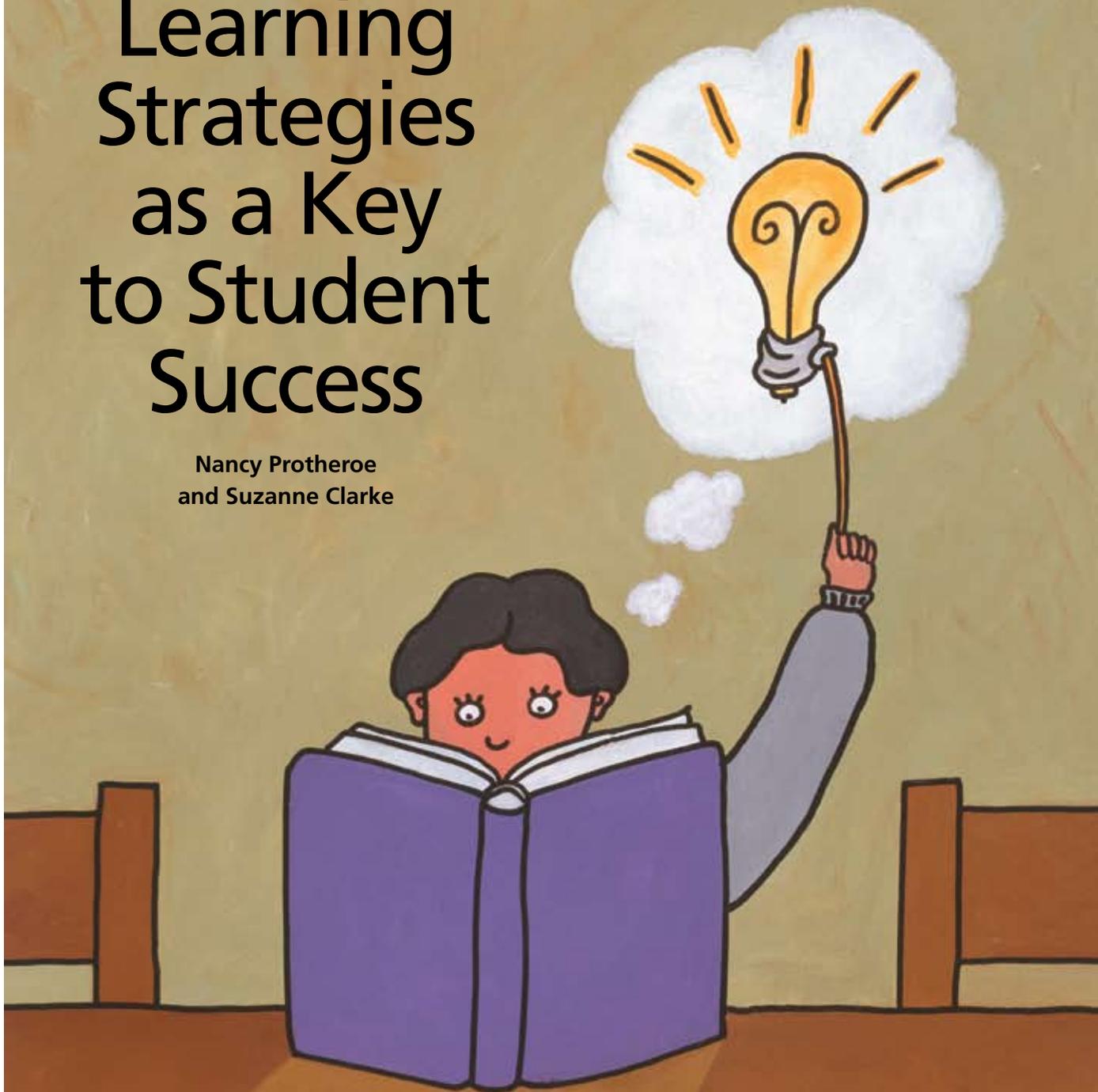


Learning Strategies as a Key to Student Success

Nancy Protheroe
and Suzanne Clarke



Teaching metacognitive skills to students, including those with learning disabilities, improves their academic performance.

