Effective Reading Instruction

The implementation of a successful reading program requires a rich understanding of the characteristics and content of effective reading instruction, including the way in which instruction addresses five critical areas of reading: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. The materials in this section are designed to help educators understand and identify these characteristics, or the lack of them, in their own programs or in programs they are considering for implementation.

THIS SECTION OF THE GUIDEBOOK INCLUDES:

_	A PowerPoint presentation summarizing the critical components of reading and effective instructional approaches that need to be included in kindergarten through third grade reading curriculums and programs
_	Quotes and Summaries from Resource Documents
_	Key Terminology
_	A Summary Checklist for administrators and teachers evaluating a reading instruction program
_	References
_	A Reading Research Sampler offering selected abstracts of studies referenced by the National Reading Panel in its analysis of existing reading research
_	A Reading Resource Sampler on early reading offering selected abstracts of studies that have investigated issues in preschool reading preparation programs

A POWERPOINT PRESENTATION SUMMARIZING THE CRITICAL COMPONENTS OF EFFECTIVE READING INSTRUCTION



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Effective Reading Instruction

Introduction

Content of Effective Reading Instruction

Features of Effective Reading Instruction

Effective Reading Interventions

Refer participants to Resource I:"Quotes and Summaries from ResourceDocuments"—Quotations and summaries organized by topics.

The purpose of the session is to provide a description of beginning reading instruction that:

- is based on scientific reading research (what we know now that we didn 't know before about reading instruction and preventing reading difficulties);
- includes the critical components of reading and effective instructional approaches that need to be included in kindergarten through third grade reading curriculums and programs;
- incorporates the features of effective reading instruction, such as grouping and maximizing student learning;
- focuses on providing early intervention (additional, accelerated, and intensive instruction for struggling readers and children with special needs);
- informs the evaluation, selection, and implementation of instructional programs and professional development.

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What We Know Now

- · We have 34 years of converging scientific research
- We know how children learn to read, what factors impede reading development, and which instructional approaches provide the most benefit
- We can assure that no child is left behind if we utilize these research findings to inform practices in our educational systems

There are no excuses

References for slide:Education Research, 1999;Fletcher &Lyon, 1998;National Reading Panel, 2000

- Be relentless. Take responsibility for how reading instruction is delivered. Teach every child, every day, at every grade level.
- Hold high standards for all students (No Child Left Behind, 2001).
- When children don't learn to read, it is not their fault. Nor
 is it the teacher's fault if he or she has not received
 training based on scientific reading research.

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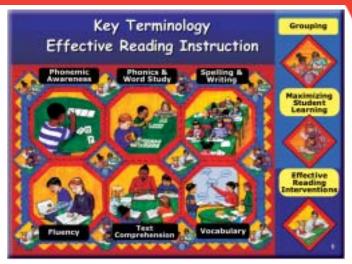
What We Have To Do

- Implement systematic change based on scientific research, not on ideology and philosophy
- Use scientific research to inform reading instruction
- Provide Intensive, explicit research-based reading instruction to ALL children, including English language learners

It is not "business as usual"

- Reading First is not the same as the Reading Excellence Act.
- Reading First is about applying what we know from research to what we know children need to learn and to how we teach them to read.
- Use systematic, ongoing classroom-based instructional assessment to monitor the progress of every child and to drive instruction.
- When children fall behind, change what is being done or provide additional instruction.
- We can't keep doing the same thing that has been done before.
- Remember that English language learners are doing twice
 the cognitive work of native English speakers during reading
 instruction. They are attending to the sounds, meanings, and
 structures of a new language and are acquiring new literacy
 concepts and skills.

- Reading is a complex skill that involves the integration of complex components (Lyon & Kameenui, 2001; National Reading Panel, 2000).
- The goal of beginning reading instruction is to enable children to read stories and informational texts quickly and accurately so they understand what they read (Adams, 1990).
- "The beginning of comprehension is the decoding of individual words ...Once children can decode, they are empowered to read, read, read, with greater fluency, vocabulary, and world knowledge..." (Pressley ,2000, p.556).
- Phonemic awareness, the alphabetic principle (the connection between letters and sounds), and phonics and decoding strategies help children accurately recognize words on sight in print. Accurate word recognition then leads to automatic and fluent reading of words and sentences that in turn results in text comprehension or understanding what is read (National Reading Panel, 2000).

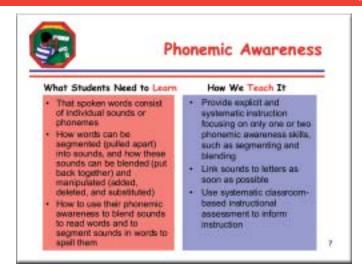


Refer participants to Resource 2: "Key Terminology"

—Definitions of key terms for each topic.

Effective phonemic awareness instruction:

- provides explicit and systematic instruction in small groups;
- begins with auditory phonemic awareness activities to direct children's attention to sound;
- links phonemes with letters as soon as children understand that letters represent segments of their own speech (National Reading Panel, 2000).



References for slide:Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998



Research Evidence

- Phonemic awareness instruction is more effective when children are taught to use letters to represent phonemes and to apply their knowledge of phonemic awareness when reading and writing
- Explicit phonemic awareness instruction helps all beginning readers, including those having reading difficulties and English language learners
- Explicit phonemic awareness instruction helps preschoolers, kindergartners, and 1st graders (including English language learners) learn to spell

(National Reading Panel, 2000)

- 52 peer-reviewed experimental studies reveal the significant effects of explicit instruction in phonemic awareness, especially when combined with instruction in letter sounds (National Reading Panel, 2000).
- These effects positively impacted reading growth (including word recognition and comprehension) for all students and accelerated spelling growth for all children except those with established learning disabilities (National Reading Panel, 2000).
- Phonemic awareness and letter knowledge are the two best school-entry predictors of how well children learn to read during their first 2 years in school (Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998).
- Children who have poorly developed phonemic awareness at the end of kindergarten are likely to become poor readers (Learning First Alliance, 2000; National Reading Panel, 2000).

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Phonics and Word Study

What Students Need to Learn

- Accurate and rapid identification of the letters of the alphabet
- The alphabetic principle (an understanding that the sequence of source) or phonomics in a spoken word are represented by letters in a vertilen word!
- Phonics elements (e.g., lettersound correspondences, spelling patterns, syllation, and meaningful word parts)
- How to apply phonics elements as they read and write

How We Teach It

- Provide explicit, systematic phonic instruction that teaches a set of letter-sound relations
- Provide explicit instruction in blending sounds to read words.
- Include practice in reading texts that are written for students to use their phonos knowledge to decode and read words
- Give substantial practice for children to apply phonics as they spell words
- Use systematic classroom-based instructional assessment to inform instruction.

References for slide: Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998

- Phonics and word study (decoding strategies) involve the systematic instruction of letter-sound relations to read and spell words accurately and quickly (Learning First Alliance, 2000; National Reading Panel, 2000).
- Explicit, systematic phonics instruction:
 - Benefits all beginning readers and most particularly children having difficulty learning to read;
 - Can be delivered through tutoring, small group and whole group instruction, especially in kindergarten and 1st grade and to help in preventing reading difficulties among at-risk students;
 - Is integrated with other reading instruction to create a complete reading program (National Reading Panel, 2000).

- Thirty-eight studies indicate systematic phonics instruction results in growth in both reading and spelling when combined with applying that knowledge in daily reading and writing activities (National Reading Panel, 2000).
- Systematic phonics produces gains in reading, not only in early grades but in the later grades, and among children having difficulties learning to read (Learning First Alliance, 2000; Lyon & Kameenui, 2001; National Reading Panel,
- Systematic instruction maximizes the likelihood that whenever children are asked to learn something new, they already possess the necessary background knowledge to efficiently understand it (Adams, 2001).



Research Evidence

- Explicit, systematic phonics is significantly more effective than alternative programs that provide unsystematic or no phonics instruction
- Explicit, systematic phonics is significantly more effective with children of different ages, abilities, and SES backgrounds
- Phonics instruction improves word reading skills and text comprehension, especially for kindergartners, first graders, and older struggling readers

(National Reading Panel, 2000) 10

- Children first string letters together randomly. With insight into the alphabet, they begin to spell by sounding out words, then they progress to one-syllable spelling patterns, syllable combinations, and the spelling of meaningful parts of words (Learning First Alliance, 2000).
- Spelling instruction promotes using letter-sound knowledge, phonological awareness, knowledge of word parts, and spelling conventions.



Spelling and Writing

What Students Need to Lear

- Now to remember and reproduce exact letter patterns (e.g., letter-sound correspondences, spelling satisms, syllations, syllations, and meaningful word parts)
- How to notice reliable spelling patterns and generalizations
- ow to write for different purpo ad audiences in various forms

How We Teach It

References for slide: Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998

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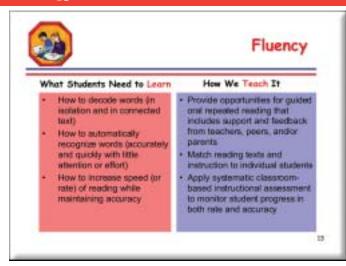
Research Evidence

Spelling words as they sound enhances phonemic awareness and letter knowledge and accelerates the acquisition of conventional spelling

Complementing regular opportunities for writing with systematic spelling instruction enhances and extends to both reading and writing growth

(Asterna, 2001)

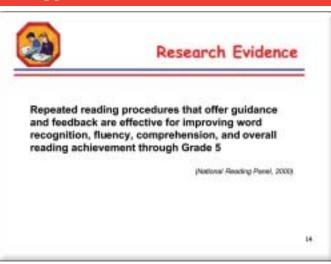
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References for slide: Learning First Alliance, 2000; National Reading Panel, 2000

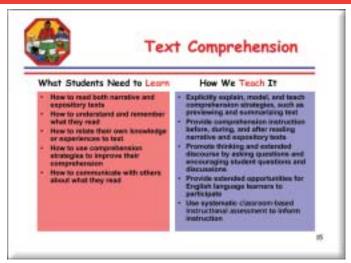
- Fluency is reading quickly, accurately, and with expression (National Reading Panel, 2000).
- Skilled readers process the letters of each word accurately and rapidly with little attention or effort (Adams, Treiman & Pressley, 1998; Lyon & Kameenui, 2001; Share & Stanovich, 1995).

