

Mastering Reading Instruction
Teacher Knowledge and Skills Required for First Grade Literacy Instruction

Susan Brady, Margie Gillis, Mary Ellen Lavalette, Linda Liss-Bronstein,
and Laura Conway-Palumbo
Haskins Laboratory, New Haven, Connecticut

Component 1: Phoneme Awareness/ Foundations For Instruction In The Code

Content Knowledge

First grade teachers should know:

1. Why phoneme awareness is important for children who are learning to read.
2. Why phoneme awareness is difficult for many children. What the difference is between 'hearing' phonemes and being 'aware' of phonemes
3. What the developmental sequence is for acquisition of phonological awareness.
4. The meaning of the following terms:
 - phonological awareness
 - phonological sensitivity
 - phoneme awareness
 - onset-rime
 - rime vs rhyme
 - segmentation
 - identification
 - blending
5. What is meant by the 'phonological structure of language'.
6. Why ability to rhyme and knowing the first sound of words is not an adequate level of phoneme awareness for beginning readers.
7. What the consonant sounds of English are and how each is pronounced in isolation. What the properties of phonemes are (i.e., the bases for selecting minimal pairs for instructional purposes).
8. What the vowel sounds of English are and how each is pronounced. What the articulatory features of vowels are (i.e., the basis for understanding which vowels will tend to be difficult for children to distinguish).
9. How many phonemes are in spoken one-syllable words having either simple or complex syllable structures.
10. What the difference is between speech sounds and letters. What the difference is between phoneme awareness and phonics.
11. What the appropriate curricular goals are for phoneme awareness for the end of kindergarten (i.e., for entering first grade), and for the beginning, middle and end of first grade.
12. Which English speech sounds might be more difficult for English-language learners or those who speak African-American vernacular to discover. Why

awareness of particular speech sounds might be difficult for these children. Related to this, which sounds need to be deliberately taught.

13. What the links are between phoneme awareness, decoding and spelling skills. How the stages in phoneme awareness correspond to stages in the development of word recognition and of spelling.

14. Why the above concepts are important for teachers of reading.

Pedagogical Knowledge

Instructional Knowledge:

Teachers should:

1. Be able to quickly and accurately segment, identify and blend the phonemes in spoken words, including words in which the number of phonemes differs from the number of letters.
2. Know how to assess each of the developmental levels in the acquisition of phoneme awareness informally or using formal testing procedures.
3. Know how to interpret assessment information related to phoneme awareness.
4. Know how to analyze student errors in phoneme awareness, reading or spelling to identify potential difficulties or gaps in phonological awareness.
5. Know how to match instructional activities to the phoneme awareness objectives for each child.
6. Understand the purpose and benefit of proper feedback to children.
7. Know what auditory phoneme awareness skills need to be in place to enhance instruction in different levels of code knowledge.
8. Skillfully set up and conduct effective whole group instruction in phonological awareness.
9. Accurately place students in homogeneous small groups and conduct activities appropriate to the group's level of awareness. Know how to follow-up with individual phoneme awareness instruction and practice for students who need additional support.
10. Be able to identify students who are struggling with phoneme awareness and provide differentiated instruction and additional guided practice.
11. Be able to provide students with opportunities to practice their awareness of speech sounds.
12. Be able to choose appropriate phonemes and word examples to teach phoneme awareness at different levels in children's development of full phoneme awareness. Likewise, be able to avoid phonemes and combinations of phonemes that will obfuscate discovery of phonemes.
13. Select and use listening and articulatory activities for building student mastery of: phoneme awareness (segmentation, identification, blending) in simple (V, CV, VC, VCV) and complex syllables (CCVC, CVCC, CCVCC, etc.).
14. Know resources for finding word lists, games and activities for assessing and teaching phoneme awareness.
15. Establish and maintain a monitoring system for keeping track of students' progress and mastery in acquiring full phoneme awareness.

