational materials via SMS and seminars broadcast on television.

BBC Janala launched at scale in 2008 with a primary delivery mechanism of 3-minute audio lessons, along with occasional Dual-Tone Multi-Frequency-based quizzes. At the time, a new lesson that coincided with the content of the TV component would be launched every week.

In 2012, BBC Janala introduced a method whereby users can phone at any time to receive sequential lessons, with the system bookmarking users' progress and allowing them to pick up from their last completed lesson at any point. Once a user completes the course, they can go online to receive a report recognising their completion of the course.

No specific information on the content, but the study used data on the learning levels from the week 4 assessment to send tailored text messages to each student in the fifth week. For example, students who knew addition received subtraction problems to push them to a higher level of learning, whereas students who knew multiplication were sent division problems.

Designed and implemented an early literacy curriculum on an interactive voice response (IVR) system, Allo Alphabet. The curriculum targets phonological awareness and print-sound mapping, gradually increasing in complexity and difficulty, from simple phoneme and syllable awareness, to mappings between letters, words, and sounds.

At the start of each call, the system plays a welcome message, updates the user on their progress, and selects the next lesson based on the user's prior mastery of concepts. Each lesson begins with an explanation of the concept in that lesson and an explanation of how to respond.

For English: Used SMS and mobile phones: We offered a set of 20 audio English lessons delivered through mobile phones. Participants were given instructions in local languages, then they listened to a lesson recorded in English. They were able to test their speaking skills through a series of audio quizzes. We also sent out the lessons in two ways: - The first method was a “pull with a reminder.” We sent the participant an SMS message in the morning with a text version of the daily lesson. The participant was told to call in later that day to access the lesson via a voice message. - The second method was to “push” the lesson out automatically each morning through a phone call at a scheduled time. Participants were also able to call in to hear the content at any point in the day. **For Math: Used SMS**. We sent them one set of 10 math questions via SMS message.
Content was developed by Pratham based on Indian national curriculum

No information

Content is developed by Pratham and aligned with the national Indian curriculum as well as learners' contexts and learning levels.

Content is developed by an internal team in line with the Kenyan national curriculum and is available in English and Swahili.

Treatment group students in both arms of the intervention received weekly SMS text messages sharing practice problems that could then be referred back to during the calls themselves. The weekly SMS communication included a welcome message, a practice problem, guiding tips to master the topic, an additional challenge problem, and recommended mobile quizzes related to the content. All of the content for this intervention focused on mathematics. Students were in one of the three groups: (1) **Accountability -** five-minute teacher-student phone calls focused on accountability. Teachers were instructed to first gather information on whether the student attempted the SMS problems, answered the problems correctly, and completed the recommended interactive quizzes. Then, they discussed next steps including recommended additional mobile interactive quizzes and reminding them of the next time the teacher plans to call to check in. (2) **Tutoring** - 15-minute teacher-student phone calls focused on a mini-tutoring session in addition to basic	
No information	

The intervention is still ongoing and involves SMS messages and phone calls to support foundational skills in Math among Grade 3-5 students. The SMS includes multiple questions. Teachers/ facilitators adjust their teaching to the level of the child and would also practice with child additional questions (similar ones depending on the level of the child).
a) Number operations task: Reading out loud the numeracy questions by assessor in ascending order of difficulty: place value, addition, subtraction, multiplication and division.
b) Timed word problem task: Texting word problems to the student and asking them to read it out loud and solve them.
c) Explanation of the solution: the students explaining their work to check for understanding.

The program includes a mobile phone module as a complement to traditional literacy classes. The course taught students how to read and write in their native languages (Hausa and Zarma) and how to solve simple math problems. In addition, they learned about agricultural, environmental, and health issues.
The state is incorporating digital self-study activity packages that are distributed online (with zero data internet access) and via applications such as WhatsApp. These packets contain hundreds of practice problems for all grades for different thematic areas and answer keys with feedback for parents or caregivers. Also, the state is developing a multi-channel approach that includes lessons through audio files for remote learning. These remote lessons are tailored to different grades and designed in an interactive way that includes health and sanitation messages.

