

Strategies for Composition and Self-Regulation in the Writing Process

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Few people-either children or adults-would describe writing as a very easy process that they complete without much effort. Writing is a highly complex and demanding process. While negotiating the rules and mechanics of writing, the writer must maintain a focus on factors such as organization, form and features, purposes and goals, audience needs and perspectives, and evaluation of the communication between author and reader. Self-regulation of the writing process is critical; the writer must be goal-oriented, resourceful, and reflective.

Even highly skilled professional writers speak to the demanding and complex mix of composition and self-regulatory abilities involved in writing. For example, Susan Sontag has said that when writing *On Photography*, she often drafted each page 30 to 40 times (Burnham, 1994). Joseph Heller, author of *Catch-22*, carried index cards in his wallet so that he could write down ideas whenever they came to him (Plimpton, 1989).

Research on expert writers has further clarified the importance of self-regulation in writing. For skilled authors, writing is a flexible, goal-directed activity, scaffolded by a rich source of cognitive processes and strategies for planning, text production, and revision. Skilled authors also engage in purposeful and active self-direction of these processes and strategies. As Flower and Hayes (1980) note, "a great part of skill in writing is the ability to monitor and direct one's own composing processes" (p. 39). Research on and descriptions of expert writers-both children and adults-has been an important factor in understanding and improving children's writing abilities (Harris & Graham, 1992).

Children's writing

While we know what is required for effective writing, we also know that many children, and especially those who experience significant difficulties with writing, do not exhibit critical self-regulation and composition strategies, skills, and beliefs. Often, children act more like Snoopy does in one Peanuts cartoon. Sitting on top of his dog house, paws at the typewriter, he types the sentence, "The light mist turned to rain." He types the next sentence, "The rain turned to snow." At this, he rips his paper out of the typewriter and throws it away, muttering, "The story turned boring..." Much like Snoopy, many children fail to plan ahead when they write. Instead, they view writing as a task of telling what one knows-as remembering or knowledge telling (Scardamalia & Bereiter, 1986). Any somewhat-appropriate information is retrieved from memory and written down, with little attention directed at choice of topic, the needs of the audience, the constraints imposed by the topic and the audience, the organization of the text, or the development and evaluation of goals. Writing remains a problematic area for many children in our country (Applebee, Langer, Jenkins, Mullis, & Foertsch, 1990).

Research also indicates that affect (including attitudes, beliefs, and emotions) needs to be considered when students experience difficulty in writing or other academic areas (Harris & Graham, 1996a). It is important to understand the reciprocal relationships among academic difficulties or failure, self-doubts, learned helplessness, attributions, pre-task expectancies, self-efficacy and motivation (Alexander, in press; Garner & Alexander, 1989; Licht, 1983; Sawyer, Graham, & Harris, 1992). In addition, other characteristics such as impulsivity, difficulty with memory or other aspects of information processing, low task engagement and persistence, devaluation of learning, and low productivity create further challenges for some children (for a detailed discussion, see Harris & Graham, 1996a). Children who consider themselves poor writers, who have negative attitudes and emotions about writing, or who have learning difficulties that make writing even more

challenging need an approach to instruction that directly addresses these issues.

Self-regulated strategy development: Every child can write

More than 15 years ago, Karen Harris and Steve Graham began developing the instructional approach now known as self-regulated strategy development (SRSD). They started with the premise that all children-and especially those who face significant difficulties-would benefit from an integrated instructional approach that directly addressed their affective, behavioral, and cognitive characteristics, strengths, and needs (Harris, 1982; Harris & Graham, 1996a). The SRSD approach integrates findings from researchers and educators who have focused on cognitive development and learning, those who have focused on behavior, and those who have emphasized the role of affect in learning and development (cf. Harris, 1982). Harris and Graham believed that such an approach must integrate competing viewpoints about effective learning environments and approaches to teaching, while remaining dynamic and open to change as knowledge of teaching and learning expands and new approaches are validated. They have also emphasized that approaches to teaching and learning need to be flexible and modifiable to meet the styles and needs of both teachers and students (Harris & Graham, 1992).

Self-regulated strategy development has been used to support students in a variety of academic areas-including reading, spelling, math, and writing (see Case, Mamlin, Harris & Graham, 1995; Harris & Graham, 1992). However, the heart of SRSD has been establishing that every child can write, and validating powerful strategies for planning, writing, revising, editing, and managing the writing process. In tandem with composition strategies, children develop self-regulation strategies and abilities crucial to orchestrating the writing process-including goal setting, self-instructions, self-monitoring and self-assessment, and self-reinforcement (a detailed discussion of these skills and how they can be developed in the classroom is included in Harris & Graham, 1996a).

In writing, the major goals of SRSD are threefold:

1. Assist students in developing knowledge about writing and powerful skills and strategies involved in the writing process, including planning, writing, revising, and editing.
2. Support students in the ongoing development of the abilities needed to monitor and manage their own writing.
3. Promote children's development of positive attitudes about writing and themselves as writers.

To reach these goals, teachers using the SRSD model provide whatever level of support and scaffolding necessary-from explicit instruction to guided discovery-in the development of (a) skillful use of strategies that make a difference, (b) self-regulation of strategic performance and knowledge of one's own cognitive processes and other learning characteristics, and (c) understanding of the purpose, significance, and limitations of the strategies used.

Integrating SRSD and the Writing Process Approach

A product-oriented model of writing instruction prevailed in American schools until relatively recently (Applebee et al., 1990; Harris & Graham, 1992; Graham & Harris, in press). In this model, mechanics and grammar were emphasized over content and process. Further, writing was given limited time and attention, and few activities pursued in classrooms required sustained writing. Students were taught little about the processes and strategies involved in writing, and little was done to promote their development. Students were expected to learn to write in isolation, typically by reading the work of others and creating similar compositions. First drafts were often final drafts, read only by the teacher-who primarily marked errors in mechanics and assigned grades. The roles of writing in learning and communicating were neglected.

