Overview of the Early Grade Reading Assessment (EGRA)

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

March 2015
Session Objectives

• Know what EGRA is and what it measures

• Be aware of the research-based rationale for EGRA content and design

• Understand different purposes of EGRA and current usage
What Is EGRA?

• EGRA stands for “Early Grade Reading Assessment.”

• The assessment is used to measure children’s progress toward learning to read.

• EGRA is administered orally by an assessor, one-on-one with a child.
Child reads from paper, called “pupil stimuli”
Assessor records responses on a tablet or paper.
EGRA History

- Developed by RTI with USAID support; Review by expert panel
- 1st EGRA workshop hosted by USAID & World Bank
- Piloted/validated with USAID & World Bank support
- EGRA Toolkit
- 2nd EGRA workshop by USAID & World Bank; Igniting Report launched
- USAID Education Strategy; EGRA Guidance Notes

Source: www.eddataglobal.org
Where in the World Has EGRA Been Used?

- Used by 30+ organizations
- Used in 60+ countries
- Adapted for 100+ languages

Source: www.eddataglobal.org
What Does EGRA Measure?

- EGRA assesses critical skills that early primary-age pupils (~ grades 1-3) need in order to read with understanding—and to be successful in other subjects and later grades.

- Components are aligned with essential and teachable reading skills that research shows children can and should acquire in the early grades.

Source: Dubeck & Gove, 2015
Why EGRA?

• While the Education For All (EFA) goals were successful in increasing enrollments, little information was available on learning outcomes.

• International assessments were not necessarily being used in many low-income countries.

• In places where learning assessments were available, did not know if children were not performing well because they didn’t know content, or because they couldn’t read the test.

• Its theoretical foundation supports quick adaption to meet demand for early assessments

Source: Crouch & Gove, 2011; Gove & Wetterberg, 2011; Wagner et al., 2012
Why Assess Reading?

- The ability to read and understand a simple text is one of the most fundamental skills a child can learn.

- Measurements of how quickly and accurately children can read a text out loud, and how well they understand it, align with both scientific and a popular understanding of what it means to be able to read.

Source: Fuchs et al., 2001; Kim et al., 2011
Why Assess Early?

- Children who learn to read within the first few grades of primary education have a greater chance of succeeding in and completing primary school.

- Evidence indicates that learning to read both early and at a sufficient rate are essential for learning to read well.

- Learning to read becomes more difficult as children grow older.

- Children who do not learn to read in the first few grades are more likely to repeat and eventually drop out.

Source: Adolf et al., 2010; Daniel et al., 2006; Darney et al., 2013; Scanlon et al., 2008; Torgesen, 2002
Why “Early” Matters

Reading Trajectories of Low and Middle Readers

Source: Good, Simmons, & Smith, 1998
Why Assess Orally?

• Child-centered

• Assessor and child interact one-on-one

• Rapport is established

• Timing begins when child speaks

• Administered in a language the child understands

• Oral tests of basic skills help us better measure which foundational skills children have—or do not have.
Different Types of Assessments: A Continuum

Examinations
- Completion/promotion exams
- Matriculation exams
- “A levels”

Assessment surveys
- SACMEQ
- PASEC
- PISA
- PIRLS/Pre-PIRLS
- TIMSS
- Early Grade Reading Assessments

Classroom assessment
- Class tests
- Homework
- Projects/presentations
- Mastery/monitoring checks

Formal
High cost
More time
High stakes
Informal
Lost cost
Less time
Low stakes

Source: Kanjee, 2009
How Can EGRA Results Be Used?

- Examine gaps in reading competencies to raise awareness, improve policy, curriculum, etc. (country or regional level)
- Identify key skills, or areas of instruction, that need to be improved in order to target interventions (teacher training, materials, etc.)
- Inform education sector strategic planning, resource allocation and budgeting
- Identify changes over time
- Evaluate outcomes of program designed to improve specific early grade reading skills
- Develop reading indicators and benchmarks

Source: Gove & Cvelich, 2011, Gove et al., 2013
Using EGRA Results: System Diagnostic

Example: EGRA in Northern Nigeria

Since 2011, EGRAs conducted in two states have been used to:

• Provide policy makers and other stakeholders with information to inform state-level planning

• Identify areas for which instruction needs to be improved

• Measure improvements over time at the state level
Using EGRA Results: Impact Evaluation

- EGRAs conducted in Kenya have been used to evaluate the impact of an early grade reading program.
- The proportion of pupils reading English at benchmark by the time of the endline assessment was more than twice as high in the treatment group (28.3%) than control schools (12.6%).
- Growth in Kiswahili comprehension levels: 0.3% of Class 1 at baseline and 5.2% at endline were able to answer at least four out of five comprehension questions correctly. In Class 2, the percentage improved from 6.9% to 22.2%.

Source: Kenya PRIMR, 2014
Using EGRA Results: Explore Costs of Design

Oral reading fluency gains over baseline per dollar spent

Source: Kenya PRIMR, 2014
Other Data Collected with EGRA

- EGRA is often administered with other instruments to collect contextual information to inform data analysis and recommendations. These include:
  - Pupil questionnaire
  - Teacher questionnaire
  - Head teacher/Principal questionnaire
  - School and classroom inventory
  - Reading lesson observation

- The Snapshot of School Management Effectiveness (SSME) is one package of instruments sometimes used in conjunction with EGRA to obtain a broader picture of school-related factors affecting student performance in math and reading.
Using EGRA Results: Inform Teacher Training

