EFFECTIVE READING INSTRUCTION
What We Know from the Research
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Foreword

In an era when it is ever more important that we help every child succeed—as well as in a time of increased accountability for states, school districts, and schools—the need for solid and substantiated research to support decision-making is paramount. Over the years, much has been written—to varying degrees of quality and comprehensiveness—about how reading should be taught, and efforts to remain current on the latest research can be daunting. Yet it is imperative that state boards of education and other education leaders are cognizant of high-quality research and best practices in reading instruction in order to make the decisions that will most improve learning for all students.

This edition of NASBE's Issues in Brief series presents a synthesis of the characteristics that research has consistently found in high-quality reading instruction and details components and instructional strategies necessary for success in reading for both beginning readers (K-3) and those in the upper grades (4-8). This document can help state leaders identify the critical elements of effective reading instruction as they evaluate criteria in their states' reading programs, instructional materials, and curriculums.

Finally, NASBE would like to thank Ali Sullo and the other contributing members of the Reading/Language Arts and Bilingual Education School Division of the Houghton Mifflin Company for developing and working with us on the contents of this Issue Brief. Like boards of education in every state, NASBE recognizes that it is only through partnerships with a wide range of nonprofit, business, citizen-based, and governmental organizations and agencies that we will fulfill our mission of educating every child to high standards.
Introduction

Few, if any, topics in the field of education have received more attention than beginning reading instruction. Recently, broad consensus has been reached that beginning reading instruction and materials should be based on research, with less reliance on opinion and ideology. The amount and scope of beginning reading research is massive. The quantity and quality of research in reading that focuses on beginning reading instruction has led scholars to a high degree of consensus about what should be included in a beginning reading program. While there is less high-quality research and fewer syntheses of research focusing on reading instruction in grades 4-8, there is considerable evidence to guide decision making for reading/literacy instruction in the upper grades. The research syntheses that are summarized in this document include the following in chronological order:

- 1998: Snow, C. E., Burns, M. S., & Griffin, P. G. (Eds.), Preventing Reading Difficulties in Young Children, National Academy Press
- 2000: National Reading Panel: Teaching Children to Read, National Institute of Child Health and Human Development (NICHD)
The research documents differed in length, comprehensiveness, and the depth with which they addressed various topics; however, there was considerable overlap in the topics they addressed and the conclusions they reached. The following topics emerged as centrally important for beginning reading instruction, with implications for the development of materials to be used in teaching children to read.

**Foundations for Learning to Read**
1. Oral Language
2. Knowledge of Letter Names
3. Phonological/Phonemic Awareness
4. Concepts of Print

**Decoding Skills**
1. Phonics/Sequential Decoding
2. Analogy
3. Context
4. Instant Word Recognition

**Fluency**

**Texts for Reading Instruction**

**Developing Reading Comprehension**
1. Vocabulary and Background Knowledge
2. Strategic Reading

**Writing, Spelling, and Grammar**

**Motivation, Independent Reading and Writing, and Home Connections**

The purpose of this document is to summarize the major conclusions drawn from the research syntheses that cover a span of years.
Foundations for Learning to Read

Grades K–3

1. Oral Language

Oral language is the foundation on which reading and writing are built. Children develop a “working” knowledge of the phonological structure of oral language early in their preschool years. With instruction, this knowledge develops into a conscious awareness of the phonemic composition of spoken words (or phonemic awareness), which is essential to learning to read. In this sense, oral language is the foundation for learning to identify or pronounce written words.

Oral language is, perhaps, even more obviously related to reading comprehension. Oral language and reading comprehension have many factors in common. The syntax of oral and written language is highly similar. The semantics for words heard and read are the same—the word car, whether read or heard, will evoke similar though varying meanings for any given person. The background knowledge that a person stores contributes significantly to using and understanding oral language and to reading comprehension. This strong relationship between oral language and reading is manifested in the high correlations that develop between reading and listening comprehension once children have gained a degree of proficiency in word identification.

If children come to school with well-developed oral language, it must be expanded. If children come to school with underdeveloped oral language, it must be developed. Research-based instructional materials must provide instruction and activities to develop and expand oral language, including such opportunities as hearing and using good language models, talking about and discussing meaningful topics, and so forth. The necessity for oral language development and expansion extends from preschool through a child’s later school experiences.
2. Knowledge of Letter Names

A long-standing, extremely robust finding in the field of reading research is the high correlation between young children’s knowledge of letter names and success in learning to read. However, simply teaching children letter names in and of itself does not lead to significantly better reading achievement. The relationship between young children’s knowledge of letter names and beginning reading achievement is a complex relationship, not a simple causal one.