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- Repeated reading procedures work under a wide variety of conditions and with minimal special training or materials (National Reading Panel, 2000).
- When word identification is fast and accurate or automatic, cognitive resources are free to process meaning (National Reading Panel, 2000).

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Learning First Alliance, 2000; National Reading 10; National Research Council, 1998

 Text comprehension is the process that enables readers to make meaning of text and to communicate meaning about what was read (National Reading Panel, 2000).

 Comprehension strategies are conscious plans or procedures that good readers use to help them be aware of how well they are comprehending as they read and write (National Reading Panel, 2000).

Effective Reading Instruction

 Comprehension strategies that appear to improve comprehension in normal readers include comprehension monitoring, cooperative learning, and graphic and semantic organizers, including story maps, question answering, question generation, and summarization (National Reading Panel, 2000).

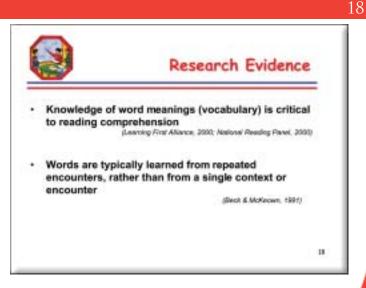


 Vocabulary is a component of both oral and written language (National Research Council, 1998).



References for slide: Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998

 Repeated exposure to vocabulary in a variety of contexts, including other reading material and in content areas, improves children's vocabulary (National Reading Panel, 2000).





Cautions

- Most children do NOT learn to read or spell "naturally," rather they learn from instruction
- Good word identification instruction does NOT include guessing words from context or picture cues
- Instructional time spent on independent, silent reading with minimal guidance or feedback has NOT been confirmed by research to improve reading fluency and overall reading achievement

. .

References for slide: Learning First Alliance, 2000; National Reading Panel, 2000; National Institute for Literacy, 2001; National Research Council, 1998

- Explicit, systematic phonemic awareness and phonics instruction does NOT JUST occur incidentally as teachers see a need in the context of reading text and writing (National Reading Panel, 2000).
- Explicit and systematic phonics:
 - does NOT focus on whole-word methods with their limited attention to letter-sounds in words and little or no instruction on how to blend letter sounds to pronounce words;
 - does NOT have to mean dull drill and meaningless worksheets;
 - does NOT occur only as a part of invented spelling activities or through the use of picture cues during reading;
 - does NOT regard attention to letter-sound correspondences to decode words as one part of a triple cueing system.

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Cautions

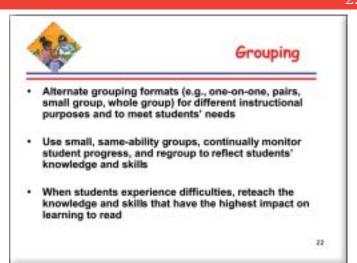
- Guided oral reading is NOT the same instructional practice known as "Guided Reading"
- A little structure, a little rationale, and a little instruction is NOT effective comprehension instruction
- Explicit spelling instruction is NOT random and does NOT consist of informal memorization of word lists or repetitious copying of words

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References for slide: Learning First Alliance, 2000; National Reading Panel, 2000; National Research Council, 1998 Features of effective instruction reflect the body of research that has identified instructional procedures most associated with significant gains in student achievement.



- Use flexible grouping that provides opportunities for students to be members of more than one group.
- Incorporate peer tutoring; pair students together (e.g., less proficient reader with a more proficient reader).



References for slide: Elbaum, Vaughn, Hughes, Moody, & Schumm, 2000; National Reading Panel, 2000; Vaughn, Hughes, Moody, & Elbaum, 2001; Vaughn, Thompson, Kouzekanani, Bryant, & Dickson, 2001



Maximizing Student Learning

- Every minute counts!
- Actively engage children:
 - Vary presentation, format, and ways students can participate in instruction
 - · Reduce teacher talk
 - Use an appropriate level of instructional materials
 - Adapt the pacing, content, and emphasis of instruction for individuals and groups of children, including English language learners and those having difficulty learning to read

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References for slide: National Reading Panel, 2000; National Research Council, 1998; Rosenshine, 1997; Simmons & Kameenui, 1998

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Research Evidence

 Students with reading difficulties who are taught in small groups learn more than students who are instructed as a whole class

(National Pauding Panel, 2000)

 Students benefit from working in a variety of grouping formats that change to reflect their knowledge, skills, interests, and progress

(Elbaure, Vaughn, Hughes, Moody, & Schumm, 2000; Los et al., 1996)

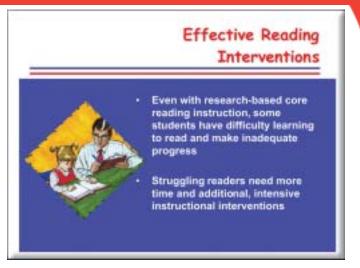
 Students in 1:1 instruction did not make significantly higher gains than students in groups of 1:3

(Visight, Thompson, Kourskeneni, Bryant, & Dickson, 2001)

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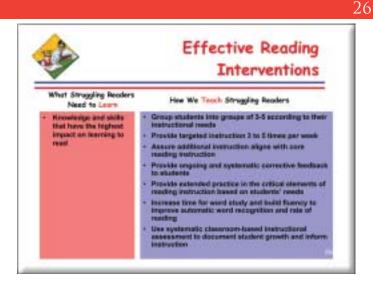
- Small group instruction is generally more effective when teaching phonemic awareness (National Institute for Literacy, 2001; National Reading Panel, 2000).
- Small group instruction is especially effective when teachers match materials and instruction to students' needs (Lou et al., 1996).
- Student engagement is an essential factor linked to academic achievement (National Research Council, 1998).

- In this next portion of our presentation, interventions refer to additional, targeted, and intensive instruction provided to students who are struggling with learning to read and write.
- Intervention programs may be published programs, but frequently involve altering the conditions of instruction, such as providing extra instructional time during the school day.



References for slide: National Research Council, 1998

- Provide many opportunities to practice with more support initially and less support as students become more proficient (Rosenshine, 1997; Simmons & Kameenui, 1998; Vygotsky, 1978).
- Help students learn to apply reading strategies when reading and writing independently (Vaughn et al., 2000).



References for slide: National Reading Panel, 2000; National Research Council, 1998; Vaughn, Gersten, & Chard, 2000



Research Evidence

 Explicit, intensive instruction is an essential feature of effective interventions for struggling readers, including students with learning disabilities

(National Reading Panel, 2000)

 Well-designed intervention programs implemented by highly qualified teachers can make a difference in helping children learn to read

(Elbaum, Vaughn, Hughna, Moody, & Schumm, 2000; Fletcher & Lyon, 1998)

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 Some children, including those with special needs, may never learn to read unless they are taught in an explicit, systematic way by a knowledgeable teacher using a welldesigned instructional approach that is adapted to their unique strengths and needs (National Research Council, 1998).

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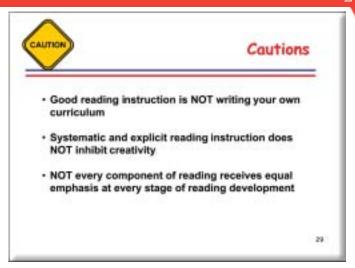


Cautions

- Effective reading instruction is NOT adding one new program after another to programs already in your school without determining each one's effectiveness and efficacy based on research
- Contrary to the claims made by some of the "latest" and "best" reading practices, a "balanced" approach to reading is NOT 50% whole language and 50% phonics

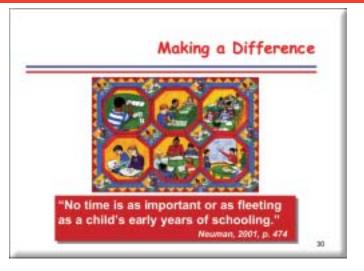
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References for slide: National Reading Panel, 2000; National Research Council, 1998 A balanced approach to reading is determined by the educational needs of the student.



References for slide: National Reading Panel, 2000; National Research Council, 1998

- Most children begin school with positive attitudes and expectations for success, but beginning reading difficulties can negatively affect how they feel about reading and lead to reading problems that persist into adolescence and adulthood.
- The most effective way to maintain positive expectations about reading is to provide explicit and systematic reading instruction in the knowledge and skills children need to become successful readers (Fletcher & Lyon, 1998; National Research Council, 1998).



