



EVIDENCE-BASED PRACTICES

Topic: Reading Comprehension

Three different aspects of reading comprehension are explored in the papers reviewed in this issue. The first review focuses on word recognition and its importance in developing reading comprehension skills. The second review examines what is necessary for a student to comprehend textbook information, both in the formatting of a well-produced textbook and what skills are required to locate and understand knowledge from texts. The final review describes best practices for teaching students with disabilities to improve reading comprehension skills.

Literature Reviews

Chard, D. J. & Osborn, J. (1999). Word recognition instruction: Paving the road to successful reading. *Intervention in School and Clinic, 34(5), 271-277.*

Research has shown that automatic, accurate, and fluent word recognition is a prerequisite skill for young children to develop reading comprehension skills. In 1998 researchers Chard, Simmons, and Kame'enui identified four conditions that foster the development of word recognition. Children need 1) to realize the communicative function of print; 2) to understand that speech maps into print; 3) to demonstrate phonological awareness; and 4) to know that words are made up of letters and that letter-sound knowledge can be used to read words. In the absence of these conditions, word recognition cannot flourish.

Word analysis, figuring out what a word says, depends on sequential learning of multiple subtasks. Alphabetic understanding, or letter-sound knowledge, comes first. The authors recommend beginning letter-sound instruction with sounds that combine readily to make words, separating instruction of letter-sounds that are similar to one another to avoid confusion, teaching easily articulated sounds first, and limiting instruction to approximately two letter-sounds per week. Regular progress monitoring is recommended during the teaching of these skills and in subsequent teaching of regular word reading, story reading, irregular word reading, and advanced word analysis. The authors emphasize that once basic relationships between sounds and letters are established, repeated reading is the most important element in expanding word skills and in subsequent comprehension development.

Dickson, S. V., Simmons, D. C., & Kame'enui, E. J. (1995). Text organization and its relation to reading comprehension: A synthesis of the research. National Center to Improve the Tools of Educators. [Online].

Available: <http://idea.uoregon.edu/~ncite/documents/techrep/tech17.html>

The authors of this literature review examined both narrative and expository text structures in relation to students' comprehension. They found that text organization, students' knowledge of that organization, and the ability of students to use effective strategies greatly affected their understanding of the content. The evidence suggests three areas of convergence 1) well-presented physical text facilitates reading comprehension; 2) text structure and student awareness of text structure are highly related to reading comprehension; and 3) explicit instruction in the physical presentation of text and/or text structure facilitates reading.

Classroom Implications

- Begin letter-sound instruction with sounds that are easily combined into words (m, s, a, t) rather than with the typical alphabetic sequence (a, b, c, d). The alphabetic sequence does not lend itself to the development of words; it is not viewed as a *productive* sequence.
- Allow time for a letter-sound (such as b) to be learned and mastered before introducing a similar or confusing letter-sound (such as d).
- Teach more easily spoken sounds first. These are *continuous sounds* such as /m/, /s/, and /f/ that can be made in isolation and pronounced continuously without changing. Teach them before introducing *stop sounds*, such as /d/ and /g/, for ease of production.
- Teach approximately two letter-sounds per week, carefully monitoring student progress to ensure mastery before introducing new letter-sound combinations.
- Provide frequent opportunities for children to read and reread out loud so that they can practice newly acquired skills and expand their repertoires.
- Select textbooks that are structured to maximize and instruct the understanding of text. Look for visual cues that highlight or emphasize main ideas and relationships between ideas; use of signal words, headings and subheadings; use of semantic cues such as topic sentences; and use of syntactic clues such as the words "first," "second," and "third."
- Provide explicit, task-specific instruction on how to recognize the physical presentation of important information in the text, such as topic sentences, headings, and

The research suggests that instruction in the physical presentation of text, narrative and expository text structures, how to impose structure on text, and how to apply strategies will improve students' comprehension. Instruction needs to be explicit and include "(a) explaining the skill or component of text structure, (b) telling the importance [of the skill], (c) modeling how, when and where to use the skill, and how to evaluate the effectiveness of the skill, (d) providing guided and independent practice, (e) teaching for transfer, and (f) evaluating." Among the techniques cited as effective in increasing student comprehension of textbooks are use and construction of graphic organizers, instruction in using text structure to create main idea statements, using headings and subheadings to make summaries, and instruction in story grammar.

