

EGRA Results Dissemination

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

- Understand basic EGRA data outputs and uses
- Be familiar with effective communication and dissemination strategies

EXERCISE: Whose Results?

- Why do we collect EGRA data?
- Who will use it, and for what purpose?
- What kind of information is appropriate for certain audiences?
- What methods and media are best used according to audience and purpose?

1. What?

2. How?

Remember:

It's not what you want to tell them that counts, it is what they are capable of hearing!

and

Information is only useful if it is used...



Example: Which Message is Most Powerful?

- The average oral reading fluency score for children in grade 2 was
 16 correct words per minute.
- The average grade 2 student reads 1 word every four seconds.
- After two years of public school, it takes the average child four seconds to read one word.

Best Practices

- Know your audience
- Tell a story
- Validate results first (depending on context)
- Less is usually more

Cautions and Limitations

- Correlation vs. causation
- Avoid comparison across languages and countries
- Be careful about generalizations if sample size is not sufficient
- Check print quality before distribution (particularly legibility of colors in graphs)
- Always clearly label your axes and give graphs a title (not always done for this presentation!)



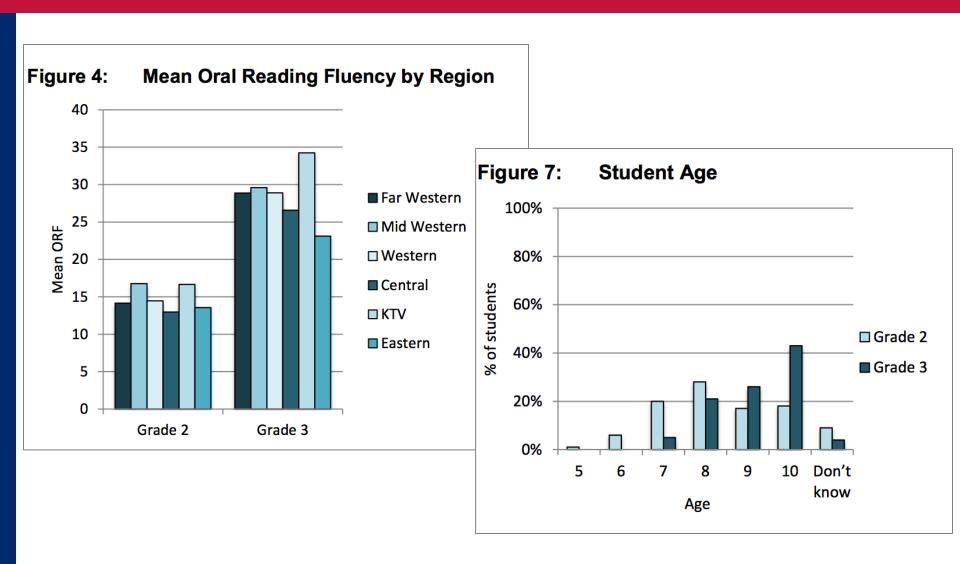
Presentation Types: Refresher

Presentation Types: Refresher

Not all presentation types are equal—certain visualizations are used for specific purposes.

- Bar charts: comparing groups
- Pie charts (or 100% bar charts): total distribution of values
- Line graphs: evolution over time
- Points/scatterplots: relationship between two variables
- Tables: technical details
- Maps: geographical information

Bar Charts: Comparing Groups



Source: Sitabkhan and DeStefano, 2014 (Nepal EGRA).

Stacked Bar Chart: Distribution by Group

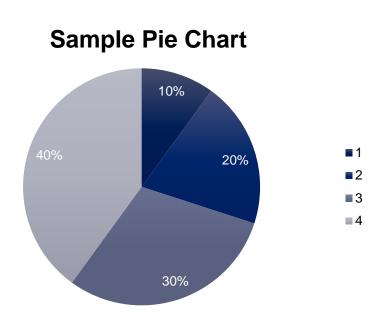
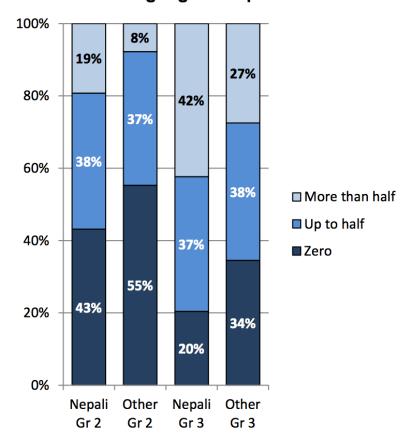
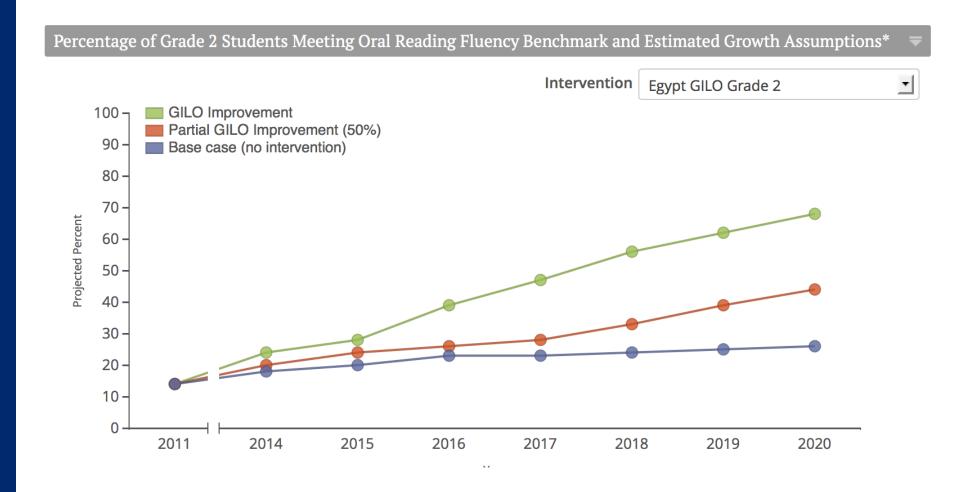


