



EdData II

Student Performance on the Early Grade Reading Assessment (EGRA) in Yemen

Executive Summary

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Prepared for

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Executive Summary

Policy Background

In 2003 Yemen's Ministry of Education (MOE) drafted the National Basic Education Development Strategy (BEDS). The goals of the strategy include decentralizing the education system and improving access to basic education, with particular focus on closing the gaps between urban and rural school quality, as well as between boys and girls who attend school.¹ Results have been positive: In 1999/2001, the gross enrollment rate for girls in primary school was only 51%; by 2007/2008 it had increased to 76%.² As of 2008, the ratio of girls to boys enrolled in primary school was 80, and the primary school completion rate was 72% for boys and 49% for girls.³ Illiteracy rates in Yemen have been startlingly high in the past, but have improved significantly in recent years. Although the adult literacy rate is 80% for males and 45% for females,⁴ among youth ages 15–24 the rates are 96% for males and 72% for females.⁵ A clearer understanding of how students are learning basic reading skills in the early grades is an essential first step in improving student performance.

Purpose and Design of the Assessment

Assessments of student learning in the primary grades, such as the **Early Grade Reading Assessment (EGRA)**, offer an opportunity to determine whether students are developing the fundamental skills upon which all other literacy skills build, and, if not, where efforts might be best directed.

A closer evaluation of students' mastery of foundational reading skills would help reveal to Yemen's MOE why learning outcomes have not improved as much as would be desired. To that end, USAID and the Yemen MOE tasked RTI International with administering EGRA to a stratified random sample of 735 students in grades 2 and 3. Students were selected from 40 schools across the three governorates of Amran, Lahj, and Sana'a.

¹ Ministry of Education (MOE), Republic of Yemen. (2008). *The development of education in the Republic of Yemen: The national report*, p. 6. Retrieved Dec. 12, 2011, from http://www.ibe.unesco.org/National_Reports/ICE_2008/yemen_NR08.pdf.

² World Bank: International Development Association (IDA). (2009, September). *Educating more girls to reach universal goals*. Retrieved Nov. 30, 2011, from <http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:22341550~menuPK:3266877~pagePK:51236175~piPK:437394~theSitePK:73154,00.html>.

³ World Bank database, retrieved Nov. 30, 2011, from <http://data.worldbank.org/country/yemen-republic>.

⁴ United Nations Educational Scientific and Cultural Organization (UNESCO), Institute for Statistics (UIS), retrieved Nov. 30, 2011, from <http://www.uis.unesco.org/Literacy/Pages/default.aspx>.

⁵ World Bank database, retrieved Nov. 30, 2011, from <http://data.worldbank.org/country/yemen-republic>.

How Well Are Students Learning to Read?

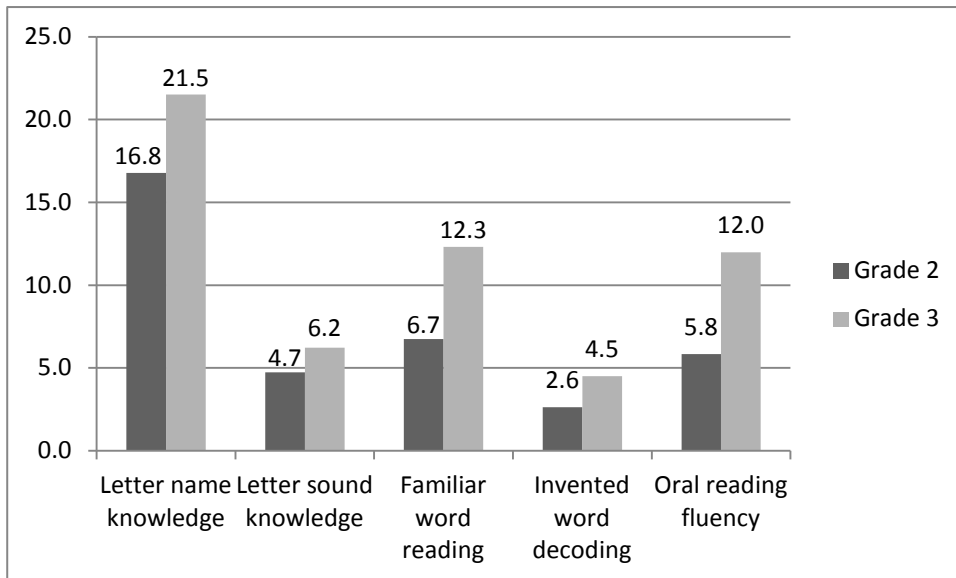
The EGRA was administered orally in Arabic and included nine subtasks: five that were timed to assess automaticity in the skill area (letter name knowledge, letter sound knowledge, familiar word reading fluency, invented word decoding, oral reading fluency) and four that were not (initial sound identification, reading comprehension, listening comprehension, and dictation). In addition to the subtasks, data collectors interviewed each student to gather information about home and school contexts that might help to understand students' reading performance.

