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EGRA Instrument Design (Development or Adaptation)

Prepared for the USAID workshop
“Designing and Implementing Early Grade Reading
Assessments: Understanding the Basics”

March 2015

Recap of Where We Are

- Identification of Research Design and Sampling Framework
- **Development/Adaptation of EGRA Instrument**
- Procedures for EGRA Administration, Scoring and Data Capture
- Establishment of Electronic Data Capture System
- Enumerator Training, Assessment, and Selection
- Pilot and Full Data Collection
- Use and Dissemination of EGRA Results
- Planning and Managing EGRA Implementation

Session Objectives

- Be knowledgeable about the process of developing an EGRA
- Know how to plan for and implement an adaptation workshop
- Review specific considerations and guidance regarding instrument construction

Review: What is EGRA

- An assessment of early reading skills
- Different skills are measured by different subtasks
- Each subtask consists of instructions and specific items that the child will read or listen to, while the assessor records performance data
- Whereas items may change from one survey to the next, the basic procedure, including instructions, should remain consistent

What Is Instrument Design?

Whether designing an instrument from scratch (development) or from an existing model (adaptation), you will need to make sure that it is appropriate for:

- The language
- The grade level
- The research questions

1. Select subtasks to use

2. Identify subtask items

Who is Involved?

- Language experts
- Reading specialists
- Curriculum and assessment experts (from the Ministry of Education)
- Teachers, especially reading teachers
- Psychometrician or test development experts

Adaptation Process Overview

Adaptation (development) of new instruments	Adaptation (modification) of existing instruments
Language analysis	Language analysis (optional);
Item selection	Item reordering/randomization
Verification of instructions	Verification of instructions
Pretesting	Pretesting
Pilot testing	Pilot testing
Validation	Validation

Adaptation Workshop Considerations

- One week is usually sufficient, including one day of practice (pretesting)
- Some language analysis can be done in advance
- If the workshop cannot be done in the region where testing will take place, pretesting should happen afterward, but participants need to report back
- The most difficult part is usually story writing, so don't leave it until the last day

Early Grade Reading Assessment (EGRA) Instrument Adaptation Workshop Agenda – EXAMPLE

Day & Time	Day 1	Day 2	Day 3	Day 4	Day 5
9:00-9:30 a.m.	Welcome and introduction	Review of Day 1	Review of Day 2	Review of Day 3	Visit schools to field test instruments and questionnaires
9:30-10:30 a.m.	Project overview and EGRA context	Review draft EGRA instrument (e.g., non-words)	Development of Listening Comprehension Passages	Modify/develop additional subtasks and questionnaires, as applicable	
10:30-11:00 a.m.	<i>Break</i>				
11:00-12:30 p.m.	Overview of EGRA: purpose, instrument content, results use	Development of Oral Reading Fluency Passages	Continue listening comprehension stories and develop questions	Modify/develop additional subtasks and questionnaires, as applicable	School visit debrief
12:30-1:30 p.m.	<i>Lunch</i>				
1:30-3:00 p.m.	Presentation on language: orthography and issues to consider vis-à-vis EGRA development	Continue ORF stories and develop questions	Review and Update Pupil Questionnaire	Prepare instruments for school visits	Finalization of instruments
3:00-3:45 p.m.	<i>Break</i>				
3:45-5:00 p.m.	Review draft EGRA instrument: (e.g., phonemic awareness and letter sounds)	Finalize stories and questions	Finalize stories, questions, pupil questionnaire as needed	Prepare instruments for school visits	Workshop Closure
<i>Daily Objectives:</i>	<i>Understanding of EGRA purpose and content</i>	<i>Oral reading passages and questions developed</i>	<i>Listening comprehension passages and stories developed; Pupil Questionnaire Developed</i>	<i>Additional subtasks/questionnaires developed</i>	<i>Instruments finalized</i>

NOTE: The duration of the adaptation workshop and specific sessions will depend on several factors, including: existence of a previously used EGRA for the given language/country/grade; number of subtasks to be tested; number of languages to be tested; need for additional questionnaires and instruments; and purpose and audience of the workshop.



