

# The Role of Assessment in Structured Literacy

by Melissa Lee Farrall and Jane Ashby

Busy educators may think of assessment as a burden that takes time away from instruction. It is tempting to think that informal observations of student performance will provide an adequate basis for planning instruction. However, the learning needs of many children are not identified when educators rely on informal observation alone. In the hands of a skilled structured literacy practitioner, well-taken data supports unbiased, timely educational decision making and, thereby, improves student outcomes.

This article examines tools and techniques that permit educators to document skills in basic reading and spelling in order to understand how to implement a structured, sequential reading curriculum that responds to the needs of children with different patterns of reading difficulties. Specifically, we will discuss how to identify sources of reading comprehension problems.

Tests of reading comprehension (e.g., Benchmark Assessment System, Renaissance Star Reading, and Smarter Balanced Assessment Test) are diagnostically difficult to interpret; students perform poorly on comprehension tests for a variety of reasons. It is often tempting to assume that students with poor comprehension require practice identifying the main idea and supporting details. This may be true for some students; however, problems reading words accurately and language skills are much more likely to account for comprehension problems (Bishop & Adams, 1990; Gough & Tunmer, 1986; Rayner, Pollatsek, Ashby, & Clifton, 2012).

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In order to boost reading comprehension, educators can focus on identifying which underlying processes impair a child's comprehension. Word reading problems include problems with accuracy (decoding) and problems with speed (fluency). The ability to read unfamiliar words confidently is crucial to understanding texts that contain new information. Receptive language (i.e., listening skills) refers to the ability to understand spoken language as others use it. Language skills allow readers to automatically string words into phrases, to provide intonation, and to knit sentences together into larger, meaningful contexts. For educators, spoken language comprehension indicates the potential for growth in reading comprehension.

Identifying student needs is the first step in effective teaching. After a child scores below expectation in silent reading comprehension, additional assessments reveal what type of instruction will be effective for that student, based on which underlying processes need strengthening. For most students with poor reading comprehension, additional assessments reveal incomplete and/or slow decoding skills. Teaching children to use basic phonics patterns, syllable types, syllable division, and spelling rules to read and write words accurately will often boost comprehension scores for students with code-based reading difficulties.

For a smaller number of children, the problem is not technically one of reading comprehension but more global issues with language comprehension. Teaching that focuses on developing receptive language skills (rather than decoding skills) and strategies for recall are more likely to increase reading comprehension for these children. Listening comprehension of passages is hard to measure directly, as listening itself occurs internally and does not typically involve observable productions. We have to be satisfied with measuring it through indirect channels such as speaking or pointing (Farrall, 2016). For elementary-age children, retellings (a common part of fluency testing) can be scrutinized for main ideas, supporting details, key phrases, and sequence. For older children with intact writing skills, teachers can score note-taking tasks for content and accuracy to assess whether the notes reflect an understanding of the lecture or discussion. Evaluators wanting something more robust can use the Oral Passage Understanding Scale (OPUS: Carrow-Woolfolk & Klein, 2017) in which students are asked to answer questions based on literary passages that are read to them. Responses can be analyzed to discern different profiles of listeners, i.e., those that reflect true deficits in understanding versus those that have their roots in memory. Not all poor listeners are alike, and understanding the precise nature of the challenge is important. While some students may benefit from work on vocabulary and syntax, others may benefit from strategies designed to facilitate recall. Students with poor listening skills should have their hearing checked before being referred for a speech-language evaluation.

Students who demonstrate adequate listening skills can be identified as having a comprehension difficulty that stems from difficulties processing print and, therefore, is specific to reading. Armed with the knowledge of the underlying causes of comprehension problems, we can now turn our attention to aspects of print.

## Components of Reading Comprehension

### Word Recognition

As words deliver the author's message, it is difficult to overestimate the impact of poor word recognition on reading

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comprehension. Assessing single word reading can indicate if reading inaccuracy and speed are limiting silent reading comprehension. Table 1 presents achievement tests and criterion-referenced word reading inventories that include a word recognition subtest. Poor performance on a word recognition test should prompt the educator to learn more about a student’s phonemic awareness and decoding skills. Note that before Grade 3, a strong visual memory can yield an age-appropriate word recognition score in children who may, nonetheless, lack the phonics skills to read unfamiliar words independently. Such children struggle with content-area reading in the later grades unless they learn the decoding and morphological skills for reading multi-syllable words. Therefore, any child with comprehension problems in the early elementary grades should also complete a decoding task with pseudowords to examine word analysis skills.