The project strategy focuses on strengthening the technical and administrative capacity, commitment, and accountability of federal, state, and Local Government Education Authorities (LGEAs) to provide practical English and mother-tongue-based Early Grade Reading (EGR) teaching and learning literacy, numeracy, and life-skills.
No information

4 hours of daily content; created 7000 virtual, Zoom-based classrooms (30mins daily); 20min math & literacy digital self-study activity packets & storybooks for independent study; homeschooling support via 45-min learning guides with parent-led activities, distributed via WhatsApp & online.

The content covers all basic skills in curriculum (including literacy, numeracy, English and life skills). Audio lessons guide teachers and students through activities, games, and exercises that teach carefully organized knowledge and skills which are culturally, linguistically and contextually relevant to marginalized populations. Audio lessons are led by a “radio teacher” who leads students through content and activities, pausing throughout the program to allow student responses. The one-hour broadcasts (30 minutes of interactive lessons and 30 minutes of health programming, stories, and games) are aired daily.

Text messages containing literacy materials are sent via SMS to these mobile phones 6-8 times a day, and program participants are instructed to read the messages, practice writing them in their workbooks, and answer questions. The goal is to improve literacy retention among newly literate youths, particularly among young rural women, by delivering post-literacy materials via mobile phone.
The project consisted of delivering daily short stories and complementary lesson plans via SMS for teachers designed to introduce children to reading English and followed an underlying phonics and key word based methodology. The aim of the project was to improve phonics through content delivery in a context where books are unavailable.

SMS reminders asked students to tune in to the radio broadcast two times per week. The twice-weekly 15 minute telephone tutorial with a teacher covered content from the radio broadcast.
Focus is on teaching literacy, language, and job skills, via three- minute micro lessons. They study through interactive text and audio voice lessons narrated by real teachers -- whether using an app or simply calling in. No internet or data plan is required. Cell-Ed also provides learners a live Cell-Ed coach who follows and supports each learner using texting and even phone calls to nudge, motivate, and provide feedback and further instruction.

Creative Associates developed reading materials in ChiNyanja (the predominant local language). Over nine months, participant households received three SMS on their mobile phones each week. These three messages comprised a short story (e.g., 160 characters each). Children would read the stories with their families and respond to a question about the story. In addition, participants could call in for a pre-paid recorded voice message (IVR), which included comprehension questions and a recording of the story itself.
10 min/week IVR modules were prepared

VR, Phone Calls)

Subject/Skills Assessed	Modality of Content Delivery	Assessment Tool Used (if any)
Literacy	**SMS.** The class met 6 days a week for an hour each day using Afghan literacy textbook. The students first learned the alphabet and sight words. Then they were given mobile phones and taught how to use them. Initially, in the classroom, teachers texted questions to students and students texted answers back. In addition, student	No information

All subjects	SMS	**Kenya:** SMS quizzes and Shupavu Mock Papers
Socioemotional skills (such as communication, teamwork, creativity, and grit) and enterprenuership training	SMS, phone calls and radio	No information
Literacy	SMS, radio, TV, tutorial classes.	No information

English (Literacy)	IVR	No clear information about the tool, but the project developed its own, bespoke English testing tools specifically designed to be administered in dispersed settings with its target audience, in order to measure competence changes amongst service users.

Numeracy	SMS and phone call	ASER tool (adapted to phone assessment)

Literacy: Targeted phonological awareness and print-sound mapping, gradually increasing in complexity and difficulty, from simple phoneme and syllable awareness, to mappings between letters, words, and sounds. In this study, users only experienced the first 2 of 8 units, which ask learners to match words or syllables that share a sound or a combination of sounds, to choose the	IVR. The system provides instructions, questions, and feedback via voice messages recorded by an Ivorian researcher, with answers input via touchtone (DTMF). The users call in to a specified number, which immediately ends the call and calls the user back to avoid fees for the users.	No information

English (Literacy)	**For English:** Used SMS and phone calls **For Math:** Used SMS	Audio quizzes
literacy, numeracy, and life-skills	SMS	No information

early grade numeracy skills	No information	No information

Language (English, Hindi), Mathematics	SMS and phone call	No information

No information	No information	No information

Numeracy/mathematics	SMS + phone calls	No information
Numeracy (Number operations tasks)	SMS	No information

Numeracy	SMS and Phone call	ASER tool (adapted to phone assessment)

Literacy and numeracy	SMS	No information
No information	SMS and WhatsApp	No information

literacy, numeracy, and life-skills	Lessons are broadcasted by TV, radio, and IVR to students four times a week. A pedagogue follows up through live calls to check on the engagement of students. Parents can also request a call from a teacher if needed by responding to an IVR message	No information
No information	No information	No information

