



# Effective Early Reading Instruction

## Aligning Standards, Curriculum, and Assessment for Special Education

Combating the cycle of illiteracy and poverty is a major global issue, particularly in developing countries, where far too many children (and adults) cannot read and write at a basic level. Data from the World Bank confirms that in many developing countries, fewer than 50 percent of individuals more than 15 years old can read.<sup>1</sup> Within this group, there are those who have special needs. This issue is not a new problem for educators currently teaching in developing countries, and the high rate of illiteracy undermines the economic and educational goals of the populace. The primary purposes of

this article are to provide background knowledge about language and reading development; describe new assessment tools; share practical guidance for developing early reading standards to reduce reading problems; and suggest ways to review, revise, or design early literacy and special-education curriculum resources that align with standards and assessments. Research shows that early literacy intervention is a powerful approach to preventing reading problems and is more effective than trying to remediate persistent reading problems.<sup>2</sup>

### Understanding Language and Early Literacy Skill Development

Understanding language and reading development is critical for special-

education practitioners and general classroom teachers. Reading disabilities are the most common disabilities, and they are caused by deficits in phonemic awareness, letter-sound correspondence, and a lack of automatic and fluent reading.<sup>3</sup>

Reading and writing are relatively new in human history. Louisa Moats<sup>4</sup> in her resource for language teachers explains that both cuneiform and hieroglyphics developed around 4000 B.C., but there is evidence that oral language existed earlier. Indeed, many languages around the world do not have a written form. She describes how alphabetic languages (those which assign symbols to sounds) developed from

B Y S T E P H A N I E A L O T A I B A

these non-alphabetic early written forms that represented syllables, units of meaning, and sounds. The Phoenicians created a syllabic set of symbols to represent consonant-vowel and consonant sounds. Although the Greeks embraced these symbols around 1000 B.C., they further assigned a symbol to each sound. In turn, to represent Latin, the Romans refined the Greek alphabetic system, and it spread around the world.

The easiest alphabetic systems, which have exactly one symbol for each sound, are called transparent systems. This contrasts to opaque systems like English, in which words are spelled by representing sounds (phonemes) and syllables, but also representing small units of meaning (morphemes).<sup>5</sup>

Understanding how reading and writing develop is essential for providing effective early reading instruction to prevent and remediate reading dis-

abilities. There are many theories, but the Simple View of Reading<sup>6</sup> is a helpful, foundational resource for educators. The Simple View regards reading development as the product of students' ability to understand the code of their own language and understand the meaning of words. The importance of code and meaning skills has been tested across a number of languages (alphabetic and non-alphabetic), and understanding this area has been useful to



many professionals who work with special-education teachers and parents.

#### *Code-focused Skills*

If children cannot read a passage, it may be because they lack the ability to sound out the word or because they do not know its meaning. In most languages, meaning skills include background knowledge, oral language (including vocabulary and grammar), and listening comprehension. Code-focused skills differ somewhat by type of language. Within the English language, the task of “understanding the code” relies on skills such as phonological awareness, alphabetic awareness, sounding out words, and recognizing irregular words by sight. Phonological awareness<sup>7</sup> refers to the ability to hear and manipulate spoken sounds in the mind and out loud. An initial strategy might be to break words into large

chunks; for example, *hotdog* can be broken into *hot* and *dog*. A next step is to break or segment and blend words at the onset (or first sound) and the rime level (the vowel and sounds thereafter); in other words, /c/ /at/ is *cat*. An even more complex manipulation is to recognize that *bat* said backwards is *tab* or that *past* without the /t/ is pronounced *pass*.

To learn to read English, students need to be able to blend and segment individual sounds in speech (e.g., *dog* can be segmented into three sounds: /d/ /o/ /g/, and those three sounds can also be blended together to form the word *dog*). Furthermore, the word links to an image of an animal that says “woof.” Similarly, to decode a word, a student must know the sounds that letters make and eventually acquire the ability to apply a knowledge of phonics and syllable patterns to read words (and sentences and texts) fluently.<sup>8</sup> However, many words in English (e.g.,

*the*) do not follow the regular phonetic patterns (See Table 1).

