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)

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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

100% of special education teachers practicing skills from training

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

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

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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	Pretest	Alpha Test	Beta Test
• Key informant interviews • Focus group discussions • Literature review • Prototyping	• Five students, focus on user experience	• 28 students in three schools • Three scenarios of proctor support	• 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
Synchrony	Asynchronous administration
Technology	Tablet
Software	Tangerine for assessment administration
Instructions for EGRA	Video on tablet
(In-person) Proctor during EGRA	Teacher

PROCTOR SUPPORT SCENARIOS

Scenario Aspects	Scenario 1: Proctor	Scenario 2: Proctor + remote FSL support	Scenario 3: Proctor + on-site FSL support
(In-person) Proctor FSL fluency	Non-fluent	Non-Fluent	Fluent
(Remote) FSL support 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

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

2023 CIES Conference

February 19, 2023

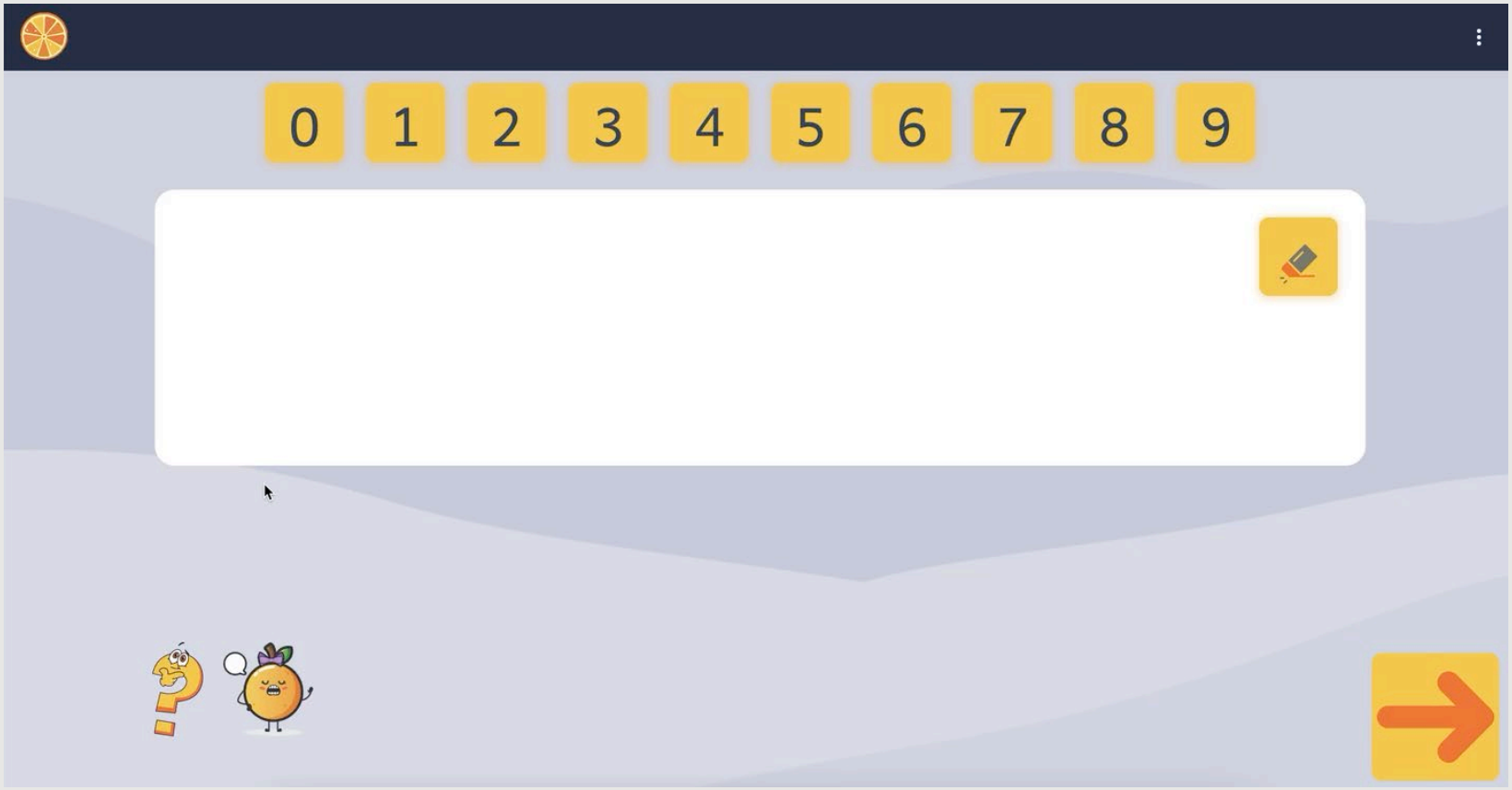
Washington, DC

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

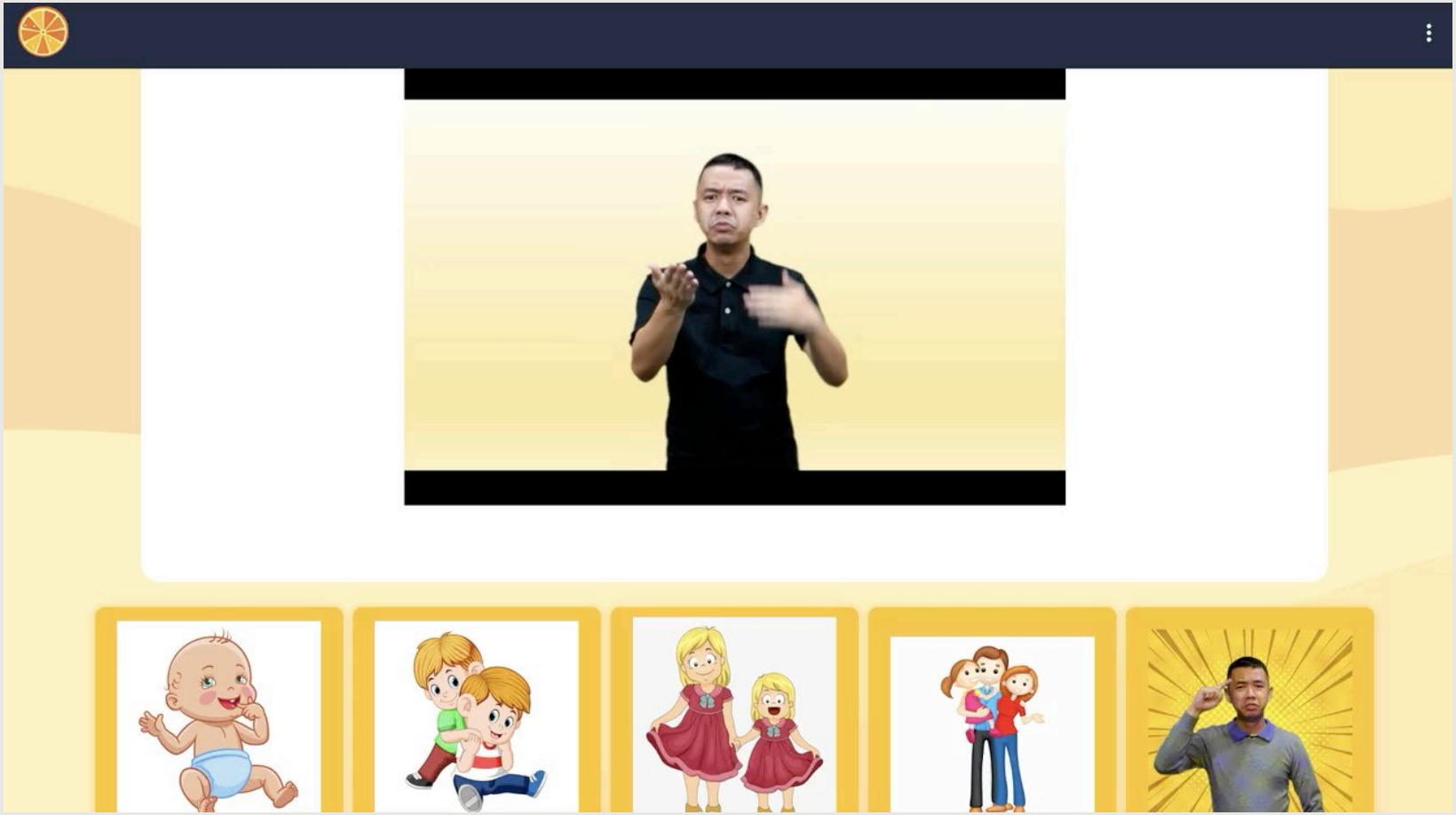
Tangerine for Self-Administered EGRA/EGMA