Literacy and numeracy	WhatsApp and Online	No information

Literacy and numeracy	Radio	No information

Literacy	SMS	No information
Literacy	SMS	EGRA

Numeracy - counting and simple arithmetic **Literacy -** vocabulary, spelling, and aural comprehension.	SMS and Phone call	A mix of Early Grade Reading and Mathematics Assessments (EGRA and EGMA), ASER assessments, and items used orally in in-person assessments in urban India.
Literacy, Job-skills	SMS, IVR	No information

Literacy	SMS and IVR.	EGRA
Literacy and numeracy	IVR	No information

Assessment Procedure	Language of Assessment
Each student received a handset (that ran on the standard 2G system), a phonecard, and a notebook. Teachers sent daily texts to the students, who read the incoming message and responded via return text message, demonstrating reading comprehension and writing skills. Students attended twice-monthly evaluation sessions to monitor progress and receive assistance, in addition to attending classes. Primarily, the messages comprised three types of questions: a) fill in the blank type sentences which students had to rewrite with the word filled in; b) open-ended questions to facilitate critical thinking and writing skills;	Dari

Rwanda: quizzes aligned to the Rwandan curriculum **Kenya:** Mock papers are designed to be as much like the real exam as possible (KCSE and KCPE exams). It is comprehensive, meaning that it tests all that has been taught in the previous classes	No information
Learning assessments are provided through SMS	Local lannguage
SMS was used to answer questions during lectures by students. They also were able to provide interaction through voice calls.	No information

No information	English

Student learning outcomes were collected by directly assessing the child or children over the phone: a) Number operations task: Reading out loud the numeracy questions by assessor in ascending order of difficulty: addition, subtraction, multiplication and division; b) Timed word problem task: Texting word problems to the student and asking them to read it out loud and solve them; c) Explanation of the solution: the students explaining their work to check for understanding.	English

The IVR plays a pre-recorded audio message with the question and response options. Questions have either two or three responses, depending on the type of question, with most questions having three options. Students receive feedback upon responding; correct responses prompt new questions, while incorrect ones provide a hint and an opportunity to respond again to the question, focusing their attention on a particular part of the word or syllable. If incorrect, they receive the same question again, with a hint message explaining the concept or prompting the student to focus their attention on a particular part of the word or syllable. After one or two wrong attempts (depending on the question	French

Tested children's speaking skills through a series of audio quizzes.	English
Conducted through activties sent to children via SMS. Each SMS targeted a competency.	One of the 11 mother tongues

After parents were asked a few background questions, they were requested to pass the phone to the child for administering the phone-based assessment. Enumerators were trained to and were tasked with calling the parents, seeking their consent for the survey and for assessment of the child, and it was explained to them that these assessments would not adversely affect the child in any way.	No information

Remote assessments were conducted for students who could only read words. The assessment tool was sent to students as an image via WhatsApp, and facilitators assessed the students over a phone call.	English and Hindi

Student progress is tracked through continuous assessment. Students interact with the platform in a series of responses to questions that determine how the learner is progressing through a learning pathway. M-Shule uses a notification system to encourage learners to return to the application.	English and Kiswahili

A phone-based assessment took place in December 2020 with 2,552 students. It was conducted by hired enumerators and consisted of 14 questions, covering two predetermined sections on (1) core numeracy, and (2) curriculum-aligned standards based on what students would have been learning had schools been open and what they were supposed to be learning as part of the phone-based interventions. The curriculum-aligned questions varied across grades while the core numeracy section and survey questions were the same across grades. In addition, in-person assessments were conducted in February and	No information
The two-week pilot sent trial math exercises to children to assess their skill level and, thereafter, sent them math exercises pitched to their abilities. As children mastered exercises of a certain difficulty, they received more challenging exercises. Conversely, if a child was struggling with their current set of exercises, they received easier exercises.	No information

As a part of the phone survey (Baseline assessment), a short Math test was administered (5 questions). This test is based on the ASER test and was adapted for phone delivery (Angrist et. al 2020). The test includes place value, addition, subtraction, multiplication and division questions that Grade 2 students are expected to answer. As per Angrist et al. (2020), student learning outcomes were collected by directly assessing the child or children over the phone: a) Number operations task: Reading out loud the numeracy questions by assessor in ascending order of difficulty: place value, addition, subtraction, multiplication and division. b) Timed word problem task: Texting	No information

