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Strategic Processing of Text: Improving Reading Comprehension of Students with Learning Disabilities. ERIC/OSEP Digest #599.

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While 20 years ago research on the reading comprehension problems of students with learning disabilities focused on difficulties with decoding text, researchers today view such problems as arising from difficulties across a wide range of language and thinking activities (Swanson and Hoskyn, 1998). They recognize that some students have mastered the mechanics of reading but still have comprehension problems. This type of problem may not be evident until the higher grades when comprehension challenges increase.

Although students with learning disabilities may have the ability to process information, they do so with great inefficiency. It is not atypical for students with learning disabilities to be unaware of basic strategies that good readers use as a matter of course, such as re-reading passages they don't understand.

These are difficulties of strategic processing and meta-cognition (Gersten, Williams, Fuchs and Baker, 1998). Strategic processing is the ability to control and manage one's own cognitive activities in a reflective, purposeful fashion, and involves meta-cognition, the ability to evaluate whether one is performing successfully. Research shows that instruction can improve students' strategic processing of text. This digest summarizes relevant research and promising practices in the strategic processing of text, focusing first on the strategic processing of narrative and then expository text.

NARRATIVE TEXT

Generally speaking, narrative text (i.e., fiction) is easier to comprehend and remember than expository text (i.e., factual and informational material). For one thing, the content of a narrative is usually more familiar than the content of an exposition.
Most research on narrative text has focused on teaching students to utilize story structure as an organizing framework for understanding critical aspects of the stories they read. Even preschool children use story structure to aid their comprehension. As they get older, children improve in their ability to use it. However, students with learning disabilities are slower to develop this ability. They may not be good at certain tasks, such as picking out important story information, making inferences, and identifying story themes.

Several studies have addressed the question of how to improve the ability of students with learning disabilities to use narrative structure. For example, Idol-Maestas (1985), developed a strategy that consisted of the following steps: (T): study story titles, (E): examine and skim pages for clues, (L, L): look for important and difficult words, and (S): think about the story settings. Using this strategy, called TELLS, students improved their performance on comprehension questions and raised their scores on a standardized reading test. However, when the intervention was removed, student performance

declined. Maintenance of performance levels after teacher guidance or other external support has been removed is a common concern in these studies.

This issue is addressed directly in work on comprehension monitoring. For example, Chan and Cole (1986) trained 11-year-old students with learning disabilities to remember what they read by learning to: (a) ask a questions about the text and/or (b) underline interesting words in the text. The comprehension of all the trained groups improved equally, suggesting that it was not any specific strategy that led to the improvement. Rather, all of the students had been actively engaged with the struggle to understand the texts, which triggered the use of strategies that the students possessed but rarely used.

Probably the most effective of strategies has been teaching story grammar to use as an organizational guide when reading. Story grammar refers to the principal components of a story: main character, action, and outcome. This technique has been applied by using story maps and by asking generic questions based on story grammar. It has also been used to move beyond the plot level of stories to teach students with disabilities to identify story themes, a more abstract comprehension level than is typically taught to students with learning disabilities.

An important question in intervention research is the extent to which one can generalize from the experimental situation to the ordinary classroom. Only a few studies have focused on teacher delivery within naturally occurring classroom settings. One interesting approach is the work of Fuchs and Fuchs (Fuchs, Fuchs, Mathes, and Simmons, 1997), who designed an effective class wide peer-tutoring program (Peer Assisted Learning Strategies-PALS). Overall in these interventions, the effects occur mainly on measures that closely mirror the skills taught. Transfer effects--the students' ability to transfer the skills to a different situation--are seen, but they are often small and sometimes difficult to achieve among students with learning disabilities.

EXPOSITORY TEXT

The comprehension of expository text is more difficult for virtually all students. Exposition usually deals with less familiar content and involves more complex and varied structures (e.g., compare and contrast, cause and effect).
Most classroom instruction does not provide enough guidance for students with learning disabilities to be successful with expository text. Early studies of strategy training focused on teaching one strategy at a time. As in the research on narrative text, teaching the use of generic structural components has been proven effective, but the range and complexity of the various expository text structures means that students need to master several different text structures (e.g., description, sequence, compare/contrast, pro/con, cause-effect, and problem-solution. Moreover, while these single-strategy interventions have been effective in improving performance, there is little evidence that strategy use is maintained over time or transferred to other situations.

Later interventions involved a combination of strategies. Several studies have combined summarization and self-monitoring. These studies, while promising, have not yielded strong maintenance or transfer effects. They have, however, demonstrated that the teacher must play a substantial role in guiding students step by step through the instructional procedures.

Some studies have included several instructional strategies. In the MULTIPASS strategy (Schumaker, Deshler, Alley, Warner and Denton, l984), students made three "passes" through an expository text. The first pass involved students becoming familiar with main ideas and organization. The next pass included getting specific information from the text by reading questions at the end of each chapter and guessing at the answer, then reading the text to find the correct answers to the questions, and finally self-testing by answering each question with the newly acquired information. Teachers led students through each of these three steps by explaining, modeling the strategy, and providing rehearsal opportunities and practice.

Other studies also involved similar multiple strategies, and some also used peers as tutors (e.g., Klinger, Vaughn, and Schumm, 1998). These studies indicate that such training, if carefully developed and continued for a sufficiently long time and closely managed by the teacher, shows promise for effecting good maintenance and transfer.

A FOCUS ON TEACHER TRAINING

The growing awareness that the teacher is a potent ingredient in any of these programs has led to a research focus on developing instruction for the teachers themselves. Pressley's Transactional Strategy Instruction has demonstrated the feasibility of training teachers in strategy instruction (Pressley, El-Dinary, Gaskins, Schuder, Bergman, Almasi, and Brown, 1992). The goal of such training is to enable a teacher to teach strategies to students in a flexible, opportunistic manner. Such training has been shown to lead not only to better teaching skills but also superior student reading achievement. To be successful, this type of teacher education takes a substantial amount of time and effort.

FUTURE RESEARCH

What is likely to be the focus of future research in this area? The emphasis on helping students develop effective strategies for reading comprehension is likely to continue, albeit with a strong focus on teacher preparation rather than on direct teaching of strategies to students.
More and more investigators will conduct their studies in real classroom settings, arguing that the results of studies conducted in a more contrived setting, though they may be subjected to better controls, are not generalizable to other settings and situations. In fact, one main research question will be on how more substantial transfer effects can be assured.

Interest in peer-mediated learning is likely to continue. One reason for the success of many peer-tutoring programs may well be their ability to generate interest and motivation among students and thus to increase task persistence and achievement.

With the focus on teacher preparation and the realization that teaching specific strategies is less promising than taking a more fluid approach, attention is likely to turn away from trying to improve students' generic thinking strategies. The field is beginning to ask questions about how reading comprehension can be fostered and improved via content area instruction. Past research on the role of background knowledge and on strategy instruction will both be of great value in this endeavor.

One additional topic that seems ripe for attention concerns the assessment of comprehension. What tasks are most appropriate for evaluating whether students really comprehend what they read? Are these tasks the same as those that are most appropriate for instructional purposes? All in all at the beginning of a new century, we seem to be poised to make major progress in our understanding of the immensely complex nature of reading comprehension.

This digest was based on Improving Reading Comprehension for Children with Learning Disabilities by Russell Gersten, Joanna Williams, Lynn Fuchs, and Scott Baker (1998).

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