#### *Variations in Code Structure*

Of course, not all languages have the same structure or follow the same code patterns as English.<sup>9</sup> For example, some alphabetic languages like Spanish and Arabic are much more transparent than English, meaning that each sound is represented by a single symbol. In Arabic, many words are divided into a root and an ending. So *Mom* is pronounced “Om,” and that is the root. The ending sound “ee” means *my*. Thus, *Om-ee* is the pronunciation for “my mom.” Thus, blending sounds might involve blending bigger chunks of meaning than in English.

In other non-alphabetic languages, like Chinese, words are composed of characters and in turn, the characters



**Table 1. Regular Phonetic Patterns in English**

Key: C = Consonant V = Vowel

VC	<i>it</i>	CVC	<i>dog</i>
VCC	<i>ask</i>	CVCC	<i>lamp</i>
CVC	<i>cup</i>	CVCC	<i>dust</i>
CCVC	<i>crib</i>	CVCe	<i>cake</i>
CCVC	<i>spent</i>	CCCVC	<i>scrap</i>
CCCVC	<i>shrink</i>		

are composed of radicals. These radicals are units of meaning; some are semantic or morphological, but others are phonetic (representing sounds). In the Korean language, units are logographic, which means that symbols or characters may represent a unit of meaning. So reading involves combining these units.<sup>10</sup>

### Using Knowledge About Reading Development

Because reading with comprehension requires students to decode and read simple, familiar words, it makes sense to use assessment tools to learn (1) what individual students know and need to learn and (2) how many children within a school or educational system can read at grade level. Early intervention is vital. Therefore, since 2006, the U.S. Agency for International Development and the World Bank have worked with developing nations to create a simple tool to help countries, schools, teachers, and parents understand how well children in primary school can recognize letters, read simple words and sentences, read passages, and comprehend what they are reading. This assessment tool, the Early Grade Reading Assessment (EGRA),<sup>11</sup> is a 15-minute individually administered series of tasks.

This tool is particularly helpful because its multiple versions can be used not only to screen students who are

below a benchmark, but also to monitor progress while students are receiving intervention. The tool is adaptable to a range of learning environments—from large schools to small schools—because it is individually administered, and there are a variety of tasks, so that teachers in multigrade classrooms can better understand what grade level texts match a student’s skill level, group children appropriately for instruction, and monitor whether students are making progress as readers. For more information, see <https://www.eddata.global.org/reading/index.cfm>. Countries have received assistance to develop their own versions of the EGRA so that the set of words in the various tests are simple and common in each language and cultural context. Because many countries have multiple language groups, efforts have been made to develop bilingual (and multilingual) versions of this tool. Many Non-Governmental Organizations (NGOs) such as Save the Children and CARE have supported efforts to pilot these tools. Putting EGRA or similar tools into the hands of systems, schools, teachers, and parents is a goal of many international organizations. The Website listed above provides links to briefs, the actual assessments, and training workshops.

### Using Knowledge About Reading Development and Assessment to Develop Grade-level Standards

Standards represent end-of-grade literacy goals for each of the important areas of reading development. In the United States, more than 40 states have adopted the Common Core Standards. However, other countries may have their own grade-level achievement standards.<sup>12</sup> EGRA data can be used as a benchmark goal for the end of the year; then teachers can monitor reading progress toward that goal for all students, including those with special needs. Here is an example:

**By the end of Grade 1, the pupil will:**

*Demonstrate relations between spoken words and sounds (Phonological Awareness).*

- When presented with a word (or picture), the pupil will say the first sound.
- When presented with a word (or picture), the pupil will blend the sounds to make a word (or will segment the sounds into parts).

