Early Grade Reading Assessment
Field Guide

A guide to EGRA tool preparation and assessment implementation

World Vision International

Background

Recent evidence from Early Grade Reading Assessments (EGRA, SACMEQ, PISA and other sources)[1] indicate that average student learning in most low-income countries is quite low. In some countries, 50 percent of fourth-grade students do not understand the meaning of the texts they read (RTI, 2009). Dissemination of shocking reading results such as this from formal and informal assessments in several countries attracted worldwide attention that eventually resulted in an international movement, known as EGRA, to measure and increase the reading fluency of students in the early grades, 1-3.

Reading well requires two key elements: learning to read *early* and reading *at a sufficient rate* (fluency) to comprehend what one is reading. Based on US studies, early grade reading seems to predict later skills acquisition between 70% and 90%[2]. Reading fluency in the early grades determines student achievement all the way to university level. The faster one reads a message, the more time one has to understand it or to take in more messages and understand them all together[3]. So students cannot learn from books until they can read them fluently, and without reading they may even be unable to solve math problems. As grades advance, texts become more complex and if students keep reading, speed should rise in tandem. By the time they reach grade 6 students in low-income countries ought to be reading about 90 words per minute on average. If they only read 60 words per minute, they cannot read volumes of material, as current modern jobs and modern life demands.

Unfortunately, literacy trajectories are established early; children on a low trajectory tend to stay on that trajectory and fall further and further behind. If children cannot read with ease and understand what they are reading when they are in the early grades, they are more likely to repeat and are less likely to learn core subjects or essential life skills at the appropriate age. As students grow older, acquiring literacy becomes more difficult. Often, those who start late, or repeat, eventually drop out. Thus, early-grade reading strongly affects the efficiency of an education system. Much repetition and dropout can be avoided if students read at the appropriate age and required speed.

This field guide was developed to support field staff with assessing foundational literacy skills of children in primary school. It contains procedures, protocols and tools required to implement an EGRA, including sampling, analysis and reporting of results.

The recommendations in this guide are based on practical application of the EGRA tool in low-income countries by USAID/RTI, as documented in the RTI Early Grade Reading Assessment Toolkit. It is expected that World Vision field staff will contextualize the tool and modify the protocol according to the resources available and local culture within the geographical area.

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[1] USAID/RTI EGRA, Southern and Eastern Africa Consortium for Monitoring Educational Quality (2010), OECD/Program for International Student Assessment (2009), and the Second Regional Student Achievement Test in Latin America 2006)

[2] Coefficient of correlation between .70 and .90. USAID EGRA: Frequently Asked Questions.

[3] Abadzi, H

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1. Introduction

What is the purpose of the Tool?

The World Vision Early Grade Assessment Tool (EGRA) provides critical information about children's foundational reading skills. The objective of the tool is to test reading fluency and comprehension skills of primary school children enrolled in Grade 2[4]. The tool was developed for measuring an additional indicator of the Child Well-being Outcome (CWBO) Children read, write and use numeracy skills:

Percent of children who, by the end of Grade 2, (typically aged 7-9), can read with comprehension and speeds of 45 words per minute in language of school instruction

Why Grade 2?

Reading fluency of 45 words per minute by end of Grade 2 is important for comprehension and transitioning from 'learning to read' to 'reading to learn'. However, reading tests are rarely administered to children at this grade to determine their actual reading skills. Most national and international student achievement assessments are content-area tests administered to students in grade 4 and above (that is, they assume students can read and write). It is not always possible to tell from the results of these tests whether students score poorly because they lack the knowledge tested, or because they lack basic reading and comprehension skills.

The Education for All/Fast Track Initiative[5] (EFA/FTI) Secretariat has recognized the importance of assessing reading in Grade 2 through a commitment for 'All Children Reading by 2015' and a revised framework to include general early-grade and end-of-cycle student performance goals. The adoption of two reading skills indicators reflects the fact that reading is the foundation of all learning in all subjects and grades. The indicator for reading skills in the early grades set forth in the EFA/FTI Framework[6] is:

- Proportion of students who, after two years of primary schooling, demonstrate sufficient reading fluency and comprehension to 'read to learn'.

The EFA/FTI has also embarked on an effort to ensure consistent monitoring of early-grade reading indicators through reading fluency benchmarks. The current EFA/FTI benchmark for *Reading Fluency* derived from existing norms of various countries is:

- % of children who can read 45 or more words per minute on average by the end of grade 2.

[4] It is important to note that the EGRA is designed to complement, rather than replace, existing curriculum-based pencil-and-paper assessments.

[5] EFA/FTI is a global partnership dedicated to quality basic education for all children by 2015.

[6] EFA FTI Indicative Framework located at: http://www.educationfasttrack.org/media/library/Indicative_Framework_template_FINAL_Oct-6-2009.pdf

The World Vision indicator under the CWBO "Children read, write and use numeracy skills" measured by the EGRA embraces these two EFA/FTI benchmarks. It assesses both fluency at 45 words per minute and comprehension to measure whether students are prepared to transition from 'learning to read' to 'reading to learn'.

Important note: the indicator is **"by the end of grade 2"** This means that the assessment must be timed correctly to be at the end of Grade 2 or at the beginning of Grade 3, depending on the timing chosen for the assessment. Children will need to have had two years of learning, or as close as possible.

Why is 45 words per minute the benchmark?

To comprehend a message, people must be able to hold it in their mind long enough to make sense out of it. Human short-term memory lasts only about 12 seconds and holds about 7 verbal items (words, letters, short phrases). Roughly, people must read at least a word per 1-1.5 second (45-60 words per minute) to understand a sentence of about seven words. If they read more slowly, they forget the beginning of a sentence by the time they get to the end. Therefore they cannot answer simple comprehension questions that link various facts together. Practice brings about automaticity, which all students must attain to read effortlessly. The ability to read words by sight automatically is the key to skilled reading.

To progress in school work, students should be expected to read relatively fluently by the end of grade 2 at 45-60 words per minute (Abadzi, H.). Based on RTI's experience in approximately 10 countries to date, these benchmarks may be reasonably relaxed to 45 correct words per minute, particularly for poor countries with linguistic complexity or particularly difficult orthographies. As noted above, the EFA/FTI has relaxed the minimum international standard for reading outcomes to 45 words per minute by end of grade 2. Available EGRA data for eleven World Vision countries show current levels far below the minimum standard, thus World Vision has adopted the 45 words per minute benchmark as a realistic target for the most vulnerable populations with which World Vision works.

