

Using Self-Regulated Strategy Development to Support Students Who Have “Trubol Giting Thangs Into Werds”

Tanya Santangelo

Rowan University, Glassboro, New Jersey

Karen R. Harris

Steve Graham

Vanderbilt University, Nashville, Tennessee

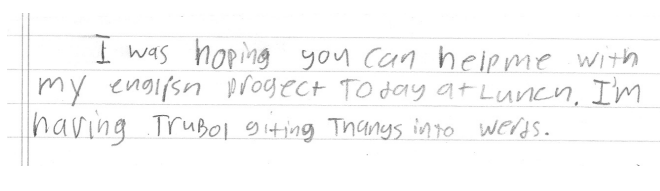
Self-Regulated Strategy Development (SRSD) is a well-established, thoroughly validated instructional model used to teach a variety of writing strategies to elementary, middle, and high school aged students. In this article, an overview of SRSD is presented. Specifically, this includes a discussion about why students struggle with various aspects of the writing process and an explanation of how strategy instruction is uniquely well suited for writing instruction. Next, the SRSD stages are described and an example of how SRSD was used to teach a story grammar strategy to fifth-grade students is offered. Finally, the principles for evaluation and characteristics of effective instruction are discussed and additional resources are listed.

Keywords: *inclusive practices; strategy instruction; learning disabilities; writing instruction; self-regulation*

Writing is one of the most powerful forms of communication. However, even expert writers frequently lament how difficult it to effectively plan, compose, evaluate, and revise their compositions (Zimmerman & Reiserberg, 1997). Thus, it is not surprising that many students struggle with the writing process. For example, recent evaluations done as part of the National Assessment of Education suggest that only one out of every five high school seniors acquires the required writing knowledge and skills (Greenwald, Persky, Ambell, & Mazzeo, 1999; Persky, Daane, & Jin, 2003). These difficulties are poignantly illustrated in a note, shown in Figure 1, that an 11th-grade student with a learning disability wrote to his teacher.

Both the No Child Left Behind Act and the Individuals With Disabilities Education Improvement Act of 2004 mandate that teachers use research-validated practices to improve students' performance in all academic areas, including writing. Self-Regulated Strategy Development (SRSD) is a flexible instructional model that complies with that mandate by helping students explicitly learn the same kinds of planning, drafting, and revising strategies that are used by highly skilled writers (see Graham and Harris [2005b] for a full description of 20 validated strategies). To date, more than 25 published studies have

Figure 1
Note Written by an 11th-Grade Student



documented that SRSD leads to significant and meaningful improvements in writing knowledge, writing quality, writing approach, self-regulation skills, and motivation. To illustrate, three separate meta-analyses found that SRSD had a strong impact on improving the quality of students' writing, with average effect sizes of 1.14 or greater (Graham, 2006; Graham & Harris, 2003; Graham & Perrin, 2006). In fact, Graham and Perrin (2006) found that SRSD had the largest average weighted effect size of all writing interventions studied in their comprehensive

Authors' Note: Please direct correspondence to Tanya Santangelo, Rowan University, College of Education, Department of Special Education Services, 201 Mullica Hill Road, Glassboro, NJ 08028; e-mail: santangelo@rowan.edu.

meta-analysis of the experimental writing literature for students in Grades 4 through 12. SRSD has been an effective instructional procedure for teaching students how to brainstorm and organize ideas, generate substantive content, and edit and revise their work. SRSD-induced improvements in students' writing typically are maintained over time and generalize across settings, genres, people, and media (e.g., paper and pencil to word processor; see Graham & Harris [2003, 2005a] and Harris & Graham [1999] for extended reviews and discussions). To fully understand the necessity and rationale underlying the use and benefit of SRSD instruction, it is beneficial to examine why writing is such a difficult task for many students.

Common Challenges With Writing

In most cases, students' challenges with writing are related to difficulties acquiring, utilizing, and managing the strategies that are used by skilled writers (De La Paz, Swanson, & Graham, 1998; Graham & Harris, 1996, 2000; Harris & Graham, 1999; Zimmerman & Reiserberg, 1997). Specifically, many students (a) have limited knowledge of what constitutes good writing, (b) utilize an ineffective writing approach, (c) do not engage in advance planning, (d) have difficulty generating content, (e) rarely make meaningful revisions, (f) struggle with transcription, (g) evidence minimal persistence, and (h) have an unrealistic sense of self efficacy (Graham & Harris, 2005a; Harris & Graham, 1996).