Knowledge of letter names in all probability signals the fact that the child has been exposed to a rich, stimulating preschool environment. A rich, stimulating environment allows the child to learn letter names, but it also allows the child to develop rich oral language skills, sensitivity to oral language patterns, concepts of print, motivation for learning to read, and so forth. While knowledge of letter names may somewhat facilitate learning to read, such knowledge is certainly not sufficient for learning to read; learning to read depends upon the multiple skills developed in a stimulating early childhood environment; hence, just teaching letter names does not result in improved reading achievement.

Letter names serve as a “marker” for additional and more complex skills and relationships in the learning-to-read process. First, letter names are the equivalent of a label for the letter form; having a label available facilitates the child’s ability to discriminate critical differences among different letters. For example, differences between C, G, and O will be more apparent if each has a separate label.

Second, accurate letter naming may also serve as an index of the completeness with which the letters’ identities have been learned by the child. Third, and perhaps most important, letter names may be related to reading achievement because the names of most of the letters of the alphabet contain clues as to the sound that a letter represents (for example, “b” and “f”); knowledge of letter-sound associations is critically important to progress in beginning reading.

From the research reviews it is safe to conclude that measuring a child’s knowledge of letter names is a very good predictor of success in learning to read. It is also reasonable to conclude that teaching letter names in kindergarten or first grade is a useful activity. However, children then need to be taught to recognize letters not just accurately but automatically, and to use letter names as a mnemonic for learning the sounds associated with the letter forms. As with other skills that are foundations to learning to read, familiarity with letter forms is necessary, but not sufficient, for learning to read.
Knowledge of Letter Names (continued)

Research-based instructional materials should provide many activities and games designed to teach letter names. Such activities should include learning alphabet songs and the shared reading of and listening to alphabet books.

3. Phonological/Phonemic Awareness

The term phonemic awareness is used in two very distinct ways in the reading research literature. It is sometimes used broadly to refer to children’s awareness of any of the several units that constitute oral language: spoken words, syllable, onset and rime, and phonemes. Others use the term phonological awareness for this broad range of skills and reserve the term phonemic awareness for the insight that spoken words can be conceived as a sequence of sounds or phonemes. In this document, phonemic awareness is used in the more restricted definition.

Measures of phonemic awareness are among the very best predictors of success or failure in learning to read, rivaled only by knowledge of letter names. There is also clear and indisputable evidence that phonemic awareness skills can be trained and that such training results in a reduction of reading problems and improved reading achievement.

Progression in the development of phonological awareness includes becoming familiar with rhyme and alliteration, becoming aware of spoken syllables, dealing with onsets and rimes, and finally, dealing with the blending and segmenting of phonemes. The skills for blending and segmenting phonemes are among the most difficult to acquire but are also among the most important for reading and spelling.

Beyond the beginning stages of the development of phonemic and phonological awareness skills, there is evidence that the relationship between phonemic awareness and learning to read is a reciprocal one. While phonemic awareness skills contribute to learning to read, learning to read clearly appears to hasten and sharpen the development of phonemic awareness.

Beginning at the pre-K level, research-based instructional materials should provide activities and instruction designed to systematically develop phonological and phonemic awareness for those students who need it. Young children should be engaged in activities that include identifying and producing rhyme, identifying syllables in spoken words, identifying and blending onsets and rimes, and blending and segmenting phonemes.
4. Concepts of Print

Phonemic awareness involves insights about oral language; concepts of print involve insights about written language. While measures of concepts of print are not as highly related to success in learning to read, they nonetheless are clearly important.

In order to learn to read effectively, children must develop concepts of print, including such things as knowing that printed English has a left-to-right orientation; that a printed word is preceded and followed by a space; that there are letters, words, and sentences in printed English; and that there is a one-to-one correspondence between the number of printed words and the number of words that a reader reads aloud. Some children come to school with some or even all of these concepts, but others do not. Therefore, well-developed, research-based instructional materials must provide opportunities for instruction as well as activities that develop these concepts.

Grades 4–8

5. Oral Language

By the time children have reached fourth grade only the most severely limited, special needs students require instruction in areas such as knowledge of letter names, phonological/phonemic awareness, and concepts of print. However, oral language remains an important foundation for reading, and in some respects is more directly related to reading performance at fourth grade and beyond than it is in the early grades.

Most students who are at the beginning stages of learning to read have richer listening and speaking vocabularies than the vocabulary challenge of the materials they are reading. For most beginning readers the major reading challenge they face is decoding print into the oral language forms that they know. By fourth grade, however, there is a change in the challenges that reading makes on developing readers. By this time most students have developed the basic decoding or word identification skills for independently reading most of the words they encounter; however, they begin to face more challenging syntactic forms and words that are not in their listening and speaking vocabularies. Therefore, they need instructional support for dealing with this vocabulary.

By the middle grades, most students have acquired mature oral language syntactic forms which provide a base for understanding the more sophisticated linguistic ideas and forms they will encounter in their reading. However, many students will need instructional support
to develop the oral vocabulary skills needed to construct the meaning of more challenging texts. (See section on vocabulary.)

