

# What K–3 Teachers Need to Know About Assessing Children’s Reading

December 2003

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This work was originally produced in whole or in part by the North Central Regional Educational Laboratory with funds from the Institute of Education Sciences (IES), U.S. Department of Education, under contract number ED-01-CO-0011. The content does not necessarily reflect the position or policy of IES or the Department of Education, nor does mention or visual representation of trade names, commercial products, or organizations imply endorsement by the federal government.

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## Introduction

Teachers need to assess children's reading so they can determine appropriate, challenging, and individualized instruction. It is a daunting task because it requires many kinds of assessments to make decisions that must be reevaluated continuously as children become more proficient readers (Stallman & Pearson, 1990). Teachers must decide who needs instruction on decoding skills, vocabulary, or comprehension and which materials are at the instructional level of each child. These decisions are crucial because research has shown that early diagnosis and remediation of reading difficulties can improve reading achievement (Snow, Burns, & Griffin, 1998).

Traditionally, K–3 teachers have used informal observations of children's oral reading for instructional decisions (Paris, Paris, & Carpenter, 2002), but the recent press for early accountability requires teachers to document children's early reading development. Research has identified the fundamental skills for early reading success as well as tools for assessing these developing skills. The *Report of the National Reading Panel* (National Institute of Child Health and Human Development, 2000) identified five essential skills to assess and teach in primary grades: the alphabetic principle, phonemic awareness, oral reading fluency, vocabulary, and comprehension. The same five skills were endorsed in the Reading First part (Section 1221 [a][3]) of the No Child Left Behind Act (2002) as fundamental in K–3 education. Thus, it is important to know how these five reading skills can be assessed in the classroom.

### The Alphabetic Principle

Of course, children must learn the alphabet in order to read effectively, but children begin to recognize and write words before they know all 26 letters. Knowing the alphabetic principle involves more than reciting 26 letters. Children need to identify letters in upper and lower cases (graphemes); they need to know the sounds associated with each letter (phonics); and they need to practice recognizing letter-sound relations until they become automatic (Snow, Burns, & Griffin, 1998). Teachers can assess these skills in isolation by asking children to:

- Name letters that are shown to them.
- Pronounce letter sounds.
- Choose letters that have specific names and sounds.

Such assessments can be relatively quick and can be recorded to show progress over time. However, many teachers prefer to assess letter knowledge and phonics informally as children are engaged with authentic texts. When children attempt to read words in beginning texts or when children read alphabet books with pictures and words, teachers may ask them to identify specific letters and their sounds. Because the alphabetic principle is so fundamental for reading and because it develops rapidly for most children in Grades K–1, it may not be necessary to assess children's letter knowledge repeatedly. It is more important for teachers to identify children's specific difficulties with the

alphabet and to provide explicit instruction and practice so that children achieve mastery as quickly as possible.

### **Instructional Options**

Regardless how alphabet knowledge is assessed, teachers need to determine which children need more instruction and then provide specific activities for them. Alphabet books are helpful for children with little experience with print because they also build vocabulary skills. Practice can be fun if teachers use songs, chants, rhymes, poems, and oral language to recite letters of the alphabet. Large cut-out letters, such as felt or magnetic letters, can be used to identify initial sounds, and writing letters in sand or shaving cream adds a manipulative aspect to learning letter-sound correspondence. Many teachers provide practice by having a “letter of the day” to focus attention on words that start with that letter. This is easy to combine with word walls because teachers can group the words by initial letters on the board or large sheets of paper. Children can be invited to write additional words that begin with the focal letter.

Teachers can ask children to read alphabet books with cross-age tutors or parents to practice identifying words with specific initial letters. Audio and videotapes or computer software with pronunciation may be helpful for children learning English as a second language. Specially dictated writing to practice specific words can combine assessment and instruction. The volume of activities focused on letter identification is important, but it is also necessary to provide specific instruction on particular letters. For example, teachers should compare the letters *b* and *d* and *p* and *q* for reversed shapes; they should explain the vertical alignment of letters such as *b* and *p*; they should describe how to dot the letter *i* and cross the letter *t*; and they should emphasize the soft and hard sounds of the letters *c* and *g*. The key to effective instruction is to mix direct instruction about letters with engaging activities that allow children to recognize and write letters.

### **Phonemic Awareness**

Knowing the sounds associated with letters helps children to identify the distinct phonemes associated with printed text. For example, by age 5, most children can identify onset-rime patterns—such as *cat*, *hat*, and *fat*—that are the bases for initial rhyming. Later, they develop the ability to segment words into phonemes and to blend separate sounds into words. These are the basic analytic and synthetic aspects of decoding that follow from phonemic awareness. There are many formal and quantitative assessments of phonemic awareness that have been created by commercial publishers, researchers, and state education departments. Many basal reading series include assessments of phonemic awareness. Here are some key features of phonemic awareness for teachers to assess in Grades K–2:

- Can children recognize consonants at the beginnings and ends of words?
- Can children recognize vowels and their sounds in words?
- Can children identify and produce rhyming words?