No information on assessment procedure but the students were tested (1) in the beginning (January of each year), (2) at the end of the course, and (3) the following January (sought to determine whether the acquired literacy and numeracy skills had endured over time).	Hausa and Zarma
Text-based assessments are distributed via SMS or WhatsApp. The state is developing interactive quizzes delivered to parents' mobile phones. These quizzes are aligned with the state curriculum, and they interrelate with other resources such as digital storybooks and lesson guides delivered to parents.	No information

No information	English, Mother-tongue
SMS and IVR-based practice modules aimed at parents alongside their children	No information

Formative quizzes sent via SMS or WhatsApp.	No information

During short pauses built into radio scripts, teachers and students participate in program, reacting verbally and physically to questions and exercises posed by radio characters.	English

Monitoring the learners' participation in the mobile-based programme is done by the web-based system which is used to send text messages to the learners. In addition, newly literates respond to questions/multiple-choice-questions (MCQs) or tests sent by SMS, and the results of these tests are summarised and recorded in the web-based system. Learners also report to literacy centres on regular bases. A monthly exam is given to learners at learning centres to track their retention rate and the development of their literacy skills.	Urdu
Project included a baseline reading assessment, mid-point lesson and classroom observations, and an end-point reading assessment.	English

Learning assessments are provided through SMS for a small subsample. For the rest, it's an in-person assessment.	English
SMS or IVR quizzes are prompted to participants. A correct response to the question triggers the beginning of the next micro-module, whereas an incorrect response leads to a repetition of the same micro-module until the user succeeds. Content is delivered at the learner’s pace and is able to track their responses and scores.	Spanish

Assessment was done by phone through a questionnaire that tracked how many days did parents and children use the tools to read together.	ChiNyanja
Using simple IVR formative assessments & retention surveys. For example, they hear a nursery rhyme about what sounds animals make, and then they are asked, “What sounds does this animal make?” So, they check via these mini assessments if students have listened and are still present.	Ndau

Results/Impact/Outcomes	Implementation Challenges/Lessons Learned
83% of students were able to pass two levels of AIL's literacy course in just 4 months. This would normally take 18 months.	One of the challenges with programs such as these is the acceptance of mobile phone usage in the Afghan culture. Mobile phones are seen as a potential threat to Afghan culture. People are afraid of what may happen when their family members have unlimited access to communicate with people all over the country.

Reached over 6 million offline users at 8,000+ schools in Kenya, Ghana & the Ivory Coast	No information
No information	No information
No information	No information

BBC Janala has data that evidences a significant correlation between English language competency and income. The service estimates that their users experience a 20-25% increase in income as a result of attaining an intermediate level of spoken English, compared to someone who speaks no English at all. 1. 56% of participants have shown competency increases 2. 28 million people have used the service on more than one platform - 80% of which are rural - 80% of which come from the lower 2 socioeconomic groups 3. Impressions of 100 million 1/2	No information

The study found statistically significant learning differences between treatment and control groups. For the combined phone and SMS group, there was a 52 percent decrease in the share of students who could not do any numerical operations on an ASER test. The gains in average numerical skill were 24 percent, which translates to 0.29 standard deviations. For the SMS-only group, the study saw positive, statistically significant effects roughly half this size: a 0.16 standard deviation gain on the ASER test.	No information

Although the Allo Alphabet IVR was designed for a single user, adult supporters adapted their usage of it to fit their desire for collective support for children's learning, much like other ICTD work on users' appropriation of technologies beyond the intended usage. We find that adults engage in both simultaneous and sequential use of the IVR with their child.	No information

• People who registered tried at least one lesson: 91% • People who continued after the first lesson: 94% • People who finished 10 or more English lessons: 62% • People who finished all English lessons: 7%	**For Math:** The main challenge of rolling out this project on a larger scale is students are not allowed to have cell phones at school. This is even more challenging for boarding school students who only have access to phones during vacations.
No information	No information

No information	1. Only a limited set of competencies can be assessed through phone-based assessments. This is especially true for early grade students, for whom assessments are typically conducted verbally, face-to-face, and with help of visual aids. 2. There are tradeoffs in terms of the length, scope, and the type of assessments that can be administered through a phone. 3. There is a high likelihood of non-response. When the caller reaches the parent, they might not be at home or the child might not be willing to participate in the phone-based assessment. 4. To ensure that the child was comfortable while replying to the