Instructional practices in writing today evidence significant change from that model. A process-oriented approach to writing has emerged, as seen in Writers' Workshop and whole-language approaches (Applebee et al., 1990; Atwell, 1987; Graves, 1985). The process approach to writing places the learner and the learner's needs at the center of interactive learning among teachers and students. Learning is seen as a socially situated activity enhanced in functional and meaningful literacy contexts. Emphasis is placed on creating a community of learners who:

- share and help each other,
- make personal choices about what they read and write,
- take ownership of and responsibility for their learning,
- see writing as a process-and a first draft as just that,
- take risks in their reading and writing, and
- collaborate in evaluating their efforts and progress.

Students write for real audiences and for real purposes, and are given opportunities for extended writing. Writing conferences, peer collaboration, mini-lessons, modeling, sharing, and classroom dialogue are all essential components of this approach. Students should come to see writing as a process that is difficult and frustrating at times, yet is also a challenging and enjoyable vehicle for learning and self-expression.

Good strategy instruction embraces every one of these principles and teacher actions (cf. Harris & Pressley, 1991; Pressley, Harris, & Marks, 1992; Pressley & Rankin, 1994). We have strongly supported the shift toward the writing process approach, and toward authentic learning approaches in general, for all children (Harris & Graham, 1992, 1996b). However, the integration of strategy instruction with process writing or whole-language approaches has generated considerable debate. There are those who view strategy instruction as similar to the teacher-centered, "drill and kill" approach, and those who argue that such integration is impossible and dangerously misguided (cf. Edelsky, Altwerger, & Flores, 1991; Goodman, 1986; Harris & Graham, 1994, 1996b; McIntyre & Pressley, 1996). Some whole-language advocates encourage teachers to inoculate themselves against criticisms or concerns regarding the approach (see Edelsky et al., 1991; Manning & Manning, 1995). These advocates believe that rich social interaction and immersion in meaningful literacy activities will teach children all they need to know, and develop all the skills and abilities they need to have, in due developmental time. In their view, it is not necessary, and may even be harmful, to teach explicitly.

Researchers and practitioners, however, are increasingly demonstrating that neither whole language nor process approaches to writing are uniformly effective for all children (Graham & Harris, 1994, 1997). Immersion in reading and writing, informal methods of instruction, and "teachable moments" do not provide all children with the level of explicit instruction, practice, and feedback they need to master critical skills and strategies. For students who struggle with reading and writing, and those with pronounced learning difficulties or disabilities, the limitations of process writing and whole-language approaches may be even more pronounced. These students often require more extensive, structured, and explicit instruction in the skills and strategies critical to literacy (Brown & Campione, 1990; Englert et al., 1991; Graham & Harris, 1994; Harris & Graham, 1996b; Wong et al., 1994).

Teachers and researchers have argued that explicitness and structure should not be equated with decontextualized learning of meaningless skills, passive learning, or the teaching of gradually accruing basic skills before allowing higher-order thinking, problem-solving, and conceptual learning. In fact, Harris and Graham (1994, 1996a) have argued that SRSD depends upon teachers engaging students as active collaborators in their own learning and development; modeling, dialogue, sharing, and scaffolding are critical. It is also important to note that SRSD was not designed to replace any particular writing curriculum, but rather to complement existing, effective practices in writing instruction. Further, SRSD emphasizes providing instruction that is only as explicit and supportive as is required by individual students' self-regulation and writing needs-needs that are realized in authentic literacy contexts, such as that provided by the process writing approach. Thus, the full SRSD model is not needed with all students, nor do all students need the same self-regulation or writing strategies. The SRSD approach also stresses that teachers are active learners; as they engage in collaborative strategy instruction, they and their students construct knowledge of

- writing and self-regulation strategies;
- difficulties that students encounter in attempting to regulate strategic performance;
- ways to facilitate development of strategies; and ways to promote sustained and generalizable self-

regulated, strategic performance.

Many teachers have "adapted, rather than adopted" whole language and other authentic learning approaches (Pearson, quoted in Willis, 1993, p. 8). In a national study of outstanding teachers of reading and writing, Pressley, Rankin, and Yokoi (in press) found that these teachers typically blend together whole language and explicit instruction. Commenting on how she integrated SRSD with Writers' Workshop, one teacher noted,

It's perfect. I think it fits Writers' Workshop really well because there were plenty of opportunities for student choice ... I think it really clarifies for kids what the planning stage of Writers' Workshop is all about, and the writing process (MacArthur, Schwartz, Graham, Molloy, & Harris, 1996, p. 174).

Research base supporting SRSD

To date, over 20 studies using SRSD to teach writing strategies have been conducted (cf. Case et al., 1995; Harris, Graham, & Schmidt, 1997). These studies have taken place in classrooms or tutoring settings, with instruction typically given by preservice or inservice teachers. Many of the studies involve teachers who have integrated SRSD with Writers' Workshop or whole-language approaches (e.g., Danoff, Harris, & Graham, 1993; MacArthur et al., 1996; Sexton, Harris, & Graham, in press). Studies have been conducted by Harris, Graham, and their colleagues, as well as others (Albertson & Billingsley, 1997; Collins, 1992; De La Paz, in press; Tanhouser, 1994). While Harris and Graham have worked primarily in the elementary and middle grades, SRSD has also been used with high-school students.