Effective Reading Instruction

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QUOTES AND SUMMARIES FROM RESOURCE DOCUMENTS

Quotes and Summaries from Resource Documents

- Learning First Alliance. (2000). Every child reading: A professional development guide. Baltimore: Association for Supervision and Curriculum Development.
- National Institute for Literacy. (2001). Put reading first: The research blocks for teaching children to read. Jessup, MD: Author.
- National Reading Panel. (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC: National Institute of Child Health and Human Development.
- National Research Council. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.

Effective Reading Instruction

"... many children learn to read with good instruction, but some do not. And many children have problems learning to read because of poor instruction" (National Research Council, 1998, p. 247).

"Effective instruction necessarily recognizes that learning builds on prior knowledge. Beyond any collection of compelling objectives and engaging activities, therefore, effective instruction requires a developmental plan that extends across days and weeks of the school year as well as a means for monitoring progress so as to adjust that plan accordingly" (National Research Council, 1998, p. 193).

"The successful teacher adapts the pacing, content and emphasis of instruction for individuals and groups, using valid and reliable assessments" (Learning First Alliance, 2000, p. 11).

Components of Reading Instruction

"Effective reading instruction is built on a foundation that recognizes that reading outcomes are determined by complex and multifaceted factors A disruption of any of these factors increases the risk that reading will be delayed or impeded, a phenomenon particularly prevalent in impoverished urban and rural neighborhoods and among disadvantaged minority populations" (National Research Council, 1998, pp. 313-315).

Phonemic Awareness (PA)

"... children will differ in their PA and some will need more instruction than others. In kindergarten, most children will be nonreaders and will have little PA, therefore PA instruction should benefit everyone. In first grade, some children will be reading and spelling while others may know only a few letters and have no reading skills. The nonreaders will need much more PA and letter instruction than those already reading" (National Reading Panel, 2000, p. 2-33).

"The PA skill thought to be important for developing word memory is being able to segment pronunciations into phonemes that link to graphemes" (National Reading Panel, 2000, p. 2-13).

Teaching children to manipulate phonemes using letters produced greater effects than teaching without letters (National Reading Panel, 2000, p. 2-4).

"If teachers have students who are learning English as a second language, they need to realize that their students are almost bound to misperceive some English phonemes because their linguistic minds are programmed to categorize phonemes in their first language, and this system may conflict with the phoneme categorization system in English" (National Reading Panel, 2000, p.2-32).

Systematic Phonics Instruction

"Good readers do not depend primarily on context to identify words" (Learning First Alliance, 2000, p. 14).

"The focus of systematic phonics is on helping children acquire knowledge of the alphabetic system and its use to decode new words, and to recognize familiar words accurately and automatically. Knowing how letters correspond to phonemes and larger subunits of words is essential for enabling beginning readers to sound out words segments and blend these parts to form recognizable words. Alphabetic knowledge is needed to figure out new words by analogy and to help beginners remember words they have read before. Knowing letter-sound relations also helps children to be more accurate in predicting words from context. In short, knowledge of the alphabetic system contributes greatly to children's ability to read words in isolation or connected text" (National Reading Panel, 2000, p. 2-90).

"Systematic phonics instruction typically involves explicitly teaching students a prespecified set of letter-sound relations and having students read text that provides practice using these relations to decode words" (National Reading Panel, 2000, p. 2-92).

Regarding decodable text: "The intent of providing books that match children's letter-sound knowledge is to enable them to experience success in decoding words that follow the patterns they know" (National Reading Panel, 2000, p. 2-97).

Spelling and Writing

"Reading and writing are two sides of the same coin. Both depend on fluent understanding and use of language at many levels. Each enhances the other" (Learning First Alliance, 2000, p. 21).

"Recent research supports the premise that written composition is enhanced by mastery of the component skills of spelling and writing just as reading comprehension is supported by mastery of fluent word recognition" (Learning First Alliance, 2000, p. 22).

"Instruction should be designed with the understanding that the use of invented spelling is not in conflict with teaching correct spelling. Beginning writing with invented spelling can be helpful for developing understanding of phoneme identity, phoneme segmentation, and sound-spelling relationships. Conventionally correct spelling should be developed through focused instruction and practice. Primary-grade children should be expected to spell previously studied words and spelling patterns correctly in their final writing products" (National Research Council, 1998, p. 195).

Fluency

"Because the ability to obtain meaning from print depends so strongly on the development of word recognition accuracy and reading fluency, both should be regularly assessed in the classroom, permitting timely and effective instructional response when difficulty or delay is apparent" (National Research Council, 1998, p. 7).

"... repeated reading and other procedures that have students reading passages orally multiple times while receiving guidance or feedback from peers, parents, or teachers are effective in improving a variety of reading skills.... These procedures help improve students' reading ability, at least through grade 5, and they help improve the reading of students with learning problems much later than this.... (And they) tended to improve word recognition, fluency (speed and accuracy of oral reading), and comprehension with most groups" (National Reading Panel, 2000, pp. 3-20; 3-28).

Text Comprehension

"Throughout the early grades, reading curricula should include explicit instruction on strategies, such as summarizing the main idea, predicting events or information to which the text is leading, drawing inferences, and monitoring for misunderstandings, that are used to comprehend text (either read to the students or that students read themselves)" (National Research Council, 1998, p. 195).

"The instruction of cognitive strategies improves reading comprehension in readers with a range of abilities. . . . This improvement occurs when teachers demonstrate, explain, model, and implement interaction with students in teaching them how to comprehend a text (National Reading Panel, 2000, p. 4-47).

Vocabulary

"... methods in which children were given both information about the words' definitions and examples of the words' usages in a variety of contexts resulted in the largest gains in both vocabulary and reading comprehension" (National Research Council, 1998, p. 218).

"Vocabulary should be taught both directly and indirectly. Repetition and multiple exposures to vocabulary items are important. . . . Vocabulary learning should entail active engagement in learning tasks. . . . How vocabulary is assessed and evaluated can have differential effects on instruction. Dependence on a single vocabulary instruction method will not result in optimal learning" (National Reading Panel, 2000, p. 4-27).

Grouping

"When children were taught in small groups, their learning was greater than when they were taught individually or in classrooms" (National Reading Panel, 2000, p. 2-4).

"... small groups are the best way to teach PA (phonemic awareness) to children. Also small groups facilitate greater transfer to reading.... Children may benefit from observing their peers respond and receive feedback or from listening to their peers' comments and explanation. Or children may be more attentive and motivated to learn so that they do well in the eyes of their peers." (National Reading Panel, 2000, p. 2-42).

Effective Interventions

"Research affirms that quality classroom instruction in kindergarten and the primary grades is the single best weapon against reading failure. Indeed, when well done, classroom instruction has been shown to overwhelm the effects of student background and supplementary tutoring" (National Research Council, 1998, p. 343).

"Supplementary instruction has merit if the intervention is time limited and is planned and delivered in a way that makes connections to the daily experiences that the child has during reading instruction. Supplementary instruction can be a significant and targeted enhancement of classroom instruction" (National Research Council, 1998, p. 26).

"Consistent with the view that reading develops under the influence of many early experiences, it is the committee's judgment that deferring intervention until third or fourth grade should be avoided at all costs" (National Research Council, 1998, p. 236).

Key Terminology

Key Terminology

Effective Reading Instruction

Explicit and systematic teaching of beginning reading knowledge and skills within an overall program of purposeful, engaging reading and writing

Explicit and systematic instruction

Planned, purposeful, and visible instruction

- Adapts the pacing, content, and emphasis of instruction for individuals and groups using classroom-based instructional assessments
- Makes choices that are guided by ongoing progress monitoring of the critical skills and attitudes needed by students at each stage of reading development

Phonemic Awareness

Phonemes

Smallest units of sound in spoken language

• Example: Map has 3 phonemes. /m/ /a/ /p/ When we pronounce the word, map, there is no break between the sound segments. But, we can prove that there are 3 distinct phonemes in map by comparing it to other words. When we compare map to lap, we hear that these words differ in the initial phoneme; when we compare map to mat we hear that these words differ in the final phoneme; and when we compare map to mop, we hear that these words differ in the medial phoneme

Phonemic awareness

Ability to focus on and manipulate sounds (phonemes) in spoken words

- Phonemic awareness instruction is not the same as phonics (the understanding that there is a predicable relationship between phonemes and the letters that represent the sounds in written language)
- Phonemic awareness is not the same as phonological awareness:
 Phonological awareness is a more encompassing term that refers to various types of awareness, including phonemic awareness, as well as an awareness of larger spoken units, such as syllables and rhyming words

Phonological awareness

General understanding of the sound structure of words, including rhymes, syllables, and phonemes

Phonics and Word Study

Systematic phonics

An instructional approach that explicitly teaches a sequential set of phonics elements

 For example, separates the introduction of easily confused sounds (e.g., b, d, e, I) and begins with a set of letter sounds that can be used to make and read a lot of words (e.g., s, m, t, n, a) before sounds that are less frequently used (e.g., z, q)

Alphabetic principle

An understanding that the sounds (phonemes) in spoken language are represented in a sequential order by letters (graphemes) in written language

Graphemes

Letters or letter combinations that represent a phoneme, such as e, ei, igh

Letter-sound correspondences

Refers to letters and letter combinations and their most common sounds (also referred to as letter sounds, sound-symbol correspondences, letter-sound relations or associations, letter-sound connections)

Decoding

Ability to translate a word from print to speech, usually by employing knowledge of letter-sound correspondences (also referred to as blending and sounding out)

Decodable texts

Engaging and coherent texts in which most of the words are comprised of an accumulating sequence of letter-sound correspondences being taught