Knowledge of Writing

Skilled writers have extensive knowledge about writing genres, devices, and conventions. They are also intimately familiar with the elements and characteristics associated with good writing. In contrast, many students who struggle with writing lack contextual knowledge and believe good writing is related to form and mechanics, rather than substance or process (Englert, Raphael, Fear, & Anderson, 1988; Graham, Schwartz, & MacArthur, 1993; Wong, Wong, & Blenkinsop, 1989). For example, when asked to describe good writing, students with writing difficulties responded, "Spell every word right," "Write as neat as you can," "Put your date and name on there," and "Be sure to hold your pencil right." When asked to describe what should be included in a story, a typical response is, "Main character, a subject, predicate, and main idea." Unfortunately, this incomplete knowledge is directly reflected in students' writing, as basic story elements are frequently omitted (Graham & Harris, 1989b).

Approach to Writing

Skilled writers engage in a multidimensional process that involves planning, composing, evaluating, and revising. In contrast, many students who struggle with writing focus solely on generating content (Graham, 1990; Thomas, Englert, & Gregg, 1987). This unidimensional approach, aptly named "knowledge-telling," involves writing down all information that is perceived to be somewhat topic-related. Each preceding phrase of a sentence is used to spawn the next, and minimal attempts are made to evaluate ideas, reorganize the text, or consider constraints imposed by the topic or audience (McCutchen, 1988). Consequently, resulting papers typically contain a list of ideas rather than a well-organized, comprehensive discussion of the topic.

Planning in Advance

Prior to actually writing, skilled writers devote a significant amount of time to planning and developing goals that subsequently guide what they say and do. In contrast, students who struggle with writing rarely utilize advance planning strategies, even when specifically directed to do so. Instead, their thought processes are spontaneously episodic, with each preceding idea serving as the stimulus for that which follows (Graham & Harris, 1989a; MacArthur & Graham, 1987). The plans they develop often resemble a first draft, consisting of a series of sentences that are just rewritten in subsequent phases of the writing process.

Generating Content

During the initial phases of writing, skilled writers frequently generate more content than they need and then eliminate superfluous ideas or information through the revision process. In contrast, students who struggle with writing frequently produce inordinately short stories that contain little elaboration or detail (Graham, Harris, MacArthur, & Schwartz, 1991). Most likely, this occurs because students have difficulty retrieving information from memory, utilizing outside sources, and translating their ideas into written form (Graham, 1990).

Revising

Skilled writers engage in extensive evaluation and revision processes that iteratively improve their compositions. In contrast, many students who struggle with writing experience difficulty evaluating and revising their text (Fitzgerald, 1987; MacArthur, Graham, & Harris, 2004).

Specifically, it has been found that less than 20% of the revisions made by struggling writers represent substantive changes to the original text; they primarily involve making word substitutions, correcting spelling and usage errors, and rewriting the paper to make it neater. Furthermore, although many students can articulate appropriate and beneficial revisions, approximately two thirds of the changes that do alter the text actually have a neutral or negative effect (Graham, 1997; MacArthur & Graham, 1987; MacArthur, Graham, & Schwartz, 1991).

Transcription Skills

Many students who struggle with writing have difficulty transcribing their thoughts into written form. They routinely misspell words, have difficulty with capitalization and punctuation, and produce letters very slowly (Graham et al., 1991). This leads to fluency rates that are nearly half that of their peers who are successful writers (Weintraub & Graham, 1998). Because students devote so much attention and effort to transcription, writing content becomes minimized or forgotten and many aspects of the writing process are compromised (Graham, 1999). Transcription difficulties also make it very challenging for anyone, including the author, to read the paper.

Persistence

Whereas skilled writers devote significant time and effort to composing, many students who struggle with writing put minimal time and effort into the writing process. For example, when 10- to 12-year-old students who struggled with writing were asked to write an essay expressing their opinions on a topic, they typically spent 6 minutes or less writing their papers (Graham, 1990). Their compositions began with either “yes” or “no,” included one or two brief reasons, and abruptly ended without a resolution or concluding statement. However, because students also evidenced difficulty producing multiple statements about familiar subjects, the absence of content should not be solely attributed to a lack of motivation.

Collectively, difficulties related to writing knowledge, processes, and behaviors make writing an incredibly challenging task for some students. The following example of Ron, a bright 12-year-old boy with a learning disability, provides an illustration (Graham & Harris, 1999).

Ron’s Writing Challenges

Ron avoids writing whenever possible. When he is required to compose something, he devotes little effort to

the writing process. However, despite his obvious dislike for writing, Ron is generally positive about his writing capabilities, telling others, “I’m pretty good at this.”