Figure 16: **Reading Comprehension by Language Group**



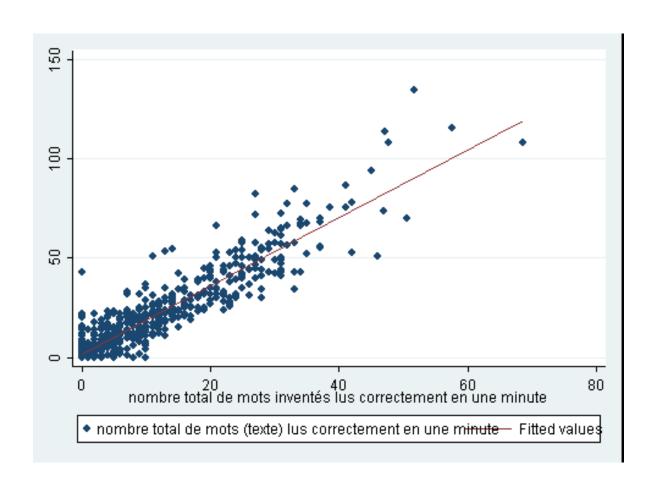
Source: Sitabkhan and DeStefano, 2014 (Nepal EGRA).

Line graph: Continuous Variables (time series, trends)



Source: USAID EGRA Barometer (Egypt), http://www.earlygradereadingbarometer.org

Points or Scatterplots: Relationship Between Two Variables



Source: Pouezevara, Sock, and Ndiaye, 2010 (Senegal EGRA).

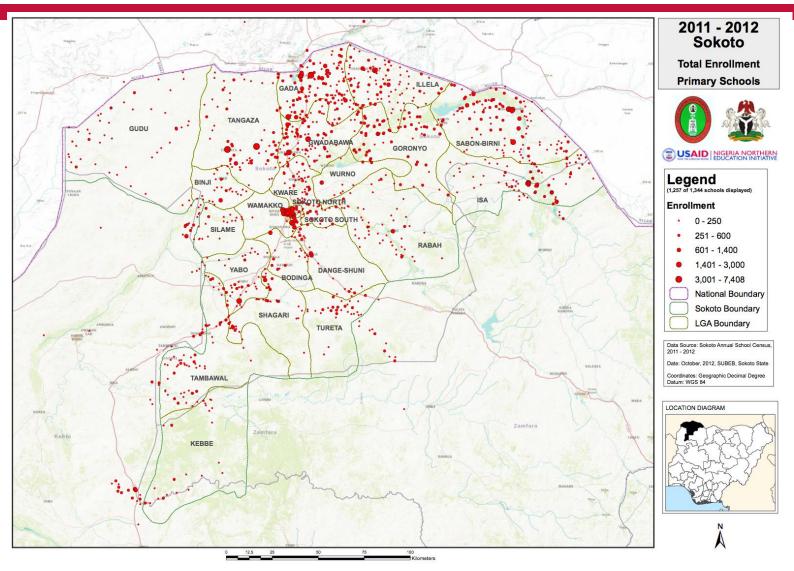
Tables: Technical Data

Table 3: Summary of Reading Performance on All Subtasks

_	Grade 2			Grade 3			
	Mean	Standard Error	% Zero	Mean	Standard Error	% Zero	
Letter sound knowledge	28.6	1.0	8%	39.9	1.1	4%	
(correct letters/min)	20.0	7.0	070	00.0	, ,	770	
Matra reading (correct matras/min in isolation)	15.8	1.1	31%	27.9	1.4	16%	
Nonword reading (correct words/min in isolation)	6.6	0.5	34%	11.7	0.6	19%	
ORF (correct words/min of text)	14.2	1.0	37%	27.2	1.4	19%	
Oral reading comprehension (# correct out of 6 questions)	1.3	0.1	50%	2.4	0.1	27%	
Listening comprehension (# correct out of 3 questions)	1.8	0.1	11%	2.0	0.0	6%	

Source: Sitabkhan and DeStefano, 2014 (Nepal EGRA).

Maps: Geographic Data



Source: EGRA in Sokoto State, Nigeria, 2013, USAID Nigeria Northern Education Initiative. Data analysis report: Creative Associates International and RTI International, 2013.

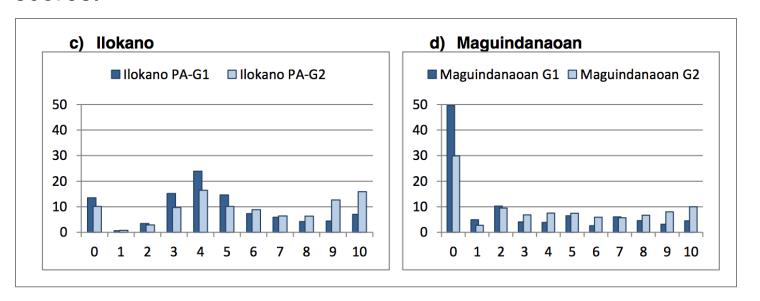


Presentation by Type of Information

- 1. Subtask types
- 2. Item analysis
- 3. Relationships between variables or tasks
- 4. Factors associated with the results
- 5. Benchmarking
- 6. Validity and reliability

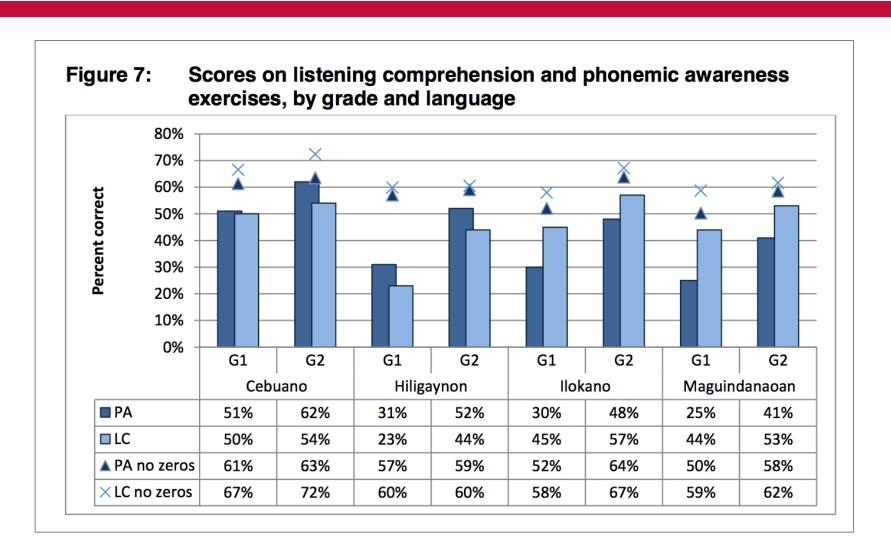
1. Subtask Types: Untimed Tasks (comprehension, phonemic awareness)

- Indicator is percent correct out of total possible or total attempted (in the case of reading comprehension).
- Present mean (average percent correct), distribution (how many got one correct, how many got two correct, etc.), and zero scores.



Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

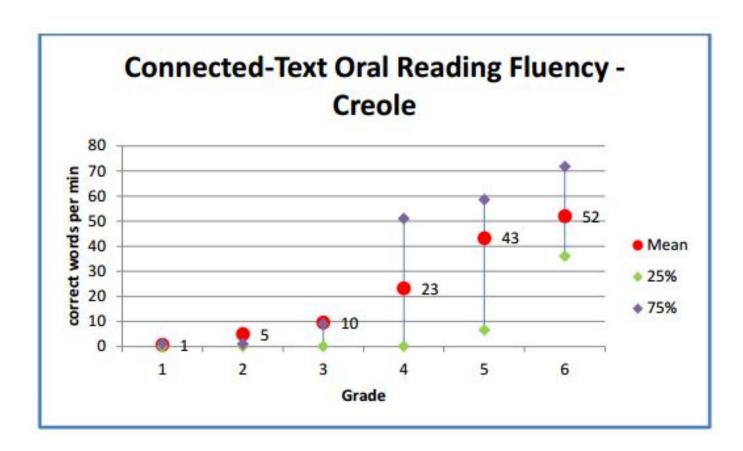
Bar Chart With and Without Zero Scores



Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

Subtask Types: Timed Grid Tasks

- Fluency
- Accuracy
- Means
- Distribution



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- Fluency
- Accuracy
- Means
- Distribution

Connected-Text Oral Reading Fluency Creole

"The text in this passage is aligned to grade 2 or grade 3 standard, in which we would expect scores of 45-60 cwpm. Mean scores from grades 1-4 are very low – the mean for grades 2, 3 and 4 respectively are 5; 10; and 23 cwpm. This implies that the average child in grades 2-4 cannot read a simple text with fluency. Mean scores for grades 5 and 6 are higher, at 43 and 52 cwpm respectively. However, these scores are in the low range for fluency and they must be considered relative to the standard of the text. If the average grade 6 student reads grade 2 text at just 52 cwpm it is very unlikely that he/she can read a grade 6 level text with fluency or comprehension"....

Fluency vs. Accuracy

Table 8: Reading accuracy: Percent correct out of total attempted

	Cebuano		Hiligaynon		llokano		Maguindanaoan	
	G1	G2	G1	G2	G1	G2	G1	G2
Non-words	74%	81%	73%	80%	81%	89%	67%	73%
Familiar words	76%	88%	79%	86%	77%	89%	67%	77%
Short story	79%	90%	76%	87%	76%	85%	72%	84%

Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

Fluency vs. Accuracy

Table 8: Reading accuracy: Percent correct out of total attempted

	G1	G2	G1	G2	G1	G2	G1	G2
Non-words	74%	81%	73%	80%	81%	89%	67%	73%
"With a fe	w excep	otions, fo	r all lang	guages a	nd tasks	accurac	y impro	ved by
wless than								
s that Grade								
reading w	ith a gre	eat deal c	of accura	acy, and k	by Grade	2 their o	cognitiv	e skills
could be	used for	[·] increasi	ng auto	maticity a	and there	fore ove	erall flue	ency.
We can al	so see t	hat as re	ading b	ecomes n	nore emb	edded i	n conte	xt and
familiarity	(short	story rea	ding as	opposed	to readir	g words	s in isol	ation),
accuracy	usually	improves	s. Ilokan	o was the	e only ex	ception	where	
accuracy	was low	ver when	reading	a short s	story, con	npared t	o when	
reading w	ords in	isolation	in both	Grade 1	and Grad	le 2. It is	likely t	hat
this was o	due to th	ne highly	agglutir	native nat	ure of the	e langua	age."	

Maguindanaoan

Source: RTI International. 2014. Philippines EGRA.

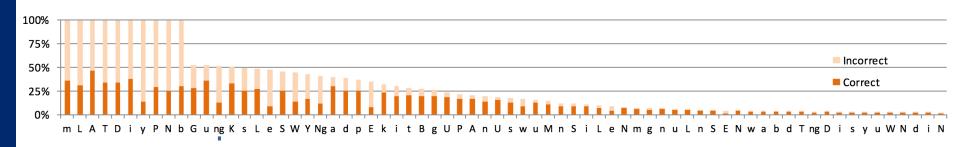
Subtask Types: Comprehension (reading and listening)

Table 5: Grade 2 Analysis of Correct Responses to Attempted Questions

Grade 2								
#	# Correct							
Attempted	0	1	2	3	4	5	6	
0								
1	72%	28%						
2	34%	29%	37%					
3	12%	20%	34%	35%				
4	3%	6%	9%	23%	59%			
5	1%	0%	9%	12%	29%	51%		
6	1%	0%	1%	16%	12%	22%	49%	

2. Item Analysis

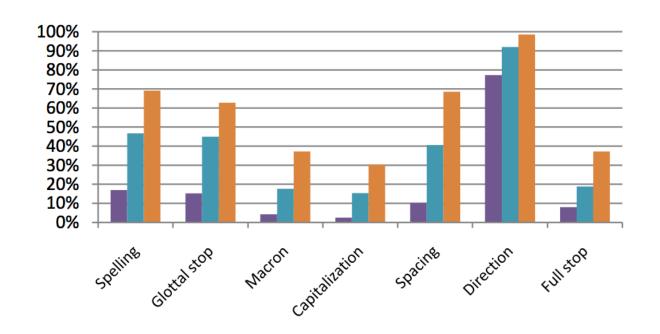
Percent correct/incorrect by item



Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

Item analysis: Dictation

Figure 5 – Percentage of Correct Answers in Each Task of Sub-test 8 by Class and Gender