Why use the EGRA tool?

The full EGRA tool is designed to orally assess the *most basic foundation* skills for literacy acquisition in grades 1–3, including pre-reading skills. The test components are based on recommendations made by an international panel of literacy experts and include timed, 1-minute assessments of letter naming, nonsense and familiar words, and paragraph reading. Additional (untimed) segments include comprehension, relationship to print, and dictation. EGRA meets psychometric standards as a reliable and valid measure of early reading skills.

World Vision has selected one subtest of the EGRA toolkit focused on timed passage reading and comprehension for the initial phase of implementation within target schools within the programme area. The connected text fluency (correct connected words per

minute) and comprehension passage are the most important items to benchmark because they provide the most leverage in terms of predictive power over cognitive development in later grades. Oral reading fluency in particular is a measure of overall reading competence: the ability to translate letters into sounds, unify sounds into words, process connections, relate text to meaning, and make inferences to fill in missing information. Because oral reading fluency captures this complex process, it can be used to characterize overall reading skill. Tests of oral reading fluency, as measured by timed assessments of correct words per minute, have been shown to have a strong correlation (0.91) with the Reading Comprehension subtest of the Stanford Achievement Test. Poor performance on a reading comprehension tool would suggest that the student had trouble with decoding, or with reading fluently enough to comprehend, or with vocabulary.

When to use the EGRA?

The EGRA is intended for baseline and evaluation. However, it can also be used, where appropriate for annual monitoring, in partnership with participating schools or structured learning institutions. The assessment is used during the baseline stage of programme design for assessing foundational reading levels of children in Grade 2. This will give us a measure of how many children are reading at the appropriate grade level. The same test can be administered at the middle of a program (mid-term evaluation) to judge the progress after a reading intervention has taken place and at the end (final evaluation) to assess the impact of the programme. Students tested at the onset of an intervention and subsequent to the instructional intervention would be expected to demonstrate improvement over time. At each testing, the assessment is undertaken with a sample of children currently at the end of Grade 2 (or early Grade 3) – not with the same children. This tool can be used with all types of structured learning institutions that World Vision is working with, in the programme area.

The tool should be developed at the national office level and made available to all relevant programmes and projects. This will ensure consistency and comparability overtime for annual reporting on reading. It also means that the tool only needs to be adapted once for each language, not for every programme. However, if being used for annual monitoring, the reading passage should be updated each year to ensure that children are not already familiar with the passage, e.g. from an older sibling who was previously assessed.

The measurement should be conducted towards the end of the school year, as children to be assessed need to have had (almost) two years of learning (last two months). If this is not possible, the EGRA can be used at the beginning of Grade 3, or third year of learning e.g. within first two months.

2. Using, Adapting and Translating the Tool

A. Using the Tool

The tool is administered to each child individually in the classroom, or quiet location in doors or outside. It takes about 5 minutes to complete. After some introductory discussions to help the student feel at ease, he or she is given a sheet of paper with a passage on it and asked to read the story aloud as best as they can when the stopwatch[7] begins. They have 1 minute (60 seconds). The enumerator marks any incorrect words with a slash (/) and places a bracket (]) after the last word read.

If the child hesitates for 3 seconds, the enumerator provides the word, points to the next word and says "please go on". The word provided to the child is marked as incorrect. If the child reads a word incorrectly but then self-corrects, circle the slashed word, so it is counted as correct in analysis.

When 60 seconds are up or if the child finishes reading the passage in less than 60 seconds, the enumerator removes the passage from in front of the child, and asks the first comprehension question. The child is given 15 seconds to answer each question up to the point where the child stopped reading displayed by the bracket (]). An example of the EGRA tool is found in Annex 1.

Tips to keep in mind when administering the test:

1. It is important to help the child feel comfortable. Tell the child a little about yourself and ask the child about her or himself. A friendly conversation with the child prior to testing always helps to befriend the child and create a more relaxed atmosphere.
2. Ask for verbal consent (see general instructions in the tool, Annex 1). Explain that the test will not affect their grade in any way. Tell the child what you want him or her to do and treat it as a game.
3. It is important not to coach or teach the child if they are struggling. If the child is unable to read at all, end the test early, and thank the child for their effort.
4. If stopwatches are unavailable, use the stopwatch function included in most mobile phones. Do not use a regular watch, unless it has a specific stop watch function. This is to ensure accuracy of timing.
5. To thank the children for participating in the assessment, as small treat such as a snack, drink or a pencil or other learning material could be given to each one[8].

B. How to score results

Students are scored on the number of correct words per minute and the number of comprehension questions answered acceptably. The scoring should be done during analysis and not by the enumerator.

[7] If no stopwatches are available, the stopwatch function on a mobile phone can be used. Do not use a watch, unless it has a specific stopwatch function. Every second counts!
[8] Depends on National Office policy

1. Count the number incorrect words, those slashed, excluding any self corrections (circled). Subtract from 60, the total number of words, for a number of correct words.
2. Total the number of questions answered correctly

To be completed during analysis:

E10. Number words <u>correct</u> in one minute (#/60) _____
If completed in less than 60 seconds calculate words per minute

E11. Total number of questions asked _____

E12.Total number of questions answered correctly: _____

If no answer mark with a dash (—); if not asked, leave blank

C. Adapting the tool

Tools are developed after analyzing age-appropriate children's reading books and in consultation with education experts at the district and national level. They are then piloted (pre-tested) before use to ensure comparability and consistency across different programme areas (same language areas) and over time.

The use of Ministry of Education staff to adapt the tool is recommended in order to build capacity and help ensure sustainability for these assessments. The ideal situation is for Ministry of Education staff to participate throughout the entire adaptation and piloting process. Other participants may include other education practitioners, academics, teachers, and experts in curriculum development in the local language, if possible.

The tool should be developed at the national office level and made available to all relevant educational projects or programmes. This will ensure consistency and enable annual reporting on changes in reading fluency. It also means that the tool only needs to be adapted once. Where there are multiple languages, the tool will need to be developed for each appropriate language.