In class, Ron wrote an essay about whether students should be required to clean their own rooms. Before even picking up his pen, Ron complained, “This is stupid.” His teacher encouraged him to do his best writing and reminded him to “Take your time and plan what you will say first.” Ron ignored this suggestion and immediately started to write. He wrote quickly, pausing only briefly to think about the spelling of a word or to consider what he would say next. In less than 5 minutes, he produced the following draft:

Children should be required to clean their room, because they might think is ok to make messes at school. They might not find school work to turn in. They might lose important books. They might break important stuff like school books, projects, library books, and toys. In conclusion, it’s just better to have a clean room.

Ron clearly engaged in a unidimensional writing approach that could be characterized as “knowledge-telling.” He did not utilize any advance planning strategies, and he devoted minimal time or effort to the writing process. After completing the last sentence, he immediately put his paper away and did not reread his work or make any corrections. Ron’s primary goal was to get the assignment completed as quickly as possible. His essay contains very little content and does not include the characteristics of a well-developed argument. Ron evidenced a least-effort approach, with both his behavior and his essay reinforcing the fact that he did not have effective strategies to guide him through the writing process.

The next day, Ron and his classmates worked on revising their essays. During a writing conference, Ron’s teacher suggested he should enhance his argument by including additional reasons and details. However, despite these explicit recommendations, Ron primarily focused on trying to correct spelling miscues and then rewrote his essay to make it look neater. His only content-related revision was adding “my little league baseball trophies” to his list of examples of “stuff” that might get broken. While revising, Ron twice muttered, “I hate this,” and it was evident that he was extremely frustrated because he did not know how to make meaningful improvements to his essay.

Ron’s writing performance suggests that he will go on to be one of the many high school students who do not meet the national expectations for writing knowledge

and skills (Greenwald et al., 1999; Persky et al., 2003). Given his maladaptive behaviors and negative attitude, it is also reasonable to assume that without an effective instructional intervention, Ron would continue to find writing burdensome and frustrating.

An Introduction to Writing Strategies

A strategy can be generically defined as a set of operations or actions that a person consciously undertakes to accomplish a desired goal (Alexander, Graham, & Harris, 1998). Strategy instruction has been shown to be an effective instructional technique in a variety of academic areas, especially for students with learning disabilities (Swanson, Hoskyn, & Lee, 1999). However, there are a number of reasons why strategies are especially beneficial within the context of writing. First, they help simplify and organize the complex tasks such as planning, generating, and revising text. Second, they define a course of action for successfully completing all, or part, of a writing assignment. Third, they make the mental operations that occur during planning, composing, evaluating, and revising visible and concrete. This is particularly salient because contemporary approaches to writing instruction (e.g., *Writer's Workshop*) encourage students to plan, draft, edit, revise, and publish their written work, yet surprisingly little attention is devoted to explicitly teaching these processes (Graham & Harris, 1997a). Finally, strategies enhance students' knowledge about writing genres and devices, the writing process, and their capabilities as writers.

The SRSD Instructional Model

I hear and I forget. I see and I remember. I do and I understand.

This ancient Chinese proverb simply and clearly characterizes the ideal process for teaching writing strategies (Graham & Harris, 2005b). It is important to explain the purpose of a strategy and the way that it should be used. However, students also need to have the strategy modeled for them, and they need to be supported while they practice using it. Finally, it is also essential to address issues related to motivation and attitude and to ensure that students believe the new strategy is easy to learn and worth using (Salomon & Globerson, 1987). This comprehensive and structured approach is especially important for students with learning disabilities, as they typically

require more intense and explicit instruction to successfully master strategy usage (Brown & Campione, 1990; Wong, 1994).

Four theoretical and empirical sources provided the initial foundation for the SRSD in the early 1980s. First, based on Meichenbaum's (1977) cognitive-behavioral intervention model, and its emphasis on Socratic dialogue as well as stages of intervention, Harris and Graham developed their initial stages of instruction and an emphasis on the role of dialogue/discussion in instruction. Second, the work of Soviet theorists and researchers (including Vygotsky, Luria, and Sokolov) on the social origins of self-control and the development of the mind was very influential and contributed to the self-regulation and modeling components of the model. Third, the work of Deshler, Schumaker, and their colleagues on the validation of acquisition steps for strategies among adolescents with learning disabilities (Deshler, Alley, Warner, & Schumaker, 1981), steps that were also influenced by the work of Meichenbaum and others, strongly influenced, and continues to influence, the SRSD model. Fourth, the work of Brown, Campione, and their colleagues on development of self-control, metacognition, and strategies instruction was also foundational (Brown, Campione, & Day, 1981).

Although current models of strategies instruction have converged in many ways, the SRSD model differs from other strategies instruction models in at least two important ways. First, based in part on the research on expertise in writing and research on children's self-regulation (see Harris, 1982, 1986; Harris & Graham, 1992), explicit instruction in and supported development of critical aspects of self-regulation were integrated throughout the stages of instruction in the SRSD model. These self-regulation components include goal-setting, self-assessment, self-instruction, self-reinforcement, imagery, and managing the writing environment.