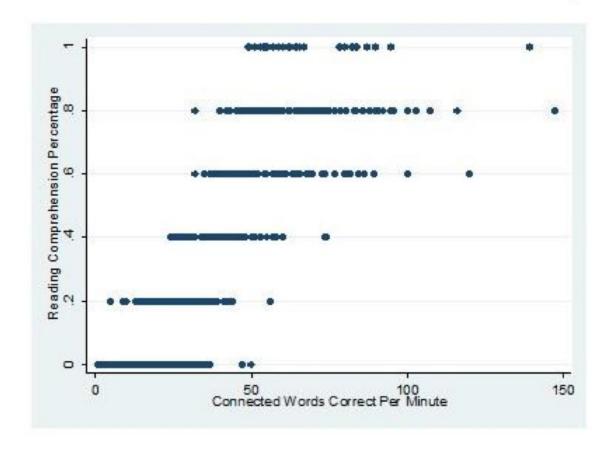


Source: Machuca-Sierra and Stevens, 2009 (Tonga EGRA).

3. Relationships between subtasks

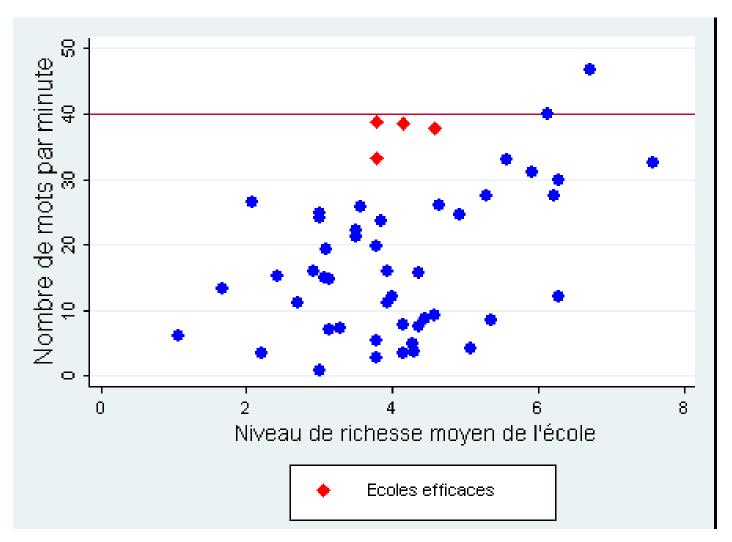
Figure 6 – Percentages of Average Reading Comprehension by Number of Correct Words Read Per Minute in the Oral Reading Passage

 Reading fluency and comprehension



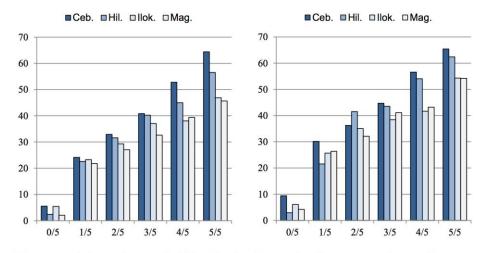
Source: Machuca-Sierra and Stevens, 2009 (Tonga EGRA).

Fluency and socioeconomic status



Source: Pouezevara, Sock, and Ndiaye, 2010 (Senegal EGRA).

Fluency and comprehension



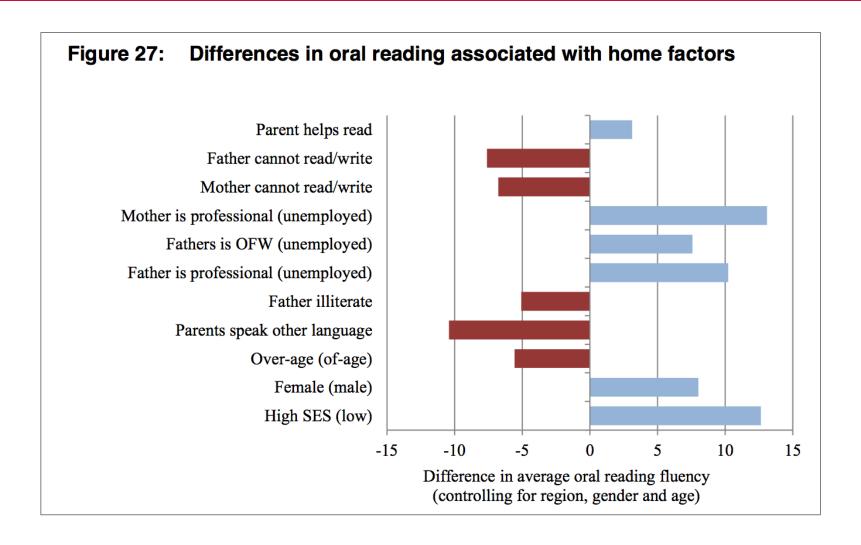
What we see is that students at the highest levels of comprehension across Grades 1 and 2 had oral reading fluencies in the ranges shown for each language in **Table 10** below.