The development of beginning reading skills clearly builds on oral language/vocabulary skills; however, by fourth grade, the rich vocabulary found in reading materials helps students to enhance oral language and vocabulary development if they are given the instruction and taught the strategies for learning new word meanings. Thus, the relationship between vocabulary development and reading becomes a reciprocal one—a rich vocabulary and highly developed oral language facilitate reading comprehension, but engaging in reading and encountering challenging new words in texts contributes to oral language and vocabulary development.

The heightened relationship between oral language and reading beyond the early grades is also suggested by studies of the relationship between listening comprehension (sometimes called auding) and reading comprehension. While the relationship between listening and reading comprehension is weak in the early grades, it grows stronger in the later grades. In the early grades reading progress is highly related to decoding and word identification; however, as reading fluency develops, reading comprehension, like listening comprehension, becomes highly dependent on language development.

A research-based reading program for grades four and above will develop vocabulary and oral language skills which in turn contribute to reading comprehension.
Decoding Skills

Grades K–3

1. Phonics/Sequential Decoding

The role of phonics in beginning reading instruction has been the topic of what seems like endless discussion and debate; the consensus among the documents reviewed for this framework is striking—early, direct, systematic, explicit instruction in phonics results in higher levels of beginning reading achievement. English is an alphabetic language in that the sounds (phonemes) that compose the language are represented by letters (graphemes). Unless children come to understand this “alphabetic principle,” or code, their progress in reading will be very limited.

One of the major issues in phonics instruction is whether or not phonics should be taught “explicitly.” There are two dimensions that distinguish explicit phonics instruction—sounds associated with letters are identified in isolation, and the isolated sounds are blended together to produce a word. This blending of sounds to identify words is called sequential decoding. In contrast, in implicit instruction, teachers point out relationships among whole words; for example, “bed” and “boat” both sound like they begin the same.

In the past, prior to the accumulation of convincing evidence, there were concerns about teaching children to sequentially decode words because it was seen as a slow, laborious, attention-draining process; if a child’s attention was fully focused on decoding, this seemed likely to interfere with the child’s ability to construct the meaning of the text being read. However, it is only through such deliberate attention and processing of print that children develop the ability to rapidly and automatically recognize words the way mature readers do. This rapid, automatic recognition of words frees the reader’s attention for constructing meaning from the text he or she is reading. Thus, sequential decoding is a reasonable, reliable way for children to identify words that are unfamiliar to them in print; however, sequential decoding has the long-term beneficial effect of familiarizing children with the letter patterns in words, which allows for rapid, effortless word identification.
2. Analogy

In addition to recognizing words through the use of individual letter-sound associations, an analogy approach to word identification focuses on recognizing a new word because it shares a word pattern with a known word. For example, a child who knows the word *make* very well, and who knows the sound for the letter *l*, could use this combined information to identify a previously unseen word—*lake*.

The most common approach to teaching children word patterns is to work with commonly occurring rimes. (A rime is the vowel in a syllable and any consonants that follow it; e.g., *ake* in *lake*; *in* in *pin*.) Rimes are more commonly referred to by teachers as “phonograms” or “word families.”

Reading words through analogy or through a focus on rimes is not a substitute for sequential decoding. The previous discussion of phonics makes it clear that careful, sequential application of letter-sound associations is a necessary step in building familiarity with the orthographic patterns in words; working with phonograms can reinforce patterns that are common to many words.

Research-based reading materials must present coherent, well-coordinated instruction in reading that includes phonics and reinforces common spelling patterns through instruction with common rimes, which helps children decode by analogy.
3. Context

Context, when applied to decoding or word recognition, refers to the use of syntactic and meaning clues to help identify an unknown or difficult word in a text that is being read. Consider, for example, the incomplete sentence, “He was riding on a ______.” The syntax indicates that the missing word is a noun; the accumulated meaning of the sentence suggests the missing word may be a vehicle (bicycle, wagon), an animal (donkey, horse), or a physical place (hill, mountain), and other possibilities as well.

In the past, it was speculated that poor readers had difficulty reading because they weren’t using context clues; however, more recent research has shown convincingly that young and poor readers rely on context clues more than skilled, proficient readers. Skilled readers are able to quickly and accurately identify words based on their letter composition.

Research also confirms that context clues are limited because they are not reliable; it is rarely possible to determine an exact word in a text based on context. Context narrows the word possibilities, but rarely determines the exact word of a text, as is illustrated in the incomplete sentence used previously in this section. This does not mean that use of context is an unimportant skill for mature, efficient reading. Context serves at least three important functions: (1) it helps to confirm the pronunciation of a word that a child might arrive at through sequential decoding, (2) it clarifies multiple-meaning words and in this sense may even be necessary to arrive at the correct pronunciation of a word (e.g., “lead a parade” vs. “a lead pipe”), and (3) it sometimes helps with the meaning of a word that is not known by a reader.