Second, children with learning disabilities often face additional challenges related to reciprocal relations between academic failure, self-doubts, learned helplessness, low self-efficacy, maladaptive attributions, unrealistic pretask expectancies, and low motivation and engagement in academic areas. Thus, children's attitudes and beliefs about writing and themselves as writers became critical targets for intervention as well as assessment. Throughout SRSD instruction, students are supported in the development of attributions for effort and the use of powerful writing strategies, knowledge of writing genres, self-efficacy, and high levels of engagement (Harris, 1985; Harris & Graham, 1992).

SRSD Stages

The SRSD instructional model includes six stages that allow students to learn and apply a writing strategy (Graham & Harris, 2005b; Harris & Graham, 1996). However, these stages are intended to be used as a beginning framework for instruction and can be reordered, combined, modified, and repeated, based on students' needs.

Stage 1: Develop background knowledge. During this introductory stage, the primary goal is to ensure that students will successfully understand, learn, and apply the strategy. Inherently, this means that teachers must first identify what prerequisite skills are needed, and they need to assess whether students possess these skills. If skill deficits are identified, they can be addressed either by reteaching or by using appropriate accommodations or modifications.

Stage 2: Discuss it. The primary purpose of this stage is to ensure that students are motivated and willing to learn the new strategy. Frequently, this is done by having them examine and discuss their current writing performance and their perceptions of the writing process. This information becomes the foundation for discussing the purpose and potential benefit of the new strategy. This is also an ideal time to introduce the concept of progress monitoring by having students identify one aspect of writing they hope to improve (e.g., length of papers, number of story parts included, number of revisions made) and then graphing their performance on this element using previously written papers. At the end of this stage, the actual steps of the strategy are introduced.

Stage 3: Model it. In this stage, students are shown exactly how to use the new strategy. Modeling is most effective when teachers use a "think-aloud" process that highlights the "why" and "how" of each strategy step and specifically shows how to use positive self-statements to maintain motivation and address attributions (e.g., "This is tough, but I can do it if I try!"). After the strategy is modeled, students should have an opportunity to continue discussing the benefits and challenges of the strategy and to think about ways they think it should be modified to be more appropriate or effective. This is also an ideal time to have each student identify statements they will use to maintain a positive attitude and persistence throughout the writing process. Finally, the concept of goal setting can be introduced, and each student can set individual targets, based on his or her baseline performance data that was gathered in Stage 1. It is also important to recognize

that it may be necessary for the teacher to model a strategy multiple times.

Stage 4: Memorize it. The goal of this stage is to have students become familiar enough with the steps in a strategy that they can use them automatically. This is often the fastest stage in SRSD, and it is most effective when teachers make memorization fun. It is not a problem if students paraphrase parts of the strategy, as long as the original meaning is maintained. For students who experience difficulty with memorization, prompts (e.g., index cards with the steps listed) can be used so they are able to move to the next stage.

Stage 5: Support it. During this stage, students gradually assume responsibility for using the new strategy. This process is most effective when teachers scaffold instruction (see Dickson, Collins, Simmons, & Kamenui, 1998), use cooperative peer groups, provide frequent constructive feedback, and offer positive reinforcement. As with the acquisition of any skill, the amount of time it takes students to demonstrate mastery of a strategy will vary. However, when the SRSD model is used with appropriate strategies, most students are able to correctly and independently apply a strategy after two to four collaborative, scaffolded experiences (Graham & Harris, 2005b).

Stage 6: Independent performance. Ultimately, the goal of SRSD is to ensure students consistently use a strategy over time, in multiple settings, and with a variety of tasks. This generalization and maintenance is achieved by encouraging students to recognize how the strategy improves their writing. Then, they can also identify where else it would be beneficial and in what ways it can be modified.

Barbara and Joan's Fifth-Grade Classroom

To illustrate one of the many ways SRSD can be implemented, a description of how fifth-graders learned to use a story grammar strategy is now offered (Danoff, Harris, & Graham, 1993). This strategy has students generate ideas for each basic story part before they write and then embellish their thoughts while they compose (see Table 1).