SRSD has made significant differences in children's development of a variety of planning and revising strategies, including brainstorming (see Harris & Graham, 1985); self-monitoring (Harris, Graham, Reid, McElroy, & Hamby, 1994); reading for information and semantic webbing (MacArthur et al., 1996); generating and organizing writing content using text structure (Graham & Harris, 1989; Sawyer, Graham, & Harris, 1992); advanced planning and dictation (De La Paz & Graham, 1997); goal setting (Graham, MacArthur, & Schwartz, 1995; Graham, MacArthur, Schwartz, & Voth, 1992); revising using peer feedback (MacArthur, Schwartz, & Graham, 1991); and revising for both mechanics and substance (Graham & MacArthur, 1988; Graham et al., 1995). Writing strategies have been developed, typically with the assistance of teachers and students, for a variety of genres—such as story writing, opinion essays, persuasive essays, report writing, and so on (see Harris & Graham, 1996a, for detailed descriptions of the strategies and how to help students develop them).

SRSD leads to changes and improvements in four main aspects of students' performance: quality of writing, knowledge of writing, approach to writing, and self-efficacy (cf. Graham, Harris, MacArthur, & Schwartz, 1991; Harris & Graham, 1992). Specifically, across a variety of strategies, the quality, length, and structure of students' compositions have improved. Depending on the strategy taught, improvements have also been documented in planning, revising, substantive content, and mechanical concerns. Further, these improvements have been consistently maintained over time (with some students needing booster sessions for long-term maintenance), and students have shown generalization across settings, persons, and writing medium—i.e., from word processor to paper and pencil (Harris & Graham, 1996a; Graham, Harris, & Troia, in press). These improvements occurred among normally achieving students as well as students with learning problems (Graham et al., 1991). In several studies, in fact, improvements for students with learning disabilities have been so pronounced that following SRSD instruction, these students did as well as their normally achieving peers (cf. Danoff et al., 1993; Graham & Harris, 1989).

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From children's portfolios

The stories below, from three elementary school students' portfolios, illustrate how SRSD helps children develop as writers. The first two children, Mike and Christie, were described to us by their teachers as "non-writers." Both were also identified as learning disabled. Mike, our first author, was said to "very much dislike writing." Christie did not particularly dislike writing (her teacher attributed her more positive attitude to the Writers' Workshop used at the school), but felt she was simply not much good at it.

Mike

Mike wrote the following story before SRSD instruction:

The boy is running through the meadow where there is a lot of water and trees and high hills. He is running up and down to get to another side and he must be happy or he would stop running.

Together with other students who were having difficulty with writing, Mike was offered SRSD instruction in a basic three-step planning strategy adapted for story writing (Harris & Graham, 1996a):

1. Think -Who will read this? -Why am I writing this?
2. Plan what to say -Use S-P-A-C-E
3. Write and say more

SPACE is an acronym used to help students remember the parts of a good story; it stands for Setting, Purpose, Action, Conclusion, and Emotions. Mike and his peers were able to use this strategy effectively in six to eight class sessions. The following story is one Mike wrote after SRSD instruction.

Once upon a time long ago an animal was shipped to a small country in Brazil. The men that lived there did not know what it was and they went to their master and told their master what had happened. He came out, took the box to a top of a hill because whatever was in the box he did not want it to kill his men. The man got a net and went to open the box. He opened the box. The animal got out and bit him and was running towards his men. The men did not want to get hurt, so they ran into their tent with fear and the animal ran away. The leader got a bandage for his leg and got the net and started after him. He finally caught the animal and found out it was only a scared lion and carried him back. He told his men to come out and look. They walked out slow. The leader said, "Look, it is only a baby lion." They all pet it and played with it, fed it and they all became good friends with the lion. They were all happy, but pretty soon after that, the tiger got bigger and wasn't friendly any more. So they let it go free. They were all upset, but then they remembered all the good time they had with the lion.

Christie

Christie's teacher, Barbara Danoff, decided to offer instruction in a different story writing approach at her school-the "W-W-W" or Story Grammar strategy. While she felt that all of the students would profit from learning about the strategy, she was surprised (but pleased) to find that the entire class wanted to receive this instruction. The students who were struggling with writing needed seven to nine class sessions and considerable support (the full SRSD model) to make the strategy theirs; others caught "the trick of it" in the first few mini-lessons. (For a complete description of how Barbara and her students worked together during Writers' Workshop to develop each student's abilities with this strategy and with other aspects of story writing, see Harris & Graham, 1996a.) This planning strategy has five steps:

1. Think of a story that you would like to share with others.
2. Let your mind be free.
3. Write down the story part reminder:
 - o W-W-W
 - o What=2
 - o How=2
4. Make notes of your ideas for each part.

5. Write your story-use good parts, add, elaborate, revise as you write or afterwards, and make sense.

The mnemonic in Step 3 of this strategy stands for the following questions: Who is the main character, and who else is in the story? When does the story take place? Where does the story take place? What does the main character do or want to do, and what do other characters do? What happens when the main character does or tries to do it, and what happens with other characters? How does the story end? How does the main character feel, and how do other characters feel?

Barbara taught students the W-W-W strategy in the context of the Writers' Workshop approach at her school. Before SRSD instruction, Christie's stories looked much like Mike's pre-instruction story, but after working with Barbara and her peers, she wrote the following story.

Baseball and Tommy

One hot, humid day in April (April 22, 1990) there was Tommy, who lived in Maryland-Virginia. Tommy is a short boy, he is 9 years old with brown hair. And he loved to wear his red hat, blue jeans, and his gray sweatshirt. One afternoon Tommy saw his friends (Jim, Scott, Fred, Tod) were playing ball. But when he went home he tried to play but he was not good. He practiced and practiced, finally he was getting good. So when he told his friends they said, "Lets see how good you are." So they went to Tod's house and played in his backyard. It was a hot, humid day so they had to stop. They went in and got drinks. Then Scott said, "Hey, you're pretty good." "Thank you," Tommy said. When Tommy tried out for the team (neighborhood) he made it. When he got home he was so proud of himself. He told his father and his father said if you're so good then try out for the school team. The next day he watched the team and tried to learn the plays. When he went home he played with his friends, like the team. The next day he went in to talk with the coach and ask if he could try out. The coach said sure, we're looking for another player. So Tommy went for it and made the team. When he got home he told his father. His father was so proud he took him out for ice cream. Tommy's father said, "I am sorry for acting so rude before and being so forceful." Tommy said, "It's OK."