Research-based reading instruction and instructional materials must teach children not to overrely on context. The instruction must focus on the appropriate use of context, which teaches children to focus first on the visual form of the word and its letter-sound associations.
4. Instant Word Recognition

Previous sections of this paper presented the major roles that phonics and analogy approaches play in word recognition. However, those sections also noted that skilled readers become capable of recognizing words with remarkable speed—they recognize words instantly (by sight). This instant, accurate recognition of most of the words a reader encounters is critical; if students must focus much of their attention on decoding words, insufficient attention will be available for constructing the meaning of text. In order to build a large store of words that are recognized instantly, children need many opportunities to read. A large instant recognition vocabulary helps make children adept in word reading and fluency.

There is a special class of words that is particularly important in beginning reading instruction—high-frequency words—those words that appear over and over again in English. Approximately 300 words account for 65% of the words in beginning reading materials, and a mere 500 words account for 90% of the running words in children’s text. These words are particularly challenging because they carry little concrete meaning and because many of them are composed of irregular letter-sound relationships. For example, the should rhyme with be and was with gas; to should be pronounced as toe, and of as off.

Research-based instructional materials need to pay careful attention to building instant recognition (sight recognition) of many words through careful attention to the letters and orthographic patterns in those words, with special attention in beginning reading instruction to high-frequency words with their attendant letter-sound correspondence irregularities. Young readers also need to read appropriately challenging texts that not only allow for the application of the phonics skills they are learning, but which contain and repeat the high-frequency words that are critically important for success in beginning reading. (See Texts for Reading Instruction.)

5. Fluency

The entire section on decoding in this document emphasizes that beginning readers need to carefully attend to and process print. Sequential decoding, for example, is an effective route to identifying a word unknown in print to a reader; however, another, perhaps ultimately more important, consequence of careful attention to the letters of words is the ability to recognize words easily and effortlessly so that the reader’s attention can be focused on comprehending and enjoying the text. Fluency, the ability to read words quickly and effortlessly, develops through the learning of sequential decoding and the reading and rereading of appropriately challenging texts.
6. Texts for Reading Instruction

The texts used for reading instruction are a critical component in teaching children to read and to achieve high levels of reading proficiency. Research offers some guidelines for selecting texts for instructional purposes, but that research is limited. Children in the beginning stages of learning to read face major challenges in decoding the words of texts they read. Therefore, the texts used for beginning reading need to be carefully constructed and chosen to allow students to progress toward developing reading fluency. Beginning reading texts should include a high percentage of words that allow children to apply the phonic skills they are learning and help children become very familiar with high-frequency vocabulary. These texts are often referred to as decodable texts. However, the research syntheses are also clear that from the very beginning, children must view reading as a meaning-making process; therefore, even decodable texts must be as meaningful and engaging as possible.

Children at the beginning stages of learning to read have limited decoding skills and fluency; therefore, the richness of the ideas and vocabulary that they can deal with in the texts they are reading is necessarily limited. In order to further stimulate oral language development and build concepts and background knowledge, children should be introduced to more challenging stories and informational texts through listening to teacher read-aloud events. By the middle to end of first grade, the core texts for reading instruction can be chosen from the rich array of available children’s books, with attention to their level of challenge, both in terms of decoding demands and comprehension challenges.

Well-developed, research-based instructional materials must include a balance of texts selected and sequenced to allow children to develop reading proficiency and a lifelong interest in reading.

Grades 4–8

7. Word Identification and Fluency

By the time students have reached fourth grade, they should have been taught the word identification skills that will allow them to decode words that are in their oral language vocabularies. Students who are reading below grade level, however, can profit from phonics instruction and related word identification skills. Beyond third grade there would appear to be two major word identification goals for most students—developing the capacity to process longer, multi-syllable words and the development of fluency.
Unfortunately, little has been written about and very little research exists on the topic of decoding longer words. From a theoretical point of view students should be able to function at a stage of development at which readers can associate sounds with clusters of letters or chunks of words. However, in order to store these clusters, they need to have had sufficient practice in processing words carefully in order to develop strategies for dividing words into syllables or chunks. While “rules” for decoding longer words may give a developing reader a place to start decoding, they are not sufficiently reliable for reading longer words. Instead, teachers need to model flexible strategies for dividing words into pronounceable units and to provide guided practice in decoding longer words.

Through the repeated processing of texts, students develop the capacity for rapidly, accurately, and automatically recognizing an increasingly large store of words which results in fluent reading. Fluency can be defined as “freedom from word identification problems that might hinder comprehension in silent reading or the expression of ideas in oral reading or automaticity” (Harris & Hodges, 1995). Two essential aspects of fluency are accuracy (freedom from word identification problems) and rapid, effortless decoding (automaticity).