The students in this class attended an inclusive school. Their writing class was team-taught by a special education teacher, Barbara, and a general education teacher, Joan. After reviewing students' writing portfolios, Barbara and Joan decided to teach this story grammar strategy to the

Table 1
Barbara and Joan's Story Grammar Strategy

Step 1	Think of a story you would like to share with others.
Step 2	Let your mind be free.
Step 3	Write down the story part reminder: W—W—W What = 2 How = 2
Step 4	Make notes about your ideas for each part: Who is the main character? Who else is in the story? When does the story take place? Where does the story take place? What does the main character want to do? What do the other characters want to do? What happens when the main character tries to do it? What happens with the other characters? How does the story end? How does the main character feel? How do the other characters feel?
Step 5	Write your story—add, elaborate, and revise as you write and afterward. Make sure it all makes sense.

whole class because most of the students wrote stories that were incomplete. Many students were also anxious about writing and needed to develop an “I can do this if I try” attitude.

The teachers decided that Barbara would take the lead in teaching this strategy, but both teachers were integrally and actively involved throughout the process. Strategy instruction was integrated into the Writer's Workshop that was already being used by the class. With this approach, students routinely planned, drafted, revised, edited, and eventually published their papers. During the composition process, students had regular conferences with their teachers, shared their drafts and completed papers with classmates, selected papers for publication, and reflected on their writing accomplishments and challenges in a journal.

Stage 1: Develop Background Knowledge; and Stage 2: Discuss It

SRSD instruction began with a class conference that focused on what students already knew about the story writing process and the required elements (i.e., setting, characters' goals, actions to achieve the goals, ending, and characters' reactions). The teachers briefly introduced the new story grammar strategy, and the class discussed how including and expanding story parts would improve a story. Using these ideas, the students established their overarching goal for learning the strategy to be “writing better stories that are more fun to write and more fun for others to read.” Next, Barbara and Joan

described how students would learn the strategy, emphasizing that they would be collaborating with the teachers and their peers throughout the process. They also stressed the importance of effort in mastering the strategy, and each student was asked (and agreed) to make a commitment to learn the strategy.

During the next mini-lesson, the students expanded their previous discussion about good stories, focusing on the need to include information about the setting (i.e., characters, place, and time) and the plot (i.e., precipitating event, characters' goals, actions to achieve goals, resolution, and characters' reactions). The students then located and discussed examples of these elements in books they had read and highlighted different ways authors used and developed story parts. Next, they selected at least two previously written stories from their portfolios and determined how many of the story parts each one contained. Barbara and Joan demonstrated how to graph this information and explained that each student would keep track of how many parts were in the stories he or she wrote using the strategy. This self-regulation procedure not only helps students monitor the completeness of their stories, but also visually reinforces the benefits of using the strategy. During this process, Barbara and Joan made sure each student correctly identified and graphed the story parts in his or her existing papers, and they provided additional assistance to those who experienced difficulty. For the few students whose stories already included nearly all the story parts, the two teachers stressed that their goals would be to include more creative ideas, greater detail, and expanded plot descriptions.

In the third mini-lesson, Barbara introduced the specific story grammar strategy and gave each student a chart listing the strategy steps and the mnemonic (WWW, What = 2, How = 2). She prompted students to explain why each step of the strategy would be important, and they discussed where and how the strategy could be used. Students' ideas included writing creative stories, book reports, and biographies; and students also indicated that paying attention to story parts could help them with reading.

Stage 3: Model It

During the next lesson, Barbara shared one of her ideas for a story with the class and used the “think-aloud” technique to model how to use the strategy to develop this idea. Students participated in this activity by helping her establish a goal (“Write a story that includes all the parts and think of a lot of good ideas for each one”), make notes for each story part, and write a first draft on big chart paper. To emphasize the importance of allowing a story to evolve and to improve it with new ideas, Barbara

purposefully made several changes to her plan as she wrote. She also used a variety of self-statements to help her use the strategy, including the following:

- “What do I need to do for this assignment?” (Problem definition)
- “First, I need to think of ideas for my story.” (Planning)
- “Let my mind be free and take my time; good ideas will come to me.” (Brainstorming)
- “Does this idea make sense?” (Self-evaluation)
- “What a great ending!” (Self-reinforcement)
- “I can do this!” (Coping)

Once the first draft was complete, Barbara and the class focused on revising and editing the story. She modeled how to make sure all the story parts were included and then worked to improve and elaborate on the ideas. She verbally reinforced herself for achieving her goal and graphed the results, commenting, “I got them all because of my hard work and use of the strategy.”

The class then discussed how what people say to themselves impacts what they write. Students volunteered examples of positive and negative self-statements they used before the strategy was introduced, and they identified phrases Barbara used when she wrote her story with the class. All of the positive ideas were listed on the board, and each student wrote the personal self-statements she or he planned to use on an index card. Examples included, “How am I doing so far?” “I can do this if I try!” and “Slow down and take my time.” Finally, Barbara and Joan asked the students to suggest any changes that would make the strategy better, but none were identified.