**Decoding**

Assessment of pseudoword decoding indicates whether students can apply their knowledge of phonics to decode unfamiliar words and read independently. Pseudoword tests require students to decode made-up words that are designed to reflect rules for conventional spelling. If, for example, students can decode closed syllable patterns (e.g., mag, hep, sib, pon, rup), we then know that they have mastered this rule and can

apply their knowledge to words that they have never seen before. Table 1 presents targeted inventories that assess single-syllable and multi-syllable decoding skills. Pseudoword decoding is useful both for assessing young children who have been taught to recognize words visually and for assessing older readers who read simple text fairly well but who have difficulty reading multi-syllabic words accurately.

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Whether assessing word recognition or decoding skills, educators need to be alert to those children who can score within the average range for accuracy but still lack automaticity. Timed tests of word and pseudoword reading can reveal the degree to which foundation skills are automatic (see Table 1).

**TABLE 1. Assessments to Inform Instruction**

Tests	Word Recognition	Decoding	Spelling	Phonemic Awareness
Core Phonics Survey (Consortium on Reading Excellence, 2000)	√	√	√	
Diagnostic Assessments of Reading (DAR-2; Roswell, Chall, Curtis, & Kearns, 2006)	√	√	√	√
Informal Decoding Inventory (Walpole, McKenna, & Philippakos, 2011)	√			
Kaufman Test of Educational Achievement, Third Edition (KTEA-3; Kaufman & Kaufman, 2014)	√ (timed & untimed)	√ (timed & untimed)	√	√
Phonological Awareness and Reading Profile (PARP; Salter & Robertson, 2001)		√	√	√
Phonological Awareness Test, Second Edition NU (PAT2 NU; Robertson & Salter, 2018)		√		√
Spellography (Moats & Rosow, 2002)			√	
Test of Word Reading Efficiency, Second Edition (TOWRE2; Torgesen, Wagner, & Rashotte, 2012)	√ (timed)	√ (timed)		
Wechsler Individual Achievement Test, Third Edition (WIAT-III; Wechsler, 2009, Pearson)	√	√	√	√
Woodcock-Johnson IV Tests of Achievement (WJ IV ACH; Schrank, McGrew, & Mather, 2014)	√	√	√	√
Words Their Way (Bear, Invernizzi, Templeton, & Johnston, 2003).			√	

This table includes a small sample of tests that may be appropriate for individual students. As always, it is important to verify that any particular test is valid for the student in question.

## Phonemic Awareness

Phonemic awareness is the ability to perceive individual sounds in words.; the word, cat, for example, consists of three sounds: /k/ /ă/ /t/. Assessing phonemic awareness indicates whether a phonological deficit is the source of word identification problems and how severe that deficit is. Table 1 presents phonological awareness tests suitable for children age 5 and older. A poor phonemic awareness score indicates that the child is likely to need intensive, multi-sensory phonics instruction. Poor decoding skills can also appear with typical phonemic awareness scores; this pattern occurs in children who simply have not been taught how letters represent sounds.

## Spelling

Spelling's contributions to reading and written expression are often unrecognized at worse and unappreciated at best. Spelling a word correctly indicates that a consolidated memory representation exists, and this memory is what allows for fast and accurate word recognition. Spelling and decoding rely on similar underlying processes (Ehri, 2000).

Most spelling batteries progress from writing letters to spelling multi-syllable words, many of which derive from Latin and Greek. Educators should not content themselves with a right or wrong approach to spelling, given that the number of items spelled correctly only sheds minimal light on how to proceed with instruction. When assessing spelling, three questions can lead to a greater understanding of a child's instructional needs (Moats, 1995):

1. Are sounds represented accurately? If not, then these errors have phonological roots; they reflect poor phonological awareness and indicate a need to practice with the sound sequences in spoken words.
2. Are words spelled according to the rules? If not, then these errors are orthographic in nature; they reflect poor visual memory for conventional spelling patterns and indicate a need to learn and practice basic spelling rules, such as when /k/ is spelled with a k vs. ck.