Figure ESI reveals that early reading skills were low across all the timed EGRA measures. Students in grade 2 could identify almost 17 letters by name in a minute, and they could produce the sounds of about 5 letters in that same time. Their peers in grade 3 could correctly name 22 letters and produce the sounds of about 6 letters per minute. One third of students (33%) were unable to correctly produce the sound of any letters.

Students' limited mastery of the letters and the sounds associated with them, coupled with low scores in identifying the initial sounds of words (on average, 1 of 10), contributed to very low scores in invented word decoding and familiar word reading. Over half the students (53%) could not decode a single invented word. Students read lists of familiar words at a rate of 12.3 correct words per minute at the end of grade 3.

Because students had not acquired the basic building blocks for reading, their oral reading fluency scores were low. Students in grade 2 read on average 5.8 correct words per minute and 42% were unable to read a single word. Grade 3 students read on average 12 correct words per minute and 27% were unable to read a single word. To give some perspective, the average reading fluency score was 57.3 correct words per minute for the students who were able to correctly answer 5 of the 6 reading comprehension questions.

Figure ES1: Correct responses per minute on the five timed EGRA subtasks

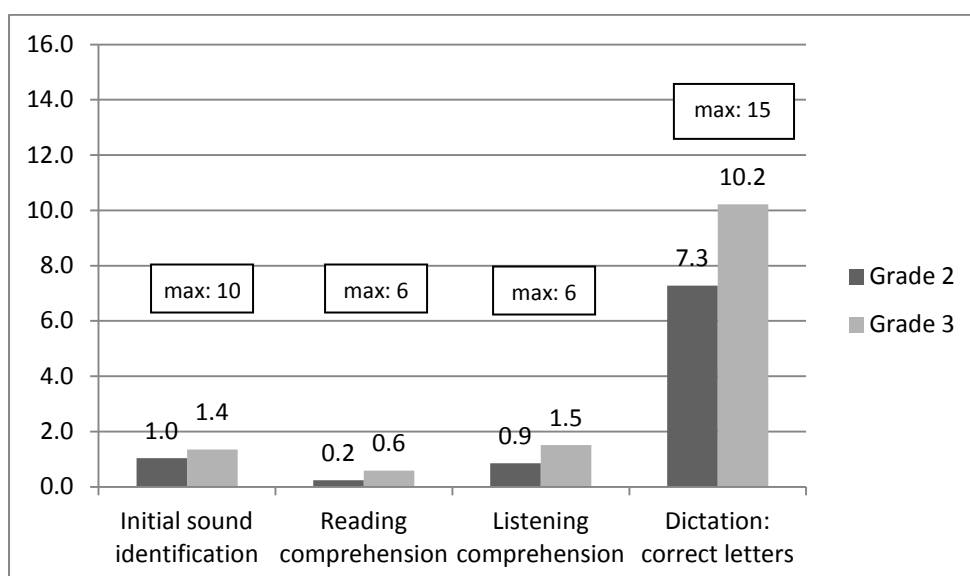


Note: Separate scales are used for the timed and untimed subtasks. Graphs of student performance on the timed tasks use items per minute as the unit of measurement.