The End

Vanessa

Vanessa, also in Barbara Danoff's class, was one of the more capable writers. However, review of her portfolio indicated that she typically did not use all of the story components in her writing. In addition to including all the story components, Vanessa also wanted to include more elaboration, detail, and actions in her stories. After discussion and modeling of the strategy (just a few class sessions or mini-lessons), she wrote the following story-and clearly met her goals.

The St. Patrick's Day Leprechaun

One day in Doggy Land, Valerie (a poodle) was walking through the forest. It was March 31, 1990. Valerie was a white poodle with a green bow in her hair. Since it was St. Patrick's Day, Valerie was going to find a leprechaun.

She was skipping along when all of a sudden she heard a moan. Then she heard a whimper. Now, Valerie was a very curious dog. She started to walk east. That was where the sound was coming from. In surprise she found out that it was a dog too. He was tan and white with big, brown, sad eyes. He also had on a green top hat and a bow-tie with clovers on it. It was a leprechaun! Valerie said, "Why are you crying Mr. Leprechaun?"

"Because I have scratched my paw on a thorn bush! Could you please help me!" begged the leprechaun. Well, Valerie wanted a little something out of this too. So she said, "Only if you give me three wishes!"

"Oh, all right!" said Mr. Leprechaun. Valerie got a band-aid out of her purse and put it on the leprechaun. He felt much better. "Now what do you wish for?"

"I want a bike, a new dress, and a pot of gold!" said Valerie. Out of mid-air came a bike, and a new dress. "But where's my pot of gold?" asked Valerie.

"Well for that we'll have to go over the rainbow. Hop on!" shouted Mr. Leprechaun. Together they rode up onto the rainbow on the magic carpet. When they got on top they slid down. They landed on a cloud. Under a rock was the pot of gold.

After that Valerie went home. She laid her things down on the table. She was thirsty from the long ride. She went into the kitchen. When she came back her bike, dress, and pot of gold were gone. "Oh no!" thought Valerie. She ran back to the woods. But he wasn't there. She looked up at the sky. The rainbow was gone! For it was only her imagination.

The End

SRSD stages of instruction

How do students achieve such developments in their writing? Children like Vanessa, who enjoy writing and do not struggle with it, may merely need opportunities to share, discuss, and try out strategies for different genres or forms of writing. For other students, much more is needed—more explicit instruction, more support, and more attention to their attitudes, beliefs, and feelings about writing.

Six instructional stages provide the framework for self-regulated strategy development (Harris & Graham, 1992, 1996a). These stages represent a "metascript," providing a general guideline; they can be reordered, combined, revisited, modified or deleted to meet student and teacher needs. Furthermore, the stages are designed to be recursive—so that if a concept is not mastered at a certain stage, students and teachers can revisit or continue that stage as they move on to others. In fact, a typical lesson (as we illustrate shortly) involves two or three stages.

The six stages in the SRSD model are listed below. ("It" refers to the writing process using both self-regulation and specific writing strategies).

1. Develop Background Knowledge
2. Discuss It
3. Model It
4. Memorize It
5. Support It
6. Independent Performance

Some stages may not be needed by all students. For example, some students may have already mastered the background knowledge needed to use the writing strategy and self-regulation processes targeted for instruction. These students may skip this stage or act as a resource for other students who need this stage.

Procedures for promoting maintenance and generalization are integrated throughout the SRSD model. These include: identifying opportunities to use the strategies in other classes or settings, discussing attempts to use the strategies at other times, reminding students to use the strategies at appropriate times, analyzing how these processes might need to be modified with other tasks and in new settings, and evaluating the success of these processes during and after instruction. Other teachers can be asked to prompt students to use the writing and self-regulation strategies when appropriate in their classrooms. Booster sessions, in which the strategy is reviewed and discussed, are very important in maintaining strategy use for some students.

Rather than simply describing each stage, we will illustrate the SRSD process with two case studies of its use in actual classrooms.

SRSD instruction: Two teachers and their students

SRSD can be conducted with individual students, small groups, or entire classes. While Barbara Danoff

(whose students Christie and Vanessa were described above) involved her whole class in at least the first stages of SRSD (Danoff, Harris, & Graham, 1993), the teachers in the following two examples are working with small groups of students. In both groups, the students have serious difficulties with writing, and are identified as having a learning disability in this area. In the second example, the teacher has modified SRSD instruction in some interesting ways.

Melissa Sexton's SRSD group

The first group included six fifth- and sixth-grade students with learning disabilities, who were taught a strategy for writing opinion essays (Sexton et al., in press). These students were involved in SRSD instruction because they experienced difficulties with writing, displayed a low level of motivation, and had maladaptive beliefs about the causes of success and failure in their writing. The school was implementing an inclusion model; these six students were part of a multi-grade team with their general education peers. Their writing class was team taught by general and special education teachers, using the Writers' Workshop approach. The students continued to participate in Writers' Workshop, receiving instruction in the composition strategy in a small group. Since mini-lessons and conferences are a common part of Writers' Workshop, Melissa Sexton, the teacher, did not have a problem integrating SRSD within this approach.

Develop Background Knowledge. Melissa began instruction by leading a discussion on what the students already knew about opinion essays, including the elements that are commonly found in such an essay. This knowledge was considered an essential prerequisite to using the target writing strategy, as these elements of opinion essays served as prompts for generating information to include in the outlines. Melissa and her students read and discussed several good essays. They identified three elements commonly included in opinion essays: a premise, supporting reasons, and a conclusion. Next, they identified examples of these elements in essays they were reading in class and essays written by other children. They then spent some time generating ideas for essay parts, using various topics.