3. Are the meaningful parts of words (prefixes, roots, and suffixes) spelled correctly? If not, then these morphological errors indicate a need to learn about word structure and word origins.

## Case Studies

### Word Reading

Error analysis is the heart and soul of good reading testing. A careful recording of responses during word reading can help specify the sources of reading difficulties that interfere with comprehension. Is it difficulty reading new words? Reading familiar words accurately? Reading familiar words quickly? A background in basic phonology (i.e., the vowel circle and consonant groupings) is essential for identifying patterns. Table 2 provides data on three students in Grade 2 who have difficulty understanding what they read but can understand text that is read to them. Although the sample of skills assessed in these examples is rather small, they provide a general idea of what can be learned.

Brenda receives reading support in the form of "read alouds" in a small group. Brenda's performance indicates that she has not yet mastered short vowels, and she does not yet discriminate between voiced and unvoiced sounds. She identified only two words automatically; she did not demonstrate skill with the VCe or VV patterns. Brenda reads words inaccurately, and misreading words is the predominant source of her low reading comprehension. Brenda requires significant work at the phoneme level. Understanding key differences in how speech sounds are produced in the mouth will support phonemic awareness practice (e.g., segmenting and deleting the sounds in spoken words). Phonemic awareness skills, in turn, will support the acquisition and automaticity of decoding.

Donald receives structured, sequential reading instruction. The skills demonstrated are consistent with what he has been taught. The accuracy of his nonword reading indicates that instruction has been effective in providing tools that allow him to decode unfamiliar letter strings confidently. As he continues to practice accurate reading, he builds deeper memory traces

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TABLE 2. Examples of Decoding Errors in Children with Normal Listening Comprehension				
Word List	Pattern	Brenda	Donald	Lizzy
ed	VC	řd	√	...√
mog	CVC	můg	√	...√
vut	CVC	vůt	√	...√
pag	CVC	pěg	√	√
blum	CCVC	b-l-ůlm	√	...dlům
pind	CVCC	√	√	...mřndůh consonant wrong?
lape	VCe	lăbē	√	...lăpē...√
feek	CVVC	√	√	...fěck...feck
hute	VCe	...hůdē	√	...hůt...√
roit	CVVC	...r-ů-ř-n	rřn	...rř...rř...√
soam	CVVC	s-ů-ă-t	sřt	√ wrong consonant?

of more words. When he can read most words in a text efficiently, then he will understand its meaning.

Lizzy’s performance is quite concerning, particularly given reports that she has been making progress in a Structured Literacy program for over a year. The foundation skills needed to unlock multi-syllable words do not appear to be in place. Lizzy pronounces sounds incorrectly. Her responses are far from automatic; she has not yet mastered b and d. She has numerous self-corrections. Therefore, Lizzy should practice previously taught concepts using a Structured Literacy approach with multi-sensory reinforcement to allow for faster retrieval of letter sounds. For example, when learning a letter sound, she would look at the letter (see it) and say its sound (speak it) as she traces the letter (feel it). Establishing automatic letter-sounds will support her accurate reading of unfamiliar words. As Lizzy practices her decoding, she will be able to apply these skills “on the fly” during text reading. As she stores accurate representations of new words, she will be able to recognize those words more quickly in the future. Becoming a more accurate decoder will allow Lizzy to focus more of her attention on the meaning of the text.