In schools and classrooms across the country, educators are working to raise the achievement of all students to ever-higher levels. Yet, often missing in discussions about how to raise academic performance is the *way* in which individual students go about learning. One aspect of a student's approach to learning is his or her use of learning strategies.

Schumaker and Deshler (2006) define a learning strategy as “an individual’s approach to a task. It includes how a person thinks and acts when planning, executing, and evaluating performance on a task and its outcomes.” Much of this thinking about learning is done unconsciously. For example, most of us automatically slow down when reading content that is difficult for us to understand. We also make use of a variety of strategies for helping us organize and remember—both key elements of the learning process.

As with many characteristics about people, however, there is wide variation in terms of the number of learning strategies we know and how well we use them. For example, think of a student you have known who approached new types of tasks with enthusiasm and who was typically able to “figure out” how to apply what he or she already knew to tackling a new problem. Now think about another child who reads a textbook but, when asked to summarize the main points in the chapter, can present only a disjointed list of thoughts with little sense of how they fit together. In math, this child might use only one strategy when approaching a problem—even when that method repeatedly fails.

Oftentimes, the difference between these two children is neither cognitive ability nor content knowledge. Instead, the second child lacks metacognitive skills. Activities such as planning, monitoring comprehension, and evaluating progress toward completion of a learning task are metacognitive in nature. Students with better-developed metacognitive skills typically have a better sense of their own strengths and needs related to the learning process. They have a larger repertoire of learning strategies—again, many of them used almost unconsciously. And perhaps most importantly, they are likely to select and use the learning strategy that is most effective in helping them address a particular learning task.

Researchers Wang, Haertel, and Walberg (1993/1994) can help us understand just how important such



metacognitive skills are to student learning. They created a knowledge base of 11,000 statistical findings from a wide range of studies on student learning. Their intent was to identify the relative strength of the contribution of several major factors. They found that “student aptitude was the most influential of the six broad types of influences. Among the categories of student aptitude, a student’s metacognitive processes—that is, a student’s capacity to plan, monitor, and, if necessary, re-plan learning strategies—had the most powerful effect on his or her learning.”

An increasingly strong research base points to the potential of strategy instruction to help support struggling learners, including students with learning disabilities. Specifically, teaching students how to use learning strategies, and helping them choose and implement them effectively, helps to strengthen their metacognitive abilities—and this, in turn, connects to improved student learning. Good strategy instruction also can help. For example:

- Improve student performance,

especially of students who have not previously developed effective metacognitive skills;

- Increase student independence and engagement with learning; and
- Help students realize that it is sometimes the use of ineffective strategies—not lack of ability—that hinders performance.

This last factor is especially important because it may help to increase motivation. Students who have repeatedly experienced failure in school due to a lack of “tools” that can help them approach learning efficiently are likely to become less persistent in addressing school tasks. Acquiring some additional tools—learning strategies—increases their likelihood of success, and may also increase their willingness to take on new challenges.

How to Teach Learning Strategies

“Researchers and practitioners who have studied and applied learning strategy instruction in the classroom generally agree on the *how* of instruction” (Clarke, 2008). Three components

of the skill are considered essential—knowledge of what the strategy is, how to apply it, and when and where to use it (Jones, Polincsar, Ogle, & Carr, 1987). Effective instruction must address all three components.

First, learning skills are most effectively taught in the context of content-area instruction. Perkins-Gough (2002) discusses some related findings of the Rand Reading Study Group, specifically:

Teachers foster comprehension development when they connect comprehension strategy instruction with in-depth learning of content in such disciplines as history and science. If students learn that these strategies are tools for understanding the ideas in texts, then the strategies become purposeful and integral reading activities.

When students are helped to develop learning strategies in the context of learning about content, they:

- Receive more opportunities for teacher support than they would if the instruction was provided only during pullout classes or special sessions focusing on study skills instruction; and
- Have more—and more meaningful—opportunities to practice the skills.

However, there are three caveats to meshing strategy and content area instruction. The first is that only one new element should be presented at a time. Thus, instruction on a new strategy should be presented in the context of familiar content. Otherwise, struggling students are likely to overload and be unlikely to learn either the strategy or the content.

