

# Critical Elements of Classroom and Small-Group Instruction Promote Reading Success in All Children

Barbara R. Foorman

*University of Texas–Houston Health Science Center*

Joseph Torgesen

*Florida State University*

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*Abstract.* The components of effective reading instruction are the same whether the focus is prevention or intervention: phonemic awareness and phonemic decoding skills, fluency in word recognition and text processing, construction of meaning, vocabulary, spelling, and writing. Findings from evidence-based research show dramatic reductions in the incidence of reading failure when explicit instruction in these components is provided by the classroom teacher. To address the needs of children most at risk of reading failure, the same instructional components are relevant but they need to be made more explicit and comprehensive, more intensive, and more supportive in small-group or one-on-one formats. The argument is made that by coordinating research evidence from effective classroom reading instruction with effective small-group and one-on-one reading instruction we can meet the literacy needs of all children.

Both applied and basic research on reading and reading growth over the past 20 years have produced a strong consensus about the critical components of beginning reading instruction for all children. Instruction that builds phonemic awareness and phonemic decoding skills, fluency in word recognition and text processing, construction of meaning, vocabulary, spelling, and writing skills is generally more effective than instruction that does not contain these components (Snow, Burns, & Griffin, 1998). These instructional elements have been supported in intervention research, and they can also be derived directly from the best current theories that specify what children must know and be able to do to become good readers (Share & Stanovich,

1995; Ehri, 1998; Trabasso & Magliano, 1996). In other words, there is converging evidence from the psychology of reading and reading growth that the components identified in instructional research are all related directly to the skills and knowledge that are critically important to becoming a skilled reader (Adams, 1990; Metsala & Ehri, 1998). Our discussion of the instructional elements necessary to promote reading success will focus first on effective classroom instruction and, second, on effective instruction for children at risk for reading failure.

## OVERVIEW OF RESEARCH ON EFFECTIVE CLASSROOM READING INSTRUCTION

Criteria for effective classroom instruction have shifted over the last 30 years of research on beginning reading. During the 1960s and 1970s, effectiveness was defined in terms of main effects of reading methods on student achievement. During the 1980s, the “effective schools research” focused on process-product relationships in classrooms. From the mid 1980s to the mid 1990s, the emphasis was on teachers’ “best practices.” More recently there has been a call for “evidence-based research.”

### Large-Scale Studies of Reading Methods

The main findings from the federally funded First Grade Reading Studies and Project Follow Through Studies (Bond & Dykstra, 1967; Stebbins, St. Pierre, Proper, Anderson, & Cerva, 1977) were that classroom approaches that emphasized systematic phonics, reading for meaning in vocabulary-controlled text, and writing produced superior achievement compared to mainstream basal readers. These reports cautioned, however, that no single method worked for all teachers

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Requests for reprints should be sent to Barbara R. Foorman, Department of Pediatrics, University of Texas–Houston Medical School, 7000 Fannin—UCT 2443, Houston, TX 77030.

or all children. Another large-scale study of 20 first-grade classrooms using either a decoding-oriented basal reader approach or a language-experience approach showed superior achievement in classrooms emphasizing systematic instruction in decoding (Evans & Carr, 1985).

### Effective Schools Research

During the 1980s, effectiveness was defined in terms of interactions of classroom processes with student outcomes (see reviews by Brophy & Good, 1984; Rosenshine & Stevens, 1986). The strongest correlates were academic-engaged time, classroom management, and certain patterns of teacher-student interactions (Soar, 1973; Stallings, Robbins, & Presbrey, 1986). For disadvantaged students, the link between explicit instruction and achievement was notable, a finding supported in other classroom observational research (Brophy & Evertson, 1978; Good & Grouws, 1975).