Table 10 ORF and comprehension

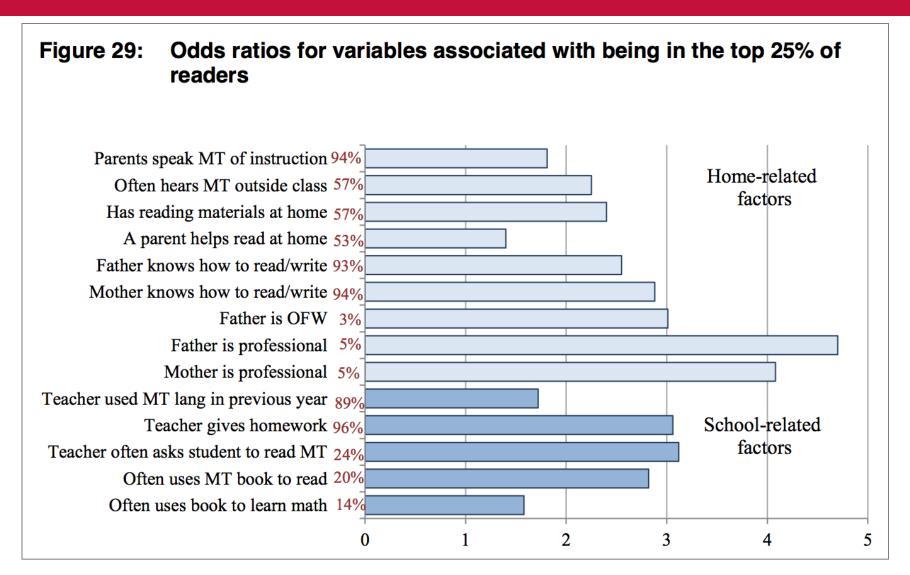
	80% comprehension	100% comprehension	
Cebuano	52-55 wpm	62-65 wpm	
Hiligaynon	45-54 wpm	55-65 wpm	
llokano	38-41 wpm	45-55 wpm	
Maguindanaoan	39-41 wpm	45-53 wpm	

Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

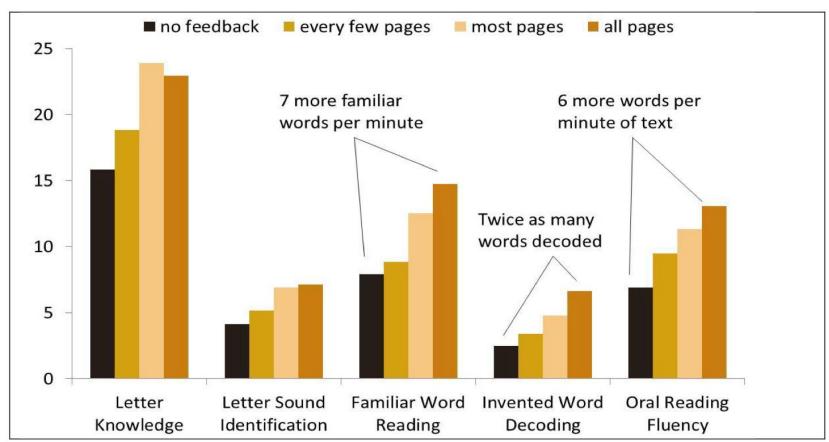
4. Factors Associated with Results



Factors associated with high performance



Corrective feedback and reading achievement



Source: Collins and Messaoud-Galusi, 2012 (Yemen EGRA); and RTI International, 2013 (brief).

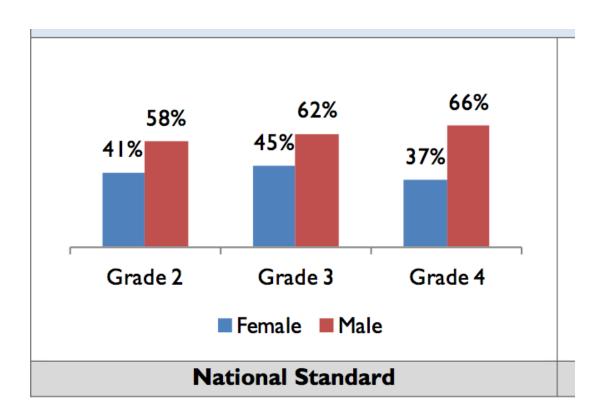
5. Benchmarking

Table 20: Reading fluency and comprehension as benchmarks								
		Grade 1	% in range	Grade 2	% in range			
Cebuano	80% comp	42 – 56	11%	46 – 64	27%			
	100% comp			55 – 76	19%			
Hiligaynon	80% comp	38 – 51	10%	44 – 62	25%			
	100% comp			53 – 69	15%			
llokano	80% comp	34 – 44	10%	35 – 45	25%			
	100% comp			45 – 58	20%			
Maguindanaoan	80% comp	32 – 57	4%	35 – 56	20%			
	100% comp			45 – 62	13%			

Source: Pouezevara, DeStefano, Cummiskey, and Pressley, 2014 (Philippines four-language EGRA).

Benchmarking

Students who did not pass the national benchmarks.



Source: Tvaruzkova and Shamatov, 2012 (Kyrgyz Republic and Tajikistan EGRA).

6. Validity and Reliability

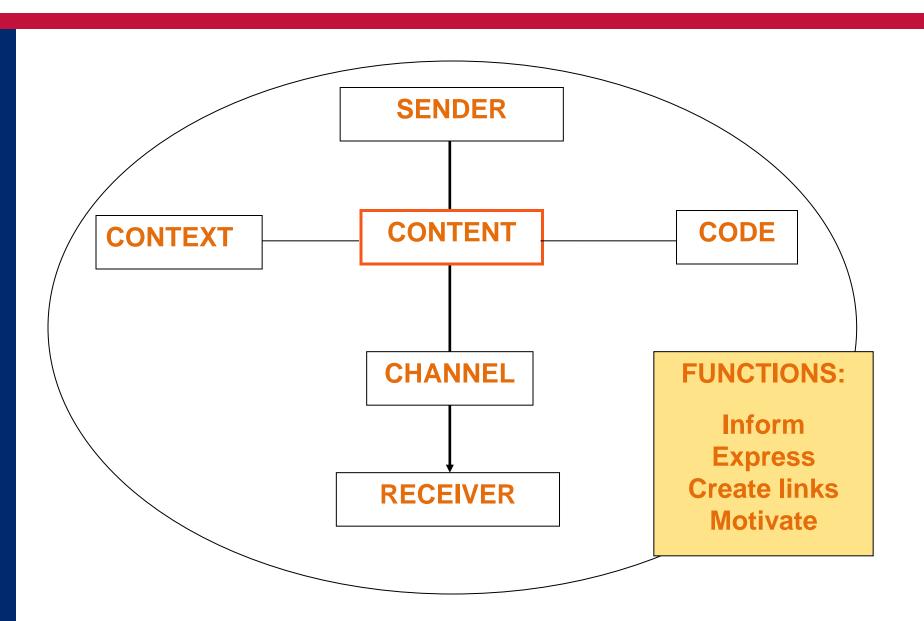
- Chronbach's Alpha vs. Pearson Correlation
- Recommendation is to use only Chronbach's alpha, Item-test Item-rest analysis



From Presentation to Delivery

Sharing Results for Maximum Impact

Communication Refresher



Receiver (Whom Do You Need to Reach?)

