Tools for Students: Strategies To Build Student Comprehension of Text and Lecture Content

A major challenge for teachers is to ensure that students truly comprehend the information that they read in textbooks or have presented in lectures. Poor students are often 'passive' learners' who use very few strategies to promote their understanding of difficult material.

Several strategies are presented below that can help students become more active and independent managers of their own learning. Instructors using any of these techniques should remember, however, that the strategies are only effective if the student has truly mastered their use. When introducing a particular technique to students, the instructor should first demonstrate several examples for the class. Using a 'think-aloud' approach, the instructor can take students through the examples, for instance, allowing the students to hear his or her thought processes are at every stage of the strategy as the instructor creates a graphic organizer of an article on an overhead transparency. When students appear to understand the approach, they should be given opportunities to try additional examples, with the instructor circulating through the room to give feedback about their performance. Once students show that they are able to use the approach successfully, they can then be allowed to use it independently. However, the instructor should also monitor proficient students to verify that they continue to use the techniques correctly over time.

The four student strategies presented below include graphic organizers, multi-step text review, expository self-questioning, and note-taking self-questioning.

1.   *Graphic Organizers.* Teachers often have students use graphic organizers as a means of graphically representing the relationship between ideas and facts in expository text. Graphic organizers typically resemble flow-charts, with geometric shapes, or cells. Each cell contains an important fact or concept, sometimes with a graphic or picture added. Horizontal, vertical, and diagonal lines link the cells together and represent the logical relationships between the ideas or concepts that the cells contain.

Suggestions for using graphic organizers:
- Students seem to retain information more effectively from a graphic organizer if exposed to them after, rather than before, reading a text selection.
- Students may come to over-rely on instructor-created graphic organizers and should be encouraged when appropriate to learn how to create their own graphic organizers independently when reading new

expository text. For example, one study (Darch, et al., 1986) found that students using graphic organizers had superior recall on narrowly focused tests that specifically tested what was taught in the classroom but that these students did less well when given global tests for which they had not had the opportunity to study in advance using graphic organizers.

- Having pairs or groups of students create graphic organizers of assigned expository text can be a powerful use of cooperative learning.
- Exceptional student examples of graphic organizers can be posted in the classroom for all children to use as reference tools.

2.   *Multi-step Text Review*. Students can increase their comprehension of expository text by following a strategy of previewing headings, posing questions about the content, and reading the. This preview/review process, sometimes referred to as SQ3R, has the following steps

i. <u>The student first reads all headings and subheadings in the selection</u>. This simple preview provides the student with a general mental map of the main topic items.

ii. <u>The student reads each subheading, looks up and recites it from memory, then looks back at the subheading to ensure that it was read correctly</u>. Subheadings are explicit markers of important topics or concepts. The cycle of reading each subheading, reciting it, and then checking the accuracy of the recital helps to embed the fact or concept into the student's memory.

iii. <u>The student thinks of several important questions about each subheading</u>. By proposing anticipatory questions, the student takes an active role in preparing to understand the content of the text.

iv. <u>The student reads the body of the text and locates key information</u>. While reading the text selection, the student looks for answers to the questions that he or she posed in the previous step and identifies other information that appears to be important.

v. <u>The student again reads the subheadings and refers to the text to answer questions for each heading</u>. After re-reading each heading, the student scans the section to locate answers to questions that he or she had posed and notes other important information.

vi. <u>The student rehearses the text</u>. The student strengthens the memorization of key points by reading each subheading again, covering the passage associated with the heading, and recalling from memory all relevant information associated with each subheading. The student then again checks to passage to make sure that he or she has not overlooked a central point.

vii. (Optional) The student rereads the entire passage.

Suggestions for using the multi-step text review:
- This review process has a number of steps that require a student to be self-motivated. To help less-motivated learners, a peer or adult tutor or parent can be trained in the process and provide support, encouragement, and feedback to the student as he or she completes the review process.

3. *Expository Text: Self-Questioning*. Struggling students may become 'inactive learners' when given expository text to read. Unlike better or more experienced readers, these less-skilled students may not apply many comprehension strategies to text and thus obtain only a limited grasp of its content.

   A student-directed reading comprehension technique that can boost comprehension is self-questioning. Whenever a student reads a new passage, he or she follows five steps:

   i. The student answers the question "For what purpose are you studying this passage?" with a self-reminder that he or she is reading the passage in order to answer key questions about its content.
   ii. The student locates all main ideas in the passage and underlines or highlights them.
   iii. For each main idea that the student highlighted, he or she generates a question.
   iv. The student reads through the passage again to answer each question that he or she generated.
   v. The student reviews all main ideas, questions, and answers in the passage.

4. *Student Notes: Self-Questioning Review*.   Lecture with note-taking is virtually a universal means for teachers to convey information to students, particularly in middle and high school. Students vary, however, in their ability to review notes efficiently, identify the main lecture points, and memorize this content. One review strategy that has demonstrated its value is self-questioning review. The student is trained to review notes from a lecture and – using question 'stems' similar to those in Figure 1 (King, 1992)—to generate a series of questions relevant to the lecture content. Then the student returns to the lecture notes to attempt to answer this series of self-generated questions.

Figure 1: Self-Questioning 'Stems' (from King, 1992)
▪ **Explain why…** ▪ **(Explain how…)**
▪ **What is the main idea of …?**

▪ **How would you use … to …?**
▪ **What is a new example of …?**
▪ **What do you think would happen if …?**
▪ **What is the difference between … and …?**
▪ **How are … and … similar/different?**
▪ **What conclusions would you draw about …?**
▪ **How does … affect …?**
▪ **What are the strengths and weaknesses of …?**
▪ **What is the best … and why?**
▪ **How is … related to … that we studied earlier?**

References

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