Table 1: Adapting the EGRA

Steps to consider when adapting the Reading Tool to a particular context:

1. Review the sample tools in Annex 1.
2. Consider which educational experts could be involved in this process: partner organisations, education experts and / or Ministry of Education.

3. Consult the appropriate department (primary, basic education, literacy, planning and evaluation) within the Ministry of Education (MoE) or other Ministry responsible for assessing student achievement in primary education. Introduce the assessment and invite the MoE to join in the planning, development and administration of the tool. Ask the MoE if they have any EGRA efforts underway. If so, request a copy of the tool. The Central MoE may recommend regional or district-level education supervisors or officers who may assist with actual execution of the assessment.

4. Request the MoE to assist with identifying appropriate language and grade-appropriate texts to identify reading passages that students at the recommended age should be familiar with according to national standards. If possible, use vocabulary words and themes linked to the national or local curriculum.

5. At the programme level, visit schools, local NGOs, and learning centres in the area and work with teachers and instructors to obtain relevant reading materials. Use general guidelines when constructing the passage. Modify the words and reading passage to reflect locally and culturally appropriate words and concepts. Names and places should reflect the local culture. Use simple one- and two-syllable words, short sentences, and familiar words should be used. Large, clear, familiar print and good spacing between the lines should be used to facilitate student reading. No pictures should be included. Comprehension questions should include fact-based questions as well as at least one question requiring inference from the text.

6. Review short passages from children's reading materials (not the school textbook) with Grade 2 level text. Select a short story of 8-10 sentences, and modify to be **exactly 60 words in length**. If the passage is more than 60 words, further calculation will be required to identify words per minute. A narrative story should have a beginning where the characters are introduced, a middle section containing some dilemma, and an ending section with an action resolving the dilemma. It should not be a list of loosely connected sentences. Typical character names from the school textbook or a well-known traditional story should be avoided as students may give automated responses based on the stories with which they are familiar.

7. Prepare at least three comprehension questions for the story - two fact-based questions and one question requiring inference from the text. The questions could pertain to the character's

background, the main event that occurred, and how they solved the problem. The answers should be provided for ease of scoring. See sample questions in Annex 1.

8. In some local languages words may be very long, and not possible to keep words in the passage to one or two syllables only. If this is the case, identify a cut off point for counting a word as two words. For example words of more than eight letters or with more than two syllables. Document your approach and justification, make note of this in reporting on the findings. Care must be taken with this approach, as this affects both the passage length and the scoring. Ensure that there are still only 60 'words' in the passage – including the words you decided to count as two.

D. Local language translations

The EGRA should be developed into the language of school instruction. However, in countries with multiple languages, the National Office can develop one version of the tool with the MoE or in country education experts, and then translate this into other national languages, for comparability. In translation, attention must be paid to word lengths as noted above.

To date EGRA has been field tested in twelve languages in half a dozen countries with EdData II involvement; additional EGRAs are also under way. If the MoE is engaged in an EGRA study already, there may be a national version available. However, it may still need to be translated into the local language of school instruction if the school uses a language different from the national language. In countries with bilingual or multilingual education programs, children may learn in the native language before transitioning to the national language. **Always check with the district-level education department or school principals to determine the appropriate language for translation.**

It is important to not only translate, but to **adapt the tool to the appropriate level of difficulty in the particular local language**. Direct translation of the English tool to a local language is not appropriate. The consensus emerging among experts is that when evaluators are looking for ways to use EGRA in home languages, it is not a good idea to simply translate the passage (and questions) from a base English version (or any other language version) into the local language (RTI, 2009). Translation may result in very long words in a local language, for instance. Instead, the recommendation is that a passage of approximately equal difficulty to the base English (or Spanish or French, depending on the country in question) passage be used. Simple one- and two-syllable words, short sentences, and a familiar narrative should be used. To the degree that the reading texts have been validated for correspondence with the national curriculum, using passages from texts will also tend to help skirt issues of validity or appropriateness of choice of reading passages. **Whenever possible, select a passage from a Grade 2 reading book in the local language**. An alternative is to ask teachers and

curriculum experts versed in the rules of the home languages to craft a passage that is similar in level of difficulty to the English passage.

3. Sampling Strategy for School-Based Survey

A. Survey Area

The EGRA is designed for implementation in schools or structured learning institutions. It may be applied in all schools within the programme area or a sample of schools with various characteristics (community, private, religious, government, etc). Ensure all target schools within the area are included in the sample, so each school or learning institution has an equal chance of being selected through simple random sampling. In analysis you may wish to disaggregate by characteristics (community, private, religious, government, etc) and urban / rural if both are relevant in the area.

B. Sample Size

Based on administrations of EGRA in several countries to date, it is estimated that the minimum sample size needed for representative results is 200[9] Grade 2 students per programme area. With a sample size of 200, the assessment is done with 10 schools or structured learning institutions and 20 students randomly selected using the method of randomization described in the next section. If there are more than 10 schools in the area, the same method of randomization described below may be applied. You would make a list of all the schools in the area, and sort them into groups according to characteristics. Then after doing the calculations below, you would use a random number to select 10 schools.

If there are fewer schools, a larger sample of students can be selected per school. Or consider administering EGRA across two World Vision programme areas, with education projects, in one district or two programme areas with similar characteristics. The assessment can be combined and results shared.

Another approach is to conduct EGRA as a census. Where there are few schools or structured learning institutions, and few children in the appropriate Grade, it may be appropriate to administer EGRA to all the children at the end of Grade 2 OR early Grade 3 (depending on timing of assessment). This may yield sufficient children to meet the recommended sample size of children. For more details regarding sampling methods, consult the national or regional DME Coordinator.

C. Selecting students

If recent and accurate data on student enrollment by school, grade and class are available at the central level prior to arrival at the school, a random number list can be used to generate the student sample. As this is highly unlikely in nearly all low-income

[9] To be confirmed by Sept 2011

country contexts, the following procedure should be followed for selecting students in the school.

If there are more than 10 schools or structured learning institutions, randomly sample 10 from a list of all possible, desirable schools (excluding any schools not targeted by World Vision). If there are fewer than 10 schools in the area, sample more children per class; e.g. if there are only 5 schools, select 40 children per school in Grade 2 or second year of learning. Ensure that **no fewer than 20 children** are sampled in each relevant school.