Stage 4: Memorize It

In the next mini-lesson, Barbara explained to the students that it would be easier to use the strategy if they memorized the steps, the mnemonic, and their self-statements. Working both individually and with partners, most students were able to easily memorize these items and moved on to the next stage of instruction. Barbara and Joan offered extra support and additional practice opportunities to the few who were experiencing some difficulty with memorization until they were ready to progress.

Stage 5: Support It

Students began to use the strategy and self-regulation procedures to write their own stories during Writer’s Workshop with responsive assistance from Barbara and Joan. For the students who struggled with writing, this stage began by collaboratively planning a story with

Barbara. This allowed the teacher to make sure that each student correctly understood how to use the strategy steps, the mnemonic, and the self-regulation procedures (i.e., goal setting, self-statements, and counting and graphing story parts). The other students in the classroom began this stage by collaboratively writing a story with a peer, and Joan assisted them as needed.

Students continued to practice using the strategy during Writer’s Workshop, with Barbara and Joan modifying the amount and intensity of their support to meet individual needs. For example, a few students needed help to effectively use their self-statement, some required additional modeling of the strategy, and others were encouraged to enhance the information they included for each story part. Teacher support, peer assistance, and other instructional aids (e.g., the strategy chart and self-statement cards) were faded as soon as possible.

Stage 6: Independent Performance

Most students were able to apply the story grammar strategy and self-regulation procedures correctly and effectively after writing three stories. The few who continued to need assistance received individualized support from Barbara and Joan until they could use the strategy easily and independently. Students were told they were no longer required to set goals or count and graph story parts, but they were encouraged to do so as a way to ensure they continued to write interesting and complete stories.

At this time, Barbara and Joan held a class conference to discuss and evaluate the strategy. Students said they were glad they learned to use the strategy because it helped them write better stories. They also identified other settings and tasks where they felt the strategy would be beneficial and appropriate. Finally, they decided to hold monthly class meetings to talk about how they were using the strategy and to recognize their accomplishments.

Monitoring and Evaluating SRSD

Although there is a substantial research base documenting that the SRSD instructional model and strategies improve students’ writing skills, there is never a one-size-fits-all answer in education. Strategies that are highly effective with some students may not be as effective with others. Strategies that are endorsed and successfully taught by one teacher may not be equally successful when taught by another teacher. In some cases, strategy instruction may also have unintended consequences. For example, one teacher noticed that after she introduced

the SCAN revision strategy (SCAN each sentence and ask, Does it make Sense? Is it Connected to my belief? Can I Add more? Note errors), one student's first drafts became considerably shorter than they were prior to instruction. When questioned about the situation, the student explained, "SCAN makes me add more ideas later, so why write a lot the first time?" Fortunately, the teacher recognized this pattern and was able to understand and appropriately address the student's thought process and decision.

For these reasons, comprehensive evaluation is a critical component of strategy instruction. Not only does evaluation provide evidence a particular writing strategy is successful, it also offers insight into what instructional modifications should be made to maximize student growth. This reflective practice is especially important because when teachers do not change ineffective practices, students tend to either devalue the strategy or interpret their lack of progress as a reflection of incompetence. The following principles can be used to guide the evaluation of SRSD procedures and outcomes.

Evaluation should reflect established efficacy. The breadth and depth of evaluation should directly reflect the established effectiveness of the strategy. In other words, an untested strategy or instructional technique requires more thorough evaluation than those that have been documented as effective. Conversely, strategies and teaching methods that have been previously validated need less scrutiny. A teacher's level of experience and effectiveness with strategy instruction should also be used to determine how much data to collect.

Evaluation should be a collaborative process. It is essential that students and teachers collaboratively evaluate writing strategies and the procedures used to teach them. When students use self-evaluation, they are provided with concrete evidence that a strategy is beneficial and that their efforts are worthwhile. Active participation also increases students' levels of self-awareness and sense of ownership. For teachers, collaborative evaluation represents a practical way to reduce the amount of work involved in the evaluation process. One technique that helps achieve this goal is to have students monitor basic elements of their writing before, during, and after strategy instruction (e.g., count and graph the number of revisions they make to each writing product).

Students should also be encouraged to share their perceptions about a strategy and the instructional methods used to teach it. This can be achieved a variety of ways, including individual conferences, class discussions, or response journals. For example, at critical points in the

writing process, they can respond to questions such as, "How has the strategy helped you?" "Are there parts of the strategy that you find difficult to use?" and "What type of help would make using the strategy easier and more effective for you?" This information should then be used in conjunction with other data sources to help determine appropriate levels of support and necessary instructional adaptations. After students gain experience using a strategy, they can reflect again on the process and outcomes. Relevant questions at this point might include, "What do you like about this strategy?" "What do you not like about this strategy?" and "How does the strategy help you write better?" However, because students' evaluations are not always accurate, the information should be synthesized with data from other sources to understand the overall efficacy of the strategy.

