

# Key factors for reading comprehension

## Combining elements for powerful programs

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**T**echnological advances have made an ever-increasing volume of information available in many easily accessible forms. Yet, despite the audio and visual components central to many new methods of receiving information, reading remains an essential way of gathering information. Even broadcast news and computer games often include on-screen text vital to viewer or participant understanding.

For most people, being able to read and being able to understand what they are reading are key to their ability to creatively and effectively process information and live successful lives.

“Children are taught to read so that they can understand what is in text. Thus...reading instruction matters because ultimately it affects whether the student develops into a reader who can comprehend what is in text,” Michael Pressley writes in his chapter, “What Should Comprehension Instruction be the Instruction of?” in the Handbook of Reading Research (in press).

Pressley, of Notre Dame University, embraces an approach to instruction that mixes word-level processes such as decoding with a broader perspective encompassing building background knowledge and using strategies to increase reading comprehension. During a keynote address at a Strategic Instruction Model Trainers’ national conference in July, Pressley recommended the following elements as essential for good reading programs:

- Teach decoding skills
  - Encourage the development of sight words
  - Teach students to use semantic context cues to evaluate whether decodings are accurate
  - Teach vocabulary meanings
  - Encourage extensive reading
  - Encourage students to ask themselves why the ideas related in a text make sense
  - Teach self-regulated use of comprehension strategies
- Regrettably, he noted that seldom do reading programs incorporate appropriate instruction in each of these areas.

### Teach decoding skills

Teaching students the skills necessary to recognize words increases the chances students will succeed in reading. These skills include the ability to sound out words and to recognize word chunks (prefixes and suffixes, for example). The ability to understand a reading passage is greater when the reader can easily recognize or decode words.

Still, Pressley believes emphasizing decoding to the exclusion of other instructional elements stops short of the final goal.

“For some,” he said of decoding, “it’s the end of everything. I’m going to argue that it’s just the beginning, that ultimately what we’re interested in is kids being able to understand.”

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**Several strategies and routines can become part of an overall reading program.**

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As such, Pressley cautions against placing too much emphasis on such activities as sounding out words.

“As it turns out, that kind of decoding is a killer with respect to comprehension,” Pressley said. “If you spend all your capacity sounding a word out, you are much less certain to understand it.”

That’s because the processes of recognizing and understanding words both occur in short-term memory, essentially competing for shares of the brain’s processing power. To minimize the limitations created by this competition, teachers can develop other tactics, including encouraging the development of sight words.

### **Encourage the development of sight words**

When students are able to recognize words automatically, they are much more likely to understand what they are reading. Drills focusing on common words can help students build a repertoire of words that they recognize as soon as they see them.

Pressley described a study in which one group of children engaged in such drills until they were able to recognize a set of words rapidly. Their instructors paid very little attention to the *meaning* of the words during this acquisition phase. A second group of children never saw the words but spent a lot of time talking with researchers about the meanings of the words.

The study results indicated that the first group of students—those who had learned to recognize the words

automatically—had a better understanding of reading passages containing these words than did the children who had focused on the meaning of the words rather than recognition.

Teachers who want to encourage students to recognize common words on sight need

One of the things that good readers do and not-so-good readers don’t do, he said, is they follow up their decoding efforts by examining whether the word’s meaning fits into the context of the reading passage. This practice should be encouraged to improve understanding.

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look no further than their local bookstores or libraries for help. The reference sections of many bookstores or libraries contain resources listing the most common words.

“There aren’t that many,” Pressley said. “It is well within imagination that you can develop automaticity with respect to most of these words.”

### **Teach students to use semantic context cues to evaluate whether decodings are accurate**

After a reader recognizes a word, how does the reader know he or she has figured out the right word? Semantic contextual processing is very important at this point in the overall reading comprehension process, Pressley said.

“Attending to semantic contextual cues is in fact critical,” Pressley said. “It’s not critical at the recognition stage. It’s critical once you have recognized and think you know what the word is.”

### **Teach vocabulary meanings**

Another important element supported by reading comprehension research is vocabulary development.

“Good readers always have big vocabularies in the sense of knowing the meanings of lots and lots of words,” Pressley said, “and they know them so well that they’re sort of immediately accessible.”

Using the same list of common words identified for sight recognition drills, teachers can devise vocabulary building exercises for students. Vocabulary instruction that incorporates many opportunities for students to use the words in many ways over a long period will be most effective.