- Can children identify and segment distinct sounds in words?
- Can children blend phonemes to create words?
- Can children manipulate phonemes in words, for example, knowing that dropping the “f” sound from the word *feel* leaves the phoneme *eel*?

Additional features can be assessed also, such as distinguishing long and short vowels, recognizing alternative spellings of the same phonemes (e.g., *sail, sale*), and identifying double vowel sounds in diphthongs (e.g., *house*). Children acquire many aspects of phonemic awareness by the end of first grade, but some children with more serious reading disabilities may need explicit instruction about phonemes in second grade and beyond (Lovett & Steinbach, 1997).

How can teachers assess phonemic awareness? The simplest suggestion is to use commercial or state-designed assessments because they are standardized and quick. They usually provide four to ten items that require children to demonstrate understanding of phonemic rhyming, segmenting, and blending. However, these tests can be disconnected from the daily curricula so teachers may choose to use informal tasks to assess phonemic awareness daily. Adams (1990) identified the following tasks as strong predictors of early reading achievement, and each task can be used in daily reading activities:

- Nursery rhymes or familiar books (e.g., *Brown Bear, Brown Bear*) provide excellent vehicles to assess rhyming. Can children recognize words that rhyme in text (e.g., *see-me*), and can they supply words that rhyme with a target or group of words (e.g., *sad-bad* or *hit-fit*)? Identifying rhyming words is easier than generating them.
- An oddity task requires children to identify which word is different from several others, and the group might include words with the same initial, final, or medial sounds. This task requires children to compare and contrast the words in order to identify how one word is different from the others.
- A different assessment task requires children to segment syllables into phonemes, for example, given the word *mud*, children need to say the individual sounds of “m”-“u”-“d” or perhaps to clap their hands for each distinct phoneme. Segmenting words begins with one familiar word and requires children to identify the component sounds. That is easier than the next method.
- Blending phonemes is a difficult task because children must remember and blend individual sounds they are given, such as “s”-“a”-“t” into the word *sat*.
- A phoneme elision task is even more difficult because it “cuts off” a phoneme and requires children to identify the sounds that remain. For example, if the “f” sound is taken away from the word *fish*, what do you have left? The answer is *ish*. Adding, deleting, and moving phonemes around in words are more difficult than the first four tasks.

These different assessments of phonemic awareness are valuable for several reasons. First, they can be embedded in daily reading with children and linked immediately to explicit instruction. Second, they can be done quickly, informally, and frequently whenever teachers choose. Third, informal assessments avoid generating student anxiety about testing and poor performance. Fourth, periodic assessments signal to children that analyzing the sounds of words is important for learning to read. Fifth, teachers who assess phonemic awareness frequently develop insights about each child’s reading that can make individualized instruction more effective. The information provided by the assessments is valuable and worth the extra time they require.

### **Instructional Options**

There are many packaged instructional approaches in commercial materials and basal reading lessons that provide practice rhyming, segmenting, and blending phonemes in formats that are similar to the assessments. Explicit instruction in phonemic awareness is beneficial because: (a) it explains language sounds and patterns, (b) it makes the testing format more familiar (such as saying phonemes in isolation), and (c) it provides practice with high-frequency words and regular phonemic patterns. It is important to use the assessments diagnostically so that children are given practice on the skills that are weak. Regrouping children for small-group instruction on phonemic awareness is useful for focusing on specific skills such as identifying vowel patterns. Worksheets and computer software can augment small-group instruction with individualized practice.

Most children learn to rhyme words by kindergarten, so they may need less formal instruction on rhyming—just lots of fun activities. For example, some teachers create teams of children who challenge each other to rhyme words. One team wins a point if the other team cannot provide a rhyming word, but the first team can. Another game that is fun for children requires teachers to make up pairs of rhyming words, such as *bit-sit* and *fat-cat*. Each child is each given a card, face down, without reading the word on it. Upon a signal from the teacher, the children hold the cards on their foreheads so others can read them. They go around the room reading aloud the words on the cards on other children’s foreheads until they find a matching rhyme word with their own words. Then they sit down together on the floor. It is a noisy, active game that involves reading, rhyming, and matching. Teachers can easily modify the game by creating word pairs that have the same ending consonants, the same medial vowel sounds, or the same number of syllables—if they want to extend matching beyond simple rhymes.