Not unexpectedly, few students could read with sufficient fluency to enable them to comprehend the text. *Figure ES2*, which displays results for the four untimed subtasks, shows that reading comprehension scores were very low, with 0.2 total correct answers out of 6 in grade 2 and 0.6 out of 6 in grade 3.

Listening comprehension scores were somewhat higher, although still quite low, with an average of 0.9 total correct answers out of 6 in grade 2, and 1.5 out of 6 in grade 3. This indicates not only that students are having difficulty with their decoding skills but also that their comprehension skills are weak. Dictation scores were similarly low with regard to students' ability to correctly spell the three words spoken to them. Students had some success spelling some of the individual letters contained in the dictated words, with 7 to 10 letters spelled correctly. However, average scores across both grades indicated that students were unable to correctly spell even one word completely.

Figure ES2: Total correct responses on the four untimed EGRA subtasks



Note: Graphs of student performance on the untimed tasks have a restricted range for possible scores.

These findings suggest that Yemeni children need greater instructional support not just in their word recognition and spelling skills, but also in building robust language comprehension in literary Arabic.

What Contributes to Student Reading Achievement?

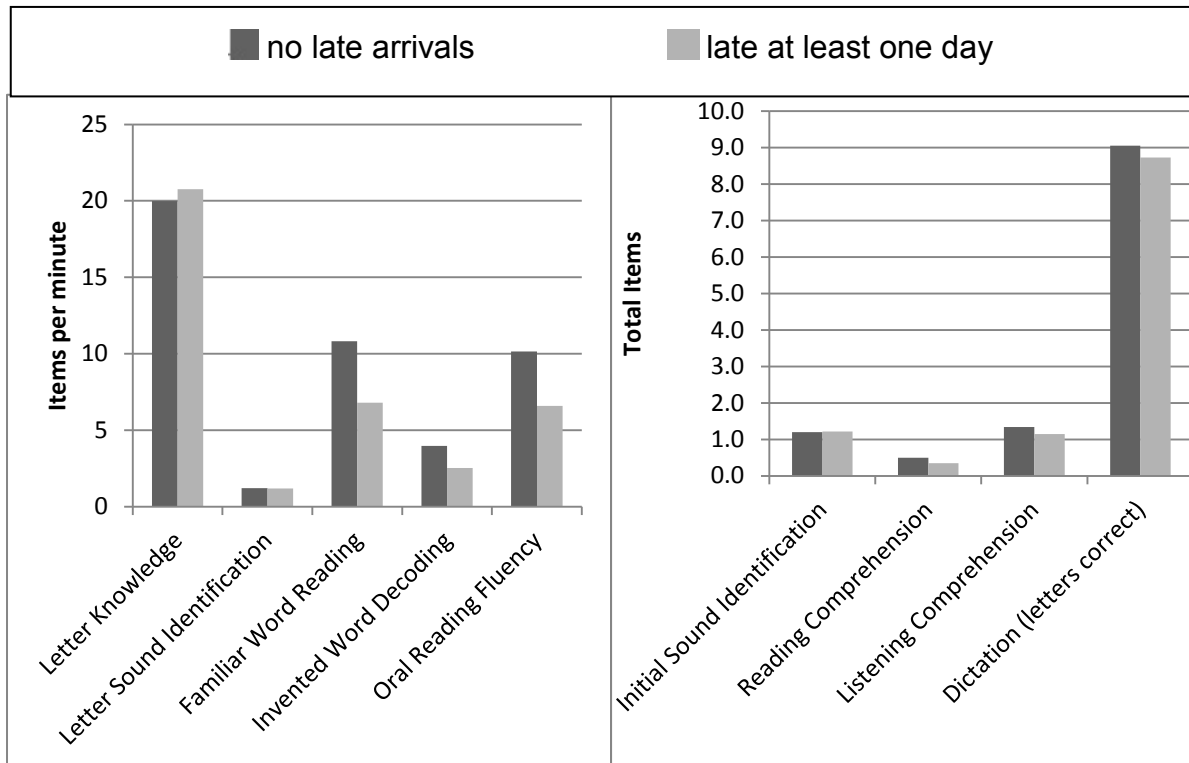
As part of the EGRA application, students were interviewed to collect information about student demographics, and other home and family factors that might influence reading achievement. These responses were then compared with students' oral reading fluency scores through a series of statistical regression models to determine which student, home, or school factors were predictive of reading performance. The analysis showed three statistically significant factors contributing to children's reading performance in school: attendance, having opportunities to practice reading, and receiving corrective feedback from teachers.