### **Encourage extensive reading**

Although students can increase their knowledge of word meanings through targeted vocabulary instruction, the most common way of adding

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# 7 Essential Factors for Improving Reading Comprehension



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Encourage extensive reading.



Encourage students to ask themselves why the ideas related in a text make sense.



Teach self-regulated use of comprehension strategies.

(Continued from page 2)

words to a vocabulary is through encountering new words in reading passages or speaking contexts multiple times. Words learned in this way are going to stick in a person's vocabulary better than words learned through specific instruction. Teachers can help students build their vocabularies, and improve their reading comprehension, by encouraging extensive reading.

"You can't knock this," Pressley said. "It's a very good thing to do."

In addition to increasing vocabulary, extensive reading contributes to building a wide store of background knowledge and developing a better understanding of the structure of language. Extensive reading also increases the chances a reader will develop fluent, automatic recognition of words because of the number of times the reader sees each word in text. Pressley reminds teachers that these benefits are not restricted by age or ability.

"Encouraging extensive reading is possible throughout elementary schooling and for all students, for even the youngest and most immature readers can 'read' picture books," he writes in the Handbook of Reading Research.

### **Encourage students to ask themselves why the ideas related in a text make sense**

When readers can relate new information in text to something they already know, they are much more likely to understand and remember what they are reading. To help them build these relationships, encourage

students to ask themselves why a fact is true and to figure out the answer to the question based on what they already know.

"All theories of comprehension deal with this business of prior knowledge," Pressley said.

Good readers automatically relate relevant prior knowledge to a passage they are reading, he said. Weaker readers, however, have trouble relating prior knowledge and may make irrelevant connections that impede their understanding.

### **Teach self-regulated use of comprehension strategies**

Pressley advocates exerting conscious control over processes—using strategies—to improve comprehension. Among the strategies he recommends are ensuring that readers know *why* they are reading a passage, associating prior knowledge explicitly, underlining important information, and taking notes.

"Very good readers do these things," Pressley said. "Lots of kids don't do these things."

### **Summary**

Studies have found all of Pressley's recommendations to be effective for improving reading comprehension. To this point, however, research has focused on only one element at a time.

"We have no idea what would happen if we actually tried to do all of these things," Pressley said. "One of the things that we do know is that elementary classrooms are complex enough with enough things going on that you *could* do all of these things."

It is interesting to note how various Learning Strategies and Content Enhancement

Routines from the Strategic Instruction Model can be used to address several of the factors in Pressley's reading framework. Clearly, the *Word Identification Strategy* can be used to teach students to decode words. The *Vocabulary Strategy (LINCS)* and the *Clarifying Routine* can be used to teach students vocabulary meanings. To bolster comprehension and to assist students in making sense of the text, the *Paraphrasing Strategy*, the *Self-Questioning Strategy*, the *Visual Imagery Strategy*, and the *Survey Routine* can all be used to the student's advantage. Hence, many of the strategies and routines included in SIM can become part of an overall reading program that, of necessity, must consist of many factors.

### **The SIM connection**

Consistently, the research findings of the Center for Research on Learning have underscored how very important it is for at-risk students to be provided with instruction that is well designed and comprehensive in nature. These students generally do not benefit from instruction that is sporadic or uncoordinated. Pressley has very convincingly argued that fluent readers are best developed when the instruction they receive is balanced and takes into account the array of factors described in this article. As SIM instruction is offered to students with reading problems, it is important to consider all of the factors in Pressley's framework and not just the ones that a specific SIM strategy is designed to address.

# Study shows benefits of strategy in general education classroom

Today's debate on inclusion—how to integrate students who have special needs in general education classrooms or even whether such instruction is beneficial—has captured the attention of the public. At the same time, it raises concerns in the educational community about how to meet the needs of students of varying ability in a single classroom.

David Katims, a Strategic Instruction Model Trainer from San Antonio, Texas, is taking steps to address this issue. Katims conducted a study of the effectiveness of the *Paraphrasing Strategy* in general education middle school classrooms. Past studies validating the benefits of students learning the strategy have focused on low-achieving students who receive intensive strategy instruction outside of the general education classroom. In Katims' study, students of all abilities received the same strategy instruction within the context of a general education classroom. The study found that, overall, students who used the strategy improved their scores on comprehension tests.