While expressive, fluent oral reading is a worthwhile skill to have for sharing written text with others, fluent silent reading is critical to effective comprehension and learning as well as to the ability to read for pleasure. Readers engage in silent reading far more commonly than in oral reading. The speed of silent reading can be measured; however, its accuracy cannot be directly observed. Therefore, silent reading fluency is often inferred from the observation and assessment of oral reading.

Fluency of word identification is not sufficient for comprehension; it is a prerequisite for it. If children read slowly and laboriously, their comprehension of texts will likely be limited. Understanding, interpreting, and responding to texts require a substantial amount of cognitive resources; if these resources are expended in the identification of words, that is, in decoding, the understanding, interpretation, and critical response to text will suffer.

All major research syntheses on the topic of fluency stress the importance of much practice in reading as the vehicle for achieving fluency. Guided and repeated oral reading activities are an important means to fluency development.
Because the evidence supporting the importance of fluency for reading comprehension is so strong, teachers should regularly evaluate students' fluency. A research-based reading program should provide many opportunities for teacher-guided reading. Repeated oral reading activities may be particularly important for students who have not yet achieved fluency.
Developing Reading Comprehension

Grades K–3

1. Vocabulary and Background Knowledge

All of the research reports used to develop this framework view reading as a meaning-making, constructive process. Reading is defined as a process in which information from the text and the knowledge possessed by the reader act together to produce meaning. Even simple beginning reading texts make demands on readers’ backgrounds of experience. Unless readers have some relevant experiences to bring to a text, they are unlikely to be able to construct its meaning. The richer a reader’s background, the greater his or her potential for reading comprehension.

Background knowledge and vocabulary are closely related. A child’s vocabulary is the set of labels he or she uses for the varied background knowledge he or she possesses. The word farm, for example, is a label or summary term for all the experiences, real and vicarious, that the child has had with farms.

Vocabulary knowledge and reading achievement are reciprocally related. The child with the richer vocabulary is the child who engages in wider and more frequent reading. However, the reading of texts, either in school or at home, contributes to a child’s vocabulary development. Vocabulary development also takes place when teachers directly teach word meanings.

Research-based reading materials should be designed so that children are taught the relevant vocabulary and background knowledge they need for reading a selection, should develop vocabulary and background knowledge for the broad reading they will do in school subjects and beyond, and should stimulate an interest in reading that will result in wide, frequent independent reading.
2. Strategic Reading

Children from the beginning stages of reading must be taught to be strategic as they read. This instruction should include such things as teaching readers to set a purpose, activate prior knowledge and develop key concept vocabulary, make predictions, monitor their reading, pose questions about their reading, summarize, create graphic organizers, and so forth. This instruction should also include opportunities to talk about the texts they are reading and the strategies they are using.

This instruction in comprehension strategies should include teacher modeling of how to construct the meaning of a selection, how to overcome obstacles to understanding, and how to evaluate the information in a text against what he or she already knows about the topic the text addresses. Children need to be taught how to apply comprehension strategies to a wide variety of texts, including texts dealing with content areas such as science, social studies, math, art, music, and so forth.

As noted earlier in this document, reading comprehension directly builds on the oral language and listening skills a student possesses. In the beginning stages of reading, children need to be taught to strategically listen to selections that the teacher reads aloud.

Well-developed, research-based instructional materials should provide systematic instruction from the beginning of learning to read which focuses on the processes, skills, and strategies needed to become an effective comprehender.

Grades 4–8

3. Prior Knowledge, Background, and Vocabulary

There is a broad consensus among a diverse group of educators and researchers that the primary goal and purpose of reading is to comprehend text—to understand what we read. Even more impressively, there is a consensus about the nature of comprehension. Comprehension is not just the by-product of accurate word recognition. Instead, comprehension is viewed as a complex process which requires active and intentional cognitive effort on the part of the reader. Both the products of comprehension and the process itself are interactive and dynamic. Comprehension is influenced by the reader’s purpose, by the type and nature of the text, and by prior knowledge and vocabulary development. In addition, there is considerable research and a convergence of agree-
Prior Knowledge, Background, and Vocabulary (continued)

ment that effective reading comprehension requires strategic reading abilities. Finally, there is also considerable good information about the types of instruction that promote and develop strategic reading behaviors and effective comprehension.

There is a reciprocal relationship between readers’ prior knowledge/vocabulary development and their ability to read and understand a wide variety of texts. Good prior knowledge and appropriate experiences certainly enhance comprehension; but wide reading also expands vocabulary and promotes conceptual development. It is very clear that extensive reading practice is essential in building both fluency and knowledge. It is equally clear that good, explicit instruction in some areas provides additional benefit to students.

Over the past three decades, research findings have consistently demonstrated how prior knowledge and experience influence reading comprehension. Simply put, the more accurate and elaborated knowledge readers have about the ideas, concepts, events, or objects described in the text, the better they will understand. Similarly, fragmented information and/or misconceptions can impede comprehension. Misconceptions and limited information influence comprehension in a number of ways. People read unfamiliar text more slowly, they remember less, they construct meanings that are inconsistent with the author’s, and they sometimes reject the text information outright.