Understanding Student Performance:

Teachers should know:

1. Which consonants are easier for children to discover and why.
2. Which consonant phonemes are more likely to be confused by children and why.
3. Which vowels are easier for children to discover and why.
4. Which spoken vowels are more likely to be confused by children and why.
5. What sets of phonemes are the common 'trouble' sounds for first-grade students to segment and identify.
6. How the above points should influence the choice of a sequence of phonemes to follow for instruction and discovery activities.
7. Which phonemes would be better to focus on in phoneme awareness instruction when children are learning letter-sound relationships. Why?
8. How problems with phoneme awareness show up in children's reading and writing errors.
9. What the guidelines are for determining that a child needs extra support in phoneme awareness and is at-risk for reading problems.
10. How to determine that a child has attained full phoneme awareness and no longer requires instruction and practice in phoneme awareness

Component 2: Code Instruction

Content Knowledge

First grade teachers should:

1. Understand the alphabetic principle and its relevance for learning to read.
2. Be able to define the following terms:
 - phoneme
 - grapheme
 - consonant
 - vowel
 - syllable
 - digraph
 - blend
 - orthography
3. Know the grapheme patterns for the 44 phonemes.
 - a. Know and be able to explain the difference between vowel and consonant phonemes.
 - b. Know and be able to define the following consonant patterns:
 - i. Single letter
 - ii. Complex consonant patterns
 - o blend
 - o digraph
 - o trigraph
 - c. Know and be able to define the following vowel patterns:
 - i. Single letter (closed, open)
 - ii. Complex vowel patterns
 1. Vowel digraphs
 2. Vowel teams (*talkers/whiners*)
 3. R-controlled
 - iii. Consonant-*le*
 - iv. Vowel trigraph
4. Explain and be able to demonstrate understanding of all six syllable types; closed, open, magic e, vowel teams ('talkers' and 'whiners'), 'bossy r' and consonant *le*.
5. Understand the difference between the phonological structure of language and orthographic representation (i.e. what is the difference between phonological awareness and phonics).
6. Know the difference between embedded phonics and systematic, explicit code instruction.
7. Be able to articulate the role of explicit code instruction in developing reading competency.
8. Know what the appropriate curricular goals are for code instruction at the end of kindergarten (i.e., entering first grade), and at the beginning, middle and end of first grade.
9. Provide a rationale for a logical sequence of code instruction.

10. Know what parts of learning the code might be difficult for children who are non-native speakers of English or for children who speak a non-standard English dialect (e.g. vowel confusion, digraph confusion).
11. Understand the importance of connected text (i.e., books, poems) for practicing the application of phonic element(s).
12. Understand when decodable texts (i.e., books, poems) should be used in reading instruction.
13. Know the difference between phonetically regular and irregular words.
14. Know the definition of a sight word (i.e., words that are recognized automatically), realizing that sight words include both phonetically regular and irregular words.
15. Understand how the brain research underscores the importance of automatic word recognition.
16. Know what a morpheme is and what morphemes are appropriate to teach in first grade (i.e., the suffixes *s*, *ed*, and *ing*).
17. Know the common principles of syllable division for multisyllabic words.
18. Understand why it is important to focus on spelling as a more explicit level of understanding of the code.
19. Demonstrate an understanding of the reciprocal relationship between word recognition (decoding) and recall (spelling/encoding).

Pedagogical Knowledge

Instructional Knowledge:

First grade teachers should:

1. Connect phoneme awareness instruction with spelling instruction, ensuring that students use articulatory feedback and proper pronunciation when spelling words.
2. Teach sequentially, ensuring that students master letter-sound correspondences and vowel pattern knowledge (i.e., syllable type knowledge). Teach cumulatively, periodically reviewing previously taught vowel patterns. Have children master vowel patterns in one-syllable words before moving on to two-syllable words.
3. Introduce and demonstrate code lessons with an element focus at the phoneme/grapheme level, followed by practice applying at the word, sentence and text level.
4. Give children practice in connected text (e.g., books, poems) that is controlled to include code principles that the student has been taught thus far together with well-known high frequency words.
5. Utilize knowledge of phonetically regular and irregular words to select appropriate words for planning instruction.
6. Assist children in knowing the difference between phonetically regular and irregular words.
7. Follow the same systematic instructional sequence for spelling and decoding instruction, together with necessary high-frequency words.
8. Demonstrate appropriate instruction with regard to duration and timing (i.e. *how much* code instruction *when*, and *with whom*).