The school chosen for the study comprised 89 percent Mexican-American students, 7 percent Anglo students, and 4 percent African-American students. The state has identified the majority of students at the school as at risk. Of the 207 students who participated in the study, 25 were identified as having learning disabilities. Again, an important aspect of the study was that all of these students

received strategy instruction at the same time and to the same degree as students without learning disabilities.

## Procedure

Each of the 10 classes of seventh-grade students selected for the study was assigned to either the experimental or control group. Students in individual classes were not separated for the study.

mastery of state curriculum objectives.

Teachers for classes in the experimental group presented 20 minutes of instruction in the

*Paraphrasing Strategy* during each class period for six weeks (15 sessions). The remainder of the class period consisted of the same Reading Workshop program instruction as the

## Steps for Paraphrasing

- |               |  |
|---------------|--|
| <b>Step 1</b> | Read a paragraph.  |
| <b>Step 2</b> | Ask yourself, "What were the main idea and details in this paragraph?" |
| <b>Step 3</b> | Put the main idea and details into your own words.                     |

Figure 1

Classes in the control group continued a district-mandated reading program called Reading Workshop, which consists of three parts:

- **Reading.** Students read materials they select independently, silently read a passage selected for the whole group, or listen as the teacher reads a selection.
- **Responses.** Students respond—in writing, verbally, or using art and drama activities—to what they have read. Responses often consisted of summaries and reactions written in notebooks.
- **Minilessons.** Teachers present short, intensive, and direct instruction on a specific topic. In the study school, minilessons focused on

control group received.

The study used Time Readings\* for pretests and posttests for both the control and experimental groups. Teachers also used Timed Readings, which consist of written passages and 10 multiple choice comprehension questions, when providing strategy instruction to the experimental group.

Teachers used the following modified version of the Strategic Instruction Model stages to present the *Paraphrasing Strategy*:

1. Pretest
2. Describe the strategy
3. Model the strategy

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\*Timed Readings are available from Jamestown Publishers, 4255 W. Touhy Ave., Lincolnwood, IL 60646-1975, (800) 621-1918.

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4. Verbally elaborate and rehearse
5. Practice acquisition
6. Undertake advanced practice
7. Posttest and celebrate

During most of the 15 class periods, teachers used the Cue-Do-Review Sequence and encouraged students to practice the strategy. To further help students during the practice period between pre- and posttests, students received cue cards, and teachers displayed large posters prompting students to use the strategy (Figure 1). Other posters reminded students to look for the main idea in the first sentence of a paragraph and to look for repetitions of the same word or words in a whole paragraph (Figure 2).

## Results

Results of the study indicated that students who received instruction in the Paraphrasing Strategy performed better on reading comprehension evaluations than students who followed the standard curriculum (Figure 3). In percentage terms, students in the experimental group showed a 17 percent increase in comprehension scores compared to a 3.5 percent increase in scores for students in the control group.

The results indicated the strategy was moderately effective in improving reading comprehension scores for students with learning disabilities, though the difference in gains between the experimental and control groups was not statistically significant. In terms of percentage gains, students with learning disabilities in the experimental group improved 22 percent compared to a gain of 11 percent for students with learning

### Finding the main idea

#### Questions to ask

What is this paragraph about?

This paragraph is about \_\_\_\_\_

What does it tell me about?

It tells me \_\_\_\_\_

#### Places to look

1. Look in the first sentences of the paragraph
2. Look for repetitions of the same word or words in the whole paragraph.

Figure 2

disabilities in the control group.

## Conclusion

In an article describing this study in the *Journal of Adolescent & Adult Literacy*,

authors David Katims and Sandra Harris hail the potential for improving students' reading comprehension abilities when all teachers support the use of instructional techniques such as the *Paraphrasing Strategy*.

## Results

	Pretest	Posttest	Percent Gain
	Mean	Mean	
<b>Control</b>			
All	.57	.59	3.5
LD	.47	.52	11
<b>Experimental</b>			
All	.59	.69	17
LD	.55	.67	22

Figure 3

*Journal of Adolescent & Adult Literacy*. The article was written by David Katims, who teaches educational psychology and special education courses with the Division of Education at the University of Texas, San Antonio, and Sandra Harris, superintendent at Castle Hills First Baptist School in San

“As the world’s classrooms become more diverse in terms of the types of learners served in general education, instructional procedures that benefit all students will be invaluable to regular classroom teachers,” they write.

*For more information:* The study is described in “Improving the Reading Comprehension of Middle School Students in Inclusive Classrooms,” in the October 1997

Antonio and instructor at the University of Texas.

