

Picture Removed

# THE FIRST THING TO THINK ABOUT IS THINKING

**V**ickie thinks studying means getting facts to stick in your brain, so she straps her math book to her head and waits 45 minutes. She thinks that's enough to get her an "A." When she gets an "F" instead, she blames her teacher, her mother, her cat. It never occurs to her to blame her methods.

Here's a better idea: Put Vickie's learning in her hands, not on her head. Teach her to think while she's learning. Use simple questions and strategies to help her focus on what she knows, what she doesn't know, and how she can go about learning what she needs. Educational re-

searchers call this "metacognition."

"Metacognition is thinking about thinking. It teaches kids to take a minute to evaluate what they're studying and why. It teaches them to adjust their focus based on the reason for studying," says Frank Hancock, educational coordinator for Sylvan Learning Centers in the Washington, D.C., area. It's at the root of study skills.

"Study skills can't be taught in isolation; they're a bore. Underneath all these isolated study skills is the 'metacognition' . . . that has to take place," says Carol Springer, educational diagnostician at Wake, Kendall, Springer, Isenman, and Associates in the District of Columbia.

BY EVELYN PORRECA VUKO

"Kids need to be responsible for their own progress in school," says Springer, noting that some of her colleagues believe this should happen by third grade.

Skillful studying begins by asking "Why?" "Why is the question you have to ask when you are going to think," says Hancock. "As you're studying, that question should come up 50 percent of the time. If it does, kids are really thinking about what they are studying," he adds.

Springer suggests that teachers and parents should "talk through an organized plan for each particular assignment." This plan should include self-monitoring questions and study strategies that suit the task and complement students' learning styles.

The following questions can be adjusted for all age groups and for all types of assignments. They are adapted from the work of William G. Huitt of Valdosta State University, Valdosta, Georgia, and Wilma H. Miller of the University of Illinois in Normal, Illinois.

Before beginning each assignment, have Vickie and her fellow students answer the questions aloud. Or make a checklist they can complete as they move to each new task. Repeat the process until they analyze their thinking automatically:

- Do I understand why I have to read this material? For a test? Report?
- What do I already know about this subject, topic, issue?
- Can I make some predictions about this material even before I read it?
- Do I know all that I need to know about this?
- Do I know where I can get some more information?
- How much time will I need to learn this?
- What are some strategies and tactics I can use to learn this?
- How can I spot an error if I make one?
- Should I read the first sentence of a paragraph more than once?
- Did I understand what I just read?
- Can I remember it well enough to retell it after I finish reading? To answer questions on a test?
- How can I revise my study plan if

## **Skillful studying begins by asking "Why?"**

this one is not working?

Then, together, develop study strategies that are compatible with students' learning styles. The two following ideas work best with kids who learn visually, the ones who have to see it to learn it and who remember best when they write it down.

Since lots of homework in middle school and high school involves textbook reading, teach Vickie and your other students to focus on note-taking and summarizing. Here is a strategy adapted from the work of Walter Pauk of Cornell University. For small groups of elementary school students, the process can be done orally, aided by a flip chart or chalkboard.

Begin by drawing a vertical line that divides a piece of paper or a section of chalkboard into two columns. Label the first column, "Questions" and the second, "Answers." Have students begin reading silently. Each time they read something they don't understand, have them stop and jot it in the "Questions" column. They are to continue noting questions until they finish reading.

In the last step, each student returns to the text to answer his or her questions, noting the answers in the right-hand column across from the question. In this process, not only do they constantly monitor their reading, they also produce notes they can use later to study for tests.

Or try visual imagery to bolster thinking and comprehension in elementary and middle school students. It's characteristic of good readers to form mental pictures as they read. These "mental movies" form a road map of the material and reinforce memory. This strategy is adapted from the work of Wilma H. Miller and Nanci Bell.

This method requires some homework on the part of teachers and parents until students get the hang of it. It starts with identifying "key words":

Using the daily reading assignment, skim through the selection and pull out important words, especially ones ripe with imagery. Make a list. Discuss with the class the images they visualize when they say each word. Then have students take turns reading the selection aloud and discuss whether their images reflect the material.

A variation is for you to read the selection aloud. As you read, each student places a coin or colored square on the table each time a word produces an image in his or her mind. Then ask various students to retell the story using their coins or squares.

Another way that you can put Vickie and her fellow students in the catbird seat of their own learning is by encouraging parents to be actively involved. "Parents need to remember what a number of studies have proved—that the single most important predictor of success in a child's life is parental involvement," says clinical psychologist and author Ruth Peters.

By applying these hints, you can show Vickie and her classmates that 45 minutes of self-monitored thinking is just about the best study method they can strap to their brains. ✍

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Resources: *The Complete Reading Disabilities Handbook* (Prentice Hall, \$29.95), by Wilma H. Miller. Orders: (800) 288-4745; *Visualizing and Verbalizing* (Academy of Reading Publications, \$49.95), by Nanci Bell. Orders: (800) 233-1819; play "Thinking Games" at the University of Toronto's Learning to Learn site, <http://snow.utoronto.ca/Learn2/resources/games.html>.

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