SOUTHWESTERN OREGON COMMUNITY COLLEGE

Reading Comprehension

Purpose

Kathrynn DiTommaso and the National College Transition Network identifies practice briefs designed to disseminate emerging college transition research from a variety of sources to strengthen reading comprehension.

Why Teach Reading Comprehension Strategies in College?

It is common for students transitioning to college to have difficulties with reading comprehension, and the need to provide students with concrete strategies for approaching reading tasks is well-documented (Malena & Atwood Coker, 1987). Studies have shown that students skilled in reading comprehension tend to interact with course material actively through paraphrasing, summarizing, and relating the material to personal experience, while students less-skilled in reading comprehension tend to underline or reread passively without the use of specific strategies (Dowhower, 1999; Duffy et al, 1987; Long & Long, 1987).

Students who fail to employ reading strategies tend to experience difficulty inferring conceptual meaning, relating to what they have read, self-monitoring their learning and understanding, and evaluating texts for clarity and consistency (Duffy et al, 1987; Long & Long, 1987; Underwood, 1997). These difficulties can also lead to decreased engagement in the current reading task, as well as a lack of motivation when approaching new reading tasks (Dowhower, 1999). As students transitioning to college encounter texts of increasing difficulty, the need to approach reading tasks strategically greatly increases (Dowhower, 1999). Research has demonstrated that direct instruction in the use of reading strategies can improve the reading comprehension skills of students, and students lacking in these skills who receive such instruction often become indistinguishable from more skilled readers (Dowhower, 1999).

What Does Research Say about "Skilled Readers"?

The act of reading involves a communication between author and reader. Skilled readers use their prior knowledge of concepts and experiences to ask how they can make sense of the content they are reading (Bacon, 1983). Skilled readers also make connections between texts, from the text to the outside world, and from the text to their own experience while reading. They tend to make mental pictures of what they read, and they ask questions of themselves and of their instructors to enhance their understanding of the text (Keene & Zimmerman, 1997; Tovani, 2000).

Strategies that have been demonstrated to help less-skilled readers improve their comprehension include: **determining importance** while reading, **self-monitoring** comprehension; **making predictions and inferences** about the text, and **questioning** while reading (Dole et al., 1991; Irwin & Baker, 1989; Pearson, 1985; Pressley et al., 1990).

What are Specific Strategies I Can Teach My Students?

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Visual Structures or Graphic Representations. These include maps, chains, charts, webs, trees, matrices, and diagrams. All provide a visual representation of a given text's content in order to facilitate comprehension. By showing key parts of a reading and the relationship among those parts, they can help students identify the most important ideas and how they are organized (Dowhower, 1999; Jones, Pierce & Hunter, 1989).

When constructing a graphic representation, students first survey the text, giving special attention to the title, subheadings, and illustrations in order to determine the topic and objectives of the text. Students then begin to form a theory of the structure of the text and which graphic representation (map, chart, web, etc.) might best represent it. Students then read the text with that graphic representation in mind, leading them to approach their reading with a specific purpose (Jones, Pierce & Hunter, 1989). After reading the text, students complete the graphic representation, using the questions or categories provided by the instructor as a guide.

Students may flesh out the graphical representation by adding information about their personal experiences with the topic or any background knowledge that they may possess. To further facilitate comprehension, students can then use the information in the graphic representation to write a summary of the text.

Researchers claim that "graphic organizers and outlines are fundamental to skilled thinking because they provide information and opportunities for analysis that reading alone and linear outlining cannot provide" (Jones, Pierce & Hunter, 1989, p. 25). Graphic representations can also foster nonlinear thinking and promote "in-depth processing and rich contextual associations," because they can be read from left to right or top to bottom, unlike linear outlines or written summaries (p. 21).

Depending on their specific goals, instructors may also choose a specific type of graphic representation for students to complete. Story grammar (or story structure), for example, is often used as a way for students to comprehend narrative texts with story elements such as characters or plot. Students fill in maps that are labeled with such elements as setting, problem, goals, and resolution, forcing them to read actively in order to complete the reading task (Davis & McPherson, 1989; Dowhower, 1999). The theme of the story is generally indicated in a circle the center of the map. Each of the main events can then be noted in circles that proceed in clockwise fashion around the central theme. Other important elements of the story are then attached chronologically to the main-event circles. Instructors can also create variations of this story map to include inferences based on the explicit information recorded in the map or to represent cause-and-effect or comparison/contrast relationships in the text (Davis & McPherson, 1989).