Although we have long understood how important prior knowledge is to comprehension, we now see that there are several types of prior knowledge that influence comprehension:

**Topic knowledge.** Students vary in how much they know about any particular concept. In addition, they may differ in the accuracy of that knowledge and in how well-connected the knowledge is to other, related, ideas. This, of course, affects comprehension. If children are reading about familiar topics (whether it is a science concept like evaporation or a social topic like birthday parties), their comprehension will benefit from their excellent prior knowledge.

**Domain knowledge.** As children learn more about various fields of knowledge, they develop a specialized sense of particular areas of study. This knowledge is known as domain knowledge because it is related to the study of specific subject matter. Thus, students with excellent domain knowledge of mathematics know more specific topical information, but they are also more likely to understand how the discipline is organized and how experts think and write about this area.
Knowledge of text structures and types. Authors create written texts for many purposes and use a variety of text structures to support and enhance their purpose. Sometimes, for example, authors use a sequential ordering of events that relies on characters, settings, and action to organize what they want to say. Other times, they use a cause-effect pattern that highlights the causal relationships between ideas and concepts. These different structures impact comprehension. Similarly, not all texts are written from within the same genre. For example, stories (usually narrative texts) have a different organizational structure than does historical exposition.

Readers who know and understand how different texts are structured can and do use this knowledge to aid comprehension. Although many people acquire this knowledge through repeated exposure to different types of texts, there is excellent evidence that developing readers can be taught to recognize these structures and that this instruction improves comprehension. It is important to note also, that these factors interact. That is, familiarity with a particular type of text can override more limited familiarity with topic and vice versa. Thus, students who are generally well read and comfortable with a variety of text types and structures can overcome some limitations in prior knowledge. Alternatively, students who are highly familiar with the topics in a particular text will likely be successful even if they have not experienced the particular text type.

Prior knowledge also interacts with strategic reading (see next section) and influences how successful students are in applying their skills and strategies when needed to comprehend text. Therefore, students with limited relevant background knowledge are likely to be handicapped in two ways; they lack background knowledge which in turn influences how they use their strategies and skills.

Well-developed, research-based instructional materials for upper-grade readers must place heavy emphasis on teaching comprehension. Included in this instruction will be appropriate opportunities to activate prior knowledge and develop background which includes key concept vocabulary.

4. Strategic Reading

Reading ability—both comprehension and word recognition—is facilitated when readers use strategies. Although even very young children can and do employ strategies during reading, a strategic approach to reading is absolutely essential for readers in grades 4–8. The texts and tasks that readers regularly encounter in these grades are
Strategic Reading (continued)

more conceptually demanding, are more complex in both form and function, and often address topics or domain knowledge that is unfamiliar. Under these circumstances, even able readers can benefit from explicit instruction and effective instructional support in the use of strategies.

A review of the research conducted over a 30-year period has established that effective comprehension of text requires active involvement with the text and the ability to employ strategies during reading. Most experts agree that strategies are different from skills in several ways. It is generally agreed, for example, that strategies are intentional and planful. Good readers and writers can make plans for accomplishing their literacy tasks. They understand and think about their purpose for reading or writing. They preview materials and determine how difficult the task will be. Using their own knowledge and experience, they make predictions and brainstorm ideas and they consider how much time they have. Then, strategic readers and writers select from a wide repertoire the skills and approaches they will use, and they monitor their progress as they read/write.

Good readers use strategies in a flexible manner. Reading requires the orchestration of a number of skills and strategies. Among mature readers, word recognition is generally quite automatic and it is this skillful behavior that permits them to be strategic when necessary. It is important to note that these strategy and skill distinctions can operate at many levels. Most researchers agree that the idea of automatic, unconscious functioning is characteristic of skills, whether we are referring to word identification or comprehension. Similarly, there is agreement that the intentional, planful, flexible nature of strategies is important whether we are reading unknown words, comprehending, or writing.

Becoming strategic is a developmental process; it occurs over time as students encounter increasingly difficult texts and new situations. The same relatively small set of strategies emerges quite early in children’s development. Among the most highly useful strategies are: (1) making predictions and drawing inferences, (2) self-questioning, (3) monitoring comprehension, (4) summarizing, and (5) evaluating. These strategies, individually, are not as important as a “strategic approach” which allows readers to respond differently to different topics, texts, genres, and tasks. Effective comprehenders often use several strategies at one time.