Segmenting and blending phonemes, however, are more difficult for children, so teachers need to model how to separate and combine sounds in words. Teachers can clap or tap as they pronounce each separate phoneme in a word to demonstrate the individual sounds. This shows children, for example, that “c”-“a”-“t” has three distinct sounds. Many teachers combine instruction on segmentation with practice on phonics to teach explicit letter-sound relationships. Imagine a teacher clapping along with the segmented sounds of familiar onset-rime patterns such as *fat*, *cat*, *rat*, and *mat*. Children learn to clap three times for the three sounds in the words. Then a teacher might model a phoneme elision

task by focusing on the “-at” sound if she drops the first phoneme. The teacher can ask children to think of other words that might have the same pattern (such as *bat*), or she might even make up nonwords, such as *dat*, to show children how they can “read” words they do not know if they identify the separate sounds. This is called decoding by analogy and is an effective instructional technique. This kind of instruction explicitly shows children how to manipulate the individual phonemes in words by identifying the separate sounds, by cutting off initial sounds, and by combining new sounds.

Modeling phonemic awareness can be done in large or small groups. It is usually beneficial for all kindergarten children, but by the middle of first grade, teachers may be selective about which children receive direct instruction on phonemic awareness. They may choose to regroup children for instruction on specific phoneme patterns and combine that with word-attack skills. Alternatively, teachers may elect to have children practice identifying, segmenting, and blending phonemes with interactive technology serving as a tutor. Commercial computer software and other technology platforms (such as *Leap Frog* interactive books) provide opportunities to identify phonemic patterns through independent exploration.

Teachers also can connect assessment and instruction on phonemic awareness in their small-group reading lessons. For example, guided reading activities provide many opportunities for mini-lessons on phonemic awareness. Some teachers use individual records, such as self-adhesive notes or a chart with each child’s name, as reminders to link instruction with assessment results. For example, a teacher may have a note that JK had a problem with words beginning with “ch,” “sh,” and “th.” Therefore, during guided reading, the teacher may pause when those specific words are encountered to deliver quick explanations about them. Likewise, when a child encounters an unfamiliar word, the teacher can ask the child to do any of these three tasks: break the word into separate sounds, search for familiar word parts (rime patterns), or cover part of the word and pronounce the remainder. Modeling and explaining the strategy during guided reading is quick and can reinforce all children’s understanding of the specific skills.

## **Oral Reading Fluency**

Fluent oral reading is the coordination of several automated decoding skills through practice. Fluency includes reading text quickly, accurately, and with intonation (Kuhn & Stahl, 2002). Reading rate is an indicator of automatic decoding, so children who can read faster often identify words more accurately and have more cognitive resources left over for reading with expression and comprehension (Rasinski & Hoffman, 2003). That may be why reading rate is a popular measure in primary grades. For example, the use of reading rate as a measure of fluency has a long tradition in special education under the name of curriculum-based measurement (Deno, Mirkin, & Chiang, 1982; Fuchs & Fuchs, 1999). The central measure in curriculum-based measurement (CBM) is oral reading fluency (ORF), defined as the number of words read correctly in one-minute samples of text drawn from the student’s curriculum. The purposes of CBM are to use text from the regular curriculum, to embed ORF assessments in everyday activities, and to provide general outcome measures of reading achievement that can be monitored over time for

both diagnostic and accountability functions. ORF is also a main feature of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS™), a popular and quick battery of reading assessments (Good & Kaminski, 2002). It is easy to assess how many words children read correctly in a minute and compare the rates to grade-level norms, but the data need to be interpreted cautiously.

One problem is that reading rate is not always a good measure of comprehension. Some children can read slowly yet construct the meaning of text. Others may read quickly but are not able to recall the key ideas. “Word callers” may be more evident among older readers, but teachers should be cautious about using reading rate alone as a measure of fluency. A second problem is using one-minute measures of reading rate as the only assessments of fluency or reading proficiency. Teachers can assess reading rate along with accuracy and comprehension. This is the procedure in most informal reading inventories (IRIs) such as the Qualitative Reading Inventory (Leslie & Caldwell, 2001), the Developmental Reading Assessment (Beaver, 1997), and the Observation Survey (Clay, 1993).

Assessing children’s decoding accuracy with miscue analyses or running records provides teachers with evidence about their strategies and weaknesses for identifying words in text. Such assessments can help teachers place children in materials at their instructional levels as well as diagnose problems such as guessing words based on initial letters or substituting similar-looking words that are inconsistent with the text meaning. A third problem is ignoring intonation of oral reading. Children who can read aloud with expression recognize syntactic and semantic chunks in text. Rate, accuracy, and intonation together provide a more comprehensive assessment of fluency than any single measure (Paris & Carpenter, 2003).