Second, the skills taught—and the approaches used to teach them—should be age- and grade-appropriate. For example, the metacognitive skill of summarizing might be addressed with primary-grades children by small-group discussions about a story, with the teacher writing down student comments. The teacher might then read the comments aloud and ask, “What were the two big

things this story was about?” Students would be taught different ways to summarize and to “report” their summaries as they advanced through the grades.

Third, instruction about strategies should be explicit. It should begin with the teacher’s modeling of the skill or strategy, followed by structured opportunities for students to practice and apply the skills—with teacher feedback provided to reinforce appropriate use of the strategy and correction or reteaching if the strategy is incorrectly applied. The instruction should also include elements that help students learn how to appropriately generalize use of a strategy to other tasks and classes (Kiewra, 2002). According to Kiewra, good strategy instructors:

- Introduce the strategy by modeling it and describing it;
- Sell the strategy by telling why it works;
- Generalize the strategy by telling where else it is useful; and
- Help students perfect the strategy by providing practice opportunities.

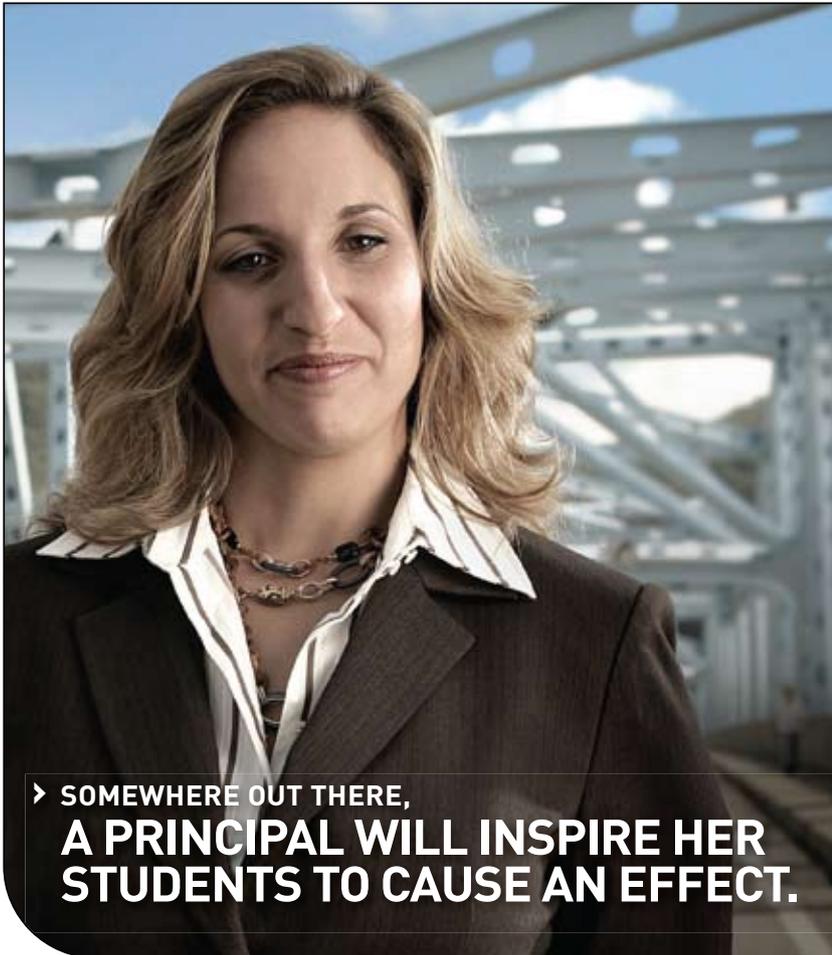
Teacher modeling is an especially important component of strategy instruction. Students who have demonstrated an inability to use strategies—or to generalize a strategy they have used successfully to another task—need more than simply hearing a description. They need to see it in action and, even better, see it applied to a few slightly different tasks. Protheroe (2003) adds another element to modeling by suggesting that teachers consistently “think out loud” and encourage their students to do the same. To use this technique, teachers talk through use of the strategy while they use it. This helps students understand learning strategies and how to use them “because they can see how a mind actively responds to thinking through trouble spots and constructing meaning from the text” (Vacca & Vacca, 2005).