Chosen as a function of:

- Their influence: Can the target audience get done what you think needs to be done, based on the results?
- Access: To whom do you actually have access?
- Relationships: What is the relationship between the person who delivers the communication and the target population?

Target Populations

- Government policy makers
- School-level officials
- Teachers
- Researchers
- Parents and civil society

Consider what each audience may get out of the EGRA results, and what is the best format for communication.

Channel: Methods of Dissemination

- Reports
- Flyers, infographics
- Workshops
- Media/multimedia

Dissemination: Reports

- Find examples on <u>www.eddataglobal.org</u>
- Reports can be a comprehensive record of everything about the study:
 - Purpose
 - Methodology (procedures, instruments, limitations)
 - Sample framework and selection
 - Validity and reliability indicators
 - Results
 - Conclusions and recommendations
- In reports, use a combination of visuals and narrative (visuals should ALWAYS be accompanied by an explanation)

Dissemination: Flyers, Posters, Banners

- A one-page flyer is always a good idea since many people won't read the full report, and it can be expensive to print and distribute full reports
- Extract key data from the report and present visually, highlighting the importance and action items
- Use local materials; engage local partners in developing flyers

Handout 10.1: Brief Example: Nigeria Handout 10.2: Brief Example: Senegal Handout 10.3: Brief Example: Philippines

Handout 10.1: Brief Example: Nigeria

Early Grade Reading Assessment (EGRA) in Hausa Results for Bauchi & Sokoto

The ability to read is one of the most important skills a child can learn. For this reason, the Nigeria Northern Education Initiative (NEI), with support from the U.S. Agency for International Development (USAID), collaborated with SUBEB, the Ministry of Education, the College of Education and others to conduct the Early Grade Reading Assessment in P3 in February and March 2011 in Bauchi and Sokoto states. The purpose of EGRA was to measure pupils' ability to read in Hausa, the language of instruction in P1- P3.

What is the Early Grade Reading Assessment?

EGRA measures various skills that are necessary for children to read fluently and understand what they read. The test is conducted orally and one-on-one with pupils. EGRA results tell us whether children have acquired these key skills, and if not, what areas need to be improved.



Why measure pupils' reading ability in Hausa?

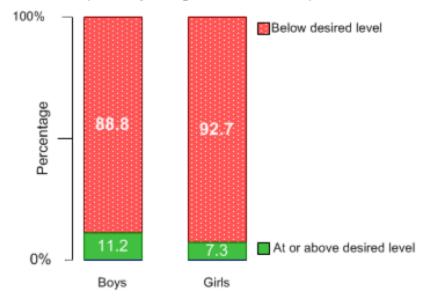
Measuring pupils' reading ability in Hausa is important for several reasons. First, children learn to read best in a language that is familiar to them. This is because they arrive at school with an extensive vocabulary in their first language, which helps them learn to read with understanding. Becoming a good reader in Hausa also helps children to learn English, since many of the key skills related to reading are transferrable from one language to another.

Handout 10.2: Brief Example: Senegal

Early Grade Reading Assessment (EGRA) Project in Senegal Update and results

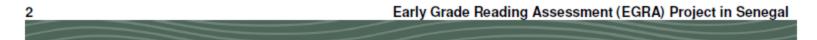
In 2009, the William and Flora Hewlett Foundation supported implementation of an Early Grade Reading Assessment in Senegal. This assessment was conducted by RTI International and Focus Africa with assistance from Associates in Research and Education for Development (ARED) and the National Institute of Research for Educational Development (INEADE) in Senegal. The evaluation took place from May to June in CE1 classes (third year of schooling) across 50 schools in 11 regions of Senegal. From July to November, the results were analyzed, then presented to different departments of the Ministry of Preschool, Elementary, and Middle Schooling, and of National Languages (Ministry of Education) during a working session on November 16, 2009. This publication summarizes key findings about the current level of reading ability in the grade tested, as well as factors linked to the socioeconomic and classroom environment that appear to influence that ability.

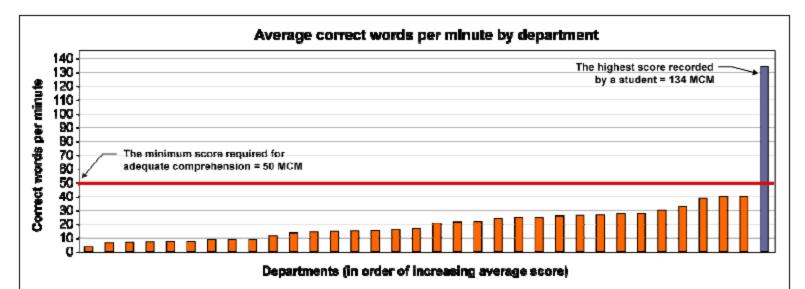
Percent of children in CE1 who have demonstrated minimum French reading fluency (score equal or greater than 50 MCM)



How is this study different from other student reading assessments?

Handout 10.2: Brief Example: Senegal





The graph above shows the large inequalities in performance between the student samples, presented by departmental* average. The bars indicate departments—and schools within these departments—where the student average reaches 40 words per minute, and others where almost all the students have a score of zero and averages do not exceed 10 words per minute (in other words, one word every 6 seconds). In order to read effectively and understand the text that is read, it is necessary to read at least 50 words per minute, yet

no department has reached this performance threshold on average. The best reading score recorded from the sample was 134 words per minute. Nevertheless, only a total of 9% of the sampled students read 50 words per minute or more. The only children that answered all of the comprehension questions correctly were part of this group. 50 WPM is an appropriate target after the first year in most countries.

^{*}Given the relatively small sample, we have maintained the anonymity of the departments.

Handout 10.3: Brief Example: Philippines

Maguindanaoan EGRA: Summary of Results

The ARMM region has been implementing MTB-MLE since 2012, and trainings began in the region as early as 2010. This region is receiving support from the Australian Agency for International Development through the BEAM program. Access to education and outcomes and been improving despite the particular challenges of this region, including political instability, poverty and highly diverse communities resulting in classrooms where multiple languages are represented among the children.