*Demonstrate that spoken sounds are represented by letters (or characters or symbols) (Phonics).*

- Given a letter (or character), the pupil will name the sound.
- Given a word (for example, *dog*), the student will sound it out and correctly read the word.
- Given a word (for example, *seeing*), the student will recognize the root *see* and understand that adding an ending (morpheme) such as *ing* creates a new word, *seeing*.

*Read familiar grade-level words in a list or in a passage or text (Fluency).*

- When shown an EGRA word list, the pupil will read \_\_\_ words in one minute.
- When shown an EGRA passage, the pupil will read \_\_\_ words in one minute.
- For non-reading pupils: *Listen to a familiar story, and answer \_\_\_ out of \_\_\_ questions correctly.* For beginning readers: *Read an EGRA passage, and answer \_\_\_ out of \_\_\_ questions correctly (Comprehension).*

## Using Knowledge About Reading Development to Make Curriculum Decisions

It can be a huge undertaking to decide what instructional materials are appropriate and sequence them according to students' reading development needs. It is even more difficult to start with no resources to teach students with a variety of mother tongues. That challenge is very real in many developing countries, which also have the fewest resources (trained teachers, curricular materials, books, printing presses, and writing materials). Teachers can think of the standards as a guideline or roadmap of the sequence of grade-level benchmarks or skills; then assessments like EGRA can reveal how many students are reaching that benchmark.

If reading curricula exist, teachers can start with a review of what is available—what is adequate, what could be revised, and what needs to be created. If relevant curricular materials do not exist, then step by step, the teacher will need to purchase or create them. As discussed earlier, according to the Simple View,<sup>13</sup> code-focused curricula are needed to teach the alphabet, to teach decoding (how to sound out regular words) and identifying common words, and to practice reading these words in simple sentences. These materials should be carefully sequenced to match the standards or roadmap of skills, moving from easiest to most difficult. For example, in Year 1, many children probably cannot read a complex story to themselves. Rather, they need to practice and review these smaller building blocks of reading in order to develop the ability to recognize letter sounds and names, read simple common words, combine those words to create short sentences, and to eventually read fluently with expression and understanding. Curricular adaptations might include teaching to mastery, monitoring progress to determine growth, or increasing intensity. The box in the next column provides a list of free online resources to which teachers may refer as examples. Information about

## Resources to Guide Creation and Revision of Materials

- **The Florida Center for Reading Research** (<http://www.fcrr.org>).

This link directs the teacher to an array of simple downloadable materials in English that can be adapted or used as models to create practice and instructional materials (e.g., flashcards of sight words, card games for rhyming activities).

- **Starfall Books** (<http://www.Starfall.com>). This link provides simple, decodable books in English that can be translated or adapted if the pictures are identical or similar enough to objects in the language of instruction (and in the mother tongue of the student).

- **The Text Project** (<http://textproject.org/products/beginningreads/>). This Website links to simple decodable books in English for beginning readers as well as many books for 3rd- to 5th-graders for summer reading. These books can be translated or adapted if the pictures are identical or similar enough to objects in the language of instruction (and in the mother tongue of the student).

teams of researchers currently working to create curricula and assessments in different orthographies is provided on page 19.

Meaning-focused materials, according to the Simple View,<sup>14</sup> can teach oral language and reading comprehension. Thus, these may differ and could be read aloud to students to teach vocabulary and listening skills, and the concept that stories have a structure (beginning, middle, and end) and are somewhat predictable (most have characters, and may contain a problem and a solution). In addition, a variety of books are probably being used as content-area resources (national history, science, or health, for example). Once children can comprehend sentences and short texts, they can read these texts to themselves or to younger or less-able peers. Adaptations might include having children listen to recorded books or read easier content than appears in grade-level text, or grouping students into small groups to increase the intensity of instruction.

## Conclusion

Early reading intervention, supported by data from assessments, can prevent most reading problems and reduce the number of students who will

require special-education services. General classroom teachers interested in special education can use standards and available curriculum resources to create effective interventions for their classes. Learning about language and reading development will provide a background; however, the examples of assessment tools, practical guidance for developing early-literacy reading standards, and information about ways to align, review, revise, or design curriculum and assessment provide teachers with practical tools to help children with special reading needs. The links to materials in English shown in the box above are free and accessible online.

