



# Adapting the Early Grade Reading Assessment (EGRA) for Students Who are Deaf in the Philippines

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# — Context, Demand, Challenges in Adapting an Early Grade Reading Assessment (EGRA) for Deaf Learners (EGRA-Deaf)

# PARAMETERS OF USAID PROGRAMMING IN THE PHILIPPINES



## **US International Basic Education Strategy (2019-2023)**

### **“Reinforcing Education Accountability in Development or READ Act”**

Goal: Education systems enable all individuals to acquire the education and skills needed to be productive members of society

#### **Objectives:**

- Improve learning outcomes
- Expand access to quality basic education for all, particularly marginalized and vulnerable populations



## **USAID Education Policy (2018)**

- Children and youth, particularly the most marginalized and vulnerable, have increased access to quality education that is safe, relevant, and promotes social well-being.
- Children and youth gain literacy, numeracy, and social-emotional skills that are foundational to future learning and success.
- Youth gain the skills they need to lead productive lives, gain employment, and positively contribute to society.
- Higher education institutions have the capacity to be central actors in development by conducting and applying research, delivering quality education, and engaging with communities.



## **US-GPH Basic Education Bilateral Agreement (2021-2025)**

- Improved literacy, numeracy and socio-emotional skills for children in the early grades
- Improved second chance education, employment and life skills outcomes for out-of-school youth
- Strengthened education governance

# NATIONAL ASSESSMENT OF STUDENT LEARNING (NASL)



## Assessment Reforms

Inclusion of learners with special educational needs in all national assessments

Prescription of appropriate test accommodations

Provision of the student's test performance profile

# BUILDING ON GABAY RESULTS

**Tripled  
enrollment** of  
learners who are  
blind or deaf in  
project sites



**Over 5,000** original  
learning materials  
produced, e.g., Braille  
books, Filipino Sign  
Language dictionary

**100% of special  
education  
teachers**  
practicing skills  
from training



# EGRA ADAPTATION

- USAID's Gabay adapted EGRA using Filipino Sign Language (FSL)
- To determine reading performance of Filipino deaf children in Kindergarten to Grade 3 from three project sites
- A baseline EGRA-Deaf was designed in 2019 and implemented in early 2020.
- The original plan was to run an endline EGRA-Deaf by 2022.



# TECHNICAL CHALLENGES

- No existing standardized reading assessment in Filipino Sign Language (FSL)
- Geographic/ cultural variations in sign language requires involvement of different groups of deaf educators
- Needs highly trained examiners and/or scorers who have strong language skills in English and FSL
- Teachers of deaf children have limited training on FSL



# CONTEXTUAL CHALLENGES

- Extreme Weather Events:  
Tropical Cyclones/ Typhoon
- Geologic Events: Volcanic  
Eruption and Earthquakes

# FACTORS INFLUENCING DESIGN OF REMOTE EGRA-DEAF

- Realism/ implementability: Few sign-language-proficient enumerators
- Geographic dispersal and isolation: 1500 cities and municipalities
- Uneven, unreliable internet
- Cost to implement/ Affordability to the government

- Developing and piloting adapted EGRAs both for in-person and remote administration

# EGRA ADAPTATION IN-PERSON ADMINISTRATION

## Adaptation workshop + pretest

- Review of proposed subtasks and items
- Pretest of assessment with 20 students

## Pilot

- Five schools with 90 students

# ADAPTATION WORKSHOP STAKEHOLDERS

- USAID Gabay
- USAID/Philippines
- The Philippines Department of Education (DepEd)
- Special Education (SPED) centers in the Philippines
- The Philippine Federation of the Deaf
- De la Salle-College of Saint Benilde
- University of the Philippines

# ADAPTATION WORKSHOP + PRETEST

| Subtasks                       | Kinder | Grade 1 | Grade 2 | Grade 3 |
|--------------------------------|--------|---------|---------|---------|
| Receptive Vocabulary           | X      | X       | X       | X       |
| Expressive Vocabulary          | X      | X       | X       | X       |
| Sign Language Comprehension    | X      | X       | X       | X       |
| Letter Name Recognition        |        |         | X       | X       |
| Familiar Word Reading          |        |         | X       | X       |
| Sentence Reading Comprehension |        |         | X       | X       |

# KEY LESSONS FROM ADAPTATION WORKSHOP AND PRETEST

- Enumerators who are deaf are critical to administration
- English as language of assessment
- Revision of items