Evaluation should be multidimensional. Clearly, evaluation should target changes in students' writing performance. However, there are two other areas that should also be assessed. First, it is important to evaluate students' strategic behaviors during each of the writing processes (e.g., Has the amount of time devoted to planning increased? Are students making more meaningful revisions?). Second, it is critical to monitor students' levels of confidence as writers, their attitude during writing tasks, and their perceptions about the writing process.

Evaluation should be continuous. Evaluation should occur throughout the instructional process so responsive adjustments can be made based on students' day-to-day progress. One technique that helps teachers achieve this goal is maintaining a running record of informal observations. These notes might reflect what went well during instruction, what aspects were problematic, and which students have difficulty independently applying the strategy. Another technique is to have students keep the work they do during strategy instruction in a writing folder. Then, by reviewing each student's work, teachers can easily monitor student progress, identify areas of need, and determine which students have mastered the criteria necessary to move to the next stage of instruction.

Evaluation should target how strategies are used. It is also important to evaluate whether students are effectively using the strategies they have been taught. Over time, some students will intentionally modify a strategy or how they use it (e.g., deciding to eliminate a step that is deemed too hard, too easy, or not beneficial). Other students may make unintentional changes (e.g., reordering steps or using self-evaluation techniques incorrectly). Although some modifications may be useful, those that

are potentially counterproductive should be addressed immediately. The most direct way to monitor how students use a strategy is to carefully and frequently observe what they do as they write.

Evaluation should promote maintenance and generalization. As previously mentioned, the ultimate goal of SRSD is to have students successfully apply strategies over time (maintenance) and in new situations (generalization). To assess if knowledge about a strategy is maintained, periodically ask students to explain the purpose of the strategy and reiterate its basic steps. If they cannot do this, it is unlikely they are using the strategy effectively. Another effective technique is to provide each student with a log to document each time she or he uses a strategy and record ways she or he modified it for new tasks. When students are taught a writing strategy that can be applied in a number of different content areas or classrooms, it is also extremely beneficial to collaborate with other teachers to determine if the strategy is being successfully generalized.

Other (Essential) Characteristics of SRSD

In addition to knowing how to use the SRSD stages and principles for evaluation, it is important to understand that there are other instructional characteristics that significantly influence the efficacy of SRSD (Graham & Harris, 2005b). Of course, most effective teachers have already internalized these ideas, but they are so essential they can never be overemphasized.

Enthusiasm

Prior to SRSD instruction, many students view the writing process as irrelevant, frustrating, and self-defeating. To help overcome these negative perceptions and attributions, teachers need to be “contagiously enthusiastic” throughout all stages of SRSD instruction. Specifically, this includes emphasizing the value of writing and ensuring that students see how their efforts will help them become good writers.

Active Involvement and Collaboration

Students should be actively engaged during all stages of SRSD instruction. By assuming an active role in learning and applying the strategy being taught, students’ motivation and sense of ownership in the writing process is increased and they are much more likely to understand how effort and dedication improve writing

performance. An effective technique to promote active engagement is collaboration to provide frequent opportunities for students to collaborate with the teacher and with peers.

Individualized, Criterion-Based Instruction

Although the SRSD model consists of six stages, they are intended to be used as flexible guidelines and should be adjusted in ways that respond to each student’s unique needs. Effective SRSD instruction is based on performance criteria, rather than time. Students need to progress through each instructional stage at their own pace, advancing to the next stage only when have met the criteria for doing so.

Authentic Writing Tasks

Involving students in authentic writing tasks that are aimed at real audiences is another extremely effective way to increase motivation and strategy usage. For example, the writing performance, self-regulation skills, and attitudes among fourth-grade students were significantly improved when they assumed responsibility for cleaning up a local stream (Graham & Harris, 1997b). As part of this project, students used SRSD planning and revising strategies as they learned to write letters to local politicians and influential citizens, to write an article in the local newspaper, and to write a grant that ultimately helped fund their project. Because the tasks were authentic, meaningful, and relevant, students’ level of interest flourished and their writing abilities improved dramatically.