The reading research teams listed on page 19 are actively assisting teachers and special educators around the world, and working to develop reading materials in several other languages. Early intervention can be effective; teachers have the power to create and develop resources that can effectively make a difference for struggling readers in their classrooms. ✍

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## Common Literacy Terms\*

**Early literacy intervention:** Phonological awareness—the ability to hear sounds in words (for example: to hear the rhyme, to blend at an onset-rime level, to say the words in a sentence).

**Phonemic awareness:** The ability to hear, blend, segment, and manipulate individual sounds or phonemes in words.

**Letter-sound correspondence:** Understanding that letters represent sounds, and sounds are represented by letters.

**Fluency:** The ability to read automatically and with prosody.

**Alphabetic systems:** Languages that are represented by letters.

**Transparent vs. opaque languages:** Languages that have clear sound-letter spellings vs. languages in which there are several ways to spell a sound.

**Phonemes:** The smallest units of sound in speech.

**Morphemes:** The smallest units of meaning.

**Meaning skills:** Vocabulary, language, and comprehension.

**Code-focused skills:** Phonological awareness, phonics.

\*Terms compiled and defined by author.



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### NOTES AND REFERENCES

1. United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics, *The Adult Literacy Rate*: <http://data.worldbank.org/indicator/SE.ADT.LITR.ZS>. Retrieved April 17, 2012.
2. National Institute of Child Health and Human Development (NICHD) Report of the National Reading Panel. *Teaching Students to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (NIH Publication No. 00-4754) (Washington, D.C.: U.S. Government Printing Office, 2000).
3. Ibid.
4. Louisa C. Moats, *Speech to Print: Language Essentials for Teachers* (Baltimore, Md.: Paul H. Brookes, 2010).
5. Ibid.
6. Philip B. Gough and William E. Tunmer, "Decoding, Reading, and Reading Disability," *Remedial and Special Education* 7:1 (1986):6-10.
7. NICHD, Report of the National Reading Panel, op. cit.

8. Ibid.

9. Moats, *Speech to Print: Language Essentials for Teachers*, op. cit.

10. Young Suk Kim, "The Relationship Between Home Literacy Practices and Developmental Trajectories of Emergent Literacy and Conventional Literacy Skills for Korean Children," *Reading and Writing* 22:1 (2009):57-84: <http://dx.doi.org/10.1007/s11145-007-9103-9>.

11. *The Early Grade Reading Assessment: Applications and Interventions to Improve Basic Literacy*, Amber Gove and Anna Wetterberg, eds.: <http://www.rti.org/pubs/bk-0007-1109-wetterberg.pdf>; *The Early Grade Reading Barometer*: <http://www.eddataglobal.org>. Retrieved May 27, 2015.

12. In my work with the World Bank, I was asked to help explicitly link reading standards to items assessed on the EGRA so that teachers would know how to plan instructional goals.

13. Gough and Tunmer, "Decoding, Reading, and Reading Disability," op. cit.

14. Ibid.

## Reading Research Teams

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**Dr. Mahmoud Eman** is an Associate Professor in Special Education at the Sultan Qaboos University in Oman who has developed curriculum-based measures for reading and piloted them

with special educators throughout Oman. In addition, he has developed teacher-training materials to guide interventions.

A team from the Yung-Ling Research Center for Reading Instruction of National Taitung University in Taiwan has produced materials and core readers in Mandarin that were carefully constructed to help Aboriginal students whose first language is not Mandarin to learn to read. Contacts: **Drs. Shu-Li Chen** ([shuli.chen@gamil.com](mailto:shuli.chen@gamil.com)) and **Shih-Jay Tzeng** ([jay.tzeng@gmail.com](mailto:jay.tzeng@gmail.com)).