9. Use a variety of instructional methods and techniques (e.g. multisensory, guided independent practice) that differentiate for students' needs (e.g., pacing, level of intensity, size of group).
10. Select books to match these developmental and instructional needs.
11. Know how to informally assess students' knowledge of the code (e.g., letter-sound correspondences, vowel patterns) in reading and spelling performance.
12. Know how to interpret assessment data, including those that are curriculum-based, norm-referenced or criterion-referenced, to guide instruction (i.e., choosing appropriate instructional methods and materials).
13. Give students practice in reading and spelling words with common suffixes (i.e. *s*, *ing*, *ed*).

Understanding Student Performance:

Teachers should:

1. Know what kinds of student errors in reading and writing point to difficulties in decoding and/or orthography vs. in phoneme awareness.
2. Know what kinds of student errors are common in spelling suffixes (i.e. *ed*, *s* and *ing*) and what teacher feedback would be useful in addressing these errors.
3. Use students' performance reading and spelling real and pseudowords to identify their instructional needs in the code.
4. Know how to administer and interpret informal spelling assessment (i.e. DSA) to analyze spelling errors (i.e. what students use but confuse) and determine mastery of orthographic patterns.
5. Know what kinds of student errors are common for non-native English speakers.

Component 3: Fluency

Content Knowledge

Teachers should:

1. Understand the two components of fluency:
 - a. Word level reading (including letter naming in K and beginning first grade) should be:
 - i. Accurate
 - ii. Fast and effortless
 - b. Connected text reading should have:
 - i. Phrasing
 - ii. Appropriate rate and prosody
2. Be able to describe the connection between decoding and word recognition with fluency and comprehension.
3. Understand the role of text selection in fostering fluency and know how to match text to reader for repeated reading activities.
4. Know the features of proven interventions for fluency (e.g., alternate or simultaneous reading with a model, repeated readings and charting progress).

Pedagogical Knowledge

Instructional Knowledge:

Teachers should:

1. Use instructional methods for building fluency and accuracy at the word and text levels, such as:
 - a. Incorporating guided repeated oral reading (of appropriate text) with feedback into small group reading instruction.
 - b. Selecting text that student can read at 90-95% accuracy level.
 - c. Incorporating incentives for reading practice, as well as concrete measures of progress (e.g., graphs of changes in rate and accuracy, records of number of stories read).
 - d. Encouraging development of phrasal reading through use of phrase-cued text (e.g., poetry) along with other activities that support phrasal reading.
2. Differentiate instruction to meet the needs of individual students by using assessment to identify when a child lacks fluency and the underlying source of the problem.

Understanding Student Performance:

Teachers should:

1. Understand the sources of difficulty when students lack automaticity and are reading in a word-by-word fashion.
2. Know how to assess fluency and know grade appropriate expectations for words correct per minute (wcpm) at the end of kindergarten (i.e., entering first grade), and at the beginning, middle and end of first grade.
3. Regularly measure and calculate student accuracy and reading rates.

4. Record and chart fluency progress.
5. Know the usual weekly increase in fluency rate for first grade students and, based on that, know whether a student requires increased attention to fluency practice.

Component 4: Oral Language: Vocabulary and Comprehension

Content Knowledge

Teachers should:

General:

1. Understand the concepts in Gough's simple view of reading, i.e., that listening comprehension and word recognition abilities each contribute to a student's level of reading comprehension

Narrative Development:

2. Know the features of decontextualized language and literate language style (e.g., conjunctions, elaborated noun phrases, complex subjects and predicates, mental state and linguistic verbs, adverbs).
3. Understand the sequence of typical narrative development in children.
4. Be able to identify the episodic structure of narratives which includes setting (character, time, and place), the initiating event, the internal response of the main character, the plan, attempts, and the consequence, as well as an understanding of the relationships in the narrative.