According to data from this study:

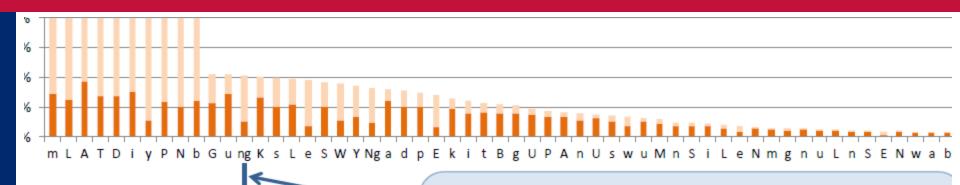
- 83% of teachers say Maguindanaoan is their mother tongue.
- 98% of students say that Maguindanaoan is spoken in their home.
- Maguindanaoan was observed being used during a reading lesson 87% of the time and during another subject area 49% of the time.
- 45% of grade 1 and 43% of grade 2 students report that the teacher never uses the MT

Gr	ade 1	Grade 2
All pupils have learning materials		
	49%	32%
All teachers have the teacher's guide		
	46%	23%
Teachers believe they have sufficient materials		
	29%	28%

Children learning to read in Maguindanaoan are improving scores significantly from Grade 1 to Grade 2, yet G2 scores are equivalent to Grade 1 in other regions/languages. An important factor reducing overall averages is the high proportion of zero scores across subtests, from 68% who could not decode a single non-word in Grade 1 to 38% who could not read a word of the short story in Grade 2.

Children in Grade 1 read on average 7 correct letter sounds per minute, 5 correct non-words per minute, and 6 correct familiar words per minute. In Grade 2

Handout 10.3: Brief Example: Philippines



66% of children in grade 1 and 38% of children in grade 2 could not read the first 8 words, and the exercise was discontinued.

A majority of children attempted 13 letter sounds in one minute, which amounts to about 5 seconds per letter. When provided simple one-syllable words, they could isolate only 3 of 10 initial sounds. Children were most successful with the words "ulan", "tig" and "gansu".

Children* read common familiar words like this correctly 67% (G1) to 77% (G2) of the time

Si Amir endu su pakat nin na nageda sa <u>awang</u>.

<u>Minangay</u> silan sa lawas a ig ka <u>nanguwa</u> sa <u>seda</u>.

Nakakuwa silan sa sakatimba a seda. Pendagangen

nilan su seda lu sa padian. Nalipatanan nilan i dikena

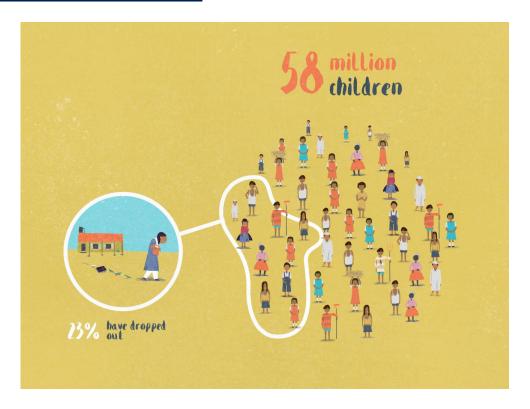
aay na padian Minuli silan ka inilutu nilan su seda 🖊





Multimedia Infographics

 http://www.uis.unesco.org/_LAYOUTS/UNESCO/oosci-datatool/index-en.html#en/cover



 http://www.msiworldwide.com/2014/07/infographic-the-road-tochildren-reading-in-pakistan/

Dissemination: Workshops

- Involve the country stakeholders
- Validate the results prior to wider dissemination in order to understand the context
- Give stakeholders an opportunity to tell you what kind of presentation formats they understand best and what might need additional clarification
- Allow people to work in groups to think about the issues and possibilities for addressing them

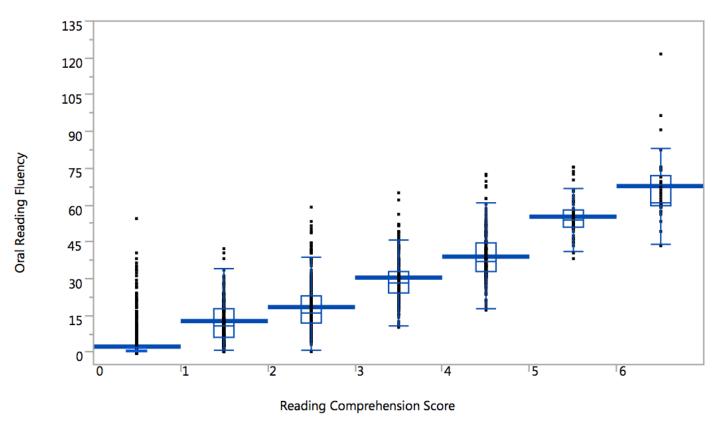
Dissemination: Multimedia

- Showing actual children reading can be a powerful way to illustrate what you are presenting in the data.
- It can be difficult and time consuming to produce high-quality multimedia such as video.
- Once created, TV/radio can be equally as costly to broadcast, depending on the country.
- Multimedia approaches are often used more for motivation to action than actually presenting the results.

Content: What to Present

Here are some examples of different types of data presentation. Who might be the target audience for each visualization?