Oral reading fluency measures are by far the most popular assessments in Grades K–3. The data are relatively easy to collect, chart, and interpret because beginning readers make steady progress reading faster with fewer errors and with more expression. All these measures reflect the development of automatic decoding processes, so they are good measures of word identification but not comprehension. That is one reason IRIs have additional comprehension and retelling measures. It is important to recognize that children often exhibit a trade-off between speed and accuracy and between fluency and understanding. This means that some children can read quickly with many errors or shallow understanding. That is a liability of an exclusive focus on reading rate. Likewise, an exclusive focus on comprehension may not diagnose children’s difficulties with decoding or vocabulary strategies that are necessary for identifying and understanding unfamiliar words. Fluency assessments, then, should be balanced with assessments of comprehension and vocabulary.

Oral reading fluency is an important benchmark of early reading proficiency because it indicates automatic word recognition, effective strategies for decoding words, and recognition of syntactic and semantic units in text. Teachers need to recognize these processes in the data collected on fluency assessments in order to provide appropriate instruction. Repeated reading of the same texts is not as effective in promoting fluency as

repeated reading supplemented with explicit instruction (Kuhn & Stahl, 2003). Teachers need to model fluent reading to young children, explain why it is important, and show children appropriate strategies. That is the critical connection between assessment and instruction.

### **Instructional Options**

Fluency is usually strengthened with repeated reading, so teachers can ask children to read text silently, then aloud, and then together in chorale reading. Children can also be asked to read dialogue of different characters in a classroom play or to memorize poems or famous speeches. Each public “reading” requires multiple readings that develop accurate automatic word recognition with appropriate intonation. Some teachers have children practice chorale reading in groups or dialogue reading in pairs, and later they listen to individual children read aloud to assess their improvement in rate, accuracy, and expression. Because mastery is the goal, children who encounter difficulty should be given additional instruction and practice individually as needed. This type of intensive, repeated reading for a high criterion of fluency shows children what they can do with practice and sets a high standard for their reading. Thus, the benefits extend beyond mastery of the particular text.

Explicit instruction about each aspect of fluency should be provided with repeated opportunities to read. Teachers can model exaggerated expression and explain how they chunk text into phrases. This is a good opportunity to explain how syntax and grammar provide clues about expressive reading. One simple example is to pause before conjunctions. Another example is use rising intonation for questions. Rereading with different intonation can help children compare good and poor intonation patterns. Children can also be asked to reread passages in order to tutor less able readers. Requiring them to model, explain, and monitor other children’s oral reading fluency makes them more aware of their own fluency. Each of these options requires children to reread text for legitimate purposes, and that builds understanding and not simply fast reading.

### **Comprehension**

Comprehension involves many different levels of understanding, and it is difficult to define and measure (Kintsch, 1998). When children read increasingly complex levels of text during the year, it is difficult to assess how comprehension changes, because the text difficulty is also changing (Paris, 2002). Assessing comprehension among beginning readers is complicated, because they read simple texts and devote so much energy to decoding that they may not be able to recall much text information. Thus, many teachers assess comprehension of beginning readers informally by asking for retellings of text or by asking questions about explicit text information. These are good methods for gauging children’s understanding whenever they read, but teachers need to judge quickly if the retellings and answers are adequate. If the answers reveal superficial or incomplete understanding, teachers need to request additional information with specific questions. If children do not understand the text well, teachers need to provide appropriate answers

and models. They need to use the “teachable moment” of children’s confusion to explain what the children can do to clarify and elaborate their comprehension. Otherwise, the ongoing assessments are disconnected from instruction.

Basal reading materials provide many ways to assess reading comprehension in K–3 including the following:

- Retellings
- Questions interspersed in selections
- Discussions of key ideas
- Review questions at the end of selections
- End-of-unit tests

Good questions assess children’s understanding of explicit and implicit text information; conceptual and thematic information; key ideas and details; and, perhaps, relations to prior knowledge or other texts. Those assessments, however, usually focus on the content of text. Effective teachers understand that children’s answers also reveal processes and strategies of comprehension. For example, if children retell text information in a disorganized manner or leave out important ideas, teachers need to show children how to use text structure to organize retelling and how to find important text information. Modeling and explicit instruction of comprehension strategies can accompany daily assessments and should be evident even in Grades K and 1 (Almasi, 2003).