On average, each facilitator speaks to about 35 students every week. Over 1000 students in DSP (89% of whom are women) are in touch with their facilitators twice a week. 70% of students complete the activities sent each week.	a) About 10% of students **don't have access to a phone** and have, therefore, not been able to benefit from the COVID-19 response outlined above. b) Another **30% of students live further away from the village center** and have not been reachable since the beginning of this lockdown. c) Additionally, **parents and spouses of students were initially unsupportive of the messages and phone calls made by facilitators due to cultural factors**. Since most learners are young women, some of whom are married, long phone calls or those made during the evening were a challenge.

M-Shule has been able to support the continuation of education for many, particularly during the pandemic. The team has found that the learners have begun to start using MShule as their primary means of education; therefore, the organization recognized the need to provide additional support to the parents: such as daily learner schedules and subject support, as well as developing digital literacy resources for parents.	No information

It was seen that although calls increased student perceptions that teachers cared, accountability checks had no effect on math performance up to four months after the intervention and tutoring decreased math achievement among students who returned to their schools after reopening. This was, in part, because the relatively low-achieving students most likely to benefit from calls were least likely to return and take in-person assessments. Tutoring substituted away from more productive uses of time, at least among returning students.	No information
No information	No information

Baseline Results: Overall, only 1.2 percent of grade 3 students, 3.8 percent of grade 4 students and 6.2 percent of grade 5 students were able to answer all questions on the mathematics assessment correctly. Only 16 percent of grade 3 students, 27 percent of grade 4 students and 38 percent of grade 5 students answered 3 or more questions correctly. Analysis by question type shows that student competencies are in fact increasing perceptibly by grade. However, even by grade 5, most students struggle with division, and to a lesser extent, 2-digit multiplication. At the other end, nearly 35 percent of Grade 5	No information

Examining changes to reading and writing and maths scores over time, students, overall, increased their test scores from 0 to, on average, between 2 and 3, meaning that they could read and write sentences and complete addition and subtraction problems. However, the writing and maths test scores of ABC villages were between 20% and 25% higher than those of non-ABC villages in the short-term, and 20% higher in the longer-term (that is, seven months after the end of the programme). Although both groups experienced a decline in literacy and numeracy skills during the six months when classes were	No information
Going forward, and with World Bank support, the Edo Government intends to scale up EdoBest to cover both primary and secondary education and to integrate the EdoBest@Home program so that students can learn anytime, anywhere. By blending learning at school and learning at home and using digital technologies, Edo State is at the forefront of reimagining education.	No information

No information	No information
No information	No information

No information	→ Not enough data yet on whether the program is producing sufficient learning outcomes → Breaking the culture of falsifying data; putting in place QA processes → How to onboard more pupils into the program as fast and effectively as possible? (JSS next) → Low parental engagement in urban areas (even compared to remote); much more community sensitization still needed (physically going to marketplaces etc); but it's eating into their resources. When schools resume they will really have to strengthen their urban school-

The Program provides a high-quality interactive radio program to children attending formal, non-formal, religious schools and out-of-school children. The program has benefited 300,000 children in 2,386 classrooms, 3,400 heads and teachers in 838 schools, 172 educational supervisors, and 22,679 parents and community groups. Due to it being publicly broadcast, it reaches 10 million children who are currently not in school. 60 percent of the program beneficiaries are female	No information

Ten literacy centres were established in three districts of the Punjab province and 250 learners completed the programme. Remarkable results were found regarding learners' achievements during the mobile-based programme. For example, at one of the districts, Sialkot, the test results from the first month of the mobile-based programme showed that 90% of the learners were in the 0–50% range and none made it to the 70–100% range; however, results from the last month of the programme indicated only 14% of the learners fell into the 0–50% range and 39% of the learners reached the 70–100% range,	1. Religious and cultural constraints and the authoritative attitude of males keep females from receiving education. As far as this particular programme is concerned, family members – especially males – were initially very negative and hostile when they were approached to allow their young female family members to participate in the programme. They strongly disagreed with the idea of giving mobile phones to young women and doubted the effectiveness of the programme's approach. In order to overcome this problem, the trust the community had in the BUNYAD Foundation, a local NGO partner, was a great source
The study found that children who did not receive the SMS Story were approximately twice as likely to be unable to read a single word of three sub-tests (decodable words, sight words, and oral reading). In other words, the intervention almost halved the number of children who could not read anything compared with the control schools.	No information