A *fishbone map*, also known as a *herringbone*, is also widely discussed in the literature as a technique that can help students organize and understand information in dense textbook chapters. The map provides a way to represent the causes and the end result of a complex historical event or a scientific phenomenon (an election, a war, a nuclear explosion, global warming, etc.). Students draw a diagram resembling a fish skeleton: a long horizontal line (the "backbone"), from which extend several shorter diagonal lines (the "ribcage"). Students plot answers to the questions "who, what, when, where, how, and why" on the diagonal ribcage lines, and then write the main idea of a given reading along the backbone line (Jones, Pierce & Hunter, 1989; Walker, 2000). For example, if students were reading about the biological basis of behavior in the beginning chapter of a psychology textbook, they could use a fishbone map to represent a reading selection on the functions of the endocrine system or the nervous system. Students would use each bone on the skeleton to answer specific questions about how the system functions (what it does, when, how and why it does it, etc.) and then write the general purpose of the system along the backbone.

For a detailed lesson plan using a fishbone map, please see *GED 2002 Teachers' Handbook of Lesson Plans* by Iris Strunc at www.floridatechnet.org/GED/LessonPlans/LanguageArtsReading /readinglesson34.pdf.

Similarly, *spider maps* can be used for longer textbook passages. Students write the theme or topic in a center circle and then draw main-idea lines extending out from the center. More details are then added, branching off from the main-idea lines (Jones, Pierce & Hunter, 1989).

Instructors can also ask students to fill out *compare and contrast matrices* with separate columns to show similarities and differences between two characters in a reading or between two things, places, ideas, or events in a textbook chapter (Jones, Pierce & Hunter, 1989). For example, a matrix can be used with a selection from a biology textbook to compare and contrast qualities of a plant cell and an animal cell with rows for the different attributes of each cell.

Arrows can be added to maps to represent a series of events, a cycle, or the nature of an interaction (Jones, Pierce & Hunter, 1989).

For more information on graphic representations, please see www.graphicorganizers.com.

Listening-Thinking Activity (LTA) and Directed Reading-Thinking Activity (DR-TA). These strategies help students develop background knowledge and establish a purpose while reading (Walker, 2000). In LTA and DR-TA, the teacher develops students' predictive comprehension by asking them what they think a certain text is about based on the title. The teacher then reads aloud a section of the text (LTA) or directs the students to read a specific section (DR-TA). Students then revise their predictions; this process is repeated until the entire text is discussed as a whole (Bacon, 1983; Dowhower, 1999; Irwin & Baker, 1989; Walker, 2000).

Reciprocal Questioning (ReQuest). In this strategy, students improve comprehension by developing their self-questioning skills (Walker, 2000). The students and the instructor first read a passage silently. The instructor then models how to ask appropriate questions about the selection while integrating background knowledge and textual information. Finally, the students and the instructor take turns asking and answering one another's questions about the text (Bacon, 1983; Walker, 2000). This strategy has been shown to improve the reading comprehension of less-skilled readers by teaching them to formulate questions as they read (Bacon, 1983). In addition, instructors can use the students' answers to the various questions that are generated to model how to make inferences and predictions when reading a text.

Question-Answer Relationships (QAR). Several studies have demonstrated the benefits of focusing students' attention on how they should vary their approaches for answering questions (Pearson, 1985). In this strategy, students classify question-answer relations by determining which are text-explicit (coming from the same sentence in the text), which are text implicit (coming from different parts of the text), and which are script-implicit (motivated by the text but coming from the reader's prior knowledge) (Pearson, 1985).

Students can also be taught question-answer relationships by noting the differences among "right there," "on my own," "think and search," and "author and you" questions (Walker, 2000, p. 277). For "right there" questions, words from the text can be used to answer the questions, while "on my own" questions require the student to fill in missing information from their own experience and knowledge. "Think and search" questions require the student to read the text carefully to find the answers that fit together, while "author and you" questions require students "to think about what they know, what the author tells them, and how this information fits together" (p. 278). Research has demonstrated that students of varying abilities and ages can improve their ability to

comprehend new texts and monitor their own comprehension after receiving instruction in question-answer relationships (Pearson, 1985).