Reading comprehension can also be assessed more formally with IRIs or periodic commercial tests. These reading assessments are often administered individually, which is time consuming for teachers, but the assessments can reveal more details about children’s comprehension strategies than group-administered tests. Group-administered tests of comprehension require children to read the text, read the questions, and choose or write the answers so the measure of comprehension is confounded with the task requirements, decoding skills, and memory demands. Children in Grades 1–3 often have difficulty with group-administered tests because they may lose their place on the answer sheets, may be confused by the multiple-choice options, may not know how to spell the answer they want to supply, may try to complete the test quickly, or may become anxious about their performance. Despite the standardized procedures, uniform content, and quantitative data available from group-administered reading tests, teachers and parents need to be sensitive to the problems that may weaken the validity of the test scores.

There are other ways to assess children’s comprehension before they become skilled readers. Morrow (1990) suggests that teachers can assess children’s understanding of narratives through retelling and reconstruction of events. Paris and Paris (2003) designed an assessment of children’s comprehension of wordless picture books and showed that children’s narrative comprehension is correlated with later reading test scores. Teachers can adapt these methods by assessing children’s understanding of stories they view on television or in picture books or stories they hear read aloud. Teachers can ask questions about the setting, characters, plot, and outcome as well as about characters’ implicit intentions, actions, and feelings. Assessments of viewing and listening comprehension

can be embedded in daily language arts activities. They are natural precursors to reading assessments.

Reading comprehension can also be assessed through children's responses to text. Discussions about text may occur in small group reading activities or in formats such as Questioning the Author (Beck, 1997) or Book Clubs (McMahon & Raphael, 1997). Teachers can assess the depth and thoroughness of understanding by each child's comments. Alternatively, responses to text may be written in short answers, reports, or essays. Teachers frequently use rubrics to evaluate writing as well as children's comprehension. Children may also respond to text in other ways. For example, the cloze procedure requires readers to fill in missing words and phrases in text. Another method requires readers to identify anomalous or contradictory information in text, sometimes called an error-detection task. Computer software that presents text visually and/or audibly also allows children to interact with text in more complex ways than simply answering questions about the content of text. Technology-based assessments of reading comprehension may provide innovative assessment methods in the future that challenge children to dig deeply into text meaning while also freeing teachers' time from individual assessments.

### **Instructional Options**

One effective form of instruction is to teach children about the relations between questions and text information using the question-answer relationships (QAR) method (Raphael, 1986). This can be coupled with explicit instruction on explicit and implicit meaning in text and with specific lessons on inferences. Many teachers provide explicit instruction about text-self, text-world, and text-text connections so that children understand that questions about the text can focus on any or all of these relations. QAR instruction is especially valuable for children who have difficulty constructing meaning beyond the literal level, because it shows that answers to some questions are not "right there" in the text.

Another way to connect assessment and instruction is through specific lessons about strategies. For example, we created lessons based on analogies such as "Be a Reading Detective" to provide explicit information to children about what comprehension strategies are, how to use them, when to apply them, and why they are effective (Paris, Cross, & Lipson, 1984; Paris & Jacobs, 1984). These metacognitive lessons model and explain appropriate strategies for children. Teachers can adapt the ideas readily in their own classrooms with various analogies, such as traffic signs that signal reading actions (e.g., STOP—to say it in your own words, Dead End—go back and reread, Speed Limit—slow down for unfamiliar words, etc.). The analogies are fun and make thinking strategies more tangible for young children, but the key to the instruction is the metacognitive discussions about how to think as you read. Teachers can use clear explanations and group discussions to clarify how children should use comprehension strategies, such as identifying main ideas, asking appropriate questions, and making good summaries (Pressley & Woloshyn, 1995). Many teachers also help students understand

narrative and informational text structure with direct instruction about genre (Blachowicz & Ogle, 2001).

There are many other ways to teach comprehension strategies. For children whose comprehension difficulties may be due to difficulties with English as a second language, teachers may use wordless picture books or videos to teach them about text elements and relations (e.g., setting and plot) and characters' motives and actions. Another way to minimize decoding requirements is to use listening tasks to teach and assess children's understanding of text they hear read aloud. Teachers use instruction on listening tasks, wordless picture books, and videos to bridge children's understanding from oral language to text. For older children who can decode words but have comprehension problems, teachers may use pair-share reading activities, such as reciprocal teaching (Palinscar & Brown, 1984), where children take turns reading and questioning each other. They practice asking questions, paraphrasing, and summarizing while reading so that the strategies become familiar. Some teachers use graphic organizers to help students identify the organization of ideas in text. For example, teachers can use a worksheet with three columns labeled *K*, *W*, and *L* to chart what students **K**now, what they **W**ant to learn, and what they **L**earned from text (Ogle, 1986). Word webs, semantic maps, and concept diagrams can also show children the connections among ideas in text.