Spelling and Writing

Morphemes

Smallest meaningful units of language, such as prefixes, suffixes, base or root words

Fluency

Reading accurately, quickly and with expression

Automaticity

Implies a quick and accurate level of recognition that occurs with little conscious attention, such as the ability to quickly and accurately associate sounds with letters in order to read words

Repeated reading or guided repeated oral reading

Students orally reread words and/or passages approximately 3 or 4 times with quidance and feedback

Text Comprehension

The ability to understand or get meaning from text

Text

Refers to any type of written material (e.g., short story, chapter in a book, article in a newspaper)

Narrative text

Tell stories that generally follow a familiar story structure using story elements such as characters, plot, and theme

Expository text

Explain information or tell about topics in different ways, such as comparison/contrast, description, and cause/effect (e.g., content area textbooks)

Strategies

Conscious plans or procedures (e.g., comprehension strategies are conscious plans or procedures that good, skilled readers use to help them be aware of how well they are comprehending as they read and write)

Vocabulary

Component of both oral and written language that includes the body of words students must know if they are to read increasingly demanding text with fluency and comprehension

Grouping

Flexible grouping

Grouping students according to instructional needs, prior knowledge, and interests; providing opportunities for students to be members of more than one group

Maximizing Student Learning

Maximized student engagement

Planned instructional time that overtly engages students in academic tasks such as reading, writing, and discussing to the greatest extent possible

 Includes a quick rather than leisurely pace of instruction and a high rate of interaction with the teacher

Effective Reading Interventions

Interventions

Additional, targeted, and intensive instruction provided to students who are struggling with learning to read and write

A SUMMARY CHECKLIST FOR ADMINISTRATORS AND TEACHERS EVALUATING A READING INSTRUCTION PROGRAM

Effective Reading Instruction Summary Checklist

Phonemic Awareness Instruction				
What Students Need to Learn	How We Teach It	Comments		
 That spoken words consist of individual sounds or phonemes How words can be segmented (pulled apart) into sounds, and how these sounds can be blended (put back together) and manipulated (added, deleted, and substituted) How to use their phonemic awareness to blend sounds to read words and to segment sounds in words to spell them 	 Provide explicit and systematic instruction focusing on only one or two phonemic awareness skills, such as segmenting and blending Link sounds to letters as soon as possible Use systematic classroombased instructional assessment to inform instruction 			
PI	nonics and Word Study Instruction	on .		
What Students Need to Learn	How We Teach It	Comments		
 Accurate and rapid identification of the letters of the alphabet The alphabetic principle (an understanding that the sequence of sounds or phonemes in a spoken word are represented by letters in a written word) Phonics elements (e.g., letter-sound correspondences, spelling patterns, syllables, and meaningful word parts) How to apply phonics elements as they read and write 	 Provide explicit, systematic phonics instruction that teaches a set of letter-sound relations Provide explicit instruction in blending sounds to read words Include practice in reading texts that are written for students to use their phonics knowledge to decode and read words Give substantial practice for children to apply phonics as they spell words Use systematic classroombased instructional assessment to inform instruction 			

Effective Reading Instruction Summary Checklist

Spelling and Writing Instruction				
What Students Need to Learn	How We Teach It	Comments		
 How to remember and reproduce exact letter patterns (e.g., letter-sound correspondences, spelling patterns, syllables, and meaningful word parts) How to segment sounds in words to spell them How to notice reliable spelling patterns and generalizations Rapid, accurate letter formation How to write for different purposes and audiences in various forms 	 Provide explicit and systematic spelling instruction to reinforce and extend students' growing knowledge about reading Provide opportunities for manipulating, categorizing, and examining the similarities and differences in words Provide daily opportunities to increase writing accuracy and speed Model various types of writing and help children to apply spelling and reading knowledge in purposeful writing Integrate writing across the curriculum Use systematic classroombased instructional assessment to inform instruction 			
	Fluency			
What Students Need to Learn	How We Teach It	Comments		
How to decode words (in isolation and in connected text) How to automatically recognize words (accurately and quickly with little attention or effort) How to increase speed (or rate) of reading while maintaining accuracy	 Provide opportunities for guided oral repeated reading that includes support and feedback from teachers, peers, and/or parents Match reading texts and instruction to individual students Apply systematic classroom-based instructional assessment to monitor student progress in both rate and accuracy 			

Effective Reading Instruction Summary Checklist

Text Comprehension Instruction					
What Students Need to Learn	How We Teach It	Comments			
 How to read both narrative and expository texts How to understand and remember what they read 	Explicitly explain, model, and teach comprehension strategies, such as previewing and summarizing text				
How to relate their own knowledge or experiences to text	Provide comprehension instruction before, during, and after reading narrative and expository texts				
 How to use comprehension strategies to improve their comprehension How to communicate with others about what they read 	 Promote thinking and extended discourse by asking questions and encouraging student questions and discussions Provide extended opportunities for English language learners to participate 				
	Use systematic classroom- based instructional assessment to inform instruction				
Mile of Otrodonte Novel to Leave	Vocabulary Instruction	0			
What Students Need to Learn	How We Teach It	Comments			
The meanings for most of the words in a text so they can understand what they read	Provide opportunities for students to receive direct, explicit instruction in the meanings of words and in word learning strategies				
How to apply a variety of strategies to learn word meanings	Provide many opportunities for students to read in and out of school				
 How to make connections between words and concepts How to accurately use 	Engage children in daily interactions that promote using new vocabulary in both oral and written language				
words in oral and written language	Enrich and expand the vocabulary knowledge of English language learners				
	Actively involve students in making connections between concepts and words				

Effective Reading Instruction Summary Checklist

Features of Effective Instruction				
Grouping	Comments			
Alternate grouping formats (e.g., one-on-one, pairs, small group, whole group) for different instructional purposes and to meet students' needs				
Use small, same-ability groups, continually monitor student progress, and regroup to reflect students' knowledge and skills				
When students experience difficulties, reteach knowledge and skills that have the highest impact on learning to read				
Use flexible grouping that provides opportunities for students to be members of more than one group				
Incorporate peer tutoring; pair students together (e.g., less proficient reader with a more proficient reader)				
Maximizing Student Learning				
Every minute counts!				
Actively engage children:				
Vary presentation, format, and ways students can participate in instruction				
Reduce teacher talk				
Use an appropriate level of instructional materials				
 Adapt the pacing, content, and emphasis of instruction for individuals and groups of children, including English language learners and those having difficulty learning to read 				

Effective Reading Instruction Summary Checklist

Effective Reading Interventions					
What Struggling Readers Need to Learn					
Knowledge and skills that have the highest impact on learning to read	 Group students into groups of 3-5 according to their instructional needs Provide targeted instruction 3 to 5 times per week Assure additional instruction aligns with core reading instruction Provide ongoing and systematic corrective feedback to students Provide extended practice in the critical elements of reading instruction based on students' needs Increase time for word study and build fluency to improve automatic word recognition and rate of reading Use systematic classroom-based instructional assessment to document student growth and inform instruction 				

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A READING RESEARCH SAMPLER OFFERING SELECTED ABSTRACTS OF STUDIES REFERENCED BY THE NATIONAL READING PANEL IN ITS ANALYSIS OF EXISTING READING RESEARCH

A Reading Research Sampler

Selected abstracts of research studies that support the major findings of the National Reading Panel

The National Reading Panel (NRP) was convened to assess the status of research-based knowledge, including the effectiveness of various approaches to teaching children to read. The research studies cited in this document were drawn from the 2000 report of the NRP, *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction – Reports of the Subgroups*.

The panel members used the National Research Council's *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) as the foundation for their work. In order to build upon the basic knowledge provided by *Preventing Reading Difficulties...*, the NRP first developed an objective research methodology that would allow them to ask questions about "what works best" in teaching children to read. The methodology included evidence-based analysis of both experimental and quasi-experimental research on selected topics considered to be key in teaching children to read.

The five instructional topics studied included phonemic awareness, phonics, fluency, vocabulary and text comprehension. Teacher education and computer technology were also included but will not be discussed here.

While there are many types of research addressing reading instruction, in order to make a claim that an instructional practice is causally linked to a particular outcome, a high standard of evidence is required. The panel determined that experimental and quasi-experimental studies of moderate to high quality were to comprise the pool of studies they would examine. If a research topic yielded too few high quality studies, then correlational or descriptive studies that concurred with the experimental findings were included in order that a causal claim could be supported. Whenever possible, meta-analyses were conducted and effect sizes calculated for each intervention or condition included in the study. The effect size provides a standard metric to reflect the treatment effect.

There are more than 400 studies cited in the NRP, far too many to include in a brief summary of the research. It is important for teachers, parents and administrators to understand what the studies actually say about "what works" best in teaching children to read. The following section includes a sample of abstracts (or summaries) of studies included in each of the five instructional topic sections. These research studies were chosen as representing some of the important findings in each of the instructional content areas. These abstracts will help the reader become more aware of the studies included in the work of the NRP and how the findings from these studies provide the basis for the implications for reading instruction suggested by the NRP.

Selected studies on phonemic awareness

Kindergarten teachers develop phoneme awareness in low-income, inner-city classrooms: Does it make a difference?

Kindergarten teachers and their teaching assistants in four low-income, inner-city schools in upstate New York participated in a study to provide phoneme awareness activities to 84 children in small groups in the regular classroom during the regular school day. The study compared the phoneme awareness, letter-sound knowledge, and the reading and spelling skills of the children after the 11-week intervention with those of 75 students in a control group. The intervention treatment included phoneme segmentation activities, segmentation-related activities and direct instruction in letter names and letter sounds.