### Best Practices Research

Mid-way through the 1980s, a reaction to the process-product orientation of the effective schools research began to build because of its lack of attention to the qualitative dimension of instruction. Effective instruction became what exemplary teachers did—their “best practices.” Researchers turned away from the large-scale studies of classroom instruction and instead engaged in case studies of exemplary teachers and culturally different students engaged in literature-based instruction (Philips, 1972; Au, 1980; Delpit, 1995; Heath, 1983; Goldenberg & Gallimore, 1991). Literature-based instruction emphasizes use of authentic literature for independent reading, read-alouds, and collaborative discussions. It stands in contrast to skills-based programs that are typically defined as traditional programs that use a commercially available basal reading program and follow a sequence of skills ordered in difficulty. The literature-based perspective is grounded in reader response theory (Rosenblatt, 1978), which says that readers play a central role in the construction of meaning, and in social-constructivist theory (Cullinan, 1987), which says that literacy is acquired in a book-rich context of purposeful communication where meaning is socially constructed. In a review of literature-based reading instruction, Morrow and Gambrell (2000) report that literature-based instruction benefits literacy acquisition in kindergarten (Reutzel, Oda, & Moore, 1989; Castle, Riach, & Nicholson, 1994) and at the elementary level (Freppon, 1991; Purcell-Gates, McIntyre, & Freppon, 1995; Reutzel & Cooter, 1990). Recently, the combination of literature-based instruction with traditional basal reading instruction has been found to be more powerful than traditional instruction alone (Dahl, Scharer, Lawson, & Grogan, 1999;

Morrow, 1992; Morrow, Pressley, Smith, & Smith, 1997). In fact, the term “balanced” reading instruction seems to be replacing “literature-based” reading instruction (Fitzgerald & Noblit, 2000).

### Evidence-Based Instruction

Most of the “best practices” research of literature-based instruction was not included in the recent report of the National Reading Panel (2000) because it did not meet the methodological criterion of “used an experimental or quasi-experimental design with a control group or a multiple-baseline method” (NRP, 2000, p. 5). This criterion was adopted in order to meet the congressional charge to determine whether an instructional practice was causally linked to the improvement of reading achievement and, therefore, should be widely adopted. The NRP committee reviewed the literature in the areas of alphabets (phonemic awareness and phonics), fluency, comprehension, teacher education and reading instruction, and computer technology and reading instruction. Importantly, the only area in which the committee felt a meta-analysis could be conducted was alphabets. In the subtopic of phonemic awareness, the meta-analysis revealed that: (1) phonemic awareness instruction causes improvement in students’ phonemic awareness, reading, and spelling (with effect sizes in spelling for students with reading disabilities being weak); and (2) phonemic awareness instruction is most effective when (a) alphabetic letters are included, (b) there are fewer rather than more manipulations of phonemic units, and (c) instruction is conducted in small groups. In the area of phonics, meta-analyses revealed that: (1) systematic phonics instruction produces significant benefits for students in kindergarten through sixth grade and for students with reading disabilities, regardless of socioeconomic status (SES); (2) the impact is strongest in kindergarten and first grade; and (3) phonics must be integrated with instruction in phonemic awareness, fluency, and comprehension. Thus, the NRP report showed for whom phonics works best—all children in kindergarten and first grade, regardless of SES—and how phonics works best—in small groups and integrated with phonemic awareness, fluency, and comprehension.

The NRP report reaffirmed the effectiveness of phonics instruction found in the large-scale studies of the 1960s and 1970s and the process-product interactions of the effective schools research of the 1980s. But the NRP report went beyond the earlier research to highlight the significance of preceding and integrating phonics instruction with instruction in phonemic awareness, a concept referring to one’s sensitivity to the segments of sound in speech. The phonics of the 1960s taught children that *tap* says /t/-/æ/-/p/, or in the case of the untutored teacher, “tuh-ahh-puh.” What the *method* of teaching letter-sound correspondences (i.e., phonics) did not teach was the *identity* of the phonemes /t/, /æ/,

/p/ that are invariant whether they are blended into the words “tap,” “pat,” or “apt.” In addition to not teaching phoneme identities, the old phonics instruction did not help children understand the systematic links among phonemes and graphemes. Thus, at a basic level, helping children see that the /m/ in *mat* and the /m/ in *moon* are the same sound is important, as well as pointing out that this sound is represented with the same letter, *m*. In this way, kindergarten teachers help children re-invent the alphabetic principle—the intentional and conventional understanding about how alphabetic letters relate to the segments of sound in speech they represent (Perfetti, 1985; Adams, 1990). The emergence of alphabetic understanding is readily apparent in children’s early writing, as, for example, in Moats’s (1995, p. 39) description of a first grader’s spellings of *asked* over a period of several months: AKT, ASKT, ASKED.