It is not easy to connect assessment and instruction on comprehension in the classroom. One problem is that standardized tests, end of unit tests, and other summative assessments do not provide diagnostic information about which comprehension skills are problems for specific children. Another problem is that children who exhibit comprehension difficulties often have difficulty with decoding, vocabulary, and reasoning because reading comprehension depends on many other cognitive processes. How can teachers identify and instruct specific comprehension difficulties? I think the answer lies in informal, daily assessments of children's responses to text. Teachers need to examine how children answer questions about text, what they say in summaries and critiques of text, and what they write in response to text. Then teachers should analyze students' abilities to use important comprehension strategies such as finding the main idea, making inferences, and summarizing key information. Students' responses can show if they have difficulties with these important strategies. If their summaries include superfluous or irrelevant information or if their critiques miss the central theme, these are signals to provide explicit instruction on those strategies. It is a diagnostic approach that relies on teachers' insights about the ways that individual children construct meaning from text, and it requires teachers to model and explain effective comprehension strategies throughout the day when opportunities arise.

## **Vocabulary**

Vocabulary, like the other essential skills, can be assessed in an isolated format with uniform tests such as the Peabody Picture Vocabulary Test that requires children to match words and pictures. Many publishers include vocabulary tests with basal reading materials that can be given periodically. Teachers may use formal tests several times during the year, but they are more likely to use informal assessments connected to their

daily instruction. Teachers may ask children to read, define, and use words in sentences, and this can be done verbally or in written assignments. The words can be drawn from the students' instructional reading selection, content area reading, or independent reading. Thus, informal vocabulary assessments can be flexible, brief, and focused on words found in the current curriculum. Many teachers use vocabulary assessments before reading a text in order to help build students' background knowledge. Initial instruction on vocabulary and related conceptual content, based on the vocabulary assessments, can facilitate children's subsequent reading comprehension (Beck, McKeown, & Kucan, 2002).

Many reading assessments in IRIs and commercial materials include word-recognition tests in which children are asked to read 10–20 words in graded word lists. The speed and accuracy of their performance is often regarded as an assessment of their “word knowledge.” It should be noted that although such tests assess speed of recognition and accurate decoding, rarely are word-recognition tests joined with assessments of vocabulary understanding. Teachers can supplement word-recognition tests by asking children to define words and use them appropriately. Computer software for vocabulary assessment is an alternative method that allows self-paced learning, automatic record keeping, and less time from teachers.

### **Instructional Options**

Vocabulary in primary grades is often taught explicitly before reading texts. It is intended to build background knowledge and to promote comprehension in addition to building vocabulary knowledge. The instruction is embedded in language arts or content-area reading and usually involves:

- Spelling the words.
- Defining the words.
- Using the words in sentences.

The words may be posted on walls or boards, and they are used deliberately during the week to reinforce their meanings. Some teachers use vocabulary pretests and posttests before and after a unit to assess if students learned the key words in the unit. Reteaching is then provided for children who do not master the new words.

When vocabulary assessment reveals that children do not know or use appropriate vocabulary words, they can be taught explicitly, often in readers' or writers' workshop activities. For example, some teachers introduce new words to children while discussing a selection. The focus is on adding new words to their vocabularies. They might discuss synonyms for words or alternative expressions in small groups. They might write them in graphic organizers or on word walls. Teachers might ask children to write specific words in vocabulary books or journals to create personalized lists that children can practice using and spelling. Some teachers provide small cards with holes that are attached to a ring so that children can create “power word rings” as they acquire new vocabulary words. Because collecting words also requires explaining them, teachers provide definitions and examples so that children can use the words in their oral and written

reports. This is the time when teachers explain the nuances of meaning and how different vocabulary words can express more detailed descriptions.

Teachers can use games and creative activities to reinforce new vocabulary words. Teachers often use word searches and crossword puzzles to identify words. Some children enjoy partner games such as hangman and battleship, which are based on producing and discovering hard-to-guess vocabulary words. Some teachers combine spelling bees with vocabulary games so that teams compete to define and spell difficult words. Creative activities, such as writing poetry or using figurative language, allow children to use expressive words. For example, “sandwich poems” start and end with the same word but include creative words in the middle, such as this one:

Winter—snowy, icy, frigid, tingling—winter.

Acrostic poems allow children to explore words that start with initial letters in a target word and then compare their creations to those of others. If teachers post acrostic poems from 25 children on the walls, there will be literally hundreds of vocabulary words for the children to read. The keys to effective instruction are (a) to help children generate and learn new words, (b) to define and explain new words, and (c) to apply them appropriately and creatively (Au, Carroll, & Scheu, 2001).