Table 2: Student selection process

To assess 20 students per grade, the enumeration supervisor should conduct the following procedure:

1. Obtain the 2nd (or 3rd) Grade student register from each classroom or from the school principal, if available.
2. Count the total number of students registered in each class for Grade 2 (or 3) and add them up (e.g., Class A=40, Class B=30, Class C=50, Total=120).
3. Divide the total (120) by the number of students to be interviewed (in this example, 20 are to be selected from each grade, so the answer is 6).
4. Use this answer to count from the class lists and select every "X"th student to be part of the sample. Count as if it is one continuous list. In this example, the answer is 6, so students 6, 12, 18, 24, 30, and 36 on the list would participate from Class A; students 2, 8, 14, 20, and 26 from Class B; and students 2, 8, 14, 20, 26, 32, 38, 44, and 50 from Class C. Because there are 50 students in class C and fewer in Classes A and B, there are a greater proportion of students from Class C. This is how we arrive at a proportionate number of students per class whom are randomly selected.
5. If a student is absent or refuses to participate, select the next number on the class list. If that student is absent or refuses, the following number should be selected. This will provide the sample of 20 students distributed across the Grade 2 classes.

4: Preparing for Field Work

A. Planning the assessment

There are several factors to keep in mind when deciding the best time to conduct the EGRA.

1. **Involving the MoE:** Perhaps, the most important is MoE buy-in. Local district education supervisors and school principals in the areas where the survey will be done need to be contacted well in advance. They should understand: the purpose of the survey, the general nature of the survey activities and the time schedule. Any concerns must be addressed before commencing the activity.

2. **School schedules:** During the planning meeting with the MoE or local schools, consider the academic year start and end dates, summer break, holidays, and exam schedules to avoid conflict with the assessment. Bear in mind that children should have had around two years of learning for the assessment to be comparable.

3. **Notify sample schools** of their selection, purpose of their assessment, and logistical needs (e.g. a separate, quiet room for administration of the instrument). If partnering with the MOE, the Ministry could endorse a letter, see sample invitation letter in Annex 3. The letter may include suggestions for the school director to notify parents that some children might be late coming home if the reading test is not completed during the school day.

4. **Time of the testing:** Often, the later in the school day, the less able young children are to focus and concentrate. Thus, it is best to plan to hold the test in the morning, if feasible.

5. **Consultation with local groups:** Consult with local partners, the local government council, parent teacher associations, and schools to engage them in the planning of the EGRA and dissemination of the findings. These groups may help to identify local groups and individuals who can help with data collection or may assist with post-assessment interventions.

B. Survey Coordinator and Field Staff

A World Vision staff member, such as the DME Officer supported by the Education Specialist, should be assigned as Survey Coordinator to oversee the EGRA data collection.

Table 2: Survey Coordinator Role and Responsibilities

General Responsibilities of the Survey Coordinator

- Plan and schedule the survey, inform key stakeholders and obtain their cooperation as needed.
- Prepare a realistic budget for implementing the survey, and monitor expenses against the budget.
- Ensure the translation of the survey questionnaire into the local language spoken in the programme area.
- Ensure the reading passages are laminated on a card, or protected. Consider using a colourful card that can be clearly read by the children such as yellow, orange or light shades.
- If you intend to use one student reading passage for each assessment, consider laminating or keeping the test in a plastic folder to preserve it.
- Ensure that procedures for selecting schools and students are followed.
- Partner with local organization as relevant to identify and train survey supervisors and interviewers, manage the data collection, and data entry.
- Assist with preparing the written report for dissemination to internal and external stakeholders.

MoE supervisors, teacher trainers, and teachers from another area may be recruited as enumerators and supervisors. If this is not possible, it is recommended that a university or firm accustomed to conducting surveys in local schools assist with carrying out the actual survey. If the process is outsourced to a university or education consultancy, this group would share responsibility for recruitment, training, data collection, analysis and dissemination of the results.

B. Recruiting enumerators and supervisors

While Ministry staff in particular should be selected based on their ability to contribute to the design, adaptation and follow up of the EGRA instruments, it is possible that not all Ministry staff may be available or selected as enumerators or supervisors. The Survey Coordinator will likely need to recruit field supervisors and enumerators. Recommended selection criteria are provided in Table 3.

Where possible, supervisors should be World Vision staff members to ensure consistency and that proper protocols are followed.

Table 3: Selecting Enumerators and Supervisors

Enumerator and Supervisor Selection Criteria

The most important enumerator qualifications are:

- **The ability to interact in a nonthreatening manner with young children.** As the instrument is oral and individually administered, the quality and accuracy of the data depend largely on the ability of the enumerator to encourage and calm the students such that they perform to the best of their abilities. False-negative results, from students who can perform well but who are nervous or fearful, can be minimized with the right approach. While some of this can be practiced and trained, a large part is attitude and personality.

- **Organizational skills.** The second important qualification is the ability to handle several tasks at one time, including listening to the student, scoring the results, and operating a stopwatch or timer.

- **Child protection**. All enumerators and supervisors must have signed World Vision's child protection policy and must follow child protection protocols at all times.

C. Training enumerators and supervisors

Training is imparted to all enumerators and supervisors. Typically the duration of training is two-three days and includes a pilot-test of the instruments in a school near the training site. The survey coordinator is responsible for selecting a suitable venue in which to conduct the survey training. If possible, select a hotel or place that has internet access (for use of training videos described at the end of this section). Staff attending training may be staying overnight, so accommodation and meals should be supplied. Ideally training venues are close to the schools in which the pilot will be conducted to minimize time spent traveling to pilot sites.