Thus, one of the essential ingredients for reading success is mastery of the alphabetic principle. Currently, there is little disagreement about whether mastery of the alphabetic principle is important. However, there is much disagreement about *how* this mastery is to be accomplished instructionally. How *direct* does alphabetic instruction need to be? What kinds of *text* best support mastery of the alphabetic principle and foster comprehension? How can alphabetic instruction be *integrated* with spelling/writing and vocabulary? There is surprisingly little classroom research on these questions, in spite of the fact that the California and Texas state boards of education recently answered the text question—without evidence—by mandating that first-grade basal readers should be 80 percent decodable. But there is some classroom research on the issue of directness of instruction and type of text—research included in the NRP’s meta-analyses of alphabetic—that can be examined. However, the question of how to integrate the rest of language arts with alphabetic instruction is not well researched beyond school reform models such as Success for All (Slavin, Karweit, & Madden, 1989), classroom peer tutoring approaches (Fuchs, Fuchs, Mathes, & Simmons, 1997; Greenwood, Delquadri, & Hall, 1989; Mathes, Torgesen, & Aller, 2001), and some research on writing (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Harris & Graham, 1996). The current basals assume that children will learn to spell the words they learn to read, that they will learn vocabulary by highlighting the story words prior to reading passages, and that integration of vocabulary, spelling, and writing will occur automatically.

A study that manipulated directness of alphabetic instruction at the classroom level was one by Foorman, Francis, Fletcher, Schatschneider, and Mehta (1998). In this study, 285 Title 1 first and second graders in 66 classrooms in eight schools received one of three kinds of classroom reading instruction, all of which were enhanced by language arts instruction emphasizing read-alouds and writing: (1) direct instruction in letter-sound correspondences practiced in controlled vocabulary texts (direct code); (2) less direct instruction in sound-spelling patterns embedded in trade books

(embedded code); and (3) implicit instruction in the alphabetic principle while reading trade books (implicit code). The 53 participating teachers were part of ongoing professional development and generally delivered their instructional approach with fidelity. An additional 13 teachers were part of an unseen control group that was trained by district supervisors to deliver the district’s standard instruction—implicit code practiced in trade books. Students receiving direct code instruction improved in word reading at a faster rate and had higher end-of-year scores than students in the implicit code group, and this rate of reading development was moderated by initial level of phonemic awareness. End-of-year standardized scores in word recognition and comprehension approximated national averages for the direct instruction group. Although the direct code and embedded code groups did not differ on average, there were large individual differences in both the implicit code and the embedded code groups. Approximately 46 percent of the implicit-code students and 44 percent of the embedded-code students improved in word reading at a rate of 2.5 words or less per school year on the experimental 50-word list compared to 16 percent of the direct-code students. Direct instruction in phonemic awareness and phonics had the effect of normalizing the distribution of reading scores such that even students who brought to the classroom low phonemic awareness and word-level skills were able to become successful readers. The overall failure rate of children who received direct instruction (based on the percentage of children remaining below the 30th percentile) represents 6 percent of the population from which these children were selected (Torgesen, 2000). That is a substantial reduction in the approximately 15 to 20 percent of students with reading disabilities in the United States (Fletcher & Lyon, 1998).

It is impossible to study the separate effects of direct instruction and type of text. The more direct the instruction, the more controlled the text. However, the fact that the embedded-code group’s scores described above tended to fall in between those of the direct-code and the implicit-code groups suggests a gradient of generalizability. Relative to the incidental learning of the alphabetic code in literature-based instruction, students’ reading will improve somewhat, but not significantly, if targeted spelling patterns are highlighted in trade books. However, students’ reading will improve significantly if letter-sound correspondences are taught explicitly and practiced in controlled-vocabulary text.