Mastropieri, M.A., & Scruggs, T.E. (1997). Best Practices in Promoting Reading Comprehension in Students with Learning Disabilities, 1976 to 1996. Remedial & Special Education. (18)4, 197-213.

This review of twenty years of research describes best practices for improving reading comprehension skills. Reading comprehension is one of the most important skills learned in school. Students with learning disabilities may have deficits in reading comprehension. When they are taught systematic methods for improving recall and understanding of printed text, reading comprehension can be improved.

Teacher-led questioning and self-questioning techniques demonstrated improved performance. Text enhancements such as illustrations and instruction in basic skills also proved beneficial. Questioning students or instructing them in using self-questioning strategies before, during, and after reading helps to activate prior knowledge and increase understanding. Four types of illustrations were examined: pictures that represent information contained in the text, mental pictures, charts and graphs, and mnemonic pictures intended to increase memory of important vocabulary and content information. The authors include recommendations for use of best practices for instructing reading comprehension.

subheadings, and the purposes of these structures.

- Increase student comprehension of textbooks through the construction and use of graphic organizers, instruction in using text structure to create main idea statements, using headings and subheadings to make summaries, and instruction in story grammar.

- Provide students with systematic instruction and feedback. Offer guided practice that correctly models the strategy and independent practice to enhance performance.

- Teach students
 - ...strategies that require them to stop and question themselves before, during, and after reading.
 - ...prereading activities that will activate prior knowledge, introduce new vocabulary words, and generate relevant questions.
 - ...summarization and main idea strategies.

- Utilize text enhancement strategies, such as illustrations (including pictures, maps, charts, graphs, and diagrams), and adjunct aids, such as study guides and underlining or highlighting text.

Commonwealth of Pennsylvania - Mark S. Schweiker, Governor; Department of Education - Charles B. Zogby, Secretary; Thomas P. Carey, Deputy Secretary, Office for Elementary & Secondary Education; Fran James Warkowski, Director, Bureau of Special Education; John J. Tommasini, Assistant Director, Bureau of Special Education.

The Pennsylvania Department of Education (PDE) does not discriminate in its educational programs, activities, or employment practices, based on race, color, national origin, sex, sexual orientation, disability, age, religion, ancestry, union membership, or any other legally protected category. Announcement of this policy is in accordance with State law including the Pennsylvania Human Relations Act and with Federal law, including Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967, and the Americans with Disabilities Act of 1990.

The following persons have been designated to handle inquiries regarding the nondiscrimination policies: Complaints regarding discrimination in schools: Human Relations Representative, Intake Division, Pennsylvania Human Relations Commission, Harrisburg Regional Office (717) 787-9784; Pittsburgh Regional Office (412) 565-5395; Philadelphia Regional Office (215) 560-2496. Complaints against a Pennsylvania Department of Education employee: Pennsylvania Department of Education Equal Employment Opportunity Representative, Bureau of Personnel, 11th Floor, 333 Market Street, Harrisburg, PA 17126-0333; Voice Telephone (717) 787-4417; Fax (717) 783-9348; Text Telephone TTY (717) 783-8445.

Information on accommodations within the Department of Education for persons with disabilities: Pennsylvania Department of Education, Americans with Disabilities Act Coordinator, Bureau of Management Services, 15th Floor, 333 Market Street, Harrisburg, PA 17126-0333; Voice Telephone (717) 783-9791; Fax (717) 772-2317; Text Telephone TTY (717) 783-8445.

General questions regarding educational law or issues: Pennsylvania Department of Education, School Services Unit, Director, 5th Floor, 333 Market Street, Harrisburg, PA 17126-0333; Voice Telephone (717) 783-3750; Fax (717) 783-6802; Text Telephone TTY (717) 783-8445.

For additional copies of this publication, contact PaTTAN, 200 Anderson Road, King of Prussia, PA 19406; Voice Telephone (800) 441-3215; Fax (610) 265-5737; Text Telephone TTY (610) 768-9723.

PaTTAN
200 Anderson Road
King of Prussia PA 19406-1904

Non-Profit
US Postage
PAID
Permit No. 6541
Southeastern PA