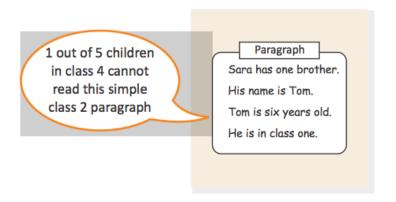
Figure 2: Mean Oral Reading Fluency and Reading Comprehension Scores, Grade 2

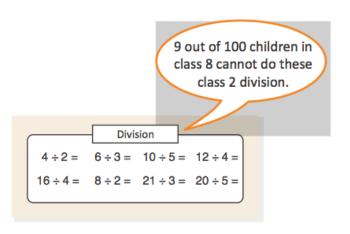


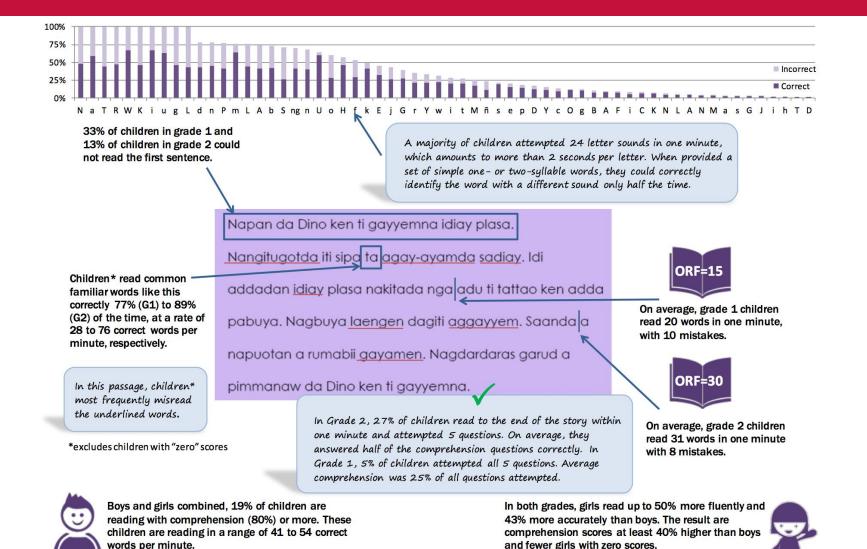
Source: Sitabkhan and DeStefano, 2014 (Nepal EGRA).

Five Key Facts

- 1. Our children are going to school, but are they learning?
 - Nationally, 7 out of 10 children in class 3 cannot do class 2 work. Learning levels are poorest in arid districts and in Western Province.







55

Guest speaker: Benjamin Sylla Strategic Measurement Specialist Goal 1 & Goal 3 Strategic Measurement, USAID

 We will now break for lunch. The next session will begin at 2:00 p.m. EST.

 Online participants can chat in questions from the last session.

References

- Collins, Penelope, and Souhila Messaoud-Galusi. 2012. Student Performance on the Early Grade Reading Assessment (EGRA) in **Yemen.** Prepared under the USAID EdData II project, Learning Outcomes and Assessment-Related Tasks, Task Order No. EHC-E-07-04-00004-00 (RTI Task 7). Research Triangle Park, NC: RTI International. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=392
- Concern Worldwide. 2013. Early Grade Reading Assessment (EGRA) Saut d'Eau **Haiti.** Prepared under the Multi-Sectoral Rural Development Programme in Saut d'Eau, Haiti, jointly funded by Irish Aid and the Kellogg's Foundation. Dublin, Ireland: Concern Worldwide. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=512
- Creative Associates International and RTI International. 2013. Results of the 2013 Early Grade Reading and Early Grade Mathematics Assessments (EGRA & EGMA) in Sokoto State.

 Prepared under the USAID Northern Nigeria Initiative, Contract No. EDH-I-00-05-00026-00. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=514
- Machuca-Sierra, Myrna, and James A. Stevens. 2009. **Tonga** Early Grade Reading Assessment (TEGRA) Baseline Survey: Results Report. Nukuʻalofa, Kingdom of Tonga; and Washington, DC: East Asia and the Pacific Education Unit (EASHE), World Bank. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=304

References, continued

Pouzevara, Sarah, Joseph DeStefano, Chris Cummiskey, and Jennifer Pressley. (2014). *DEP/AME:*Philippines Analytic Support Services for Early Grade Reading (PhilEd Data II). Component 2:

Early Grade Reading Assessment Results: A Cross-language Look at MTB-MLE

Implementation in the Philippines. Prepared for USAID under the EdData II project, Data for Education Programming in Asia and Middle East, Task Order No. AID-492-M-12-00001 (RTI Task 15). Research Triangle Park, NC: RTI International.

https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=626

Pouezevara, Sarah, Madjiguene Sock, and Aminatou Ndiaye. 2010. Evaluation des compétences fondamentales en lecture au Sénégal: Rapport d'Analyse [Early Grade Reading Assessment in Senegal: Analysis report]. Prepared for the Ministère de l'Enseignement Préscolaire, de l'Elémentaire, du Moyen Secondaire et des Langues Nationales du Sénégal and the William and Flora Hewlett Foundation, under Grant No. 2008-3367. Research Triangle Park, NC: RTI International and Focus Africa.

https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=250

Sitabkhan, Yasmin, and Joseph DeStefano. 2014. **Nepal** Early Grade Reading Assessment Study. Prepared for USAID under the EdData II project, Data for Education Programming in Asia and Middle East, Task Order No. AID-OAA-BC-11-00001 (RTI Task 15). Research Triangle Park, NC: RTI International.

https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=598

References, continued

- RTI International. 2013. *All Children Learning. Early Grade Reading Brief: Yemen.* Prepared under the USAID EdData II Project, Data for Education Programming in Asia and Middle East, Task Order No. AID-492-M-12-00001 (RTI Task 15), for the All Children Learning Workshop, Rabat, Morocco. Research Triangle Park, NC: RTI International. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=526
- Liliane Sprenger-Charolles, Liliane. 2008. *The Gambia.* Early Grade Reading Assessment (EGRA) Results from 1,200 Gambian Primary Students Learning to Read in English—Report for the World Bank. Research Triangle Park, NC: RTI International. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=116
- Tvaruzkova, Mirka, and Duishon Shamatov. 2012. Review of Early Grade Teaching and Skills: The Kyrgyz Republic and Tajikistan, Final Report. Prepared for USAID/Central Asian Republics under Task Order EDH-E-00-08-00003-00 of the Global Evaluation and Monitoring II Blanket Purchase Agreement. North Bethesda, Maryland: Aguirre Division of JBS International, Inc.; and University of Central Asia. https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=364
- Uwezo **Kenya.** 2011. *Are Our Children Learning? Annual Learning Assessment Report. Summary and Key Findings.* Nairobi, Kenya: Uwezo. http://www.uwezo.net/wp-content/uploads/2012/08/KE_2011_AnnualAssessmentReportSummary.pdf