Supportive Environment

Classroom environments that are supportive, pleasant, and nonthreatening develop students’ passion for writing and increase the likelihood that students will apply the strategies they have learned. This is particularly important for students who struggle with writing because many need to overcome the lingering effects of previous experiences where they felt unsuccessful and frustrated throughout the writing process. Examples of ways to create an enjoyable and inspiring environment include

- establishing an exciting mood during writing time;
- encouraging students to take risks when writing;
- developing writing assignments that reflect students’ interests;
- allowing students to select their own writing topics or modify assigned topics;
- having students arrange their own writing space;

- encouraging students to help each other as they plan, write, revise, and edit their work;
- holding student conferences to discuss writing goals, achievements, and challenges;
- asking students to share works-in-progress and completed papers with each other;
- praising students for their accomplishments, effort, and use of writing strategies;
- reinforcing students' efforts and accomplishments by "showcasing" work in prominent places; and
- consistently modeling and promoting an "I can do this" attitude.

Constructive Feedback

Students should be provided with frequent feedback that provides them with information about what they are doing well and where they need to improve. However, placing too much attention on students' writing errors can negatively impact performance, perceptions, and motivation (Graham, 1982). Circling every misspelled word and usage error in red pen and writing things such as "AWK" above every clumsy phrase or sentence can make students more aware of their limitations and less willing to write. Instead, it is best to target one element at a time (e.g., the use of punctuation) and to ensure that the positive aspects of a paper are highlighted along with those indicating areas for improvement. Similarly, writing should never be used as a punishment because it only reinforces students' negative attitudes about the process.

Predictability

Finally, the role of predictability should not be overlooked or underestimated when using SRSD. Establishing a consistent writing routine where students plan, draft, revise, edit, and publish their work provides students with plenty of opportunities to apply the various strategies they have been taught. It also creates the flexibility needed for teachers to individualize instruction. Finally, a predictable writing routine continually reminds students that writing is a highly prioritized, meaningful activity.

Final Thoughts and Resources

The SRSD model and strategies have been shown to consistently and significantly improve students' writing performance, knowledge, strategic behavior, motivation, and perceptions. However, it should not be viewed as a panacea. Writing strategy instruction does not encompass all of the skills and knowledge that students need to learn to become effective writers. It is also important they

improve their handwriting, spelling, capitalization, punctuation, sentence construction, and usage. Additionally, young writers need to become familiar with the various functions of writing, develop a rich writing vocabulary, gain an appreciation for their audience, and acquire a writing voice. Consequently, strategy instruction should not replace an existing writing program, rather it should be used as a way to enhance it.

A number of resources are available for those who would like to know more or try SRSD for writing. Two books, *Writing Better* (Graham & Harris, 2005b) and *Making the Writing Process Work: Strategies for Composition and Self-Regulation* (Harris & Graham, 1996), offer detailed information on writing strategies for multiple genres as well as descriptions of implementation with individual students, small groups, and entire classrooms. A new book is in press that contains lesson plans and instructional support materials for all of the SRSD writing strategies that have research support; the book is titled *The Educator's Guide to Powerful Writing Strategies: Self-Regulated Strategy Development for Writing* (Harris, Graham, Mason, & Friedlander, in press). The writing strategies have been used from first grade through high school, depending on students' needs. Selected SRSD lesson plans are offered on the Center for Accelerating Student Learning (CASL) Web site, under Outreach, at www.vanderbilt.edu/CASL. In addition, all of the stages of instruction can be seen in both elementary and middle school classrooms in the video, "Teaching Students With Learning Disabilities: Using Learning Strategies" (Association for Supervision and Curriculum Development [ASCD], 2002). In this video, an inclusive fourth-grade classroom is followed as they use the SRSD approach to learn a powerful strategy for writing opinion essays, and a middle school classroom is followed as a vocabulary learning strategy is taught. Finally, a free, online interactive tutorial on SRSD is available through Vanderbilt University at <http://iris.peabody.vanderbilt.edu/index.html>. The tutorial includes all stages of instruction and video from the ASCD video. From the IRIS homepage, select Resources, and then select Star Legacy Modules. Next, click on "Using Learning Strategies: Instruction to Enhance Learning."

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Tanya Santangelo, PhD, is an assistant professor in the Department of Special Education at Rowan University in Glassboro, New Jersey. She is an associate editor of *Reading and Writing Quarterly*. Her research interests include strategy instruction, effective practices in inclusive classrooms, and promoting success with collaborative problem solving teams.

Karen R. Harris, EdD, is the Currey-Ingram Professor of Special Education and Literacy at Vanderbilt University. She also serves as editor of the *Journal of Educational Psychology*. Her research interests include strategy instruction across academic areas, ADHD, and the development of self-regulation among students with disabilities and others who struggle with learning.

Steve Graham, EdD, is the Currey-Ingram Professor of Special Education and Literacy at Vanderbilt University. He is editor of *Exceptional Children*. His research focuses on identifying the factors that contribute to writing development and writing difficulties, developing and validating effective instructional procedures for teaching writing, and the use of technology to enhance writing performance.

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