# PILOT

- Six schools with 90 students in kinder through grade 3
- Assessors included:
  - Enumerators who are deaf and fully fluent in FSL
  - Scorers are hearing and proficient in FSL

# KEY LESSONS FROM PILOT

- Regional variations
- Language complexity
- Item-level analyses

# REMOTE EGRA

- EGRA tool for students who are deaf and hard-of-hearing was developed under the USAID Gabay project in the Philippines (2019)
- USAID/Philippines asked ACR-Asia to develop a prototype of the EGRA tool that could be conducted remotely, without requiring an assessor to travel to the site in person
- ACR-Asia conducted a 2-phase proof-of-concept test in April-September 2022

## USAID funded

- ACR-Asia

## Partners

- Resources for the Blind, Inc. (RBI)
- RTI International (RTI)
- School-to-School International (STS)

# PILOT ACTIVITIES

## Consultations + Literature Review

- Key informant interviews
- Focus group discussions
- Literature review
- Prototyping

## Pretest

- Five students, focus on user experience

## Alpha Test

- 28 students in three schools
- Three scenarios of proctor support

## Beta Test

- 177 students in 18 schools
- In-person proctor support
- Varied assessment format

# CONSULTATIONS AND LITERATURE REVIEW

- Individuals and representatives of groups with expertise in:
  - Deaf education in the Philippines
  - Administration of assessments for students who are deaf or hard of hearing
  - Administration of remote or asynchronous learning assessments
- Existing assessments for students who are deaf or hard of hearing
- Technologies
- Potential challenges
- Lived experiences of students who are deaf or hard of hearing

# ASPECTS OF REMOTE EGRA

| Aspects                                | Decision Points                         |
|----------------------------------------|-----------------------------------------|
| <b>Synchrony</b>                       | Asynchronous administration             |
| <b>Technology</b>                      | Tablet                                  |
| <b>Software</b>                        | Tangerine for assessment administration |
| <b>Instructions for EGRA</b>           | Video on tablet                         |
| <b>(In-person) Proctor during EGRA</b> | Teacher                                 |

# PROCTOR SUPPORT SCENARIOS

| Scenario Aspects                       | Scenario 1:<br>Proctor | Scenario 2:<br>Proctor +<br>remote FSL<br>support | Scenario 3:<br>Proctor + on-<br>site FSL support |
|----------------------------------------|------------------------|---------------------------------------------------|--------------------------------------------------|
| (In-person)<br>Proctor FSL<br>fluency  | Non-fluent             | Non-Fluent                                        | Fluent                                           |
| (Remote) FSL<br>support<br>or helpdesk | Not present            | Online real-time                                  | Not present                                      |

# RECEPTIVE VS. EXPRESSIVE SUBTASKS

- Letter name recognition and familiar word reading
- Receptive – learners are shown a video of an assessor signing the letter or word and asked to select the correct letter or word
- Expressive – learners are shown a letter or word and asked to produce the sign for the letter or word and record their response

# FUTURE EXPLORATIONS

- Validate assessment
- Modality
  - Formative assessments
  - Summative assessment
  - Modules for remote learning
  - Self-assessments/self-guided practice



**USAID**  
FROM THE AMERICAN PEOPLE

# Incorporating an adapted EGRA for students who are deaf onto a digital platform

2023 CIES Conference

February 19, 2023

Washington, DC

Carmen Strigel, Stephen Backman,  
RTI International

# Digital Platform for EGRA - Tangerine

- Brief history of Tangerine:
  - Original EGRA conducted face-to-face using paper-based instrument – Challenges with paper-based instrument
  - Tangerine was developed to replace paper-based instrument with a digital tool – Still administered face-to-face
  - Different renditions of Tangerine developed to address specific needs – Tangerine: Teach, Tangerine: Coach
  - Tangerine for self-administered and remotely administered EGRAs
    - changes in UI and administration protocol