**TABLE 3. Spelling Error Analysis for Sasha**

Correct Spelling	Sasha’s Spelling	Error Analysis
this	tis	P: Sound Discrimination; O: Digraph
words	wrds	O: R-controlled Vowels
gluing	cluing	P: Consonant Voicing
them	thim	P: Vowel Confusion
up	op	P: Short Vowel Confusion
tree	drey	P: Consonant Voicing; O: Vowel team
helps	hilps	P: Vowel Discrimination
keep	cep	O: Rules for /k/, Vowel Team

Note: P = Phonological O = Orthographic M = Morphological

**Spelling**

Table 3 provides spelling data for Sasha, who is a second grader. The majority of her spelling errors speak to fundamental weaknesses in phonemic awareness and sound discrimination. Sasha confuses short vowel sounds and she does not yet discriminate between voiced and unvoiced consonants. If these misspellings are due to confusion about which letter represents each sound, then this should be addressed with multi-sensory Structured Literacy instruction. It is also likely that she does not discriminate the vowel sounds that she hears, and needs to develop her phonological awareness. If Sasha has not been flagged as a student with reading difficulty, she may be next year. Those concerned might want to also assess her decoding skills.

**TABLE 4. Spelling Error Analysis for Maria**

Correct Spelling	Maria’s Spelling	Error Analysis
compartments	kunpartments	P: Nasal sounds; M: Morphemes
padded	padid	O: Doubling Rule; M: Morphemes
mixtures	mixders	P: Voicing
instructor	instrukder	P: Voicing; O: Rules for /k/; M: Morphemes
enabled	enabod	P: Sound Discrimination; M: Morphemes
impeachable	impepchubo	P: Schwa; M: Morphemes
coaches	cochis	O: Vowel Team; M: Morpheme

Note: P = Phonological O = Orthographic M = Morphological

Table 4 provides spelling data for Maria, who is an eighth-grade student. Maria’s spelling errors have roots in poor phonemic awareness, which compromises her ability to spell words accurately. In the samples in Table 4, we can see that she does not discriminate sounds that are close in their articulation (/m/ and /n/); she has difficulty with voiced and unvoiced sounds (/d/ and /t/), as well as with /l/ (which is sometimes considered to be a “semi-vowel”). Given her weakness in phonemic awareness, it is not surprising that she has not mastered the basics of sound-symbol correspondence nor has she grasped the representation of the meaningful parts of words, such as -ed. Instruction should focus on developing phonemic awareness for sounds in the middle of words and final blends. She may benefit from instruction in the simple vowel teams, such as oa. However, Maria seems most in need of reading instruction that focuses on base word identification and spelling rules for adding suffixes, such as doubling and silent e.

*Given that handwriting, spelling, mechanics, vocabulary, syntax, and organization all vie for working memory resources, it is not surprising that skills not yet sufficiently developed are revealed in passage writing.*

Although we frequently assess spelling in a list format, spelling in context is the true test of mastery. Many educators and parents question why it is that students may be able to pass a spelling test but produce stories and essays that are riddled with misspellings. The answer is that when we write, we multi-task, and the demands on working memory increase dramatically. Given that handwriting, spelling, mechanics, vocabulary,

syntax, and organization all vie for working memory resources, it is not surprising that skills not yet sufficiently developed are revealed in passage writing. Note that spell-check software becomes accessible when children can spell isolated words in the fifth-grade range. When spelling skills are below that, most programs generate many more options than most children can choose among.

### The Value of Assessments

Assessment in a Structured Literacy program can serve as an important aspect of diagnostic, prescriptive teaching. Given the different profiles of young readers, a low reading comprehension score should be regarded primarily as a flag indicating the need for further assessment to determine the source(s) of the comprehension difficulty. Periodic assessment of word recognition, decoding, spelling, and receptive language ability will ensure that we are addressing individual needs of children in order to prepare them to be readers, writers, and thinkers.

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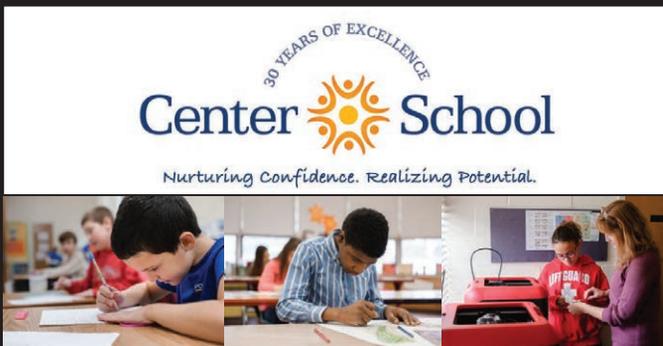
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