Protheroe (2003) provides another reason to apply the “thinking-out-loud” approach to help students use learning strategies. The teacher:

who encourages it on the part of students also has an excellent diagnostic tool available. Strengths and weaknesses of individual students in the area of metacognitive skills and strategy use are immediately apparent. The teacher can use the information collected to begin addressing inappropriate use of strategies by some students, pinpoint the type of both classwide and individualized instruction needed, and use effective learners’ techniques as an example for those with weaknesses in the area.

The last of the elements suggested by Kiewra—opportunities for practice—is also critically important. Students who do not develop their own strategies naturally need to be able to take a learned strategy from the abstract to the concrete. Although teacher modeling helps with this, practice with the strategy, accompanied by feedback from the teacher and help in correcting use of the strategy if there is a problem, will help to make the strategy a potentially useful habit.

Finally, the goal of strategy instruction should not be rote memorization of a particular approach but instead the development of a repertoire of tools a student can access as needed. Thus, teachers should build in opportunities for students to generalize use of a strategy to a new type of task. This is another skill that most highly effective learners have. They mentally—and, again, often subconsciously—select from among a variety of strategies. In contrast, less effective learners may fixate on the skill learned most recently or one that worked well for them in the past—although in regard to a very different type of task. This is a reason why schoolwide implementation of strategy instruction can be particularly effective. As students enter fifth grade, for example, all fifth-grade teachers will know what learning strategies have been taught in third and fourth grade and remind students to use appropriate ones. In addition, a strategy taught in a math class can be pointed to by a science teacher as one that would be helpful for a specific science task.



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The research summarized here identifies three important links between learning strategies and academic achievement. First, effective use of learning strategies can enhance a student's ability to achieve academically. Second, while some students independently understand and apply a wide repertoire of learning strategies, others do not. Finally, these strategies can effectively be taught as part of content-area instruction.

Principals can help ensure that students receive the necessary instruction by educating teachers about the importance of learning strategies, especially for struggling students. In addition, they can work with their teachers to develop a schoolwide approach that provides ongoing and explicit instruction in the use of key strategies. □

Nancy Protheroe is director of special research projects and Suzanne Clarke is an issues analyst at Educational Research Service. Their e-mail addresses are nprotheroe@ers.org and sclarke@ers.org.

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WEB RESOURCES

An article on learning strategies and learning strategy instruction is included in this edition of the National Information Center for Children and Youth with Disabilities *News Digest*. www.nichcy.org/pubs/newsdig/nd25.pdf

The University of Kansas Center for Research on Learning (KU-CRL) has been instrumental in research and development of learning strategies instruction and is the developer of the Strategic Instruction Model. At the center's Web site, educators can find a brief discussion of the Learning Strategies Curriculum and a list of articles, publications, and presentations prepared by KU-CRL researchers. www.ku-crl.org

Authors Mastropieri and Scruggs discuss how mnemonic strategies can be used to enhance memory and then describe three specific mnemonic techniques—the keyword method, the pegword method, and letter strategies. www.idonline.org/article/5912

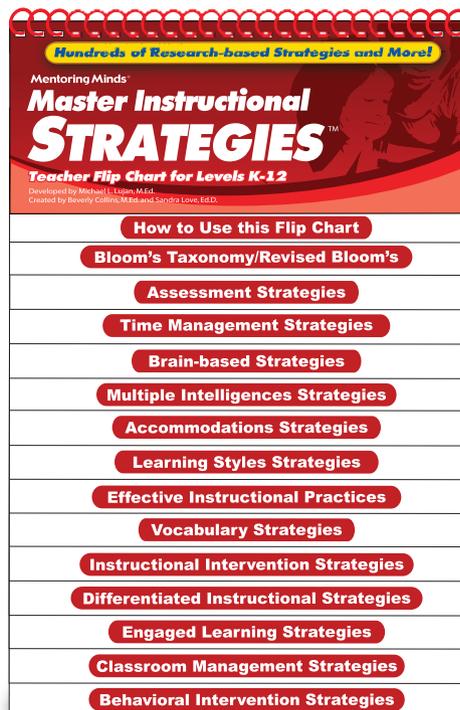
The article by Jim Wright, "Introducing Academic Strategies to Students: A Direct-Instruction Approach," provides a step-by-step guide to teaching effective learning strategies. www.jimwrightonline.com/pdfdocs/dirinstr.pdf



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