Attendance

Students who reported being absent the previous week showed weaker performance on most of the subtasks of the EGRA. Students who had missed at least one day of school the previous week identified fewer correct letter sounds, read fewer words in lists and in the passage, and were less accurate in spelling the three dictated words. Children who did not miss school were more successful in answering the reading comprehension questions.

Arriving at school on time is also important, as student tardiness limits opportunities to learn and practice the literacy skills taught in school. Students who reported that they had been late the previous week showed even weaker performance on most of the subtasks of the EGRA than those who had been absent (*Figure ES3*). As with attendance, students who had arrived on time every day were more successful in answering the reading comprehension questions.

Figure ES3: Effects of arriving on time to school vs. arriving late⁶

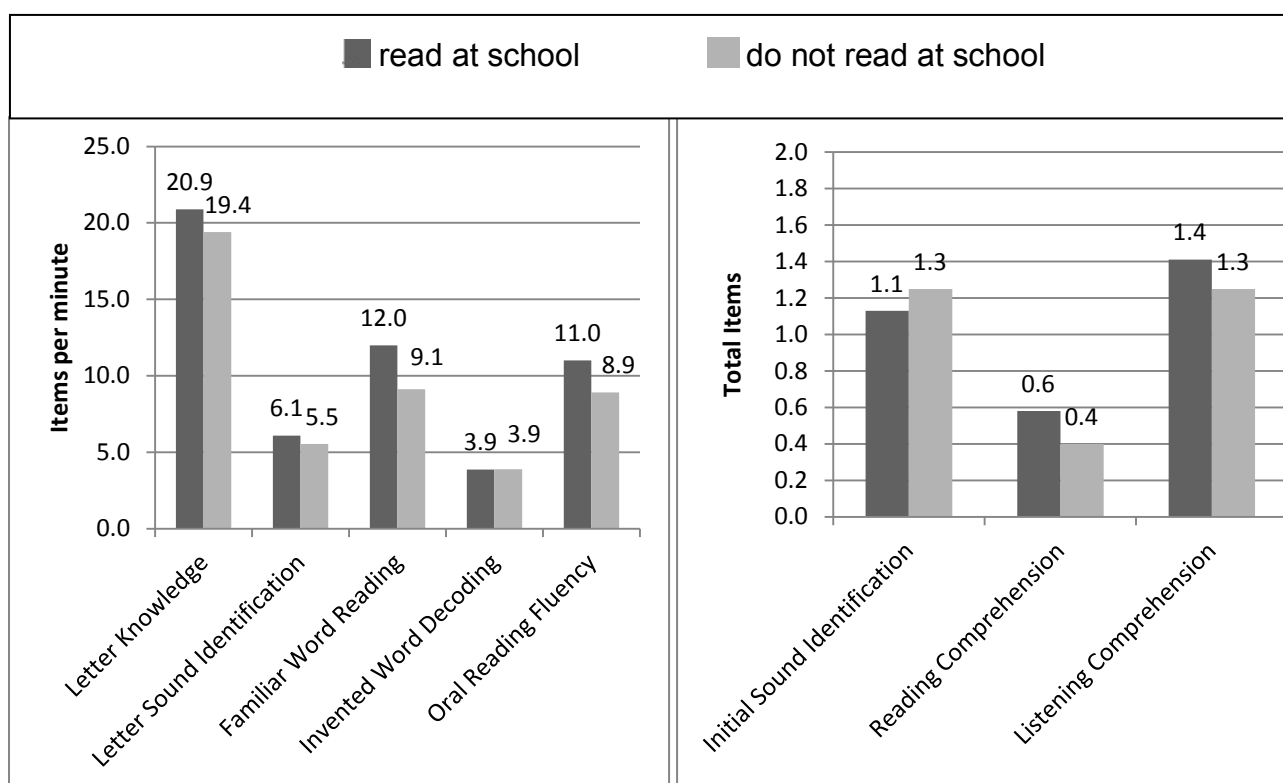


Opportunities for Practice

The findings in Yemen illustrated that giving students opportunities to practice is critical for building their beginning literacy skills. One important way of doing so is by providing children with the opportunity to read at school. Children who reported that they had time to read at school obtained significantly higher scores in reading familiar words, whether they were presented in a list or in a passage (*Figure ES4*). They also showed stronger achievement in both reading and listening comprehension. Having time to read in class was also associated with higher spelling scores.

⁶ There was a small, but statistically significant difference between the scores of students who were not late and those who had arrived late at least one day the week before.