### **Portfolios of Literacy Accomplishments**

Although K–3 teachers use observations of children’s reading and writing to guide instructional decisions, there are many types of literacy assessments that leave more visible indicators of progress (Johnston, 1992). Sometimes teachers use checklists, notes, and rubrics on work samples to assess daily work. Children’s writing folders, for example, may include samples of children’s work that can be assessed for handwriting, spelling, and phonemic awareness as well as grammar, content, and understanding. Book logs can include titles of books that children have read in the past month, as well as comments or evaluations by children. Such logs also provide evidence of the variety of genres and levels of difficulty that children have read. Spelling books, work folders, and journals can reveal developmental progress over time. These may be collected in portfolios, notebooks, or file folders, but, no matter the form of organization, they provide visible evidence of classroom activities and developmental progress (Meisels, Bickel, Nicholson, Xue, & Atkins-Burnett, 2001).

Portfolios are most useful when they reveal important aspects of students’ learning and achievement. They provide evidence for parent conferences or report cards. Portfolios can encourage children to be self-regulated learners who take pride in their own accomplishments. Children should be encouraged to take ownership of their portfolios, to review and evaluate their own work, to identify skills that require improvement, and to share their work with others (Paris & Ayres, 1994). One way to facilitate self-evaluation is through teacher-child conferences about the child’s work and what it indicates. Structured interviews about work samples are enjoyable for children and correlated with their achievement (van Kraayenoord & Paris, 1997). Another way to help children appraise their own work and take pride in their accomplishments is by allowing children

to present their own portfolio review at parent-teacher conferences (Tierney, Carter, & Desai, 1991).

## **Managing the Assessment Data**

Teachers need a systematic approach to assessment to manage their time and the information collected. A schoolwide system connected to the curriculum materials or report cards is often useful because it is coherent and shared across grades. Teachers always have their preferred styles for recording information about students. Some teachers use clipboards with students' names to record observations daily. Others use self-adhesive notes on students' work that is filed in folders. Most teachers have a specific folder or notebook or journal for each student that contains worksheets, book logs, and work samples. These can be reviewed periodically for report cards or conferences, and the contents can be sent home except for a few pieces that are saved for review at the end of the year. More teachers are using handheld electronic organizers, computers, and other technology to store assessment information, and this holds promise of minimizing paper storage as well as teachers' time spent collecting and analyzing the data. The most successful systems for collecting and using assessment information are planned for the entire year, similar among teachers in a school, recognized by students and parents, and integrated with instruction.

## **Conclusions □**

Assessing children's reading in K–3 should not focus only on identifying children who are successful or only on comparing relative achievement levels of children or schools. High-stakes testing is not appropriate for beginning readers. Instead, reading assessments should focus on diagnosing children's strengths and weaknesses, especially on the five essential skills of early reading. However, it is imperative for teachers to use the information to provide differentiated and individualized instruction to children. Assessment must be connected to the classroom materials, curricula, and instruction in order to benefit children. Experienced teachers will collect more information than the five essential skills. K–1 teachers often assess children's emerging knowledge about concepts of print (Clay, 1993), how they begin to read and write in more conventional ways, (Sulzby, 1986), and how they learn to take turns reading and discussing text (Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994). They often gather work samples of writing and reading to help parents understand their progress and/or difficulties. Teachers in Grades 2 and 3 may use more complex assessments such as basal reading assessments, writing folders, book logs, discussion groups, evaluative rubrics, and portfolios to assess progress and to document children's accomplishments. The wide variety of assessment tools available for K–3 teachers means that they need to be informed about what is important to assess and to be selective in what they choose and how they use the tools. Effective, selective, and judicious use of reading assessments in K–3 can be enormously beneficial to teachers, parents, and children.

## References

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Almasi, J. F. (2003). *Teaching strategic processes in reading*. New York: Guilford Press.
- Au, K. H., Carroll, J. H., & Scheu, J. A. (2001). *Balanced literacy instruction*. Norwood, MA: Christopher-Gordon.
- Beaver, J. (1997). *Developmental reading assessment*. Glenview, IL: Celebration Press.
- Beck, I. L. (1997). *Questioning the author: An approach for enhancing student engagement with text*. Newark, DE: International Reading Association.
- Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford Press.
- Blachowicz, C., & Ogle, D. (2001). *Reading comprehension: Strategies for independent learners*. New York: Guilford Press.
- Clay, M. M. (1993). *An observation survey of early literacy achievement*. Portsmouth, NH: Heinemann.
- Deno, S. L., Mirkin, P., & Chiang, B. (1982). Identifying valid measures of reading. *Exceptional Children, 49*, 36-45.
- Fuchs, L. S., & Fuchs, D. (1999). Monitoring student progress toward the development of reading competence: A review of three forms of classroom-based assessment. *School Psychology Review, 28*, 659-671.
- Good, R. H., & Kaminski, R. A. (Eds.) (2002). *Dynamic Indicators of Basic Early Literacy Skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement.
- Johnston, P. H. (1992). *Constructive evaluation of literate activity*. New York: Longman.
- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. New York: Cambridge University Press.
- Kuhn, M. R., & Stahl, S. A. (2003). Fluency: A review of developmental and remedial practices. *Journal of Educational Psychology, 95*(1), 3-21.
- Leslie, L., & Caldwell, J. (2001). *Qualitative reading inventory-3*. New York: Longman.