At a minimum, the training should cover all of the following aspects:

- reviewing underlying principles of EGRA
- reviewing the draft instrument, including instructions and tips for administering the EGRA
- EGRA scoring
- practice role- plays
- piloting
- final preparations for field work

Table 4 provides a comprehensive list of training content covered during the training:

Table 4: Training of Enumerators and Supervisors

Enumerator and Supervisor Training Content

1. ***Provide an overview of the baseline process:***
    - Expected learning outcomes
    - Purpose and objectives (why)
    - Data collection process (what)
    - Roles (who does what)
    - Methodology (how)
    - Child protection / friendly attitude
    - Data quality: EVERYONE is responsible for data quality.
        i. Attitude (learner)
        ii. Knowledge of the tool
        iii. Follow protocols
        iv. Respect

2. ***Present an overview of the tool, including:***
    - Rationale and background – why this tool?
    - An overview of the tool
    - An overview of the process

3. ***Use role play scenarios in small groups:***
    - Groups of threes: one 'enumerator', one 'child' and one 'observer'
    - Enumerator is given copies of the tool for him/herself and child (printed on coloured card)
    - Ensure each group has a clip board and stop watch for the enumerator
    - Practice holding the stopwatch and clip board in one hand, and following along, or marking with the other hand
    - Practice starting and stopping and resetting the stopwatch
    - Distribute different scenarios to those role-playing as children: one child who can't read, one who can't read loudly and fast, another who is too shy to read and pauses for more than 3 seconds.
    - Discuss ways to help a child who is hesitating or can't read (give the word and move on, no coaching, remain quiet; or if can't read at all, thank the child and end the assessment)
    - Begin role play, with the introduction by enumerator, and a friendly conversation to put the child at ease
    - The observer provides feedback on enumerator's body language, behaviour and process
    - Groups note any changes recommended to tool and pass this to the session facilitator
    - Switch roles until everyone has played each role
    - Each group to provide top tips for working with the children
    - Discuss in a plenary ways to avoid difficult situations, and how to recover from them. Ask any experienced facilitators for suggestions and discuss them.
    - Discuss whether to allow the children to finish reading the story, if they wish. However, the enumerator must mark the last word read by the child after 60 seconds is up, and only ask comprehension questions up to that point for consistency of scoring.

4. Field exercise, additional instruction

- Practice reading maps to locate schools
- Discuss procedures for situations where child refuses to participate or cannot read at all
- Each interviewer should be observed while doing several assessments by a supervisor and provided with feedback
- Debrief results from the field, discuss any challenges and revise the instrument to address any linguistic or cultural challenges
- Finalise the tool and complete logistical preparations (assignment of team, number of tests per enumerator, assignment of schools to teams)

A sample agenda for the Enumerator Training and Pilot Fieldwork is provided in Table 5.

Table 5: Sample Training workshop

Monday	Tuesday	Wednesday
Review underlying principles Review draft instrument Train in use of application, and practice Review roles and responsibilities of supervisors and enumerators	Pilot in two schools (determined by the number of teams being trained) Enter data Analyze results and modify instrument	Print final version of the instrument Train in use of application, and practice Test for inter-rater reliability Prepare and pack materials Finalize and review logistics

D. Use of the stopwatch

Time limitation is useful in making the assessment shorter and less stressful. Timing is also the key to assessing automaticity. To ensure that the stopwatch is used correctly, it is very important to pilot the use of the stopwatch with the trainees and to explain the purpose of using the stopwatch. The stopwatch should ideally have a minute button, a start/stop button, and a clear or reset button. The stopwatch function found in most mobile phones is a suitable alternative. If neither is available, identify a local alternative.

Use of the stopwatch

1. Set the stopwatch to ready: Press the start-stop button and the stopwatch will commence the count.
2. To stop the count, press the stop-start button again.
3. To reset the stopwatch, press clear.
4. To reset it, press reset.
5. For the timed test, there are two important rules
    a. If the student finishes before the stopwatch reaches 60 seconds, you must record the time on the stopwatch. For example, assuming the student read the passage in 30 seconds, write 30 seconds for time on the stopwatch at completion in the space indicated and move on.

b. If the child did not finish reading by the time the stopwatch reached zero, you must first put a bracket around the last word the child read, and then stop. Write 60 seconds in the box for recording time on the stopwatch at completion.

The Ed-data II global website, sponsored by USAID, has a host of videos that review each step of the EGRA test, including the introduction, establishing rapport, verbal consent, using the stopwatch, and final assessment procedures. Instructions from the video are included in this section. It is strongly recommended that that the videos are used during the training. The training videos may be located on the Ed-data II website: https://www.eddataglobal.org/video/index.cfm?fuseaction=egra. The workshop coordinator should ensure that a LCD projector and internet access are available at the training site for downloading and using the demonstration videos.

E. Materials and Resources

During the training workshop, participants will need:

- copies of the complete draft enumerator and student instruments
- stopwatches or timers
- pencils with erasers, clipboards
- several laptops with Excel for data entry (one laptop per group of enumerators)

For the pilot, participants will need:

- copies of the final enumerator instrument
- one laminated set of student forms per enumerator (the same laminated forms will be used for each student that the enumerator tests)
- stopwatches or timers
- pencils with erasers and clipboards
- pencils or other small school materials to give to students to keep in thanks for their participation

5: Data Collection

A. Distribution of field teams

The number of enumerators to hire and train will depend on the number of schools to be visited and the timeframe for completion of the exercise. In this way, supervisors can select students and circulate among enumerators during the testing period. Based on administrations of EGRA in several countries to date, it is estimated that results from 200 students are needed.

The survey coordinator is responsible for establishing teams of interviewers with supervisors. It is up to the coordinator to work out how many interviewers to use and the best combination of those interviewers. The recommendation is not to use more than 20 different interviewers. Too many interviewers can become difficult to manage and it becomes challenging to observe and pickup errors that may be occurring.

Table 6: Distribution of Field Teams

Recommended Distribution of Field Teams

Enumerators and supervisors can visit schools in groups of five: one supervisor and four enumerators per team. In one school each enumerator assesses five children, or 20 per team. Where schools are close together. Two schools can be completed in a day. With a team of 20 enumerators, in five teams, 10 schools can be completed in 1 day.

Total number of schools per day (2 per team)	Number of schools	Days of Field Work
5	10	1

B. Conducting the test

Before the assessment

The following preparations may be done by the coordinator along with a head teacher, or if the principal offers by the teachers themselves.

Ensure the following is done the morning of or day prior to beginning the actual assessment:

Before the EGRA begins, make the following preparations:

1. Arrange with the school to assign one classroom or room per enumerator, for the assessment. So the student is able to concentrate without excess pressure, it is highly recommended that the test takes place in a dedicated room away from observers or distractions or in a quiet space outdoors under a tree or shade.