Strategies are not easy to acquire; students typically require good explicit instruction over considerable time in order to gain control of a strategic approach. The hallmark of truly effective strategy instruction is...
the explanation, modeling, and guiding of this strategic approach during authentic reading experiences. Most recently, research has demonstrated that, when student-initiated literature discussion is added to this instructional approach and teachers “scaffold” or support strategy use when needed (“transactional strategies instruction”), that student performance is facilitated even more. Strategic reading development is enhanced when teachers support their students during challenging reading tasks. In particular, the active discussion of text seems to promote more reader “engagement” which, in turn, influences motivation to employ strategic approaches and enhances appreciation for reading. Since students’ motivation appears to rest, at least in part, on their sense of efficacy—their belief that they are capable—the relationship between strategic reading instruction and motivation is clearly reciprocal. (See Motivation, Independent Reading and Writing, and Home Connections.)

Research-based instructional materials for students in grades 4–8 must systematically and explicitly teach a strategic approach to reading a variety of types of texts where students learn the most critical strategies for effective comprehension.

5. Vocabulary Development

The importance of vocabulary development as a major contributor to reading comprehension has long been acknowledged and widely studied. However, in spite of the attention vocabulary has received there are still many unanswered questions about vocabulary development and its relationship to reading comprehension.

There is growing consensus that children’s vocabularies need to grow at a rate of about 2,500 to 3,000 words a year during the elementary grades, some analyses suggesting that the figure may be even higher.

The rapid rate at which vocabulary needs to grow clearly precludes the possibility of directly teaching all the vocabulary students need to acquire, especially since there is some research which suggests that children may need many repetitions of a word in order to learn its meaning. The massive amounts of vocabulary that children need to learn and that most do learn has led many researchers to the conclusion that most vocabulary must be acquired incidentally through wide, frequent reading. (See Motivation, Independent Reading and Writing, and Home Connections.) There is evidence that reading materials are far richer in vocabulary content than is oral language. There is also evidence that students can be taught strategies that increase their ability to derive the meaning of words that they encounter in their reading.
Vocabulary Development (continued)

There is also broad consensus that there is benefit to be derived from directly teaching words to children. For example, there is evidence regarding the positive effects of teaching important vocabulary from texts prior to student reading of those texts. Research also suggests that instruction that uses a combination of approaches (e.g., use of context plus definitions) results in better vocabulary learning, as do approaches that link vocabulary learning to building background knowledge such as semantic mapping and semantic feature analysis. Likewise, there is evidence that providing students with instruction in morphemic analysis (meanings of prefixes, suffixes, root words) enhances student vocabulary development.

Research-based reading materials should promote wide reading to enhance vocabulary acquisition (and reading comprehension), should instruct students in strategies that enhance their ability to derive word meanings from materials they read, and should prepare students for reading texts by teaching key vocabulary through a combination of methods and by actively relating that vocabulary to the background knowledge needed for reading texts. These materials should be designed to provide students with the relevant vocabulary and background knowledge they need for reading a selection, should develop vocabulary and background knowledge for the broad reading they will do in school subjects and beyond, and should stimulate an interest in reading that will result in wide, frequent independent reading.
Writing, Spelling, and Grammar

Grades K–3

Writing, spelling, and grammar are interrelated components of the language arts. Writing, spelling, and reading are highly related, especially in the beginning stages of learning to read.

First, writing is a process of composing and expressing ideas. Second, writing is a support process for reading, word recognition, and spelling. In the beginning stages of reading, writing plays an important role in developing concepts of print, phonemic awareness, and letter-sound associations. Writing is also related to teaching children to spell and use the grammar of the English language.

Given the strength of the relationships between reading, writing, and spelling, spelling should be taught as an integrated part of the literacy program. Most children need systematic, direct spelling instruction. The more closely connected this instruction is to the teaching of letter-sound associations that are used in reading, the better it is likely to be for the learner.

At the beginning stages of learning to deal with letter-sound associations, children use a process known as invented spelling; this is the process of trying to spell a word using the letter-sound knowledge an individual has when the correct spelling is not known. Use of invented spelling is a normal and productive stage for a beginning reader and writer to go through. In fact, use of invented spelling is very effective in helping children refine and extend phonemic awareness and letter-sound associations. However, as children develop in reading and writing, they must also be taught to spell words correctly.

Grammar refers to the guidelines, rules, or statements that explain how a language works. Usage refers to the way in which a language is actually used. Many times teachers talk about teaching grammar, usage, and mechanics. When they do so, they are usually referring to the teaching of such things as parts of speech, punctuation rules, noun-verb agreement, and so forth.

Research reports strongly discourage the teaching of grammar as an isolated subject. Grammar, however, should be taught. This instruction should be provided in close connection with students’ writing.

Well-developed, research-based instructional materials must include specific instruction in writing, spelling, and grammar. All aspects of this instruction must be related to each other and to reading.
Writing, Spelling, and Grammar (continued)

Grades 4–8

Writing, spelling, and grammar continue to be highly related as students learn to communicate more effectively in the upper grades. Older students must continue to have the process of writing modeled for them as they often want to write pieces of more significance and importance. Therefore, stronger connections need to be made between the literature that students read and what they write. They need to learn more sophisticated tools for expressing their thoughts and writing to present increasingly more important information. Some form of the writing workshop is an appropriate way to do this.