The spelling patterns used in Foorman et al. (1998) were from Hiebert, Colt, Catto, and Gary (1992). Currently, the most popular lists of spelling patterns—described under the term “word work”—are from Cunningham (1995) and Fountas and Pinnell (1998). Word work activities are incorporated into the reading of trade books in a procedure called “Guided Reading” (Fountas & Pinnell, 1996), where the teacher scaffolds children’s reading of the passage in whole-group, small-group, or partner-reading formats. Guided Reading is an embedded-code approach, and, as Foorman et al.

(1998) and a recent study by Juel and Minden-Cupp (2000) found, such approaches work best for those who bring high literacy skills to the classroom. Juel and Minden-Cupp (2000) found that first graders in two classrooms where phonemic awareness and phonics were directly taught and practiced in controlled-vocabulary texts performed, on average, at higher levels in reading at the end of the year than first graders in two classrooms where trade books were employed. However, there was an interaction of student characteristics with instruction such that students who entered first grade with low literacy benefited from direct instruction in phonics and students who entered with higher literacy made notable progress in trade book classrooms.

Foorman, Chen, Carlson, Moats, Francis, and Fletcher (2001) found a similar interaction of student characteristics with instructional strategies in an investigation of 4,872 kindergartners in 114 classrooms in 32 Title 1 schools. Here reading curricula varied in the degree of teacher choice and in the degree of incorporation of phonemic awareness but were all informed by ongoing professional development. Reading curricula characterized by less teacher choice and more explicit instruction in phonemic awareness had less variable teacher-level means in letter knowledge and phonemic awareness at the end of kindergarten and in reading achievement at the end of first grade. On the other hand, a reading curriculum that afforded teachers more choice and a moderate number of phonemic awareness activities (mostly in the form of letter-sound instruction) had more variable teacher means but more outliers representing high-scoring children at the end of kindergarten and first grade. Other researchers have noted the importance of explicit, concrete, and teacher-friendly curriculum materials to improve achievement averages and the need for more intensive, individualized instruction to reach students with reading difficulties (e.g., Fuchs et al., 1997; Fuchs, Fuchs, Thompson, Otaiba, Yen, Yang, Braun, and O'Connor, in press; Wasik & Slavin, 1993). However, Foorman and colleagues bring to the study of student-teacher-curriculum interactions a multilevel models approach that allows examination of variability at the student and teacher levels.

In summary, evidence-based research has not only highlighted the components of effective reading instruction (i.e., phonemic awareness and phonics, fluency, comprehension, vocabulary, spelling, and writing), it has revealed the conditions that need to be in place if children of varying skill levels are going to learn to read from teachers of various knowledge levels. Expecting teachers to create their own curriculum, as the embedded phonics and Guided Reading approaches assume, is not realistic given the lack of available resources and knowledge base (Moats, 1994). Yet "out-of-the-box" implementations of well-designed, scripted reading curricula will not necessarily be effective either, unless teachers are provided with careful training and support in their use. "Up-front" professional development that

helps teachers make thoughtful choices regarding curricular activities and includes classroom coaching to address the pacing of instruction, classroom management, and grouping of students is the kind of assistance teachers need if all students in their classroom are to become successful readers.

## INSTRUCTION FOR CHILDREN AT RISK FOR READING FAILURE

Given that the critical components of instruction identified in intervention research are closely aligned with the skills required to become a good reader, it should not be surprising that these elements are also critical for effective instruction of children who have difficulties learning to read. Children at risk for reading failure acquire reading skills more slowly than other children, but they must acquire the same set of skills to become good readers. The primary differences between instruction appropriate for all children in the classroom and that required by children at risk for reading difficulties are related to the manner in which instruction is provided. Specifically, instruction for children who have difficulties learning to read must be more *explicit and comprehensive*, more *intensive*, and more *supportive* than the instruction required by the majority of children. Before discussing each of these dimensions in turn, we will first briefly consider what is known about children at risk for reading failure, and what it means to be "at risk" for reading difficulties.