The results of this study confirmed and extended results of previous research, which found that training kindergarten children in phoneme awareness has a positive influence on early reading skills and developmental spelling. The treatment children significantly outperformed the control group students on tests of phoneme segmentation, letter name knowledge, and letter sound knowledge. They also read significantly more phonetically regular words and nonwords and demonstrated a more sophisticated level of developmental spelling than the control group students.

The authors point out the importance of the fact that these activities were carried out with children in regular classrooms by regular kindergarten teachers and teaching assistants using manipulatives and language games easily available.

Author(s) Blachman, B.A., Ball, E.W., Black, R.S., & Tangel, D.M.

Publication date 1994

Source: Reading and Writing: An Interdisciplinary Journal, 6 (1), pp 1-18

Effects of an extensive program for stimulating phonological awareness in preschool children

A longitudinal study in Denmark beginning in 1985 was designed to evaluate the effects of a program of metalinguistic games and exercises to stimulate preschool children's discovery of the phonological structure of language. Following an eight-month training program of daily sessions of 15-20 minutes, 255 pre-school children in the experimental group and 155 in the control group were posttested with the same instruments used for the pretest. The children were tested again for the level of phonological awareness at the beginning of Grade 1, and reading and spelling assessments were repeated in the middle of Grade 2.

The design of the study allowed assessment of specific training effects: the program showed no significant effect on functional linguistic skills such as comprehension of oral instructions or vocabulary, or on the informal learning of letter names. It did show small but significant effects on

rhyming tasks and on word and syllable awareness, and the effects on the ability to perform phonemic tasks were quite dramatic.

The results of the study indicate that not only can phonological awareness be developed *before* reading ability and independently of it, but that this phonological awareness aids in later reading skills acquisition. The authors concluded that phonological skill can be developed outside the context of formal reading instruction, although the crucial factor appears to be explicit instruction rather than specific encounters with the letters of the alphabet. The effect seems to be a lasting one, transferring to new tasks and new formats. Children receiving the experimental instruction appeared to have an advantage in reading and spelling when they entered Grade 1, due to the acquired skill in phonemic segmentation.

Author(s) Lundberg, I., Frost, J., Petersen, O.

Publication date 1988

Source: Reading Research Quarterly, 23 (3), pp 263-284

Transfer among phonological tasks in kindergarten: Essential instructional content

A study was conducted to test the effects of two variations of phonological instruction for 66 kindergarten children with very low phonological skill levels and other risk factors that might prohibit acquisition of reading during the kindergarten years (e.g., low receptive language or special education classification). The students were placed in three treatment groups, using 1) auditory blending and segmenting with limited letter-sound correspondences, 2) a global array of phonological tasks, with letter-sound correspondences, or 3) only letter-sound instructions.

Children in both treatment groups showed improved phonological abilities, which transferred to a reading analog task. Increased phonological awareness had no effect on letter-naming ability nor was the additional instruction in letters and their sounds sufficient to boost low-skilled children to the level of their high-skilled peers in letter-naming. Despite the differences in instruction content, children in both treatment groups performed comparably on phonological measures and transfer of learned skills to the LAC. Although treated children demonstrated phonological abilities beyond blending and segmenting, these other skills did not appear to contribute to the simple kind of reading required for the analog. This finding suggested that when the purpose of phonological instruction is to improve reading acquisition, concentrating the phonological teaching efforts only on blending and segmenting may be sufficient.

Author(s) O'Connor, R. E. & Jenkins, J. & Slocum, T.A.

Publication date 1995

Source: Journal of Educational Psychology, 87, pp 202-217

Effects of two types of phonological awareness training on word learning in kindergarten children

A repeated-measures design using two experimental training conditions and a language-experience training control investigated the effectiveness of phonological awareness training on word learning involving 48 kindergarten children. The AB group received phonological-awareness training that included analysis (segmenting) and synthesis (blending) activities. The B group received training in only blending activities, and the control group C students were taught using a variety of meaning-oriented language-experience activities. Small group training sessions were held for all the groups, three times per week for 7-8 weeks.

The results indicated that the group receiving both segmenting and blending skills improved significantly on both types of skills. The blending-only group did not show significant improvements in segmenting skills compared with the control group, but they did learn to blend phonemes into words with a high degree of proficiency. However, these blending skills were not sufficient to make a significant difference in their word-learning abilities compared to the control group. Only the AB group students were able to achieve statistically significant improvements in speed of acquisition of new word pronunciations.

Author(s) Torgesen, J.K., Morgan, S.T., & Davis, C.

Publication date 1992

Source: Journal of Educational Psychology, 84 (3), pp 364-370

Phonological coding, phonological awareness, and reading ability: Evidence from a longitudinal and experimental study

Two studies were conducted to investigate whether phonological coding deficits are causally related to difficulties in learning to read. Experiment 1 was a longitudinal study designed to develop a screening battery to identify kindergarteners who might have difficulty in acquiring skills in reading. It was administered to 295 kindergarteners randomly selected from suburban, urban, and rural areas near Albany, New York. The reading readiness battery included seven subtests, five of which evaluated phonological skills: 1) rhyming, 2) letter names, 3) sound-letter, consonants, 4) letter-sound, consonants, 5) initial consonant substitution, 6) letter-sound, vowels, and 7) sight words to identify. Findings showed the tests which were most highly and most reliably correlated with oral reading ability were those which depended heavily on phonological coding and phonemic segmentation ability (e.g. letter names, letter sounds etc), even after controlling for intelligence.

Experiment 2 was designed 1) to determine whether word identification problems are caused by difficulty in phonological coding or by difficulty in cross-referencing and integrating visual and verbal counterparts of print, 2) to examine the relative importance of phonemic segmentation and name encoding and retrieval in learning to identify printed words, and 3) to evaluate whether facility in naming and facility in phonemic segmentation are complementary skills. Participants were 75 students each of second-grade poor readers, second-grade normal reader, sixth-grade poor readers, and sixth-grade normal readers, who were randomly assigned to one of five treatment conditions: 1) phonemic segmentation training, 2) response acquisition, 3) phonemic segmentation training and response acquisition, 4) control group given both the training and transfer subtests used as dependent measures, and 5) control group given only the transfer subtest. Results

indicated strong evidence that training in phonemic segmentation has a salutary effect on the acquisition of skill in word identification for poor as well as normal readers. The pattern of results on the independent measures of phonemic segmentation, phonetic decoding, and phonological coding ability closely paralleled the pattern of results on the word identification/code acquisition measures. This was found to be the case for children in the poor reader groups as well as for children in the normal reader groups.

The authors concluded that phonologic coding deficits constitute a major source of reading difficulty in beginning readers, although there was suggestive evidence that semantic and syntactic deficits also may cause such difficulty.

Author(s) Vellutino, F., & Scanlon, D.

Publication date 1987

Source: Merrill-Palmer Quarterly, 33 (3), pp 321-363

Effects of instruction on beginning reading skills in children at risk for reading disability

A study was conducted to investigate the impact of two contrasting instructional methods on the acquisition of word identification and decoding skills in a group of 48 children identified as at risk for reading disability at the end of their kindergarten year. The children were randomly assigned for the next two years to either a structured phonics code-emphasis approach or to an approach emphasizing use of context. Both the Code and Context treatment conditions contained a phonics component; the crucial difference was not in the presence or absence of phonic instruction but in the methods (initial presentation, sequence, emphasis, etc.) used in teaching decoding skills.

Children in the Code group uniformly outperformed the Context group on all achievement measures at the end of first and second grade. At the end of first grade, statistically significant differences between groups were found on nonword reading and spelling of phonetically regular words. At the end of second grade, significant differences were found in reading of polysyllabic real words and decoding of monosyllabic and polysyllabic nonsense words.

The authors concluded that reading instruction plays an important role in acquisition of early reading skills and that structured, systematic phonics instruction results in more favorable outcome than does a context emphasis approach.

Author(s) Brown, I.S., & Felton, R.H.

Publication date 1990

Source: Reading and Writing: An Interdisciplinary Journal, 2 (3), pp 223-241

The role of instruction in learning to read: Preventing reading failure in at-risk children

A study was conducted with 285 Title I students in first and second grade in an urban Texas school district to determine the best of three instructional techniques for teaching reading. The students were placed in one of three types of classroom reading programs: 1) direct instruction in letter-sound correspondence practiced in decodable text (direct code), 2) less direct instruction in systematic sound-spelling patterns embedded in connected text (embedded code), and 3) implicit instruction in the alphabetic code while reading connected text (implicit code).

The results indicated that the direct code instruction improved word reading and word recognition skills more than the implicit code instruction. Effects of the type of instruction on word recognition were moderated by the initial levels of phonological processing and were most apparent in children with poorer initial phonological processing skills. Reading comprehension results paralleled those for word recognition but to a lesser extent. There was no significant difference among the groups in spelling achievement or in vocabulary building.

The authors concluded the reading instructional programs that emphasize explicit instruction in the alphabetic principal provided definite advantages for at-risk students.

Author(s) Foorman, B.R., Francis, D.J., Fletcher, J.M., Schatschneider, C., & Mehta, P.