Inference Making:

5. Know what the differences are between literal information, text-to-text inference (connecting information within the text), and text-to-knowledge inference.
6. Understand the role of schema and background knowledge in inference making.
7. Know how the use of conjunctions and cohesive ties contribute to making inferences (referential cohesion, lexical cohesion, and substitution).

Vocabulary:

8. Understand the components of research-based, explicit vocabulary instruction and its contribution to reading comprehension (i.e., the value of *tier two* words).

Pedagogical Knowledge

Instructional Knowledge:

Teachers should:

Narrative Development

1. Know how to select texts that are appropriate to students' stages of narrative development in order to help students progress in their development of a complete episode.
2. Using scaffolding to build students' skill at *expressing* orally their comprehension of material (e.g., practice with story retelling) by teaching the following:
 - a. the use of linguistic and mental state verbs
 - b. the use of cohesive ties
 - c. the use of non-linguistic supports (e.g., Braidy)

Inference Making

3. Incorporate daily practice for students with comprehension of decontextualized language by:
 - a. Drawing students' attention to syntactic or semantic structures that express important relationships between ideas.
 - b. Drawing students' attention to points where an inference must be made and scaffolds students' inferences.
4. Know how to construct questions that support appropriate inferences and productive discussion around text, encouraging students to move beyond literal interpretation.
5. Support schemata development as needed for student understanding of instructional texts.
6. Know how to teach about cohesive ties and conjunctions.

Vocabulary

7. Know how to select words for vocabulary instruction that learners will find useful in many contexts.
8. Know how to provide explanations for vocabulary items in student-friendly terms.
9. Provide direct instruction and rich, active follow-up lessons for vocabulary words.
10. Establish a mechanism to encourage maintenance of learned vocabulary words.

Understanding Student Performance:

Teachers should:

Narrative Development

1. Know how to examine children's narrative productions for literate language features as well as narrative features.
2. Monitor student progress in the use of literate language features such as cohesive devices, when retelling a story.
3. Monitor student growth in construction of a complete narrative episode.
4. Understand that assessment and instruction should be respectful of cultural/home differences in language and narrative while instructing and guiding students toward school forms.

Inference Making

5. Use observation to determine the sources of comprehension break-down (inadequate or inaccurate background knowledge/schemata, student difficulties with complex language in text, and students failing to notice that an inference is required).

Vocabulary

6. Use informal assessments to monitor student learning and retention of taught vocabulary words.

Curricular Goals:

Narrative Development

Children will:

1. Use linguistic structures that support elaborated episode, including:
 - a. Use of cohesive ties, including conjunctions and connectives (e.g., so, but, because, if).
 - b. Use of elaborated noun phrases as well as adverbs to expand subjects and predicates.
2. Generate or retell (at least) a complete narrative episode, including:
 - a. Centering (a theme that is evident) and chaining (a temporal sequence).
 - b. An initiating event (problem).
 - c. An internal response (an emotional high point if the child is telling a personal narrative). Narrative ability should focus on the development of the landscape of conscientiousness. If appropriate, children should be encouraged to talk about their emotions as they express themselves in giving their experiences related to those of the character.
 - d. An attempt to carry out a plan.
 - e. A consequence.

Inference Making

3. When listening to a read-aloud, make text-to-text and text-to-knowledge inferences, applying schemata knowledge as necessary to achieve comprehension and to 'read between the lines.'
4. Understand relative clauses and their role in inference-making.
5. Gain fluency with sentence complexity needed to draw conclusions from text.

Vocabulary

6. Use more sophisticated vocabulary including:
 - a. Mental state verbs (e.g. know, think, remember) and linguistic verbs (e.g. said, exclaimed)
 - b. Emotional words
 - c. Use of more sophisticated *tier two* words