2. Be sure to have the following materials and resources available:
   - sufficient copies of the final enumerator instrument
   - one laminated set of student forms per enumerator (the same laminated forms will be used for each student that the enumerator tests)
   - stopwatches or timers

- pencils with erasers and clipboards
- snack, pencils or other small school materials to give to students to keep in thanks for their participation

Morning of Assessment

Before departing for the schools, supervisors and enumerators should:

- Double-check all materials ensuring they have one copy of the laminated/plastic covered form of the student instrument per enumerator and sufficient copies of the enumerator instrument.
- Discuss test administration procedures and strategies for making students feel at ease, and role-play this exercise with one another.
- Verify that all administrators have a stopwatch or their own mobile phone stopwatch and are comfortable using it.
- Remind everyone of the scoring procedures
- Verify that enumerators have enough pencils or other small school materials to give to students to keep in thanks for their participation.

At the school

The steps in this section are ideally done in the first meeting with the principal to introduce the assessment, or if not possible to visit the school in advance, on the day of the testing.

Upon arrival at the school, the supervisor should introduce the team of enumerators to the school principal. In most countries, a signed letter from the Ministry will be required to conduct the exercise. The supervisor should present the letter (a copy of which should have been sent in advance, if possible; see an example of such a letter in Annex 3), re-explain the purpose and objectives of the assessment, and thank the school principal for participating in the early grade reading assessment. The principal should be reminded that students will not be identified by name in the data collection process, but that all findings will be shared back with the school.

The school principal should be notified of the procedure for providing feedback to the school on the overall performance of the students. Finally, the supervisor should kindly ask the principal if there is an available classroom, teacher room, space in the library, or quiet place for each of the administrators to conduct the individual assessments. Enumerators should proceed to whatever space is indicated and set up two chairs or desks, one for the student and one for the enumerator. Ideally, the student should have a flat surface, such as a table or desk, to place the student materials.

During the EGRA, conduct the following:

1. Pull students out from their classes in small groups, one student per enumerator, so as to minimize the disruption to classes. Lead the students to the enumerators and introduce them by name. Note the student's class

number. Enumerators record the student's age and gender, and communicate this information to each of the enumerators at the start of the student interview.

2. The enumerator should sit at a 40 degree angle from the student. If not possible, they may sit directly across from the student.

3. Ensure the administrators always have a student to assess so as not to lose time during the administration. To the extent possible, all interviews should be completed within the school day. If the assessment has not been completed before the end of the shift, find the remaining students and ask them to wait following the close of the school day. As noted in the planning section, the school director or teachers should have made provisions to notify parents that some children will be late coming home.

4. The enumerators should adhere to protocol for submitting test records to the assigned coordinator or supervisor who then reviews the tests and submits them to the data entry team. It is recommended that data is entered on a daily basis.

6: Analyzing the EGRA data

This section covers some basic and low-technology approaches that the data entry and analysis team can use in working with the EGRA data.

Throughout the development of EGRA, the approach has been to work with tools and approaches that are low cost and widely available. As statistical packages are quite expensive and require additional specialized training or self-teaching, EGRA counterparts have preferred to work with Excel. With that in mind, this section has been developed using Excel's "Data Analysis ToolPak" (an add-in available to most users of Excel) and Pivot Tables (see discussion below). When available and when they do not require much additional training in the use of the package itself, common statistical packages such as SPSS and Stata should be used because of their higher-order capacity for data analysis. This section addresses the following topics:

- Cleaning and entering data
- Using Excel to analyze data

A. Cleaning and entering data

Experience with EGRA and other surveys suggest the following are important issues in ensuring good data entry (free of errors), and data cleaning:

Cleaning and entering the data:

1. Ensure that at least one key piece of identification data on each child is included on every sheet of the questionnaire or assessment form, in case questionnaires or assessment forms become separated in transport.

2. Ensure that all data forms are checked for completeness and consistency at the end of each day, ideally by someone other than the person carrying out the assessment. This implies a reasonable ratio of supervisors to assessors (1:4), so that the supervisors can get through the forms at the end of the day. Alternatively, assessors can check each other's work at the end of the day.

3. Given the relatively small sample sizes used in EGRA assessments, data entry has been done in Excel in many cases. This maximizes transparency and ease in sharing the data. Excel can be used to create simple functions and comparisons that allow automatic consistency and range checks on the data, to detect and prevent data-entry errors. Other methods of data entry are possible, naturally, but for the sample sizes being considered for most EGRA assessments, Excel is sufficient. A Microsoft Access-based data entry interface system has been developed and is being tested in several countries. This standardized data entry system greatly reduces data entry error and can be programmed to generate simple reports.

4. However, as noted above, it is likely that once data are entered with Excel, one may want to transfer the data to a statistical package, such as SPSS or Stata, for actual analysis. Thus, it is important to enter the data with a great deal of care so as to protect record integrity. That is, it is important to make sure that the data for a given child are carefully entered into a single row, and to take great care not to mix up rows. Mixed or multiple rows are particularly dangerous if the data are sorted electronically. Excel has very weak record integrity capacity, so data entry and analysis personnel must take a great deal of care when manipulating data.

5. In coding the data, it is extremely important that data entry personnel record the answers correctly, and have a strategy for coding that differentiates among the following types of responses:
   (a) question not asked,
   (b) student did not know,
   (c) student would not answer or could not answer, and
   (d) a true zero (completely incorrect answer).

6. Similarly, if the data are to be shared with others, or are to be imported into a statistical package, it is important to create variable names that are complete and mnemonically useful e.g. CWPM for correct words per minute.

7. For key variables, such as fluency (correct words per minute), the data, as they come directly from the assessment forms, will denote the time a given task took, and the number of words. That is, even though the task is timed at 1 minute, a few children may finish the task in less than 1 minute, and in some cases more than 1 minute may be allowed. It is therefore recommended that both values, namely the number of words *and* the time in seconds, be entered into the database, but that the Excel functionality be used to create the "per minute" variable. Thus, one would enter that a child read 55 words correctly in 40 seconds, and then use an Excel formula to calculate that this means the child read at 82.5 words per minute, where the formula would be correct words) seconds x 60 (see discussion above).