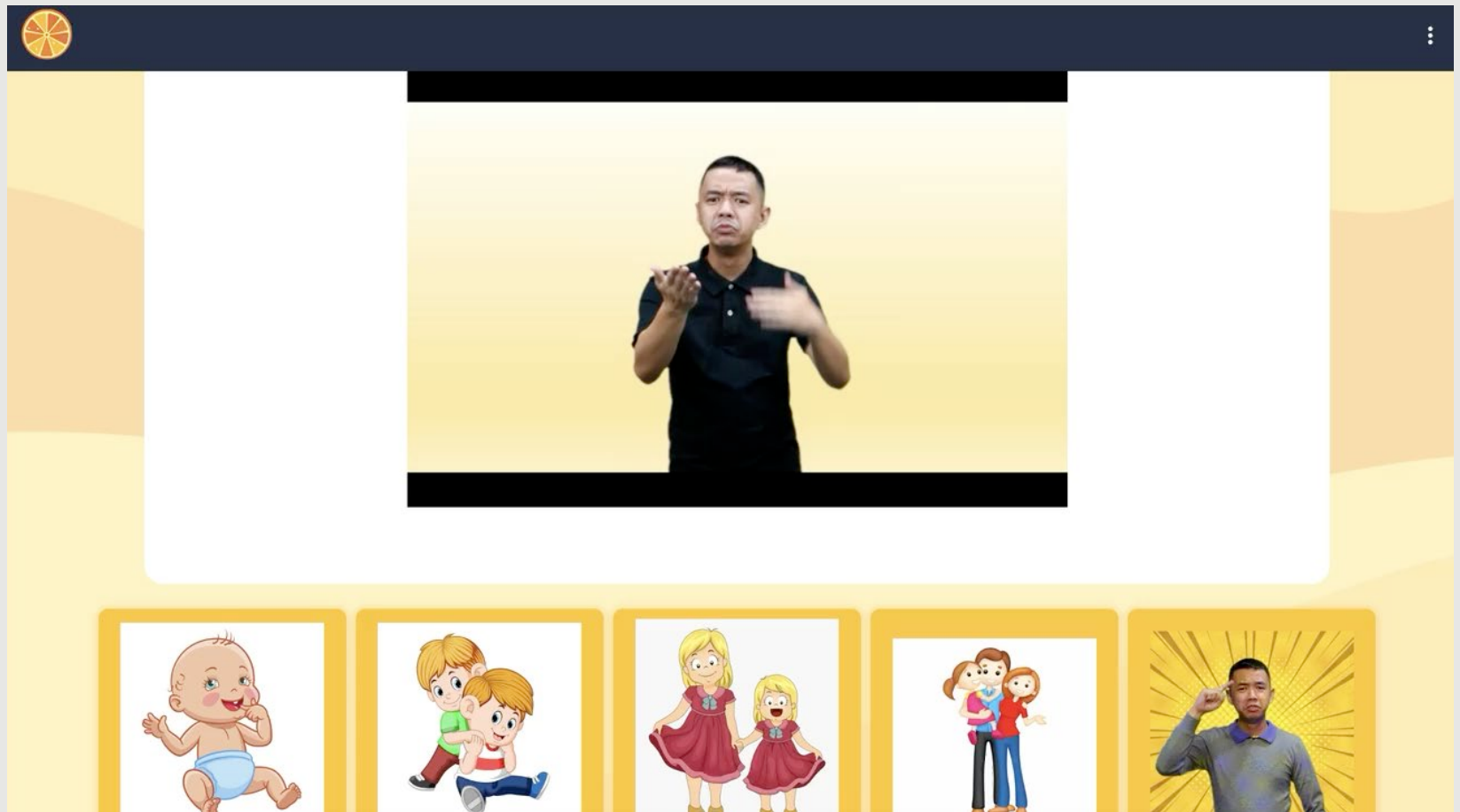
# Tangerine for Self-Administered EGRA/EGMA

The screenshot shows the Tangerine app interface. At the top is a dark blue header with an orange slice icon on the left and a three-dot menu icon on the right. Below the header is a row of ten yellow buttons labeled with digits 0 through 9. In the center is a large white rectangular input field. To the right of this field is a small yellow icon of a USB drive. At the bottom left, there are two cartoon characters: a yellow question mark and an orange character with a purple bow. At the bottom right is a large yellow button with a right-pointing arrow.