Publication date 1998

Source: Journal of Educational Psychology, 90 (1), pp 37-55

The effect of phonemic awareness on the literacy development of first grade children in a traditional or a whole language classroom

A study was conducted to examine phonemic awareness and whole language instruction in the context of determining the impact on 1) decoding skills, 2) spelling skills, and 3) writing fluency of children with various levels of phonemic awareness. Children in a first-grade whole language instruction classroom were taught using the shared-book approach with numerous writing activities. Children in another first-grade classroom received traditional instruction from a basal reading program with a skills emphasis. The reading curriculum included phonics concepts as well as specific letter-sound correspondences, practiced in isolation in basal reading workbooks; writing opportunities were limited to responses on commercially prepared worksheets and structured spelling instruction included weekly spelling tests from word lists. All of the children were tested to determine phonemic awareness prior to the study and the six highest and six lowest scoring children in each classroom were targeted as high and low phonemic awareness groups.

Beginning-of-the-year level of phonemic awareness proved of more importance in this study than method of instruction in the children's literacy acquisition; those high in phonemic awareness at the beginning of the study did well while those with low phonemic awareness achieved at a significantly lower level on all measures. While whole-language students did not receive direct phonics instruction, they appeared to use letter-sound correspondence to decode words at a level equal to those children in the traditional direct instruction. The students in the whole language classroom wrote more words and used more unique words in their compositions than did the children in the traditional classroom, but the children in the traditional classroom were more accurate spellers.

Author(s) Griffith, P.L., Klesius, J.P., Kromey, J.D.

Publication date 1992

Source: Journal of Research in Childhood Education, 6 (2), pp 85-92

Preventing reading failure in young children with phonological processing disabilities: Group and individual responses to instruction

A Florida study evaluated three programs which involved the degree of explicitness of instruction in phonological awareness and phonemic reading skills. The 180 students participating in the study were in the bottom 12% of the pretested children for phonological skills. One approach was designed to create the maximum strength in phonemic decoding while another emphasized the active coordination of less well-developed phonemic reading skills with clues from context as a means of accurately reading words in text and constructing meaning. A third intervention was designed to coordinate with regular classroom reading instruction. The children in the two

treatment groups received four 20-minute sessions of one-to-one instruction per week from the second semester kindergarten through second grade. The phonological processing skill group devoted 80% of their time on word level instruction while the explicit and intensive instruction in phonemic decoding group spent 43% of their time on it.

The children in the phonological processing skills group had significantly stronger skills in phonological awareness, phonemic decoding, and untimed, context-free word reading. They also outperformed either group on word level reading skills. However, there was no reliable difference in reading comprehension between the phonological processing group and the explicit and intensive instruction group and little difference over the control group.

The authors concluded that one-to-one instruction in reading may not have a significant impact on the core word level reading problems of at-risk children unless it contains very explicit and intensive instruction in phonemic awareness and phonemic decoding skills. However, based on the findings that there was little difference in reading comprehension among the groups, the authors would not assert that any one of the instructional approaches used in the study was more effective than the others.

Author(s) Torgesen, J.K., Wagner, R.K., Rashotte, C.A., Rose, E., Lindamood, P.,

Conway, T., Garvan, C.

Publication date 1999

Source: Journal of Educational Psychology, 91 (4), pp 579-593

The effect of reading library books at different levels of difficulty upon gain in reading ability

A study of 43 students in Grades 3, 4, and 5, during a six-week summer reading program, attempted to determine whether reading library books at a slightly more difficult reading level or slightly below reading level made a difference in reading improvement. The findings from the study indicated there was no evidence of gain by either group.

A second study was then instigated to determine whether the lack of gain was due to a measurement artifact. The same group of students was tested again in the fall, using an efficiency test to determine both accuracy and rate. The results indicated minimal or nonexistent efficiency levels.

Before a conclusion was reached that there was no support to the hypotheses of the original research, a third study was conducted to obtain an objective measure of the "difficulty level" of the books read during the summer. A computer program was written to determine the DRP score and its corresponding GE score. The results indicated that the main difference between the books read by the two groups was length rather than difficulty level. All students read books at approximately the same level of difficulty, except that the experimental group read longer books. Therefore, the only conclusion to be drawn from the study was that there was no evidence that students who read relatively easy library books for six weeks increased their reading level, vocabulary, rate, or efficiency.

Author(s) Carver, R.P., & Leibert, R.E.

Publication date 1995

Source: Reading Research Quarterly, 30 (1), pp 26-48

Effects of fluency development on urban second-grade readers

A model of fluency instruction was developed that 1) could be readily integrated into the regular reading curriculum, 2) employed an extensive array of principles implemented over the course of a school year, and 3) used several quantifiable measures of reading performance to evaluate the treatment. The fluency development lesson (FDL) is a 10-15 minute instructional activity that incorporates several key principles of effective fluency instruction. A study was conducted to implement and evaluate this FDL model in two second-grade classrooms. A total of 28 experimental subjects and 26 control participants were evaluated following the six-month implementation period.

The FDL experimental approach resulted in fluency gains for students, and teacher response was positive.

Author(s) Rasinski, T.V., Padak, N., Linek, W., & Sturtevant, E.

Publication date 1994

Source: Journal of Educational Research, 87 (3), pp 158-165

Effects of repeated reading on second-grade transitional readers' fluency and comprehension

A study was conducted to investigate the effect of repeated reading on 17 second-grade transitional readers' oral reading performance with practice and unpracticed passages. A "transitional" reader is one who is an adequate decoder but a slow, halting reader. The experiment used a time-series design, using two conditions: a read-along and an independent practice procedure. The students were then scored on rate, accuracy, comprehension, and prosodic reading (reading in meaningful phrases) measures.

The findings of the study showed that in all measures of both practiced and unpracticed passages there was significant improvement by repeated reading, regardless of the training procedure used. A second finding was that practice of one story was not as effective as the combined practice of several stories. Even when content, sentence structure, and level of difficulty were similar and vocabulary overlap high, repeated reading of the first half of a story did not result in consistent gains in accuracy and comprehension of the second half of the story; only speed and prosodic reading indicators were positively affected. Importantly, there was a cumulative practice effect in which students made significant gains from practiced to new unpracticed passages. Prosodic reading was most facilitated by the read-along procedure.

Author(s) Dowhower, S.L.

Publication date 1987

Source: Reading Research Quarterly, 22 (2), pp 389-406

Assisted reading practice: Effects on performance for poor readers in grades 3 and 4

A Canadian study of 29 at-risk third- and fourth-graders in two experimental groups and one control group over a four-month period investigated the effects of assisted reading practices and compared more and less labor-intensive methods of providing assistance. The teacher-assisted group read basal materials orally and received assistance with word identification from the teacher. The tape-assisted group read while listening to a tape recorder whose speed they could control.

Children in the tape-assisted group read nearly twice the amount of text as children in the teacher-assisted group. Both groups showed similar large gains in speed, accuracy, and comprehension over the control group. The tape-assisted group also showed significant gains in oral comprehension. However, the experimental groups' letter-naming speed, decoding, and reading speed for words out of text did not show significant improvement over the control group.

The main conclusion was that assisted reading practice leads to substantial gains in reading comprehension. In addition, larger gains in reading comprehension were apparent when there was a large pretreatment difference between listening comprehension and reading comprehension. The authors noted that this supports Chall's (1983) theory that in the early years children can comprehend more by listening than by reading.

Author(s) Shany, M.T., & Biemiller, A.

Publication date 1995

Source: Reading Research Quarterly, 30 (3), pp 382-395

Effects of repeated readings on instructional-and mastery-level readers

A study investigated the effects of repeated readings for instructional- and mastery-level readers as well as learning-disabled and non-disabled instructional-level readers. Using 25 matched pairs of third- through fifth-grade students, the study compared the effects of one and three readings on reading fluency and comprehension. In both the experimental group and the control group, the 17 instructional-level students read screening passages at instructional level and the 8 mastery-level students read them at the mastery level. Then all the participants read two additional passages, one passage once and one three times.

Reading rate increased significantly from one to three readings, an occurrence that brought instructional-level readers to near mastery-level performance. Also, recall was significantly greater after three readings than after one reading. Mastery-level readers benefited from repeated readings in the same ways as the instructional-level readers.

The authors concluded that the method of repeated readings is equally effective for LD and nondisabled readers, regardless of functional level, and for students at mastery and instructional levels, regardless of classification.

Author(s) Sindelar, P.T., Monda, L.E., & O'Shea, L.J.

Publication date 1990

Source: Journal of Educational Research, 83 (4), pp 220-226

Selected studies on vocabulary

Effects of instruction in deriving word meaning from context: A meta-analysis

A study was conducted to examine the effects of instruction in deriving word meaning from context during reading. Criteria for inclusion in the meta-analysis were that the treatment must aim specifically at enhancing the skill of deliberately deriving word meaning from context during reading, this skill must be adequately measured at the posttest, and only studies with a control group design were included. Twelve studies were finally included in the meta-analysis; the total number of experimental treatments was 21.

The overall outcome of the meta-analysis was positive with a significant medium effect size of d=0.43. Findings indicated that none of the methodological predictors reduced heterogeneity significantly, implying that there is no systematic effect of any methodological characteristic on treatment outcome. Of the educational setting variables, only class size produced a significant effect, although small and negative. Clue instruction appeared to be more effective than other instruction types or practice alone.

The authors concluded from the meta-analysis that deliberately deriving word meaning from context is amenable to instruction and the effect of even relatively short instruction is rewarding.

Author(s) Fukkink, R.G., & de Glopper, K.