8. In entering data and creating variables, the data analysis team should create two variables for each of the important concepts, such as correct words per minute, or percent of questions answered correctly. For calculating averages, for example, it may be useful to create one average that includes only the children who attempted the task and read enough to be allowed to continue the task, and one that also includes those who simply did not read enough to be recorded. If only the former children are included, it creates a somewhat distorted picture of the school, since it exaggerates how well children are reading. But if children who cannot read at all are included in the average, it does not give a good sense for the reading fluency of those who can indeed read.

9. There is no simple solution to this problem. A good solution is to enable both sorts of calculations: one average that includes the children who cannot read at all as having a fluency of 0, and one average that excludes the children who were judged nonreaders, and thus includes only those with fluency greater than 0. If a program such as Stata or SPSS is used, the matter is simple, as there are simple commands for excluding cases with a value of 0.

10. Ensure that correct comprehension is based on the child correctly answering at least two questions. If desired, percentage of correct answers can also be calculated, based on the number of questions asked. However, for the indicator, two correct questions are required, as well as the reading speed.

A codebook or data dictionary should be created by the data analysis team to describe each variable name. This could most easily be located in a separate page in the Excel worksheet, and would contain information similar to that in Exhibit 1:

Exhibit 1. Sample Codebook Entries

Variable name	**Variable description**	**Coding notes**
Cwctread	Correct words in connected text read	Blank means that the task was not

		continued
Cwctseconds	Time in seconds to read connected text	Blank means that the task was not continued
Cwpmct	Correct words per minute in connected text (created variable)	Zero means that no words were read as the task was not continued

B. Using Excel to analyze data

Most or all of the analyses needed to produce a basic report on EGRA results can be done with Excel.

To protect data integrity, it is strongly suggested that as much of the analysis as possible be done using the Excel "Pivot Table" facility. This allows the data analysis team to calculate averages, for the key variables, according to any needed subsets of the data, such as by age, by grade, by gender, or by school. For any variable, and for any subgroup, one can easily calculate the usual results such as the mean, the count or number of cases, and the standard deviation.

Results typically of interest will include the average correct words (or letters) per minute, broken down by age or gender or some other factor. A typical example, generated using Excel for a sample of students, would be as follows:

Exhibit 2. Sample Results

Variable	Grade 2
Correct words per minute, connected text (total)	4.0
Correct words per minute, connected text (excluding nonreaders)	11.6
Percent of questions answered correctly (total)	40
Percent of questions answered correctly (excluding nonreaders)	60

7: Sharing baseline findings

To bring learning to the centre of the stage, it is important not only to have data but also to disseminate and discuss the findings widely within different levels of the government, schools and among community stakeholders more broadly.

Who to share results with?

- National and district government and education stakeholders
- Parents and community stakeholders
- Partners, donors, and other stakeholders
- World Vision national office, regional office and relevant support office

A. How to disseminate information?

Depending on the particular stakeholder, the data is presented using multiple and appropriate communication strategies. A final report of the assessment describing the

tool, the process, the findings, conclusions and recommendations would be appropriate for program staff, partners, government decision-makers and school administrators who are literate and accustomed to reviewing educational data reports. The information could possibly complement government monitoring and evaluation of educational data.

Using visual graphics with large images and few words would be most appropriate in a community with high illiteracy rates, especially to inform parents and the children themselves who were tested about their overall test scores and the implications.

How can the results assist the district or national level Ministry of Education with education quality improvements?

The system diagnostic EGRA as presented in this guide is designed to fit into a complete cycle of learning support and improvement. EGRA can be used as part of a comprehensive approach to improving student reading skills, with the first step being an overall system-level *identification* of areas for improvement. General benchmarking and creation of goals for future applications can also be done during the initial EGRA application. Based on the results, education ministries at the national or district levels can then *intervene* to modify existing programs using evidence-based instructional approaches to support teachers for improving foundation skills in reading. Results from EGRA can thus inform the design of both pre-service and in-service teacher training programs. It can also increase government and donor investments in areas such as reading-focused teacher training, developing and distributing reading books and instructional materials, creating libraries, improving and expanding pre-schools, and developing measurable reading standards that all teachers and parents can understand.

Once these recommendations are implemented, parallel forms of EGRA such as the Functional Literacy Assessment Tool (FLAT) can be used to follow progress and gains in student learning over time through continuous *monitoring*, with the expectation that such a process will encourage teacher and education administrator responsibility for making sure students make progress in achieving foundational and functional skills.

How can the results inform the community members, particularly parents of the children, about the actual learning achievement of their children?

Community members, particularly parents, who are the key partners in WV program implementation, should be informed about the actual reading levels of their children. Through community conversations about possible solutions and sharing of community strategies for promoting literacy (e.g., literacy boost activities with parents), the community may be involved in monitoring children's progress in the school and at home to follow gains in student learning over time. By sharing results, the community may also be made aware of their children's right to a quality education, government obligations, and ways to advocate for improving the quality of teaching and learning.

How can the results assist World Vision partners with improving program quality and learning outcomes?

Based on the results, local providers of education can then modify existing programs. These partners may be involved during the initial adaptation of the EGRA tool and may utilize the results to inform literacy and basic education programs.

How can the results support World Vision as an institution to improve global and national strategies?

It is important to share the results with programmatic staff of all sectors responsible for integrated programming. This includes global sector directors, national office heads, and program design, monitoring and evaluation teams. The report should also be circulated to respective communities of practice so that technical groups may reflect critically on the findings and lessons learned from the experience.

Annex 1: Early Grade Reading Assessment (EGRA)
Grade 2 Passage Reading and Comprehension

General Instructions: *It is important to establish a playful and relaxed rapport with the children to be assessed, via some simple initial conversation, using topics of interest to the child (see example below). The child should perceive the following assessment almost as a game to be enjoyed rather than a stressful test. It is important to read ONLY the sections in boxes aloud slowly and clearly.*

Good morning. My name is ___ and I live in ____. I'd like to tell you a little bit about myself. [*Number and ages of children, animals, sports, etc.]*

1. **Could you tell me a little about yourself and your family? *[wait for response; if student is reluctant, ask next question, but if they seem comfortable continue to verbal consent].***
2. **What do you like to do when you are not in school?**