<table>
<thead>
<tr>
<th>Category</th>
<th>Referent</th>
<th>Words Faster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise book all completed &amp; marked</td>
<td>No pages</td>
<td>17.3*</td>
</tr>
<tr>
<td>Exercise book most completed &amp; marked</td>
<td>No pages</td>
<td>8.4*</td>
</tr>
<tr>
<td>Pupil work on the wall</td>
<td>None</td>
<td>6.2*</td>
</tr>
<tr>
<td>Has library, pupils do not use it</td>
<td>No library</td>
<td>6.4*</td>
</tr>
<tr>
<td>Has library, pupils use it</td>
<td>No library</td>
<td>14*</td>
</tr>
<tr>
<td>Majority of class time reading aloud</td>
<td>No time spent</td>
<td>-1.22</td>
</tr>
<tr>
<td>Corrects pupil, does not scold</td>
<td>Does nothing</td>
<td>8.1*</td>
</tr>
<tr>
<td>Repeat / clarify</td>
<td>Does nothing</td>
<td>7.9**</td>
</tr>
<tr>
<td>Checks for pupil understanding with assistance</td>
<td>No questions</td>
<td>13*</td>
</tr>
</tbody>
</table>

Source: Indonesia EGRA/SSME National Policy Dialogue Workshop, 2014
## Using EGRA Results: Inform Policy Discussions

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Indicator</th>
<th>Words Faster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>Home Language=School</td>
<td>5.22*</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>6.54*</td>
</tr>
<tr>
<td>Preschool</td>
<td>Attended</td>
<td>15.18*</td>
</tr>
<tr>
<td>Age</td>
<td>Of-Age (7-8yr)</td>
<td>9.31*</td>
</tr>
<tr>
<td>School Location</td>
<td>Remote</td>
<td>-7.32*</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>Low</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Medium Low</td>
<td>4.46</td>
</tr>
<tr>
<td></td>
<td>Medium High</td>
<td>9.61**</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>13.81***</td>
</tr>
</tbody>
</table>

Source: Indonesia EGRA/SSME National Policy Dialogue Workshop, 2014
Limitations of EGRA and Its Results

• EGRA measures a *specific set* of critical early grade reading skills, not necessarily *all* important literacy skills.

• Individual nature of assessment administration and size of a typical sample means it is usually used to report results at a regional, national or program level, not district, school, or student level.

• EGRA is not a high-stakes accountability tool.

• The assessment is not suited for direct cross-language comparisons, but could be used to report on percentage of children meeting grade-level expectations.

Source: Dubeck & Gove, 2015
EGRA Content
Key Components of Early Reading that EGRA Measures

- Alphabetic principle
- Phonemic awareness
- Vocabulary
- Fluency
- Comprehension

**Why these areas?**
- Predictive of later reading acquisition
- Reliably and easily measured
- Can be improved through effective instruction

Source: August & Shanahan, 2006; Caravolas et al., 2012; NICHD, 2000; Vaessen et al., 2010; Ziegler et al., 2010
EGRA Subtasks

- EGRA subtasks measure the key components of early grade reading
- Content and administration rules are based on the skill measured, assessment principles, purpose of EGRA, and experience
- Items (i.e., letters and words) are specific to the language tested
- Order of items does not progress from easier to more difficult
- Level of difficulty is controlled

Timed Versus Untimed Subtasks

- **Untimed** subtasks allow us to measure accuracy (i.e., listening and reading comprehension)

- **Timed** tasks assess skills that become more accurate *and* automatic (i.e., faster) as the skill develops
  - Same items (letters or words) can be used with readers at different levels (within and between grades)

- Results based on time can inform intervention and instructional design

Source: Dubeck & Gove, 2015
Reading Components and EGRA Subtasks

**Alphabetic Principle**

- To learn to read, children need to be familiar with the alphabet and written spelling systems.
- Alphabetic principle is the knowledge that letters and letter sequences represent the sounds of spoken language.
- EGRA subtasks that measure this skill:
  - Letter name identification
  - Letter sound identification
  - Syllable reading
  - Nonword decoding
  - Dictation
Example Measure of Alphabetic Principle: Nonword Decoding

• Measures children’s ability to apply the knowledge of letter-sound relationships to decode unfamiliar words.

• There is no meaning to a nonword.

• Example: “kiz” has no meaning in English. It follows a legal orthographic structure for the language (consonant – vowel – consonant). The arrangement “zukc” would not be legal.
Phonemic Awareness

- Phonemic awareness is the ability to hear, manipulate, and break apart the smallest units of sounds (phonemes) in words

- EGRA subtasks that measure this skill:
  - Initial sound identification
  - Phoneme segmentation
**Fluency**

- Fluency measures assess not only whether a child knows something (accuracy), but whether s/he has integrated the knowledge and can process the information automatically (quickly).

- Oral reading fluency is the ability to read text out loud with speed, accuracy, and expression.*

- Being able to comprehend text requires being able to read words correctly at some minimal speed per minute.

*EGRA does not typically measure expression.

**EGRA subtasks that measure this skill:**
- Oral reading fluency
Vocabulary

- Knowledge of the meaning of words

- **Expressive vocabulary**: The ability to put words that we understand into use when we speak or write

- **Receptive vocabulary**: The ability to understand the meanings of words that we hear or read

- EGRA subtasks that measure this skill:
  - Oral vocabulary
  - Reading comprehension
  - Listening comprehension
Comprehension

- The ability to understand, interpret, and use what has been read

- Dependent on all other components of reading

- EGRA subtasks that measure this skill:
  - Reading comprehension
  - Listening comprehension
Planning for EGRA
Key Steps in the EGRA Process

- Identify purpose and research design
- Identify and on-board planning and implementation team (organizations, individuals)
  - Identify sampling framework and schools
  - Develop instruments (adapt, approve and pilot)
  - Conduct assessor training (recruit trainees, train trainers, as applicable)
- Collect data
  - Clean and process data
  - Analyze data and write report
  - Disseminate, discuss and use results
References