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Subtask Design Guidance

Step-by-Step Procedures for Each Subtask

**Handout 3.2: EGRA Subtasks
Item Design Specs and Templates**

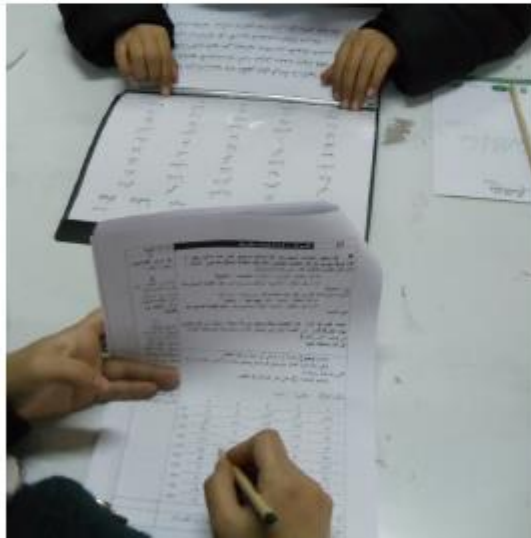
Handout 3.2: EGRA Subtasks

Item Design Specs and Templates

EdData II

Early Grade Reading Assessment (EGRA) Subtasks: Item Design Specifications and Templates

Guidance document prepared by RTI International for the USAID workshop “Designing and Implementing Early Grade Reading Assessments: Understanding the Basics,” March 2–4, 2015



1. Phonemic Awareness (PA)

- Different types of PA exercises exist, each with certain advantages and limitations:
 - Initial sound identification
 - Initial sound differentiation
 - Sound segmentation
- Choose 10 words, of one or two syllables (preferably), and of varying initial sounds (i.e., a mix of consonants and vowels)

EXERCISE: Phonemic Awareness

cat	valley	papa	nine
head	sit	kite	queen
run	dad	ear	up
play	baby	in	win
ant	stop	lamp	fall
mother	white	open	able
school	garage	tiger	idea

2. Letter-Sound Identification

- Children should give sounds of letters, not names
- In English, only the short vowel sounds are accepted
- The grid is completed based on the letter-frequency analysis previously conducted, so letters repeat proportionally to their frequency in the language
- A student stimuli page is also prepared, with careful attention to the font type

EXERCISE: Letter Sound Identification

Exercise B: Letter Sound Subtask Student Sheet

Example: A n L

a	I	N	g	K	R	A	T	u	m
S	n	P	L	d	i	b	C	ng	o
O	H	U	f	E	j	l	G	k	w
Y	c	t	r	M	ñ	s	e	p	D
Y	n	K	J	B	A	F	L	N	A
L	A	N	M	S	G	g	I	h	a
T	D	ng	U	I	N	r	K	A	p
N	G	o	i	V	M	G	Q	N	b
a	R	K	S	H	G	u	L	T	g
Z	P	X	I	A	ng	D	N	K	L

3. Familiar Word Reading

- 50 familiar words in random order, based on word-frequency analysis
- Pronunciation of the words should be unambiguous
- Words should be familiar across languages and dialects

EXERCISE: Randomization

- Discuss: How would you go about randomizing a list of words?
- Demonstration of one method using Excel
- Practice using various methods (Excel method, for those who have computers)

4. Nonword Reading

- 50 nonwords in random order
- Words should be plausible (following regular orthographic patterns)
- Using the frequent-word list can ensure this is the case
- Ensure a balance in the use of consonants and vowels

EXERCISE: Nonword Reading

Practice creating nonwords from the following list of frequent words in English:

any	be	better	both	bring
but	carry	clean	done	draw
drink	funny	hot	hurt	light
little	look	made	not	pick
ran	small	stop	sad	tell
to	today	warm	will	yes

5. Oral Reading Fluency and Comprehension

- The story consists of approximately 50 words
- Limit character names, to avoid the task becoming about memory recall
- Prepare comprehension questions that correspond to the text, spaced evenly throughout the passage

6. Listening Comprehension

- Can be included at the beginning of the series to ease the children into the assessment process and orient them to the language of assessment
- Passage length may depend on the level and first language of the children being assessed
- Having 5 questions is preferable to get a good distribution of scores, so a story that has 5 ideas/5 questions might be 30-50 words in length
- Questions need to be answered by the story, not from pre-existing knowledge

EXERCISE: Story Writing

Using the following story, create comprehension questions that would be appropriate and meet the quality control criteria. Modify the story if necessary.

Ben lives on a farm. He has goats. They eat anything! He feeds the goats after school. One day, after feeding the goats, Ben played football with his friends. Later, he looked for his homework. His homework was gone! He looked everywhere. He saw a goat eating something white. He found his homework!

Selecting Subtasks to Use

- At minimum, an assessment should test letter sounds, nonword reading, and oral reading fluency with comprehension; other subtasks depend on contextual factors.
- Selecting subtasks should be based on :
 - Efficiency
 - Validity over time

Adaptation: Best Practices

- The workshop may also be used to develop other tools or complementary instruments
- Workshops are best done face to face, although we recently experienced conducting a “virtual” training and have experimented with online training
- Do not get caught up in debating the protocol or instructions. The instructions are the way they are for a reason. Accurate translation is critical
- Both pretesting and piloting are important (piloting will be discussed later)
- Randomization, or reordering of the items, is important when reusing instruments (aligned to purposes of assessment)