### What it Means to be "at Risk" for Reading Failure

Risk for reading failure always involves the interaction of a particular set of child characteristics with specific characteristics of the instructional environment. Risk status is not entirely inherent in the child, but always involves a "mismatch" between child characteristics and the instruction that is provided. For example, King and Torgesen (2000) have reported the results of instructional reform in one elementary school that reduced the number of children who were "failing" in reading at the end of first grade from 31.8 percent to 3.7 percent over a five-year period. "Failure in reading" was defined by performance in the lowest quartile on a nationally standardized reading test. At the beginning of this project, 31.8 percent of the children entering the school were "at risk" for reading failure, but by the end of the project, only 3.7 percent were at risk for failure within the new instructional environment.

If one were interested in assessing the percentage of children at risk for reading failure in elementary school within the current public school educational environment in the United States, perhaps the most direct measure would be the results from the fourth-grade reading test administered as part of the National Assessment of Educational Progress (National Center for Education

Statistics, 1998). The most recent results available when this article was written were for 1998, and they showed that 38 percent of school children in the United States read below a "basic level" in fourth grade as assessed by a measure of reading comprehension. The reading skills of children who perform below the basic level are sufficiently poor that they interfere with the child's ability to perform learning and reading tasks at grade level. This does not mean that 38 percent of all children in the United States have a reading disability and need special education. Rather, it suggests the need for strengthening the instructional environment in early elementary school by more consistent and skillful instruction in the critical elements identified in the first section of this paper. Foorman et al. (1998) demonstrated that well-balanced and skilled instruction in reading at the classroom level could dramatically reduce the incidence of failure in first- and second-grade classrooms without special interventions for most children. We also know, however, that more effective classroom instruction is not the complete answer to the problem of preventing reading failure in young children. There are, indeed, significant numbers of children who enter school with sufficient weaknesses in talent and preparation for learning to read that they will require instructional interventions that are simply beyond the capacity of the regular classroom teacher (Torgesen, 2000).

### Characteristics of Children at Risk for Reading Failure

Whitehurst and Lonigan (1998) recently identified two broad classes of emergent literacy skills that children bring with them to school and that have a substantial impact on how easily they learn to read. One group of skills, referred to as "inside-out" skills, includes phonological awareness and letter knowledge, while the other group, called "outside-in" skills, includes vocabulary and conceptual knowledge. Skills like phonemic awareness and letter knowledge are particularly important predictors of the ease with which children acquire word-reading accuracy and fluency (Wagner, Torgesen, Rashotte, Hecht, Barker, Burgess, Donahue, & Garon, 1997), while broad oral language facility (vocabulary in particular) becomes critically important to the growth of reading comprehension skills once children learn to read words efficiently (Adams, 1990).

The great majority of children who enter school at risk for difficulties learning to read fall into one of two broad groups. On the one hand, many children enter school with *adequate general verbal ability* and cognitive weaknesses limited to the phonological/language domain. Their primary problem in learning to read involves learning to translate between printed and oral language. They have difficulties learning to read printed words accurately and fluently. On the other hand, many other children, coming largely from families of lower socioeconomic or minority status, enter

school significantly delayed in a much broader range of prereading skills (Hecht, Burgess, Torgesen, Wagner, & Rashotte, 2000; Hart & Risley, 1995). These children have weaknesses in both the broad oral language knowledge that supports reading comprehension and in the phonological and print-related knowledge that is required in learning to read words. Although it is theoretically possible for a child to enter school weak in vocabulary and conceptual knowledge, but strong in the phonological skills and knowledge required in learning to read words, these children are, in fact, quite rare. This pattern of abilities is not commonly observed because the same preschool environmental conditions that are associated with limited vocabulary growth also have a negative impact on the growth of print-related knowledge and skill.

Children with general oral language weaknesses plus phonological weaknesses will require special instruction in a broader range of knowledge and skills than those who come to school impaired only in phonological ability. However, since both groups have weaknesses in the phonological and print-related domain, *both kinds of children* will require special support in the growth of early word reading skills if they are to make adequate progress in learning to read.