Figure ES4: Effects of opportunity to read at school vs. no reading at school

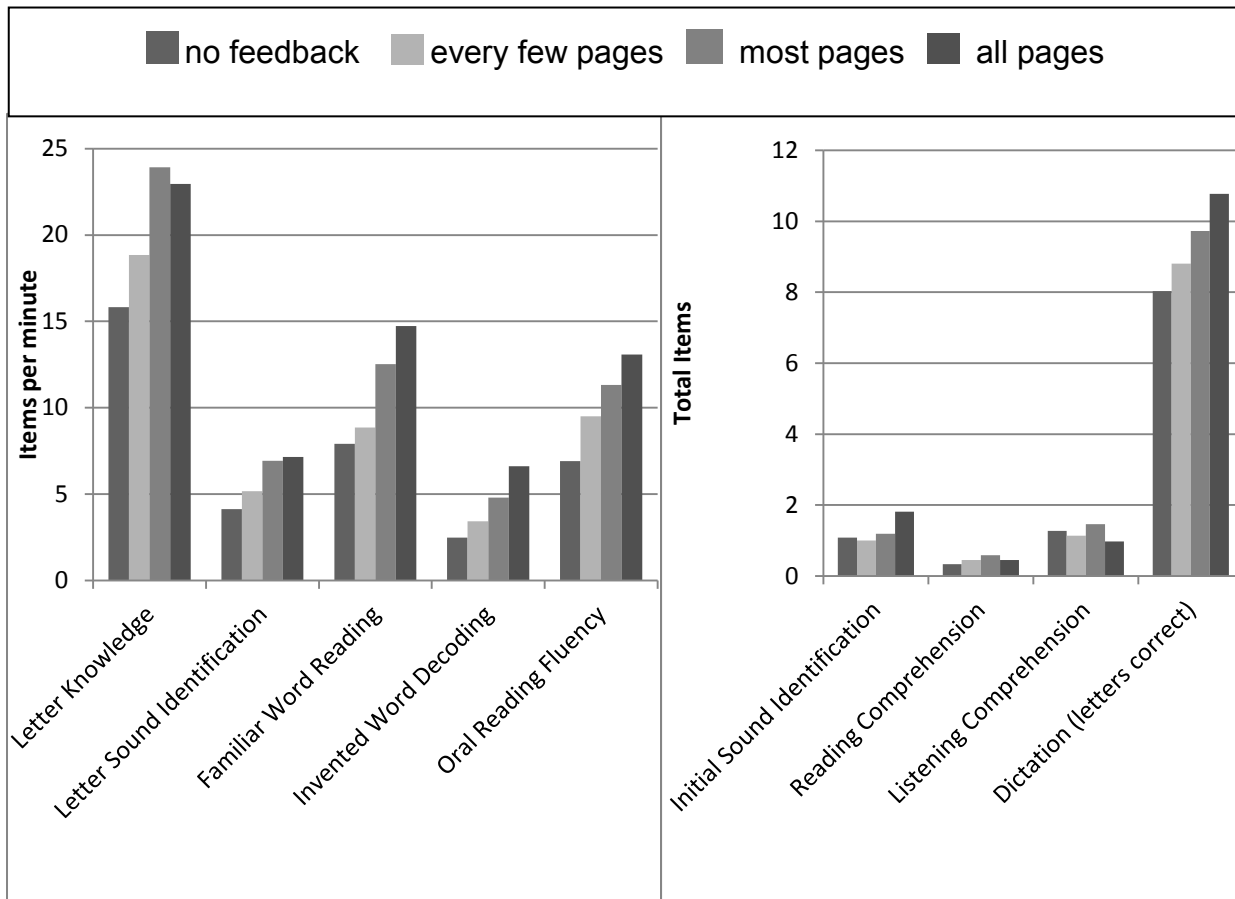


Note: A much smaller scale than for the previous graph had to be used for the untimed tasks so that small group differences could be observed. In addition, dictation results were omitted from the analysis because of coding problems.

Corrective Feedback

In Yemen, the frequency with which teachers marked or provided comments to children in their language books was used as an index for the quantity of corrective feedback students received, as well as being an indication of the level of teacher engagement. The amount of feedback varied greatly, ranging from teachers who made no comments or markings in the language books to other teachers writing on every page. Analyses showed that the more teachers provided corrective feedback in students' language books, the better students performed (*Figure ES5*). In each of the EGRA subtasks, children who received corrective feedback on most or all the pages of their language books obtained higher scores than children who did not receive or who had infrequent corrective feedback from their teachers.

Figure ES5: Effects of corrective feedback



In addition to looking at the amount of feedback provided in student exercise books, students were asked what happens when they incorrectly answer a question in class. While some students said their teacher restates the question (6%) or asks another student (6%), most students said they were punished for answering incorrectly by being hit by the teacher (58%) or scolded (14%). When comparing the EGRA results between students who reported receiving positive or corrective feedback with those who reported receiving negative feedback or punishment, the overall difference was statistically significant ($p < .01$). Compared with negative feedback or punishment, positive or corrective feedback was connected to significantly stronger performance in letter identification, letter sound knowledge, familiar word identification, and unfamiliar word identification. This is something to consider, as an environment that is conducive to learning is one where students feel comfortable participating even if they answer incorrectly at times⁷