Question-Generation Strategy. Teaching students how to formulate questions about a text can help them identify the most important information (Dole et al, 1991; Walker, 2000). In this strategy, students take a more active role as readers by generating their own questions. Students can be introduced to self-questioning by developing pre-reading questions with the instructor and then by formulating questions about main ideas while reading (Long & Long, 1987). Studies in reading comprehension have shown that students who were taught to generate questions from the main ideas of paragraphs outperformed students who were not taught to use self-questioning strategies (Long & Long, 1987). When students ask themselves questions before and/or during reading, they tend to read the text in search of answers, engaging in active comprehension (Underwood, 1997). When they revisit questions that were generated at the start of a reading task, they can reflect on the sense they made of the text and are able to assess their own comprehension (Underwood, 1997).

K-W-L (What I Know, What I Want to Know, What I Learned). This strategy is widely used to help students tap into prior knowledge, set purposes for reading by determining what they want to know about the topic, and identify what they learned while reading (Dowhower, 1999; Walker, 2000). For the first two steps, the instructor leads a discussion in which students brainstorm what they already know about a topic, and then the instructor helps them think of more general categories of information that they might encounter or want to learn about while reading a given text. In the third step, students check their questions to determine whether or not the text addressed them and how further reading might help them answer any unanswered questions (Ogle, 1986). Similarly, the *K-W-L Plus* strategy adds a writing component that consists of mapping and summarizing after answering questions in these three areas (Dowhower, 1999).

Self-Assessment. Recent research has identified *self-report rubrics, checklists,* and *portfolio entries* as ways for students to monitor their comprehension and their use of various reading strategies. These techniques can help students to pinpoint when they begin to lose focus as well as understand how various reading strategies can assist them in comprehending text (Dowhower, 1999; Walker, 2000).

For example, one specific self-assessment technique, which goes by the acronym FLIP, can help readers assess the difficulty of a given text in relation to their personal experiences and reading abilities (Underwood, 1997). Students are taught to preview the text and to decide on its *friendliness* (F) by looking at headings, pictures, graphs, and so on. They sample the *language* (L) of the text and estimate the level of difficulty of the vocabulary. Then, they decide how *interested* (I**)** they may be in the text, and finally they assess their level of *prior* (P) knowledge in relation to the topic. Techniques such as FLIP can encourage students to expect and find solutions for predictable difficulties that they may encounter while reading (Underwood, 1997).

Similarly, the Self-Monitoring Approach to Reading (SMART) has been found to help older readers in assessing their own reading comprehension. In this technique, instructors ask students to stop reading at the end of each paragraph and to ask themselves whether they understood the main points of what they read; whether it "clicks" or "clunks" (Underwood, 1997, p. 79). If it "clicks," students put the meaning of that section into their own words, and if it "clunks," students identify what went wrong and formulate questions that might lead to resolving their confusion.

Experience-Text Relationships (ETR). This strategy helps students link background *experiences* (E) to narrative story *text* (T) during pre-reading, guided reading, and post-reading. Students examine the relationship between the text and their own experiences as a way to increase their engagement in and understanding of the reading task (Dowhower, 1999). The instructor can begin ETR by facilitating a general discussion about what the students know about a given topic from their experiences and then by tying those experiences directly to the text to be

read. Students make predictions about the text based on the discussion, and then read the text to check the validity of their predictions. This reading is followed by another class discussion in which students compare and contrast key ideas from the text with their personal experiences and predictions (Walker, 2000).

Why Do Students Need Multiple Strategies?

College transition students often find that the many types of texts and reading experiences found in college-level courses are overwhelming to organize and comprehend. In addition, students are frequently required to demonstrate their comprehension of various texts in comparative analyses or other applications of their understanding. As a result, researchers emphasize the importance of tailoring instruction in a given reading strategy to the demands of the specific reading task and topic and providing students with concrete practice in how to apply strategies (Dowhower, 1999). The list of strategies provided here should be viewed as a repertoire of diverse comprehension strategies that can be used in varying ways depending on student needs, teacher goals, and the demands of the reading task. By embedding strategy instruction in classroom content and providing students with a range of strategies, students with histories of reading comprehension difficulties can become more skilled readers and more successful in approaching the many types of texts and reading tasks required for college level work (Dowhower, 1999).

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