Another important point about the language and phonological abilities required in learning to read is that weaknesses in both these areas can be the result of either neurobiological factors, which are genetically transmitted and constitutionally based, or they can be caused by a lack of adequate instruction and language experience in the child's preschool or home environment (Neisser, Boodoo, Bouchard, Boykin, Brody, Eci, Halpern, Loehlen, Perloff, Sternberg, & Urbina, 1996; Olson, Wise, Johnson, & Ring, 1997). Thus far, there is no conclusive evidence that the particular cause (genetics or environment) of a child's weaknesses in either of these domains is relevant to the type of instruction they will require in learning to read. Children whose lack of preparation for learning to read is the result of genetic factors and those who have been denied adequate learning opportunities in their preschool environment both will require interventions in reading that are more *explicit and comprehensive, more intensive, and more supportive* than children typically receive in the regular classroom.

### Critical Features of Instruction for Children at Risk for Reading Difficulties

Instruction for children who enter school with severe weaknesses in talent and preparation for learning to read must be more explicit and comprehensive than is typically provided in the regular classroom. Most of the knowledge that is acquired in the process of *typical* reading development is discovered by the child during interactions with print. As children read, they notice useful generalizations about print-sound relationships, and they acquire a great deal of word-specific

knowledge as well (the orthographic representations, or “sight words,” that are required for fluent reading) (Share & Stanovich, 1995). However, because of their weaknesses in the area of phonological processing (specifically their delayed development of phonemic awareness), children who are seriously at risk for reading failure require explicit and systematic instruction to help them acquire the knowledge and strategies necessary for decoding print. As Gaskins, Ehri, Cress, O’Hara, and Donnelly (1997) have pointed out, “First graders who are at risk for failure in learning to read do not discover what teachers leave unsaid about the complexities of word learning. As a result, it is important to teach them procedures for learning words” (p. 325).

Recent intervention research with children at risk for reading failure has provided powerfully converging evidence that phonemically explicit interventions are more effective than interventions that are less phonemically explicit. By phonemically explicit, we mean direct, systematic, and comprehensive instruction to build phonemic awareness and phonemic decoding skills (phonics). For example, one recent study (Torgesen, Wagner, Rashotte, Rose, Lindamood, Conway, & Garvin, 1999) demonstrated that, of three interventions tested on a sample of highly at risk young children, the most phonemically explicit one produced the strongest growth in word-reading ability. In fact, of the three interventions tested, only the most explicit intervention produced a reliable difference in growth of word-reading ability over children who were not provided with any special interventions. This same pattern of results has been obtained in studies reported by Brown and Felton (1990), Hatcher, Hulme, and Ellis (1994), and Iversen and Tunmer (1994). The results considered in the previous section from the work of Foorman et al. (1998) and Juel and Minden-Cupp (2000) are also relevant to this point. Both of these studies produced clear evidence that more phonemically explicit and systematic instruction was *particularly beneficial* for the students who entered the study weakest in phonological and print-related knowledge and skill.

In light of these converging results from a number of large-scale early intervention studies it is important to consider two findings from recent meta-analyses of intervention research that might, at first glance, appear to lead to different conclusions. For example, Swanson (1999) reported a meta-analysis of intervention outcomes for children with reading disabilities. In one set of analyses, he sought to determine whether instructional variables of “theoretical interest” contributed to intervention effects beyond those accounted for by a core of widely recognized effective instructional practices such as providing proper orientation to tasks, providing sufficient practice to establish skills, teacher modeling, careful sequencing of instruction, and use of systematic assessment probes. When the use of “segmented” instruction (the code for phonics instruction) was added to these variables to predict intervention outcomes, it did not add significant explanatory power.

From this finding, Swanson concluded, “programs that emphasize segmenting information, such as in phonics instruction, are not sufficient for bolstering real-word recognition” (p. 524). However, as Swanson himself points out, the correlation between the “segmentation” and “sequencing” components of instruction was 0.73, suggesting that these components almost always co-occurred in program descriptions. Thus, this finding seems more an artifact of the way study descriptions were coded rather than a valid examination of the utility of phonics instruction for children with reading disabilities.