Discuss It. Following this initial lesson, an individual conference was held with each student. Each student examined previous opinion essays he or she had written to determine which elements were included and to assess the quality of each element. Melissa and the student also talked about any strategies or self-statements that he or she currently used when writing. At this point, Melissa indicated that she would like to teach the student a strategy for writing essays. She talked with the student about the goals for learning the strategy (to write better essays), and about how including and expanding essay parts could improve the student's writing, and thus improve communication with the reader. Melissa also introduced self-monitoring, explaining that self-assessment and self-recording would allow the student to monitor the components in his or her essays and the effects of learning the writing strategy. Together, she and the student counted and graphed the number of elements included in the student's earlier essays. Melissa explained how the graph would continue to be used for self-monitoring as the writing strategy was learned. Before completing the conference, she emphasized the student's role as collaborator, and together they developed a written goal to learn the strategy.

After each child had participated in an individual conference, Melissa and the students resumed their group discussion of the writing strategy during a second lesson. Each student was given a chart listing the steps of the strategy:

1. Think, who will read this, and why am I writing it?
2. Plan what to say using TREE (note Topic sentence, note Reasons, Examine reasons, note Ending).
3. Write and say more.

(Mike's class used the same basic three-step strategy, but with a story-writing component-SPACE-as explained previously.)

The first step in the strategy involves identifying the intended audience and reasons for writing the paper. During the second step, each student develops an outline for his or her essay. This includes establishing the premise for the paper, generating ideas to support the premise, evaluating readers' reaction to each idea (and eliminating unsound ideas), noting a conclusion for the paper, and determining how the argument will be structured or sequenced. The third step is a reminder to continue revising and improving the outline while

writing.

Melissa asked the students what they thought the reason for each step might be, and the group discussed how and when to use the strategy (e.g., whenever you are asked, or want, to give your opinion or tell what you believe). Melissa then described the procedures for learning the strategy. She stressed the importance of effort, since a strategy can't work if it hasn't been mastered.

To help them remember the steps in developing an outline (TREE), students were given various verbal prompts to visualize a tree: "The trunk is like your Topic sentence or premise. How are the trunk of a tree and your topic sentence similar? [Everything is connected to each of them.] The roots are like your Reasons. How are the roots of a tree like the reasons that support your topic sentence? [They support the trunk-just like reasons support the topic sentence.] It is also important to Examine the roots-just like you examine reasons. If they are strong, the trunk and the whole tree will be strong."

Model It. During the third lesson, Melissa modeled how to use the writing strategy, thinking out loud as she worked. The students participated during modeling by helping her as she planned, made notes, and wrote the first draft of her essay. Together they accepted and rejected possible ideas to support her premise, and they continued to modify the plan while writing the paper. Once a first draft was written, they reread the paper and made revisions. While planning and writing, Melissa used a variety of self-instructions to help her manage the strategy, the writing process, and her behavior. These included self-statements involving problem definition (e.g., "What do I need to do?"), planning, (e.g., "OK, first I need to ..."), self-evaluation (e.g., "Did I say what I really believe?"), and self-reinforcement (e.g., "Great, this is a good reason!"). In addition, she emphasized that her success in writing the essay was due to effort in the use of the writing strategy. (As noted earlier, these children had maladaptive beliefs about the causes of success and failure in their writing). The attributional self-statements Melissa used included: "If I work hard and follow the steps of the strategy, I'll write a good essay" and "I want to write a good essay, so I will try hard to use the strategy and include good essay parts."

Discuss It (revisited). After Melissa modeled how to use the writing strategy, she and her students discussed the importance of what we say to ourselves while we work; students volunteered examples of positive and negative self-statements they used when writing. They also identified the types of things Melissa said that helped her work better, stressing statements that emphasized the role of effort and use of the strategy in success. After discussing how these self-statements were helpful, each student generated and recorded on a small chart self-statements he or she would use to (1) manage the strategy and the writing process (e.g., "Slow down and take my time") and (2) attribute success to effort and use of the strategy (e.g., "Work hard-Write better.").

Memorize It. During a fourth lesson, students worked on memorizing the strategy, the mnemonic (TREE), and several self-statements they planned to use. Melissa felt this stage was important to include, because several of her students experienced memory problems (as do many children with learning disabilities). Students practiced memorizing this information in pairs-typically by quizzing each other. Most students memorized the items easily, but some needed more practice, and continued to work on memorization as they began writing essays.

Support It. In subsequent lessons, students received assistance from Melissa and from each other as they applied the writing strategy and accompanying self-regulation procedures while writing opinion essays. The goal during this stage of instruction was to support the students' efforts as they learned to use these procedures successfully and independently. Melissa gradually adjusted the level of support provided, reducing assistance as each child became increasingly adept at using the procedures.

At first, students received considerable support in developing a writing outline. Based on her previous experience with the students, Melissa thought this part of the strategy would be particularly challenging for them (an excellent example of anticipating and planning for difficulties). Support initially involved her acting as the lead collaborator in the planning process. As she and the students planned together, she intentionally committed a few errors, such as forgetting a step of the strategy. This led to discussions about the impacts of and reasons for such errors. Melissa then modeled correcting the mistake, combining the correction with a positive attributional self-statement (e.g., "I need to try to follow all of the strategy steps, so I can write a good essay"). If students subsequently made mistakes in using the strategy, the possible consequences of the errors were examined again, and students were encouraged to redo the step while using a positive

attributional statement.