Three main takeaways: 1. Teacher phone calls had no effect on test scores 2. Private school teachers worked harder than public school teachers—but to no avail 3. Learning assessments by phone may not be reliable.	Difficulty of contacting children through phone because phones (1) are often owned by parents who need them for other things; (2) are not always turned on (sometimes only turned on during the weekend or during the market days); (3) are sometimes owned by neighbors and friends (which made it hard to contact the child); (4) are sometimes not valid anymore.
Data from the two field tests suggest that Cell-Ed has the potential to fill a need for on-the-go learning required by working adult learners. Cell-Ed's interactive micro lessons provide an accessible ramp to digital learning for adults who need to study in short 5 to 10 minutes bursts. They are also accessible for learners with little to no digital literacy or experience with learning online.	No information

The MA project had a positive impact on three of the five EGRA subtasks evaluated. The study found positive and significant impacts for non-word reading, oral reading fluency (ORF), and reading comprehension, these effect sizes are, respectively 0.2, 0.27 and 0.23.	No information
No information	No information

Link/Source	Additional details
https://uil.unesco.org/case-study/effective-practices-database-litbase-0/mobile-literacy-programme-afghanistan-afghanistan	http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/Yacoobi.pdf

https://enezaeducation.com/#impact	
https://www.experienceeducate.org/covid-19-response	
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.625.5535&rep=rep1&type=pdf	

https://www.gsma.com/mobilefordevelopment/resources/bbc-janala/	

https://www.csae.ox.ac.uk/materials/papers/csae-wps-2020-13.pdf	

https://dl.acm.org/doi/pdf/10.1145/3314344.3332504	

https://viamo.io/case-studies/classroom-palm-hand-lessons-via-mobile/	
https://drive.google.com/file/d/1KAPEfOLASE6qxwsIL-7oTlpL7mTv0J6Q/view	

https://www.centralsquarefoundation.org/wp-content/uploads/2021/06/ASSESSMENTS-IN-THE-TIMES-OF-COVID-19.pdf	https://riseprogramme.org/blog/phone-based-assessments-education-systems

https://resources.educationaboveall.org/sites/default/files/ngo/attachments/2020-08/09.%20Pratham.pdf	

https://resources.educationaboveall.org/sites/default/files/ngo/attachments/2020-08/07.%20M-Schule.pdf	

https://www.edworkingpapers.com/sites/default/files/ai21-432.pdf	
https://2uy7xawu7lg2zqdax41x9oc1-wpengine.netdna-ssl.com/wp-content/uploads/2020/11/2020_Q3_PAD-report.pdf	

https://openknowledge.worldbank.org/bitstream/handle/10986/35384/Learning-in-the-Time-of-COVID-19-Insights-from-Nepal.pdf?sequence=1&isAllowed=y	The intervention is designed as a randomized control trial/ impact evaluation.

https://uil.unesco.org/case-study/effective-practices-database-litbase-0/alphabetisation-base-cellulaire-abc-mobiles-4	
https://blogs.worldbank.org/education/learning-despite-crisis-case-edo-state-nigeria	

Hale, J., & Udeh, A. (2020, June 8). NEI Plus COVID-19 Remote Learning Response. BEC EdTech Webinar.	
Koester, E. (2020, June 8). Addressing Education in Northeast Nigeria (AENN): COVID Response. BEC EdTech Webinar.	

http://pubdocs.worldbank.org/en/685691598013656403/WorldBank-EdTech-Team-Knowledge-Pack-MobileDistance-HybridEducationSolutions-version2	

https://www.globalinnovationexchange.org/innovation/broadclass-listen-to-learn	

https://uil.unesco.org/case-study/effective-practices-database-litbase-0/mobile-based-post-literacy-programme-pakistan	
https://blogs.worldbank.org/edutech/promoting-literacy-mobile-phones-rural-papua-new-guinea	

https://www.cgdev.org/publication/teaching-and-testing-phone-pandemic	https://www.cgdev.org/blog/tech-plus-teachers-one-on-one-phone-tutorials-didnt-help-kids-learn-better-during-school-closures
https://edtech.worlded.org/wp-content/uploads/2018/12/Cell-Ed-Report-final-012319-2-1.pdf	

https://pdf.usaid.gov/pdf_docs/PA00SZJS.pdf	
https://pubdocs.worldbank.org/en/685691598013656403/pdf/WorldBank-EdTech-Team-Knowledge-Pack-MobileDistance-HybridEducationSolutions-version2.pdf https://www.wvi.org/stories/zimbabwe/viamo-ensures-education-continues-midst-crises	