The other meta-analysis in which the potential for misinterpretation is strong was recently reported by Elbaum, Vaughn, Hughes, and Moody (2000). In one analysis, these investigators examined instructional effects for programs that had varying instructional emphases. The areas of emphasis were: (1) comprehension, (2) decoding-word recognition, and (3) mixed (a combination of decoding, word recognition, and comprehension). The finding of interest was that interventions with an emphasis on comprehension produced significantly larger effect sizes than interventions with the other two emphases. Although the authors of the article do not misinterpret this finding, it could be used to support the idea that interventions for children with reading difficulties should emphasize reading comprehension rather than word-level skills such as word recognition and decoding. There would be two problems with this interpretation of the finding. First, the effect sizes for comprehension were based on two interventions that were both provided to children with sufficient word-level skills to read the passages used in the study with a high degree of accuracy. Thus, difficulties in word recognition, which play a large role in the comprehension difficulties of most children with reading disabilities, was eliminated as a cause of comprehension failure. Second, the outcome measures used in these studies (find the main idea) were highly similar to the training tasks used in the studies, and even the testing format was the same as the training format. This latter issue is actually related to a general problem in interpreting the results of many comprehension interventions in the reading disabilities literature; the outcome measures are highly similar to the training formats. That this is a potential problem in interpreting effect sizes is suggested by Swanson’s (1999) finding that average effect size for comprehension interventions was 0.81 when “experimental measures” were used, but only 0.45 when standardized measures of comprehension were used. In contrast, for word-recognition outcomes, effect size for experimental measures was lower (0.53) than for standardized (0.62) measures.

We certainly would not want to be misinterpreted as suggesting that explicit instruction in comprehension strategies, vocabulary, and thinking skills should not be a part of the more “explicit” instruction provided to children at risk for reading disabilities. Clearly, these are important components of instruction (Mastropieri & Scruggs, 1997), and many children at risk for reading

difficulties will require special emphasis on these skills. Rather, we want to emphasize that effective interventions for almost all children highly at risk for reading disabilities should contain strongly explicit instruction in the knowledge and skills required for learning to read words accurately and fluently, and that this instruction should be balanced and integrated with explicit instruction in other language and reading skills that are also important for good reading comprehension.

The second broad characteristic of instruction for children at risk for reading failure that differentiates it from instruction provided in most classrooms is that it must be more intensive. The fact that instruction must be more explicit and comprehensive for these children implies that more skills and knowledge must be directly taught, which in turn logically requires more instructional time. Another factor that underlines the need for more intensive instruction is the fact that children who come to school with weaknesses in talent for learning to read learn more slowly than other children and will thus require more repetition in order to solidly establish critical word-reading and comprehension skills. Although children whose risk status is determined primarily by lack of instructional opportunities in the preschool environment may learn at average rates, they have much more to learn than children who come to school with typical levels of preparation (Hart & Risley, 1995) and thus must be given more intensive instruction if they are to keep pace in reading growth with their age peers.

There are essentially two ways to increase intensity for preventive instruction in elementary school. Either the total time in classroom instruction can be increased, or instruction can be provided individually or in small groups. Although increasing instructional time for reading in the regular classroom will help many children with mild risk status, the most practical method for increasing instructional intensity for small numbers of highly at-risk students is to provide small-group instruction. There can be no question that children with reading disabilities, or children at risk for these disabilities, will learn more rapidly under conditions of greater instructional intensity than they learn in typical classroom settings. Meta-analyses consistently show positive effects of grouping practices that increase instructional intensity (Elbaum, Vaughn, Hughes, & Moody, 1999). One interesting finding that has emerged from these analyses is that, so far, one-to-one interventions in reading have not been shown to be more effective than small-group interventions (Elbaum et al., 1999; National Reading Panel, 2000). Although Torgesen, Alexander, Wagner, Rashotte, Voeller, Conway, and Rose (2001) recently demonstrated very powerful instructional effects for one-to-one instruction (as opposed to the larger group instruction typically provided in special education resource rooms), other studies have shown similar rates of growth for reading-disabled children using small groups of three and four children at a time (Rashotte, MacFee, & Torgesen, in press; Wise, Ring, & Olson, 1999).