Adaptations required on Tangerine for remote administration

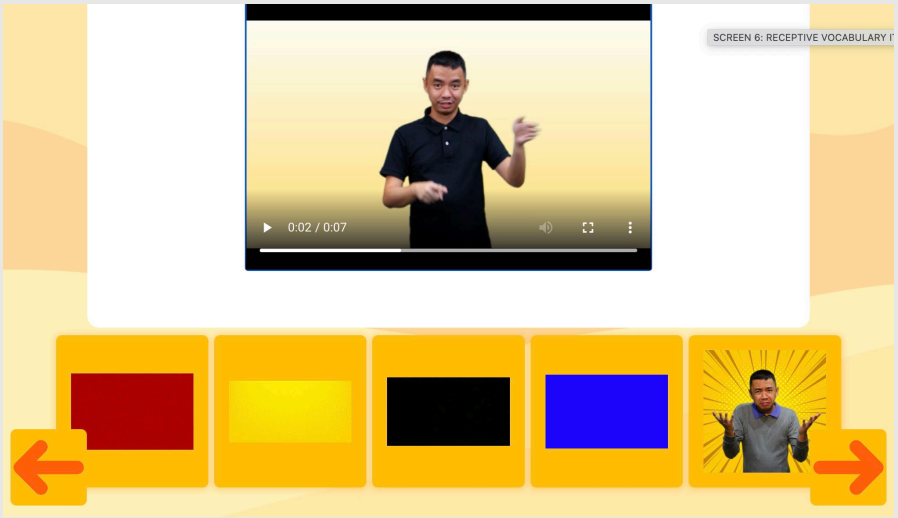
- Problem:
  - No face-to-face interaction requires instructions to be communicated directly from the application itself
  - Early grade learners cannot read instructions written on the application
- Solution:
  - Create video instructions embedded in Tangerine
- Problem:
  - Deaf children cannot hear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

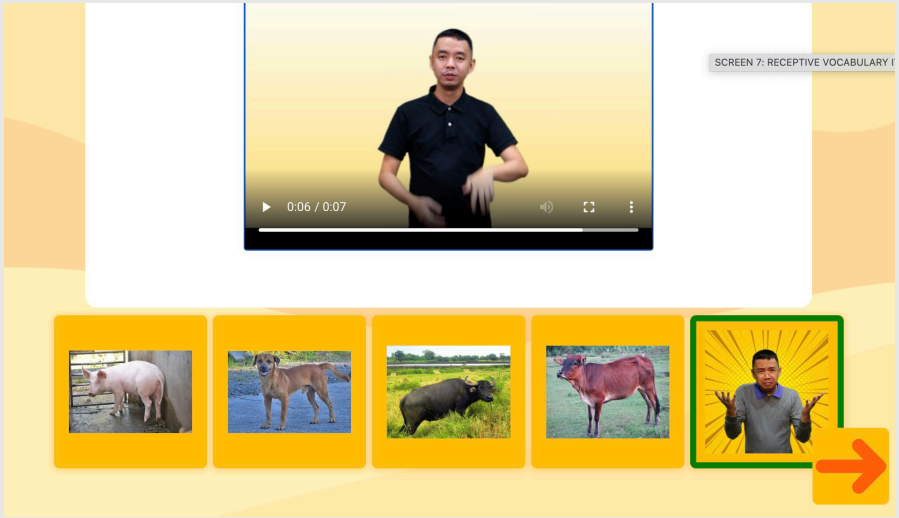
Video instructions in Filipino Sign Language



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

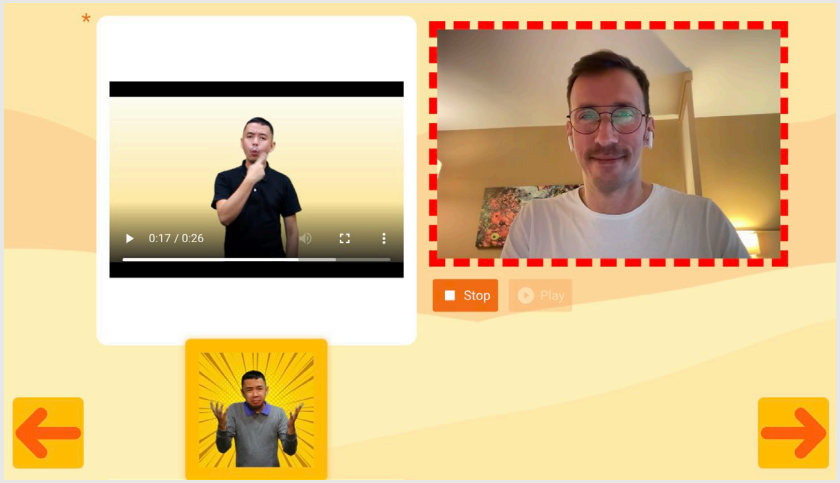
Adaptations: Changing icons, pictures, and buttons