Publication date 1998

Source: Review of Educational Research, 68 (4), pp 450-469

Teaching vocabulary through familiar associations and contexts

A study involving 113 third graders and 108 fifth graders evaluated the effectiveness of an interactive model of cognitive development—one that used prior knowledge to learn new word meanings. The children were taught 96 most-often missed words from a 150-word vocabulary list. Using one of four methods, they were told to: 1) memorize pairings to familiar words (association), 2) compile a list of words containing one target word and three familiar words (categorizing), 3) write the target words in meaningful three-sentence passages (concept development), or 4) look up target words in the dictionary, write definitions, and write sentences using the new word.

A single-factor, repeated measures analysis of variance was used to determine differences in the four vocabulary methods' results. Good readers performed significantly better than poor readers regardless of the method used. However, the context method of learning proved consistently more effective, even for the poorest readers.

The authors therefore concluded that the most effective means of teaching vocabulary is to teach word meanings in an appropriate contextual setting which is familiar to the student.

Author(s) Gipe, J.P., & Arnold, R.D.

Publication date 1979

Source: Journal of Reading Behavior, 11 (3), pp 281-285

Growth of reading vocabulary in diverse elementary schools: Decoding and word meaning

The growth of reading vocabulary was examined through the first four grades for students at three widely disparate schools: School A (a suburban school enrolling White students who spoke standard English), School B (an inner-city school enrolling Black, dialect-speaking students), and School C (a semirural school enrolling economically disadvantaged, dialect-speaking Asian/Pacific students). Reading vocabulary for the three schools was assessed with a multiple-choice test, administered to 47 to 91 students at each grade level, and 288 individuals were interviewed to determine 1) the proportion of test words that students could decode and 2) the proportion of decoded words with known meanings.

The results showed that reading vocabularies of elementary students are large and that they grow quite rapidly. However, the gaps between more and less advantaged students were substantial. School A students (mainstream students) learned many more words, decoded more words, and knew more word meanings than did minority students in Schools B and C. The gap between mainstream and disadvantaged students was largest for infrequent words.

The authors concluded that the extent to which reading ability, SES, or exposure to a nonstandard dialect affect the amount of learning that can occur from reading unfamiliar words in context is an important issue. The data seemed to indicate that direct instruction in decoding and/or individual word meanings is not sufficient to assist minority students. They suggest: 1) some of the word meanings that minority students need to learn should be taught directly, 2) minority students should be encouraged to read more, and 3) they should be motivated and helped to develop strategies for learning words on their own.

Author(s) White, T.G., Graves, M.F., & Slater, W.H.

Publication date 1990

Source: Journal of Educational Psychology, 82 (2), pp 281-290

The effects of vocabulary instruction: A model-based meta-analysis

A meta-analysis was conducted to examine the effects of vocabulary preinstruction as a way of improving reading comprehension and to examine the components of effective vocabulary instruction. The criteria for studies used in the meta-analysis included all vocabulary instruction studies suitable for meta-analysis available in April 1985 that used one of two types of control groups and provided statistical information needed to derive an effect size. A total of 52 studies were found that met these criteria, making 94 independent method comparisons.

Findings indicated that vocabulary instruction does appear to have a significant effect on the comprehension of passages containing taught words; the effect sizes averaged .97. Vocabulary instruction also appears to have a slight but significant effect on comprehension of passages not necessarily containing taught words; this effect was .30 of a standard unit. The meta-analysis also suggested that the most effective vocabulary teaching methods included both definitional and contextual information in their programs, involved the students in deeper processing, and gave the students more than one or two exposures to the to-be-learned words. In addition, the mnemonic keyword method was found to have reliable effects on recall of definitions and sentence comprehension.

Author(s) Stahl, S.A., & Fairbanks, M.M.

Publication date 1986

Source: Review of Educational Research, 56 (1), pp 72-110

The differential effect of storybook reading on preschoolers' acquisition of expressive and receptive vocabulary

Three- and four-year-olds participated in a study to evaluate the effectiveness of storybook reading on preschoolers' acquisition of expressive and receptive vocabulary. Thirty children were assigned in each condition: single-reading, repeated-reading, and questioning. In both the repeated-reading and the questioning groups, the storybook was read three times. In the questioning group, children were asked to label target items with the novel words during each reading of the storybook.

The children in the repeated-readings group made more gains in expressive and receptive vocabulary than those in the single-reading group. The questioning condition produced an increased acquisition of expressive rather than receptive vocabulary.

The author concluded that the study suggests that children learn from exposure to book reading, and that adult reading behaviors may have different effects on children' receptive and expressive vocabulary.

Author(s) Sénéchal, M.

Publication date 1997

Source: Journal of Child Language, 24 (1), pp 123-138

Informed strategies for learning: A program to improve children's reading awareness and comprehension

A study was conducted to determine the relationship between metacognition and comprehension as well as to evaluate the efficacy of an instructional reading program, Informed Strategies for Learning (ISL), which provides conceptual information about reading strategies directly and explicitly to children in the classroom as an economical and flexible adjunct to their regular reading curriculum. Two third-grade and two fifth-grade intact classes received training, while two other third-grade and two other fifth-grade intact classes served as controls. Strategy training included three modes of instruction: classroom lessons, bulletin board materials, and suggestions for classroom teachers on how to use the strategies. The control groups were provided tutoring, shown movies, and taught group lessons on topics unrelated to reading, such as ecology and nutrition during the same four-month period of 30-minute group lessons taught twice weekly.

The results indicated that the children who participated in ISL scored significantly better than did the children in control group classrooms on cloze and error detection tasks. No differences between groups were found on two standardized tests of reading comprehension.

The authors concluded that children can be taught about the existence and use of reading strategies through informed, direct instruction in their regular classrooms.

Author(s) Paris, S.G., Cross, D.R., & Lipson, M.Y.

Publication date 1984

Source: Journal of Educational Psychology, 76 (6), pp 1239-1252

Basal reader instruction: Effects of comprehension monitoring training on reading comprehension, strategy use and attitude

A study was conducted to investigate the efficacy of a metacognitive instructional strategy for use with basal readers in improving reading comprehension, strategy use, and attitude toward reading. The experimental treatment, administered to 20 fourth-grade students in a self-contained classroom (with 11 students in a second self-contained classroom as a control group), was based on the instructional strategies proposed by Schmitt and Baumann (1986) that describe how teachers can incorporate the use of comprehension monitoring strategies into the guided reading phase of basal reader instruction. Specifically, students were taught to 1) activate background knowledge, 2) make predictions about the content, 3) set purposes for reading, 4) generate questions, 5) summarize at various points, 6) evaluate and make new predictions, 7) relate new information to prior knowledge, 8) generate questions, 9) summarize total selection, 10) evaluate predictions, 11) return to the purpose set for reading, and 12) generate questions for the total selection. The control group continued with their traditional basal instruction, including round robin oral reading, seatwork assignments such as dittoed exercises to find the main idea, small group activities, and periodic questions about content of reading material by the teacher.

The results of the eight-month study indicated that children can be taught how to use metacognitive reading strategies and techniques during basal reading instruction. Average fourth-grade readers who received metacognitive skills training had greater reading comprehension, greater knowledge about reading strategies, and more positive attitudes toward reading than children in the control group.

Author(s) Payne, B.D. & Manning, B.H.

Publication date 1992

Source: Reading Research and Instruction, 32 (1), pp 29-38

How to teach comparison processing to increase children's short-and long-term listening comprehension monitoring

A study was conducted to determine whether training children to compare different parts of text improves detection of text errors and whether self-controlled training of comparison produces more durable use of the strategy. Participants were 192 third graders, who were assigned to one of eight conditions: three comparison-processing training conditions, two minimal-instruction conditions, one passive training condition, and two control conditions. The students heard expository passages, some containing explicit errors, and were asked to judge passage sensibility.

The results indicated that children taught to use a self-instructional routine specifying comparison of the two most recently presented sentences with each other and with the rest of the passage monitored comprehension immediately following training and one week later better than did the students given minimal training. Teaching the two types of comparison without self-instruction produced only short-term benefits relative to minimal training alternatives.

Author(s) Elliot-Faust, D.J. & Pressley, M.

Publication date 1986

Source: Journal of Educational Psychology, 78 (1), pp 27-33

Reciprocal Teaching: A review of the research

The authors reviewed reciprocal teaching studies, including seven unpublished doctoral dissertations (see below). Two forms of reciprocal teaching were noted: reciprocal teaching only, and explicit teaching before reciprocal teaching. The quality of the studies was evaluated by examining the design (only studies with comparable experimental and control groups), assessments of student learning, and assessments of the quality of the reciprocal teaching dialogues.

Overall results indicated that, when standardized tests were used, the reciprocal teaching treatment was significantly superior to the control treatment in 2 of the 11 studies, with a median effect size of .32. When experimenter-developed comprehension tests were used, students in the reciprocal teaching treatment had scores significantly superior to those of the control group in 8 of

10 studies, with a median effect size of .88. Also discussed in the review: 1) the role of cognitive strategies in enhancing comprehension (enabling students to process what they read more deeply, to make sense of what they read, to be aware of when they did not understand the material, and to seek additional reading and searching when they encounter comprehension difficulties), 2) most helpful strategies (more research is needed before a determination can be made, although question generation and summarization appear to be the strongest), 3) instructional approaches for teaching cognitive strategies (before, during, or as a general cognitive strategy instruction, in which the teacher guides the students as they apply the strategy, then gradually withdraws support), 4) quality of the dialogue in reciprocal teaching (providing scaffolded instruction), and 5) suggestions for future research and practice.