Melissa's role as a planning collaborator was quickly (as students became ready) replaced with less intrusive forms of assistance and scaffolding, including reminders to carry out a step or use self-statements, prompting to devote more attention to a specific aspect of the process (e.g., generate more possible supporting reasons), and feedback on the use of the strategy and accompanying self-regulation procedures. In some instances, it was necessary for her to revisit the rationale underlying an individual step in the process (e.g., the need to evaluate the readers' reactions to each idea). Assistance also included helping students determine which self-statements were especially useful to them. References to the strategy chart and self-statement lists as prompts or reminders were faded, and students were encouraged to use their self-statements covertly (in their heads).

As students worked on their essays, Melissa encouraged them to use goal setting and self-assessment (continuing the use of the graphs) in conjunction with the writing strategy and self-statements. Prior to planning an essay, each student set a goal to include all of the essay parts in his or her paper. Once an essay was completed, the student reviewed the paper, determining if any parts were missing and counting and graphing the number of essay elements that were included. Students then shared their essays with each other, providing feedback on both strengths and areas where improvements could be made in each other's arguments.

Independent Performance. After writing three or four essays, all of the students were able to use the writing strategy and accompanying self-regulation procedures without teacher support. At this point, students planned and wrote essays independently. Melissa provided positive and constructive feedback as needed, and the students continued to share their essays with each other. While some students still relied on their strategy charts and lists of self-statements as a prompt or reminder, they were encouraged to work without them. Students were asked to continue using the goal setting and self-assessment (graphing) procedures on at least two more essays. After that, they were told that use of these procedures was up to them.

In a group conference, students discussed how what they were learning could be used in other classes. Several students indicated that they now told themselves "to try harder" when writing or asked themselves if their paper was "good enough." The students identified opportunities they might have to use the writing strategy and self-regulation procedures in the future. Each student also evaluated the strategy and the instructional process. They all indicated that they enjoyed learning the writing strategy and that other students would benefit from learning it as well; as one student put it, "All schools in the country should learn this!" When asked if they would change anything about instruction, the only recommendation was to give homework assignments to use the strategy.

Formal evaluation indicated that instruction changed both how and what students wrote (Sexton, Harris, & Graham, in press). Before SRSD instruction, when students were asked to write an essay, they began to write immediately; these essays were of poor quality, containing only two or three ideas. They typically started their essays by stating their position, then gave a single supporting reason, and ended abruptly, without a concluding statement. Following instruction, the students typically planned papers in advance, and the quality of the resulting essays improved. Papers became longer, the number of reasons supporting the premise increased, text was coherently ordered, and all of the basic elements of a good essay were present. The students were more confident about their ability to write a good essay, and more positive about the role of effort and strategy use in writing.

Gary Troia's SRSD group

The second group included three fifth-graders in a tutoring setting, who were taught a planning strategy for story writing (Troia, Graham, & Harris, 1997). The strategy involved using three important writing processes: goal setting, brainstorming, and organizing. As in the previous example, these students had learning disabilities and experienced severe difficulties with writing. Gary modified the SRSD approach by leading students to derive the nature and importance of these three processes across both writing and reading tasks, and by using "homework" (practice at home or school) to promote generalization and maintenance.

Develop Background Knowledge. Instruction began with reviewing and expanding what each child knew about good stories and story writing. In an approach similar to Melissa's, Gary incorporated discussion and examination of stories students were reading to help establish the common components of a good story:

setting, problem, action, consequence, and reaction. At this point, however, rather than first describing the writing strategy he planned to offer and then asking students to reflect on the rationale and value of each step, Gary decided to model several literacy tasks involving reading and writing.

Model It and Discuss It. As he modeled each writing task, he used goal setting, brainstorming, and organizing, and let the students derive the essential features, rationale, and value of these three processes. To help students see the importance and generalizability of these processes, Gary led three lessons where he modeled different tasks, including reading tasks and both essay and story writing. The students identified, discussed and evaluated these three processes, and Gary introduced outlining as a reminder for employing these processes with writing and other tasks. During each of the three lessons, students were encouraged to assist him in goal setting, brainstorming, and organizing.

In the first lesson, Gary modeled-while "thinking out loud"-the use of these processes to read a chapter and write a story. In reading the chapter, he set a goal ("find out how plants fit into the food chain"), brainstormed and listed what he already knew, and organized his ideas by topic. As he read, he modified his outline by adding, deleting, changing, and rearranging both ideas and categories. Similarly, when writing a story, Gary set a goal ("to write a good story to share with my creative writing class"), brainstormed ideas to include in the story, and sequenced the ideas he planned to use. While writing, he modified his outline by adding, changing, deleting, and rearranging ideas. Throughout the modeling, Gary provided a rationale for each of his actions and verbally reinforced himself for a job well done.

After the two tasks were modeled, the students were encouraged to take some time to think about what they had just seen and heard. Guided discussion helped them identify the rationales for and essential features of the three processes used to accomplish the tasks. First, Gary asked a series of questions focused on what was similar and different in the reading and writing activities. All of the students identified goal setting, brainstorming, and organizing as similar. Gary then posed more focused questions, asking the students to think about why he had used each of these processes and how they had helped him. Discussion then shifted to how this approach to writing a story was similar to or different from the students' approaches on a story written a few days earlier. Each student was asked to evaluate the possible use of the processes in her or his own writing.

In the next two lessons, Gary modeled (thinking aloud, and involving students in the process) preparing for a speech, planning a trip, and, once again, writing a story. Discussion resumed about what was similar and different in the conduct of these three tasks. This series of lessons ended with the introduction of a mnemonic that would act as a prompt to set goals, brainstorm, and sequence when writing or doing other tasks involving planning. A small chart was used to introduce the mnemonic, STOP & LIST: Stop Think Of Purpose & List Ideas Sequence Them.