Verbal Consent

- **Let me tell you why I am here today. I work with World Vision and we are trying to understand how children learn to read. You were picked by chance, like in a raffle or lottery.**
- **We would like your help in this. But you do not have to take part if you do not want to.**
- **We are going to play a reading game. I am going to ask you to read a short story aloud.**
- **Using this stopwatch, I will see how long it takes you to read.**
- **This is NOT a test and it will not affect your grade at school.**
- **I will NOT write down your name so no one will know these are your answers.**
- **Once again, you do not have to participate if you do not wish to. Once we begin, if you would rather not answer a question, that's all right.**
- **Do you have any questions? Are you ready to get started?**

Check box if verbal consent is obtained ☐

If verbal consent is not obtained, thank the child and move on to the next child, using this same form

E04. Enumerators number		
E05. NAME of school		
E06. Student's grade	2nd Grade = 2	3rd Grade = 3
E07. Class name (if any)		
E08. Student's age in YEARS		
E09. Student's gender	Male = 1	Female = 2
Time started[10]	____:____ am/pm	

[10] *Time is for quality checking purposes – not required for data entry.*

Oral passage reading and comprehension

Show the child the story on the card and say:

Here is a short story. I want you to read it aloud, quickly but carefully. When you have finished, I will ask you some questions about what you have read. Do you understand what you are to do? When I say "begin" read the story as best as you can. I will keep quiet and listen to you, unless you need help. Ready? Begin.

 Start the timer when the child reads the first word.

- Follow along with your pencil and clearly mark any incorrect words with a slash (/).
- Count self-corrections as correct. If you've already marked the self-corrected word as incorrect, circle the word and go on.
- **Stay quiet**, except when providing answers as follows: if the child hesitates for 3 seconds, provide the word, point to the next word and say **"please go on".**
- Mark the word you provide to the child as incorrect.
- **At 60 seconds (1 min) say: "OK thank you"** ***Mark the final word read with a bracket (]).***

Early stop rule: If you have marked incorrect with a slash all of the words on the first line, say **"Thank you",** and discontinue the exercise. Check the box at the bottom and say **"we have finished the exercise, good effort"**. The child can now leave and you can begin the exercise with the next child.

- **When 60 seconds are up, or the child finishes reading the passage in less than 60 seconds, REMOVE the passage from in front of the child**, and ask the first question below.
- Give the child 15 seconds to answer the question.
- Mark the child's response, and move to the next question.
- Read the questions for each full line up to the bracket showing where the child stopped reading.
- Do not ask the child questions beyond where he or she stopped reading.

If the child would like to finish reading the story, they can do so. However it is very important that you mark with a bracket] the last word they read at 60 seconds. Only ask the comprehension questions up to where the child read within 60 seconds.

Now I'm going to ask you a few questions about the story you just read. Try to answer the questions as best you can.

SCORE SHEET

			Correct	Incorrect	No Response
My name is Pat. I live on a farm with my mother, father and brother Sam.	*16*	How many people are in Pat's family? *(Four: mother, father, Sam, Pat)*			
My family is happy. One day Sam planted seeds with his father. A snake bit him!	*31*	Sam's family was happy, then something happened. What was it? *(A snake bit him.)*			
Mother knew what to do. She put wet cloths and leaves on his leg.	*45*	How did Sam get well? *(His mother helped him OR put wet cloths and leaves on his leg.)*			
The next day, Sam was back in the field with father. We were happy again.	*60*	*What made the family happy again? (Sam was healed.)*			

If finished early:
Mark time on the stopwatch at completion (number of seconds): ☐

If discontinued.
Check this box if the exercise was discontinued; because the child was unable to read a correct word in the first line. ☐

To be completed during analysis:

E10. Number words correct in one minute (#/60) _____
If completed in less than 60 seconds calculate words per minute

E11. Total number of questions asked _____

E12.Total number of questions answered correctly: _____

If no answer mark with a dash (—); if not asked, leave blank

Annex 2: Student Passage

Snake Bite!

My name is Pat. I live on a farm with my mother, father and brother Sam. My family is happy. One day Sam planted seeds with father. A snake bit him! Mother knew what to do. She put wet cloths and leaves on his leg.
The next day, Sam was back in the field with father. We were happy again.

Annex 3: Open Letter from Deputy Director General, South Africa, to School Principals

AN OPEN LETTER TO ALL PRIMARY SCHOOL PRINCIPALS

Dear Principal

Let's teach our children to read

Reading is a foundational skill that all our children need if they are to succeed in life. Sadly, all our assessments of how well our children read reveal that a shockingly high number cannot read at the appropriate grade and age level. Many simply cannot read at all. We cannot allow this to continue. We are therefore challenging all primary schools to improve the reading skills of all their learners. Even learners who are perceived to be reading at the appropriate level for the grade they are in should be encouraged to move to the next level.

Since the introduction of the National Curriculum Statement, many teachers believe they do not have to teach reading anymore. Nothing could be further from the truth. Reading is probably the single most essential skill a child needs and it should be acquired as early as possible.

There are five areas that are critical for reading:-

- Phonemic awareness (understanding the sounds in spoken words);
- Phonemes (linking sounds to the alphabet and combining these to form words);
- Vocabulary (learning and using new words);
- Fluency (reading with speed, accuracy and understanding); and
- Comprehension (understanding the meaning of what they read).

The Curriculum Guidelines allocate sufficient time for the Language Learning Area and the above should be taught within that time allocation. The Department will provide additional support and guidelines to all schools so principals know how to support teachers.

In addition to the formal teaching of reading, we want all schools to set aside at least 30 minutes a day for the entire school to read (including principal and staff) in any language. This period can be handled in different ways: children who are able to read independently should be encouraged to do so, older learners can read to the younger ones, or teachers to their classes or to groups of children. The Department of Education will help you put storybooks into all classrooms, starting with schools in the poorest communities, so that children can also read for pleasure.

At the beginning of 2006 we put packs of 100 storybooks each, in the different South African languages, into over 5 628 foundation phase classes. Next year we will put similar packs into another 6 000 schools. All we ask is that you help learners read the books and enjoy them.

Later this year we will be testing the reading levels of Grade 3 learners all over the country. A short test to assess whether we are succeeding in our efforts to teach reading will from now on be a regular feature in our monitoring of learner achievement in schools. Take up the challenge and help your children read better!

Palesa T Tyobeka
Deputy Director-General: General Education and Training
Department of Education

education
Department:
Education
REPUBLIC OF SOUTH AFRICA

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