# Adaptations required on Tangerine for remote administration

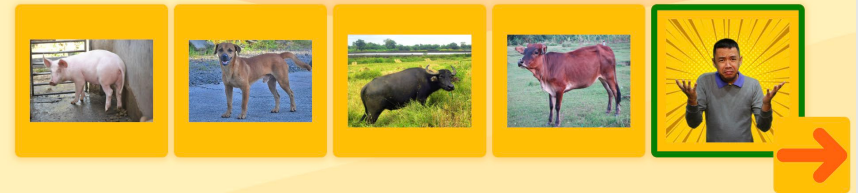
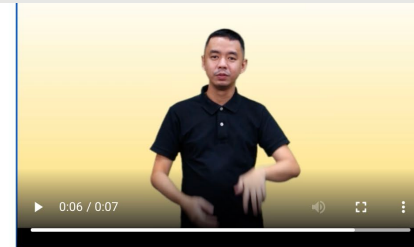
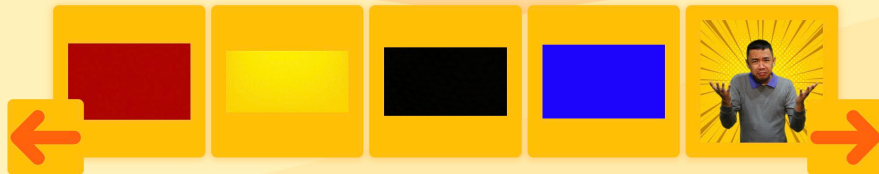
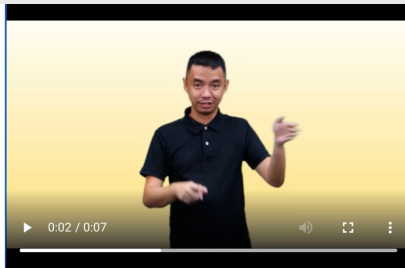
- Problem:
  - No face-to-face interaction requires instructions to be communicated directly from the application itself
  - Early grade learners cannot read instructions written on the application
- Solution:
  - Create video instructions embedded in Tangerine
- Problem:
  - Deaf children cannot hear video instruction
- Solution:
  - Create video with instructions in sign language

# Video instructions in Filipino Sign Language



# Adaptations: Recording receptive tasks

- Problem:
  - No assessor present to record responses/answers
- Solution:
  - Receptive tasks – Provide multiple choice options for student to select from (student taps on response item)



# Adaptations: Changing icons, pictures, and buttons

- Problem:
  - Icons and pictures not understood by students
- Solution:
  - Pilot tested different icons and pictures to determine which are best understood by students