## Index for Volume 9 Issues 1-6

### Vol. 9, No. 1

**Lead article:** *The Survey Routine: A new way to help students to "see the forest,"* by Jean Schumaker, KU-CRL. This article provides an overview of the *Survey Routine*, which is designed to give students the big picture of a reading assignment before they tackle the facts. Includes examples of the TRIMS Learning Sheet

**For the Classroom:** *The Test-Taking Strategy empowers students to succeed*, by Maria de los Angeles Gonzalez, University of North Texas. Maria adapted the *Test-Taking Strategy* to Spanish. Includes 11 cue cards in Spanish.

*Index for Volume 8, Issues 1-6:* A summary of the content presented in Volume 8 of *Strategram*. An order form for back issues of *Strategram* is available on page 8.

### Vol. 9, No. 2

**Lead article:** *Rethinking staff development: Partnerships work to meet students needs*, by Carl Skordahl, Director of Special Education, Osseo Area Schools, Minnesota. Carl describes his district's approach to staff development efforts that aim to create partnerships for special and general education staff. Carl describes two projects meeting the criteria established for partnership staff development.

**For the Classroom:** *Thinking Like a 12-Year-old*, by Elizabeth Turner Catarius. Elizabeth describes her approach to intro-

ducing the concept of strategic learning to a large group of 12-year-olds. *Creating a classroom notebook*. Kay Younginger shares her design for a classroom notebook to reduce paper management for teachers and place the responsibility for make-up work on students. *Learning Strategies Construction Company*. Sally Pollock's visual/tactile method of reinforcing the *Sentence Writing Strategy*.

**Strategic Instruction Model:** *A subtle, yet significant, name change*. An explanation of the change of the Strategies Intervention Model name to Strategic Instruction Model.

### Vol. 9, No. 3

**Lead article:** *Using Paired Associates with FORCE: Combining strategies boosts study skills*, by Elaine Fine, SIM Trainer from New Jersey and an associate professor in the graduate program at Montclair State College. Elaine describes the powerful combination of the *Paired Associates Strategy* with a test preparation strategy called *FORCE* that addresses poor study habits.

**For the Classroom:** *Meat & potato details on a paragraph PLATTER*. Barbara Davis' mnemonic device to use when teaching the *Paragraph Writing Strategy* to help students memorize and recall the requirements for detail sentences. *Preskills training helps students prepare for strategies*, by Barbara Glaeser. Barbara has developed ways of helping students prepare for formal strategy instruction

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Higgs, special education specialist in Texas, teams with art teacher Norman Sugg to present the *Self-Questioning Strategy* to a class of ninth-graders.

### Vol. 9, No. 4

**Lead story:** *Student motivation and commitment: A cornerstone of strategy instruction*, by Mike Hock, research associate with the Center for Research on Learning. Mike describes his work with the Possible Selves program, designed to increase student motivation.

**For the classroom:** *Paragraph Shuffle deals winning hand for students*. Mary Ann Caraco's game to help students master the *Paragraph Writing Strategy*.

*CEC seeks stories for awareness campaign*. The Council for Exceptional Children sought success stories from classroom teachers, administrators, researchers, parents, and students in support of special education.

### Vol. 9, No. 5

**Lead story:** *Routines to strengthen learning: An in-depth look at Content Enhancement*, by Keith Lenz, research scientist at the University of Kansas Center for Research on Learning. Keith takes an in-depth look at *Content Enhancement Routines*, what they are, and how they fit

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together. Includes descriptions of all Content Enhancement Routines, a graphic depicting relationships, and myths associated with the routines.

*Introducing www.ku-crl.org.* A note announcement the new KU-CRL Web site.

**Vol. 9, No. 6**

**Lead story:** *Lab offers strategic help after school: Project's success helps spread SIM ideas,* by Julie Tollefson, editor, the University of Kansas Center for

Research on Learning. Bonnie Kitchens, teacher of exceptional children and certified SIM Trainer, and Laura McGrail, school psychologist, worked together to develop a Model Learning Lab in conjunction with a junior high

school's Youth Services Center.

*Hot off the presses: The Clarifying Routine,* an announcement of the newest guidebook in the Content Enhancement Series.

**For the Classroom:** *COPS Cues: Reminders for students & teachers.* Aven Tallman and Cindy Bucy share cue sheets they developed for students to laminate and store in notebooks.

*Taking the plunge, writing for Strategram.* A description of the many ways readers can contribute to *Strategram*.

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