- Lovett, M. W., & Steinbach, K. A. (1997). The effectiveness of remedial programs for reading disabled children of different ages: Does the benefit decrease for older children? *Learning Disability Quarterly*, 20(3), 189-210.
- McMahon, S. I., & Raphael, T. E. (1997). *The Book Club connection: Literacy learning and classroom talk*. New York: Teachers College Press.
- Meisels, S. J., Bickel, D. D., Nicholson, J., Xue, Y., Atkins-Burnett, S. (2001). Trusting teachers' judgments: A validity study of a curriculum-embedded performance assessment in kindergarten to grade 3. *American Educational Research Journal*, 38(1), 73-95.
- Morrow, L. M. (1990). Assessing children's understanding of story through their construction and reconstruction of narrative. In L. M. Morrow & J. K. Smith, *Assessment for instruction in early literacy* (pp. 110-133). Englewood Cliffs, NJ: Prentice Hall.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office. Retrieved December 31, 2003, from <http://www.nichd.nih.gov/publications/nrp/smallbook.htm>
- No Child Left Behind Act of 2001, Pub. L. No 107-110, 115 Stat. 1425 (2002). Retrieved December 31, 2003, from <http://www.ed.gov/policy/elsec/leg/esea02/index.html>
- Ogle, D. M. (1986). K-W-L: A teaching model that develops action reading of expository text. *The Reading Teacher*, 40, 564-570.
- Palincsar, A. S., & Brown, A. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, 1, 117-175.
- Paris, A. H., & Paris, S. G. (2003). Assessing narrative comprehension in young children. *Reading Research Quarterly*, 38(1), 36-76.
- Paris, S. G. (2002). Measuring children's reading development using leveled texts. *The Reading Teacher*, 56(2), 168-170.
- Paris, S. G., & Ayres, L. J. (1994). *Becoming reflective students and teachers with portfolios and authentic assessment*. Washington, DC: American Psychological Association.

- Paris, S. G., & Carpenter, R. D. (2003). FAQs about IRIs. *The Reading Teacher*, 56(6), 578-580.
- Paris, S. G., Cross, D. R., & Lipson, M. Y. (1984). Informed strategies for learning: A program to improve children's reading awareness and comprehension. *Journal of Educational Psychology*, 76, 1239-1252.
- Paris, S. G., & Jacobs, J. E. (1984). The benefits of informed instruction for children's reading awareness and comprehension skills. *Child Development*, 55, 2083-2093.
- Paris, S. G., Paris, A. H., & Carpenter, R. D. (2002). Effective practices for assessing young readers. In B. Taylor & P. D. Pearson (Eds.), *Teaching reading: Effective schools, accomplished teachers* (pp. 141-160). Mahwah, NJ: Erlbaum.
- Pressley, M., & Woloshyn, V. (1995). *Cognitive strategy instruction that really improves children's academic performance* (2nd ed.). Cambridge, MA: Brookline Books.
- Raphael, T. E. (1986). Teaching question-answer relationships revisited. *The Reading Teacher*, 39, 516-522.
- Rasinski, T. V., & Hoffman, J. V. (2003). Theory and research into practice: Oral reading in the school literacy curriculum. *Reading Research Quarterly*, 38(4), 510-523.
- Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press. Retrieved December 31, 2003, from <http://books.nap.edu/html/prdyc/>
- Stallman, A. C., & Pearson, P. D. (1990). Formal measures of early literacy. In L. M. Morrow & J. K. Smith (Eds.), *Assessment for instruction in early literacy* (pp. 7-44). Englewood Cliffs, NJ: Prentice Hall.
- Sulzby, E. (1986). Writing and reading: Signs of oral and written language organization in the young child. In W. H. Teale & E. Sulzby (Eds.), *Emergent literacy: Reading and writing* (pp. 50-87). Norwood, NJ: Ablex.
- Tierney, R. J., Carter, M. A., & Desai, L. E. (1991). *Portfolio assessment in the reading-writing classroom*. Norwood, MA: Christopher-Gordon.
- van Kraayenoord, C. E., & Paris, S. G. (1997). Australian students' self-appraisal of their work samples and academic progress. *Elementary School Journal*, 97(5) 523-537.
- Whitehurst, G. J., Arnold, D. H., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology*, 30(5), 679-689.