Unpublished dissertations included in the review:

Brady, P.L., Improving the reading comprehension of middle school students through reciprocal teaching and semantic mapping strategies. Unpublished doctoral dissertation, University of Alaska. 1990.

Fischer Galbert, J. L., An experimental study of reciprocal teaching of expository text with third, fourth, and fifth-grade students enrolled in Chapter 1 reading. (Third-Grade, Fourth-Grade) Unpublished doctoral dissertation, Ball State University, Muncie, IN. 1989.

Jones, M.P., Effects of the reciprocal teaching method on third-graders' decoding and comprehension abilities. Unpublished doctoral dissertation, Texas A&M University. 1987.

Padron, Y. N., Utilizing cognitive reading strategies to improve English reading comprehension of Spanish-speaking bilingual students. Unpublished doctoral dissertation, University of Houston. 1985.

Rich, R. Z., The effects of training adult poor readers to use text comprehension strategies. Unpublished doctoral dissertation, Columbia University, New York. 1989.

Shortland-Jones, B., The development and testing of an instructional strategy for improving reading comprehension based on schema and metacognitive theories. Unpublished doctoral dissertation, University of Oregon. 1986.

Williamson, R.A., The effect of reciprocal teaching on student performance gains in third-grade basal reading instruction. Unpublished doctoral dissertation, Texas A&M University. 1989.

Author(s) Rosenshine, B., & Meister, C.

Publication date 1994

Source: Review of Educational Research, 64 (4), pp. 479-530.

Developmental and instructional analysis of children's metacognition and reading comprehension

An instructional study was designed to investigate the relation between children's reading awareness and reading performance. Eight intact classrooms with a total of 87 third graders and 84 fifth graders participated in the study. One third-grade and one fifth-grade class from each of four schools were randomly assigned to either the treatment or the control condition. The

experimental curriculum used was Informed Strategies for Learning (ISL), designed to increase awareness and use of effective reading strategies.

Results indicated that children in the experimental ISL classes at both grade levels made significant gains in metacognition and the use of reading strategies compared with children in the control classes. Cluster analysis was used to identify significant subgroups of children with markedly different profiles of reading skills, conducted at four time points: third grade pretest, third-grade posttest, fifth-grade pretest, and fifth-grade posttest. Although there were specific aptitude-by-treatment interactions, there was a general trend for metacognition and strategic reading to become more congruent for 8 to 10 years of age.

Author(s) Cross, D.R., & Paris, S.G.

Publication date 1988

Source: Journal of Educational Psychology, 80 (2), pp 131-142

References

Snow, C.E., Burns, S.M., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children.* Washington, D.C.: National Academy Press.

National Reading Panel. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Reports of the subgroups. Washington, D.C.: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development. NIH Pub. No. 00-4754.

A READING RESOURCE SAMPLER ON EARLY
READING OFFERING ABSTRACTS OF STUDIES THAT
HAVE INVESTIGATED ISSUES IN PRESCHOOL
READING PREPARATION PROGRAMS

An Early Reading First Resource Sampler

Selected abstracts of research and research-based resources that support the Early Reading First Program

The following bibliography represents a small sample of the scientifically based research and resources available supporting the Early Reading First goals. The list is not exhaustive, and the Department will be adding other relevant research and resources in the future.

Adams, M.J., Foorman, B.R., Lundberg, I., & Beeler, T. (1998). Phonemic awareness in young children. Baltimore: Paul H. Brookes Publishing.

This book addresses the research to practice issue in phonemic awareness and includes activities that stimulate the development of phonemic awareness in early education programs. While most teachers are familiar with what the term phonemic awareness means and of its importance in the process of acquiring literacy, knowing how to teach and support phonemic awareness learning has been a challenge for many. The authors intend to close the gap between the research findings and classroom instruction by providing a developmental curriculum in phonemic awareness based upon validated classroom research that originated in Sweden and Denmark, and was then adapted and researched in classrooms in the United States.

Apel, K., & Masterson, J. (2001). Beyond Baby Talk: From Sounds to Sentences – A Parent's Guide to Language Development. California: Prima Publishing.

Sponsored by the American Speech-Language-Hearing Association, this book describes how children develop language from their earliest words to sentences. With the understanding that parents are the primary "language role models" for their children, the authors provide parents with a guide to understanding language development as well as ways in which they can interact with their children to promote language development.

Burns, M.S., Griffin, P., & Snow, C.E. (Eds.). (1999). Starting out right: A guide to promoting children's reading success. Washington, DC: National Academy Press.

This book is edited by members of the Committee on the Prevention of Reading Difficulties in Young Children. It is intended for parents, teachers, policymakers, and community members. The book addresses the following central questions:

- What kinds of language and literacy experiences should be part of all preschool and childcare settings?
- What should reading instruction look like in kindergarten and the early grades?
- What questions should be asked of school boards, principals, elected officials and other policy makers who make decisions regarding early reading instruction?
- Is my child making progress in reading related skills and early reading?

The goal of the book is to share a wealth of knowledge based upon extensive research on literacy and language. There is an emphasis on practical application in this book with guidelines, program descriptions, advice on resources, and strategies that can be used in everyday life.

Gopnik, A., Meltzoff, A.N., & Kuhl, P.K. (1999). The scientist in the crib. New York: Morrow.

This book looks with great detail into the relationship between science and young children's development. There have been many rigorous scientific studies conducted which have helped us better understand how babies think and learn. The latest research on early childhood development tells us that babies and young children know and learn much more about the world around them than we ever have imagined. This book is not the typical parenting advice or "how to" book. Rather, it strives to take a different road and look at the science of babies' minds.

Hart, B., & Risley, T.R. (1995). Meaningful differences in the everyday experience of young American children. Baltimore: Paul H. Brookes Publishing.

In this book, Hart and Risley analyze the qualities of parenting that contribute to a child's acquisition of language. Their data on parent-child interactions provide a scientifically substantiated link between children's early family experience and later intellectual growth. The authors found that race/ethnicity doesn't matter; gender doesn't matter, the birth order of a child doesn't matter. What does matter is the amount of verbal interaction that takes place between parents and their children. The authors also found remarkable contrasts at the extremes of economic advantage-and within the middle class-in the amount of interaction between parents and children. As children get older, the disparities between the groups in vocabulary growth rate, vocabulary use, and IQ test scores become striking.

Hart and Risley remind the reader of the profound effects environment can have on development and their findings have important implications regarding the extent to which adequate resources are devoted to support the development of young American children.

Hart, B., & Risley, T.R. (1999). The social world of children: Learning to talk. Baltimore: Paul H. Brookes Publishing.

This book follows the groundbreaking study reported by Hart and Risley in their earlier book, Meaningful Differences in the Everyday Experiences of Young American Children. It goes beyond the discussion in the earlier book on the role of language experience in the intergenerational transmission of language competence and examines the patterns in that transmission. The authors provide tables and figures with their data and thoroughly discuss their findings. Hart and Risley state that they have a simple message for parents: their conversation matters when their children are young. Talking with children provides them with experiences that are important to both their cognitive and their social/emotional learning. The authors provide evidence that the language tools provided to children through conversation can contribute at least as much to a child's future success as their heredity and their choice of friends (Hart & Risley, 1999, p. xiii).

Neuman, S., Copple, C., Bredekamp, S. (2000). Learning to read and write: developmentally appropriate practices for young children. Washington DC: National Association for the Education of Young Children.

This book is the product of a professional collaboration between early childhood educators and reading specialists. It explains the position statement of the International Reading Association and the National Association for the Education of Young Children on the all important and controversial topic of when and how to teach young children to read and write. Also included is a summary of effective teaching practices for preschool teachers, a section on frequently asked questions, and a glossary of terms in early literacy. Finally, to help teachers consider the value of what they are doing across the dimensions of literacy, there is a brief self –inventory (Taking Stock of What You Do to Promote Children's Literacy).

Neuman, S.B., & Dickinson, D.K. (Eds.). (2001). Handbook of early literacy research. New York: Guilford Press.

This volume examines current research on early literacy and intervention. The Handbook begins by addressing broad questions about the nature of early literacy, and then continues by summarizing current knowledge on cognitive development, and emphasizing the importance of cultural contexts in the acquisition of literacy. Subsequent chapters focus on various skills and knowledge that emerge as children become literate as well as the roles of peers and families in this process. The book devotes attention to the importance of meeting the literacy needs of all children and emphasizes the importance of coordinated school, family, and social services to provide the necessary support for those children who struggle most in school.

Various approaches to instruction, assessment, and early intervention and research on the efficacy of these approaches are described.

Snow, C.E., Burns, S., & Griffin, P. (Eds.). (1998). Preventing reading difficulties in young children. Washington, DC: National Academy Press.

This book is a summary report developed from the findings of the Committee on the Prevention of Reading Difficulties in Young Children. It examines research findings to provide an "integrated picture of how reading develops and how reading instruction should proceed (p. vi)." The core message of the book with regard to reading instruction is as follows: "that reading instruction integrate attention to the alphabetic principle with attention to the construction of meaning and opportunities to develop fluency (p. vii)."

The research reviewed in this book included studies on normal reading development and instruction; on risk factors that can be useful in identifying children at risk for reading failure; and on prevention, intervention, and instructional approaches to ensuring the most optimal reading outcomes. The committee emphasizes the importance of high-quality preschool and kindergarten environments and their contribution to providing a critical foundation to facilitate children's acquisition of essential reading skills.