Discussion of STOP & LIST resumed during the following lesson. With Gary's guidance, each student self-evaluated a recent story. Students determined if each common story element (i.e., setting, problem, action, consequence, and reaction) was included and rated the quality of the elements present on a five-point Likert-type scale. They also assessed the overall quality of the story using the same rating system, and identified strategies used in writing the story. Students were then asked to specify how goal setting, brainstorming, and sequencing had helped or would help them with story writing. Together with Gary, they created a list of when, where, and why students used the three processes. At this point, Gary described how they would work together to learn to use STOP & LIST to write stories. He indicated that the purpose of learning the strategy was to "write better stories and use it with other tasks." Each student noted what he or she would do to facilitate the learning process, such as "not give up" or "work hard."

Memorize It. During this lesson, the students also briefly practiced the STOP & LIST mnemonic and the sentence it represented. This continued in succeeding lessons until students could repeat the information easily and quickly. Gary believed such practice to be particularly important for this group of students, as all of them had difficulties with long-term memory, and a strategy cannot be used if it cannot be recalled!

Support It. In the next lesson, students began writing stories using STOP & LIST. Gary collaboratively planned a story with each student, and made sure the strategy and mnemonic were used appropriately. The mnemonic chart was set out to remind students to set goals, brainstorm, and sequence. Gary modified the amount of input and support provided to meet each child's needs. Assistance included prompting, guidance and feedback, and re-explanations. This scaffolding, including use of the mnemonic chart, was faded as each

student grew ready to use the strategy independently.

After completing a story, each student was asked to determine which story elements were present in the story, evaluate their quality (using the rating scale described earlier), and determine if the goal(s) for the story had been met. The student discussed with Gary where and why he or she was successful, unsuccessful, or both; the role of goal setting, brainstorming, and sequencing in writing the story; and what could have been done to write an even better story.

At the end of each lesson, each student identified an opportunity to apply STOP & LIST at home or school, and this became a "homework" assignment. Students explained how the strategy would be helpful and what modifications were needed to enable it to work. Examples of homework assignments included planning a report, a trip, or supplies needed for school. At the start of the next lesson, each student turned in his or her outline or planning sheet, reported on the success of the assignment, and assessed the role and value of the strategy in carrying out the task. Each child also described any other times goal setting, brainstorming, or sequencing had been used since the prior lesson. Most of the students' examples centered on the completion of writing assignments.

Independent Performance. After writing two stories with assistance, each student was able to use STOP & LIST without Gary's support. At this point, students planned and wrote stories independently; Gary provided positive and constructive feedback as needed. Homework continued, and students evaluated their stories and reflected on the outcomes and relevance of using the strategy.

At the end of instruction on this strategy, each student was asked to further consider how goal setting, brainstorming, and sequencing were helpful when writing stories and completing homework assignments. They discussed how STOP & LIST had to be modified for these tasks, and they identified opportunities for applying the strategy in the future (e.g., in writing assignments, homework, shopping, and organizing their rooms).

Formal evaluation of the students' stories revealed that prior to SRSD instruction, none of the participating students had done any planning in advance of writing, following instruction they consistently used STOP & LIST to plan and organize. The students' papers became longer and included more story elements. These improvements also generalized to a second genre, the writing of opinion essays, and were maintained on writing probes administered almost a month after instruction was terminated. Students had positive comments about the strategy and the way they had learned it; they said it would help them "get better grades in school," "think of ideas I might not have," and "write good stories."

"It's not just what you do, but how you do it"

Our work with teachers and children learning self-regulation and writing strategies has convinced us that how is every bit as important as what in strategy instruction. Teachers and children have helped us to identify several characteristics of the SRSD approach that are critical to effective implementation in schools and classrooms (Harris & Graham, 1996a).

- First, the self-regulated strategy development model emphasizes collaborative learning among teachers and students. While the teacher initially provides the necessary degree of scaffolding or support, the responsibility for recruiting, executing, monitoring, evaluating, and modifying strategies is gradually transferred to the student. For example, students can act as collaborators in determining the goals of instruction; completing the task; implementing, evaluating, and modifying the strategy and self-regulation procedures; and planning for maintenance and generalization. Students also collaborate with and provide support for each other.
- Individualization of instruction based on students' characteristics and skills is a second important feature. Instruction does not need to be one-to-one, but teachers should strive to understand each child's current approach to writing and then work with students to select and modify strategies and instructional components that fit their needs and promote development. As mentioned earlier, SRSD has been successfully used with individual students, small groups, and entire classes. Regardless of the

number of students and teachers working together, the preskills, skills, strategies, and self-regulatory procedures used should be chosen and developed in accordance with a thorough understanding of each student and of the writing task, and should be tailored to individual students' capabilities. Even when the composition and self-regulatory strategies are appropriate for a group or entire class, the teacher can individualize certain aspects of instruction (the nature and content of self-instructions, goals for writing and self-regulation, affective goals, feedback and reinforcement, etc.). Ongoing self-evaluation, using techniques such as self-monitoring or portfolio assessment, can also promote individualization (Harris & Graham, 1996a).