Progr

S.No.	Country	Region	Project/Platform Name
1	Afghanistan	SAR	Sandbox
2	Africa (Senegal, Malawi, and Rwanda)	AFR	All Children Reading

3	India	SAR	Gyan Vani and Gyan Dhara
4	Peru	LAC	No information
5	Philippines	EAP	All Children Reading

6	South Africa	AFR	FunDza

ams/Platforms that use SMS/I

Implementor/Donor	Year of implementation	Short Message Service (SMS)	Interactive Voice Response (IVR)
No information	No information	No	No
USAID and Human Network International	No information	Yes	No

Indira Gandhi National Open University (IGNOU)	2001-present	No	No
MOE	2020	Yes	No
USAID and Education Development Center (EDC)	No information	No	No

FunDza Literacy Trust and Turn.io	No information	Yes (using WhatsApp)	No

VR/Phone calls (but t

Phone Calls	Grade/Level	Number of participants (if mentioned)
Yes	Secondary	No information
No	No information	No information

Yes	Higher Education	No information
No	K-12	No information
No	No information	No information

No	No information	No information

he focus is not on student ass

Frequency of communication	Information on content provided/assessed	Modality of Content Delivery
Daily	Each teacher spent approximately 6.5 hours a day on the phone, doing approximately 35-40 calls per day. Each call was approx 10 mins in length. Teachers talked to their own students (rather than a 'call centre' model). Each teacher had between 100-150 students. Calls were to focus on supplementing the national distance learning curricula	Radio., TV, Feature phone
No information	No information	No information

Daily	Higher education subjects	Radio Lessons
No information	Developed by MOE	TV, Radio, and Aprendo en Casa (online platform)
No information	No information	No information

No information	No information	No information

essment)

Link/Source	Additional details
https://docs.google.com/document/d/e/2PACX-1vRhEnDXEbzZdbbC8SrkBqmfaya1yb1ApX7WX7kx2viDRdYBd7aOKEN2-4V33VuK2HGOOpc1d6E2l0n3/pub	Different countries are pursuing variations on the theme of a 'helpline' using phones, based on local need and variations Coordinating with the government is instrumental. SMS and WhatsApp groups (where smartphones are available) are being leveraged as the basic modalities, in addition to phone-calls. In some areas, phones or even smartphones are common, which gives more avenues to explore (e.g.BRAC Tanzania are exploring Whatsapp groups). It is more ideal to distribute phones rather than using the parents' phone(s). Getting data on whether the helpline is working is difficult, for example on parental engagement and follow-through. Phone-calls for feedback have been the primary mode, but having a data-sharing agreement with a telecoms partner would enable much more 'real time' and reliable data. On-boarding the teacher is very important, for
No information	Focus is not on student assessment. Focus is to collect and analyse the student assessment results and aggregate them into a dashboard, allowing for real-time oversight.

https://www.ignouonline.ac.in/gyandarshan/ https://www.ignouonline.ac.in/gyandhara/	No information
http://pubdocs.worldbank.org/en/685691598013656403/WorldBank-EdTech-Team-Knowledge-Pack-MobileDistance-HybridEducationSolutions-version2	No information
No information	In the Philippines, EDC used SMS to enable the transmission and analysis of student National Achievement Test (NAT) scores at the school level. This helped school leadership become better informed about NAT data to guide decisions about addressing student learning gaps.

No information	FunDza’s goal is to promote reading and writing amongst teens and young adults. They have launched an initiative that leverages WhatsApp, the country’s most-used communications platform, as a way of connecting with their learners. WhatsApp allows FunDza to offer new reading content. The user needs to message “hello” to 0600 54 8676 on WhatsApp to unlock the content, which includes local stories, plays, blogs and poems all written for a young South African readership. There are plans to add reading challenges and competitions in the future to help drive engagement levels.