

“Sixty words per minute for all”: Why this goal for the early grades?

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What percentage of sixth graders in the lower-income FTI partner countries can read relatively fluently? Take a guess. Nearly everyone? What if the answer is 50% of those who survived to grade 6?

The countries that use achievement tests to monitor student progress often find that low-income and rural populations have low scores. Sometimes students lack basic skills after years in school. However, this information typically comes too late. Assessments are usually given in grades 4-6, after many students have fallen too far behind to keep up with school. Children in the early grades may not reliably respond to written tests. How should student learning be monitored in grades 1 and 2? What must be done to ensure the acquisition of basic skills among the poor early on?

Cognitive and educational research offers advice that can be put to use quickly and relatively inexpensively. Fluent and accurate reading is a prerequisite for understanding texts and learning from textbooks. Thus, achievement in the early grades can be assessed by listening to students read a simple text for about one minute. By the end of grade 1 students should be able to read very common words, albeit haltingly. By the end of grade 2 at the latest, students should be reading simple texts fluently, at a rate of at least 60 words per minute.

What is the rationale for this assessment standard? To fluent readers the skill seems trivial, but there is complex neuroscience behind it. The brain must be “programmed” through many hours of practice and feedback, until reaction time to letters decreases down to milliseconds. Brain imaging studies show that as students approach the speed of about 45-60 words per minute, a special area in the brain gets activated. That’s when reading starts becoming effortless. Then students pay attention to the meaning of the text rather than individual letters. To understand, readers must hold a text in their heads for a while, but human working memory may last only about 12 seconds. So paradoxically, a minimum reading speed is necessary to understand text. If someone reads less than about 45 words per minute, by the end of the sentence they may forget the beginning!

Worldwide, curricula specify that students should “crack the code” and read brief texts of common words by the end of grade 1. Middle-class students usually have no difficulty attaining this standard (unless they have reading disabilities). In fact, multi-country research using the Roman script has shown that when the spelling rules are simple and instruction is sufficient, most children need just 4-6 months to learn reading in their own language. However, teaching in languages with complex spelling patterns, like English, French, Portuguese, or unvoweled Urdu takes longer to learn and requires much more practice.

Delays in reading are more frequent among the poor who have little home support, particularly when faced with languages that they also do not speak well. One reason is that people identify letters faster within words they know; so poor children learning to read in schools that use English, French, or Portuguese are at a particular disadvantage. They could potentially learn to read in their own national languages (that are usually spelled phonetically) within a few months, but with limited language knowledge they need several years to become fluent in the languages that have complex spelling.

Reading- speed norms and benchmarks have been developed in the United States, Chile, and a few other countries. Oral reading surveys have been carried out in more than 40 countries, including the United

States, Peru, India, Mali, Pakistan, Uganda, and South Africa; these have shown that many poor students fail to meet curricular requirements early on. The reading assessment includes tests such as reading letters, very common words taught in school, and a short text similar to those found at the end of a grade 1 textbook. Students are asked to read the text aloud to an examiner one by one. They may be tape-recorded, or the number of words read correctly in one minute may be counted with a stopwatch. To verify comprehension, students are then asked 3-5 very simple questions pertaining to the material in the text. (In agglutinative languages, like Swahili, care must be taken to segment phrases into words.) Similar tests are under development for math skills.

What can governments do if they sample a number of students and find many of them unable to read in grade 2? At that level, it is possible for the poor to catch up with intensive reading instruction during the regular school day, evenings, and vacations. Research in India and Africa shows that speed and accuracy can substantially increase in 6-12 weeks with phonics instruction and efficient use of class time.

To bring about fluent reading for all, policies must be directed towards this goal. Specific reading hours should be designated in the curricula for grades 1-2 rather than the prevalent practice of mixing reading instruction with language. Every child should have a textbook to take home and study, and the textbook should teach phonics and offer many pages of practice to help students pick up fluency.

Teachers must be trained in phonics, explicit instruction of individual letters and combinations and should use instructional time for teaching. Teachers in low-income countries have themselves become literate under inefficient conditions, and they may believe that only few can learn reading. There is a need to emphasize in training techniques to help all learn the basics, even when classes are large. Teachers must ask questions of students at random rather than work with those who can do the work. They need to ensure that even when students are verbally repeating in unison or copying from the blackboard that they recognize the letters they see. Seating them (on the floor if necessary) close to the blackboard and the teacher is likely to maintain students' attention. Standing in various parts of the class using flash cards (simple sheets of paper with material written) will increase the probability that students see the letters and connect them to sounds. Finally, teachers could listen to each child read for one minute once a day and take action if a child cannot do so.

Teachers can be supported through incentives; for example, prizes can be given to those who manage to have all their students reading 60 words per minute by the end of grade 2. Supervisors, inspectors, district officers should supervise the lower grades based on this fluency goal. Communities can also monitor reading speed. Even illiterate parents can distinguish whether children read fluently. It is important, therefore, that parents learn to expect the acquisition of fluency in grades 1 and 2 and demand that schools prepare their children for this task. Public information videos (such as one developed in Perú) can help parents and educators understand these standards and their rationale. Though not sufficient to bring about comprehension, fluency is necessary.

Failure to learn reading is the primary reason for repetition in the early grades. Students cannot learn from books until they can read fluently, and they may even be unable to solve verbal problems written in math books. The loss of opportunities to learn early on results in knowledge gaps that persist all the way to the university. By that time, the students should be reading about 250 words per minute. If they only read 90, they cannot read volumes of material, as current modern jobs demand. They cannot read computer screens fast enough to deal with the material. Thus, early-grade reading strongly affects the efficiency of an education system.