⁷ F. Pajares, 1996, Current directions in self-efficacy research, In M. Maehr & P. R. Pintrich (Eds.). *Advances in motivation and achievement*, Volume 10 (pp. 1–49). Greenwich, CT: JAI Press.

Recommendations

The current EGRA results indicate a clear need to improve reading instruction in the early grades. It is therefore recommended that attention be focused on five key actions:

1. **Train teachers to teach reading.** Given the weak performance exhibited by students in most of the foundational reading skills, reforms to pre-service teacher training as well as supplementary in-service teacher training for existing teachers, should be considered. More specifically, training should include phonemic awareness, phonics instruction, reading fluency, vocabulary, and reading comprehension. Teaching these basic components of reading should begin in grade 1.
2. **Provide students with books and opportunities to read.** Students who had the opportunity to read at school tended to show stronger reading skills. Making more books available to children and setting aside time for them to read is a crucial first step toward improving reading outcomes.
3. **Encourage parents to improve children's attendance.** Given that absenteeism and tardiness were linked to lower reading outcomes, intentionally reaching out to parents or caretakers about the importance of sending their child to school on time every day could help to improve attendance rates, and consequently improve reading skills.
4. **Train teachers to provide corrective feedback.** Yemeni teachers who were already providing more intensive and frequent feedback enjoyed higher student outcomes. Thus, refining and expanding teachers' use of corrective feedback could play an important and promising role in improving students' reading and writing outcomes in the primary grades.
5. **Train teachers to assess reading.** Specific benchmarks for each reading skill and in each grade should be established so that teachers, parents, education authorities, and students know if children are obtaining them, and if they are progressing appropriately. Such benchmarks can be created by identifying the skills demonstrated by pupils reading with at least 80% comprehension. As part of a comprehensive training in reading instruction, teachers should be trained to assess children against reading benchmarks.