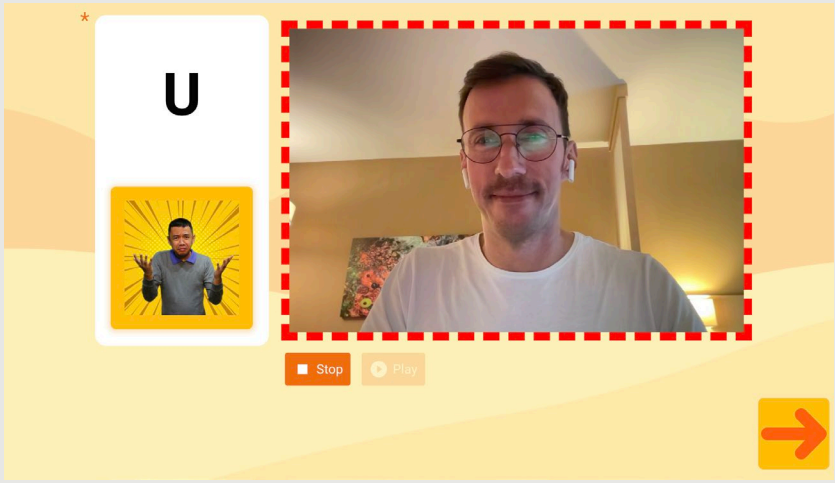
- Problem:
  - Size and position of certain buttons/prompts not utilized properly
- Solution:
  - Pilot tested different sizes and positions to determine which are best utilized by students

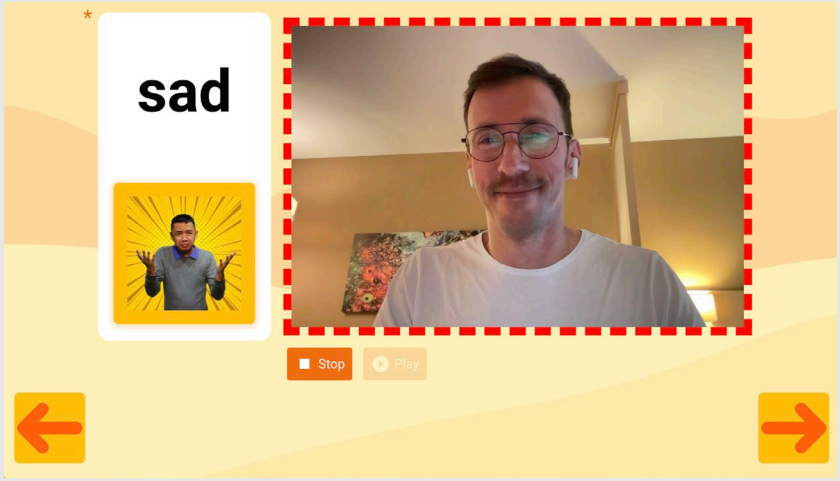
Adaptations: Recording expressive tasks

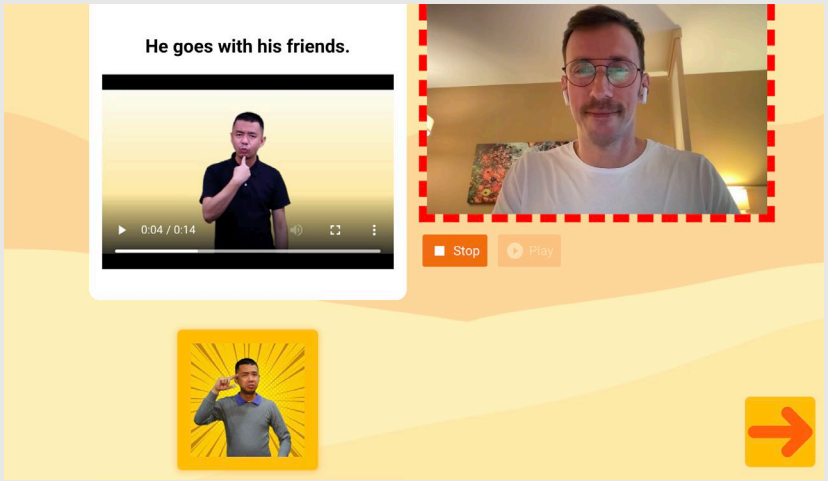
- Problem:
  - No assessor present to record responses/answers
- Solution:
  - Expressive tasks – Create a video screen with "record" button for student to record video response in sign language

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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