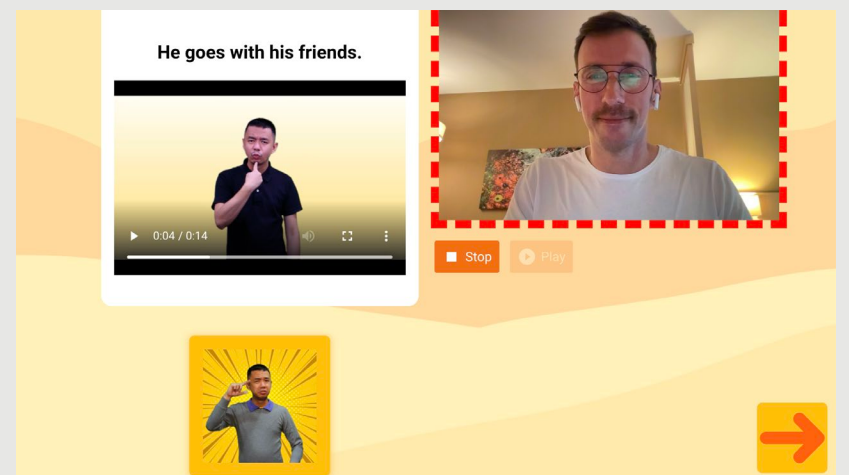
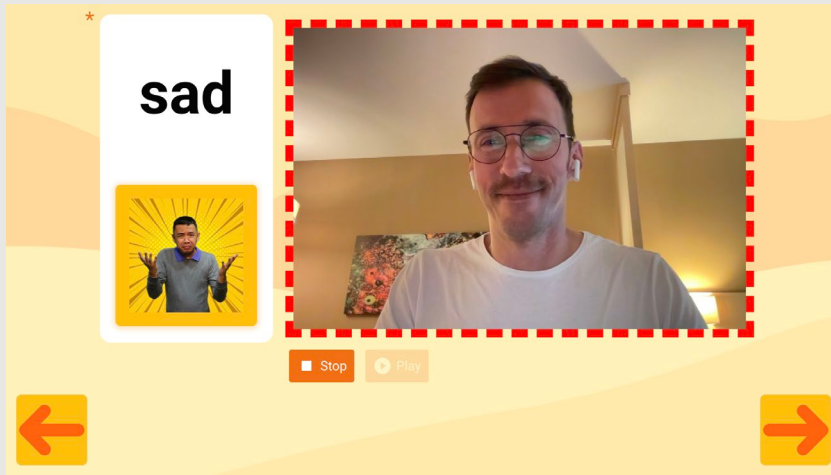
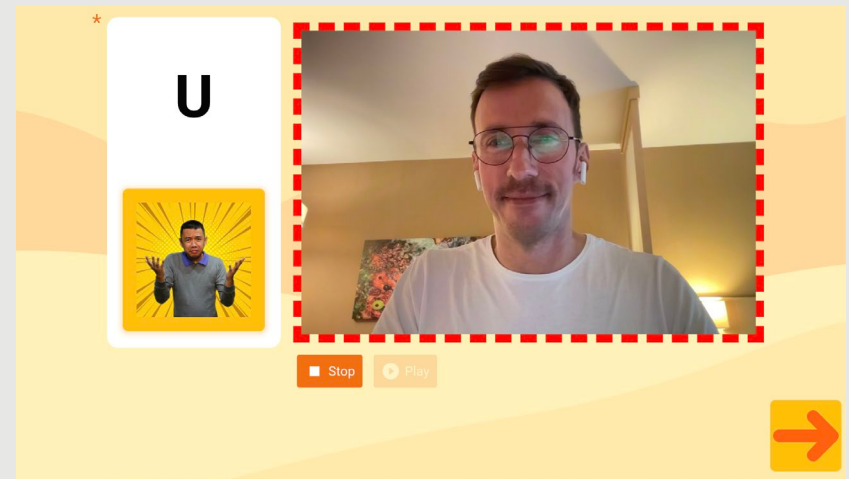
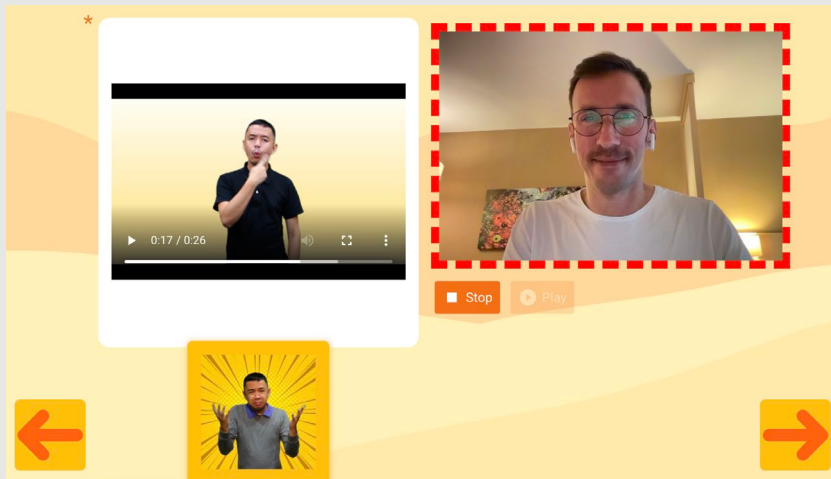
# Adaptations: Changing icons, pictures, and buttons

- Problem:
  - Size and position of certain buttons/prompts not utilized properly
- Solution:
  - Pilot tested different sizes and positions to determine which are best utilized by students

# Adaptations: Recording expressive tasks

- Problem:
  - No assessor present to record responses/answers
- Solution:
  - Expressive tasks – Create a video screen with “record” button for student to record video response in sign language

# Recording expressive tasks with video response



# Adaptations: Students record responses in video

- Problem:
  - Students' sign language responses cannot be seen in the video capture
- Solution:
  - Create larger video box for responses
  - Create playback function for student to verify their response was captured correctly

# Adaptations: Video recordings of student responses

- Problem:
  - Some videos are difficult to see, due to poor lighting, student outside of video frame, etc.
- Solution:
  - Utilize an in-person proctor with specific instructions on where to position the student for video responses (background, lighting, height of tablet and student, etc.)

# Adaptations: Asynchronous scoring

- Problem:
  - Scoring is conducted asynchronously, remotely after the assessment is completed. Scorers need to access the correct video responses to each question.
- Solution:
  - Create a dashboard which links the correct video response to each task. Easier access for scorers.
  - Create a time setting that only saves video recordings beyond a certain length (to avoid multiple video files for partial/no responses)

# Dashboard images



# Thank You

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