There are actually many different ways to effectively increase instructional intensity for children at risk for

reading failure. For example, Greenwood and his colleagues (Greenwood, 1996) have used the ClassWide Peer Tutoring model to increase amount of academic engaged time, and this increase has been consistently associated with improvements in learning outcomes in reading. In a similar vein, Doug and Lynn Fuchs have reported success (Fuchs, Fuchs, Mathes, & Simmons, 1997) in using peer-assisted learning strategies to improve reading skills in mid elementary school, and Mathes has developed successful procedures that allow the use of peer tutoring for basic reading skills in first-grade classrooms (Mathes, Torgesen, & Allor, 2001). For both older and younger children, the interventions provided by the peer-assisted procedures are both more explicit and more intensive than the instruction typically provided by the classroom teacher. A major factor underlying the effectiveness of such comprehensive instructional models as Success for All (Slaven, Madden, & Karweit, 1989) is their capacity to deliver more intensive instruction in a timely manner to children with demonstrated need.

The last general characteristic of instruction for children who are at risk for reading failure that differentiates it from instruction sufficient for most children is that it must be more supportive both emotionally and cognitively. The need of at-risk children for more positive emotional support in the form of encouragement, feedback, and positive reinforcement is widely understood. However, their potential need for more cognitive support, in the form of carefully “scaffolded” instruction, is less widely appreciated. Scaffolded instruction involves finely tuned interactions between teacher and child that support the child in accomplishing a task that he or she could not do without the teacher’s help (Stone, 1989). Instruction for at-risk or reading-disabled children typically involves two types of scaffolding. One type of scaffolding involves careful sequencing so that skills build very gradually—the child is always systematically taught and practiced on the skills required for any task they are asked to do (Swanson, 1999). Another type of scaffolding involves teacher-student dialogue that directly shows the child what kind of processing, or thinking, needs to be done in order to complete the task successfully. This type of scaffolding in instruction usually involves four elements: (1) the student is presented with a task such as reading or spelling a word or making a paragraph summary (i.e., tries to spell the word “fled”); (2) the student makes a response that is incorrect in some way, or indicates that he or she doesn’t know how to proceed (i.e., spells it “fed”); (3) the teacher asks a question that focuses the child’s attention on a first step in the solution process, or that draws attention to a required piece of information (“you’re right that the word does start with the /f/ sound, and when you say fled, what do you hear coming right after the /f/?”); and (4) another response from the child (“I hear the /l/ sound). This kind of interaction between student and child continues until the child has been led to successfully accomplish the task. The point of this type of instructional interaction is that the child is led to discover the information or

strategies that are critical to accomplishing the task, rather than simply being told what to do. As Juel recently suggested (1996), the ability to offer scaffolded support while children are acquiring reading skills may have increasing importance as the severity of the child's disability increases.

In this section, we have described three broad ways instruction for children who are at risk for reading failure needs to be different than the instruction that is typically provided to all children in the classroom. Of course, there are many important instructional elements that have not been mentioned here and that are usually identified as effective practices for children with learning difficulties (Rosenshine, 1995). Interventions for at-risk children should incorporate the best information available about sound instructional procedures. We also like Kavale's (1988) statement about the ways that special interventions for children with learning difficulties should be different from typical classroom instruction: they should be "more intensive, more relentless, more precisely delivered, more highly structured and direct, and more carefully monitored for procedural fidelity and effects" (p. 335).

In summary, effective classroom reading instruction on phonemic awareness, phonemic decoding, fluency in word recognition and text processing, construction of meaning, vocabulary, spelling, and writing can maximize the probability that all but a very small percentage of children can learn to read on grade level. To address the needs of this small percentage we need to provide additional instruction on the same components in a small-group or one-on-one format. However, research shows that such instruction will need to be more explicit and comprehensive, more intensive, and more supportive than that typically provided by schools.

## NOTE

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