As students become more sophisticated writers, they must become more sophisticated spellers. As their vocabulary knowledge increases, students will need to be able to spell more words. As in the primary grades, students learn to spell by being taught certain spelling patterns and by having the opportunity to write and use their knowledge of spelling. Students in the intermediate grades profit from having the patterns of spelling they are learning be the same as the ones they are learning in word study and phonics.

As students become more sophisticated writers and do more writing, they will also need to use a greater variety of structures of language. Therefore, they need to learn grammar and use what they are learning in their writing. Grammar should not be taught as an isolated subject; rather, it should always be connected to writing.

Well-developed, research-based materials for literacy instruction in grades 4–8 must include a strong component for modeling writing, teaching spelling, and teaching grammar. All of these elements must be continuously connected to each other.
Motivation, Independent Reading and Writing, and Home Connections

Grades K–3

A key to teaching all children to read and write is engagement in an exciting literate atmosphere that promotes and supports reading and writing. This includes providing a print-rich classroom environment, promoting independent reading and writing in school and at home, and encouraging home caregivers to support the school’s literacy program. Research-based instructional materials must provide guidelines and suggestions to support teachers in these areas.

Grades 4–8

As students in the upper grades continue to develop their literacy skills, motivation becomes even more critical to the process of learning. Keeping student motivation high means that students must be actively engaged in learning. This occurs in part through exciting literature that relates to students’ interests and through literature that students can read. Instructional strategies that involve students and make them successful in reading and writing also contribute to this process. An exciting classroom atmosphere that supports reading and writing is crucial to maintaining high student motivation.

Another factor that relates directly to student motivation is time for independent reading and writing. Independent, self-selected reading allows students to read books of their own choosing. This motivates readers to read more and helps broaden their reading vocabulary. Independent writing gives students time to focus on topics and types of writing of their own choosing. Both independent reading and independent writing are the power and practice elements of a well-designed literacy program.

Student motivation is also related to strategic reading. (See Strategic Reading.) Students who can use comprehension strategies effectively are more motivated to read; at the same time, having high motivation to read enhances a student’s use of strategies.

Student motivation for learning is further developed when the school program makes connections to the student’s family. Seeing persons from
the home and the school working together as a team helps to motivate students and lets them know that everyone is working together to help them be more successful in learning.

Well-developed, research-based materials for literacy instruction in grades 4–8 must provide literature and instructional strategies that are motivating for upper-grade students. These materials must allow for time for independent reading and writing with opportunities for home connections.
References


More NASBE Publications on Teaching, Instruction, and Related Topics:

Improving the Mathematics Achievement of All Students: What We Know from the Research. This Issue Brief looks at the major areas of math instruction, including curriculum, pedagogy, assessment, and teacher quality, in light of what research says is most likely to yield improved student achievement. In discussing the “math wars,” the Brief advocates a balanced approach, and it provides specific recommendations for reforms. (10 pp., $6.00)

The Numbers Game II: Bringing High-Quality Teachers to All Schools builds on NASBE’s widely praised document, The Numbers Game, which went beyond the rhetoric of a national teacher shortage to look at the real problems of teacher supply and demand. The new report focuses on what it takes to build a high-quality, stable teaching work force for students everywhere. It discusses in depth our teacher development system for attracting, preparing, and retaining the best educators and examines the links between reform efforts, working conditions, and schools’ ability to find and keep good teachers. Also included are numerous recommendations for state and local leaders. (48 pp., $14.00)

Moving Past the Politics: How Alternative Certification Can Promote Comprehensive Teacher Development Reforms: The ideological debate over how to prepare teachers has reached a fever pitch in the education and policy communities. The predominant arguments both for and against alternative certification confuse the process of teacher preparation with the product of teacher preparation. This report takes the viewpoint that quality alternative certification programs offer a way to develop a broader pool of prospective teachers while also helping states address concerns about teacher development, professionalism, and retention. (30 pp., $10.00)

Principals of Change: What Education Leaders Need to Guide Schools to Excellence examines the changing role of the principalship and provides recommendations on the reforms needed to ensure that every school has a well-qualified leader. Topics include the growing shortage of qualified principals; recruiting high-quality candidates; developing a standards-based vision for the principalship; dramatically improving principal preparation and professional development programs; ensuring that the best principals go to the schools that need them the most; and retaining good principals once they are on the job. (40 pp., $12.00)

The Full Circle: Building a Coherent Teacher Preparation System. Topics include coordinating K-12 and higher education to support high-quality teacher preparation; building linkages within higher education to support teacher preparation; building a coordinated system of new teacher support; and ensuring program results with an effective accountability system. (52 pp., $12.00)
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