- The third characteristic of SRSD is that instruction is criterion based, rather than time based. Each student should be given adequate time to meet affective, cognitive, and composing goals. Students progress through the stages at their own pace, moving on as they become ready to do so. Thus, teachers do not plan to teach a strategy in a set period of time, and when they are working with groups, they may frequently shift between entire-group, smaller-group, and individual lessons. Teachers have found that it typically takes only six to nine class sessions or lessons, using the full SRSD model, for students to reach independent performance. As we have noted, many students will not need the full SRSD model, and thus will come to understand and work with a strategy in less time.
- The fourth aspect of SRSD is true of teaching in general; teachers in all areas have found it important to anticipate and plan for glitches-areas of instruction that may be difficult. Before introducing a new strategy, teachers have found it beneficial to brainstorm things that could go wrong or prove especially problematic, given what is known about the learners and the composition task. Students can collaborate in anticipating glitches as well. For example, maintaining and generalizing strategy use can be challenging for some students. Together with their teacher, students can set a plan for booster sessions (reviewing and revisiting strategies) after they have learned the strategies.
- Because teachers play such a pivotal role in helping students understand the meaning and efficacy of self-regulation and writing strategies, the fifth characteristic involves having enthusiastic teachers working within a support network. Enthusiastic, responsive teaching is an integral part of SRSD, as it is with all effective teaching. Given the complexity and demands of strategy instruction, a supportive network of teachers and administrators who can problem-solve and share both their successes and their failures makes implementation considerably easier. Moreover, the impact of instruction on students is much greater, and generalization of strategic performance across the curriculum and grades is more likely, when strategy instruction is embraced across a school or district.
- The final characteristic teachers need to consider is developmental enhancement. With SRSD, teachers consider how a strategy fits into the larger scheme of things in relation to each student's development both as a writer and as a self-directed learner (Harris & Graham, 1992). The teacher needs to understand the many ways strategies can empower students in order to help students take full advantage of them. Students need to learn the meaning and significance of strategy usage, as well as the strengths and weaknesses of particular strategies. For example, strategy instruction might begin with a traditional story grammar strategy (such as the SPACE and W-W-W strategies described here). Once students develop ownership of this strategy, the class may move on to other types of story grammars-such as those used by African tribal story tellers, or structures focused more on character development than action-or they might expand the story grammar strategy by working on writing biographical stories. The strengths and weaknesses of various strategies can then be compared, and new strategies may be discovered or created.

Evaluating SRSD

Students who are taught a strategy that does not improve their performance will certainly not be enthusiastic about learning a second strategy. Conducting ongoing assessment, rather than assessing the methods only at the end of instruction, allows teachers and students to determine what is working and what changes need to be made. SRSD facilitates meaningful, ongoing assessment. The interactive, collaborative nature of the SRSD learning process allows teachers to assess changes in affect, behavior, and cognition. The following is an explanation of some basic principles for assessing SRSD methods and procedures. The list is certainly not exhaustive, but it provides a good starting point for effective evaluation.

Involve students as co-evaluators

Students should be included as partners in the strategy evaluation process. Not only does co-evaluation increase students' sense of ownership and reinforce the progress they are making, but it also provides teachers with much greater insight into the effectiveness of the strategies and SRSD instruction. Students can participate in many ways, such as learning to evaluate their writing based on their goals (self-assessment), or discussing with the teacher which components of instruction are most helpful to them and where they would recommend changes. Helping students ask appropriate self-questions (e.g., "Am I ready to move on to the next step?" "Is this working for me?" "Do I need to do anything differently?") is another effective way to help students evaluate their own progress. By asking students to share their reflections, teachers gain valuable insight into their progress and readiness for moving on. Collaborative peer evaluation, using strategies such as peer revising (see Harris & Graham, 1996), is also a valuable component of the assessment process.

Consider the level of evaluation needed

Strategies, methods, and procedures such as TREE or STOP & LIST that have been previously validated (both by research and by teachers in the classroom) typically need less scrutiny than a strategy being used for the first time. The amount of time and effort expended on assessing the usefulness of a strategy should depend on the established validity of the strategy and a teacher's experience with it. However, it is important to remember that even well-validated strategies need evaluation. At a minimum, teachers should know whether (a) students are actually using the strategy, (b) use of the strategy has a positive impact on performance and affective characteristics, and (c) students see the strategy as being valuable and manageable.

Assess changes in performance, attitudes, and cognition

Because the benefits of SRSD go beyond improving a student's performance, teachers should also look for changes in students' attitudes and cognitive processes. While teaching writing and self-regulation strategies, teachers might observe students for improvements in attitudes toward writing or confidence in their abilities. They might also gather information about the amount and quality of writing a student does before and after SRSD instruction, or listen for spontaneous statements made about writing assignments. Open-ended questions-such as "What is good writing?" or "What do you most like to say to yourself while you write?"-can help provide insight. When evaluating performance, attitudes, and cognition, it is important to remember that some changes (such as reducing writing anxiety or improving attitudes) take more time than others to obtain.

Assess how students actually use the strategy

Over time, students will often modify a strategy or the ways in which they use it. As a result, it cannot be assumed that students are using the strategy as intended. Some modifications allow a strategy to meet a student's unique needs, but others (such as eliminating a necessary step) may not be useful or desirable. Teachers can monitor strategy usage through direct means (such as observing what students do as they write, asking questions, discussing how things are working), or indirectly (by looking for evidence of strategy usage in students' papers).

Assess students' use of the strategy over time and in new situations

We cannot assume that students will continue to use a particular strategy or successfully adapt a strategy to new situations. Therefore, it is beneficial to actively enhance maintenance and generalization of strategy usage from the very beginning of SRSD instruction. This might be done by periodically inviting students to explain the purpose of a strategy, or by having students (and teachers) share ways they've used the strategy. A teacher might also ask students to keep a record of each time they use a strategy or the ways they modify

it for other tasks. Ultimately, the goal is to determine whether students need additional support to consistently apply the strategy in appropriate situations.

Collaborate with colleagues during the evaluation process

If students are being taught a strategy that can be applied in different content areas or classrooms, it is important for teachers to involve colleagues in promoting this generalization and assessing whether the transition across subjects and settings is being made. It is also important to discuss with other teachers the strategy's effectiveness and whether it is appropriate in their classes-and, if not, how it could best be modified, or what other strategies would be more useful. Working together in this way, teachers in different classes can provide reminders for students to use the strategy, help students with a particular aspect of the strategy, or suggest modifications to make the strategy more effective for a certain task.

Use portfolio assessment procedures

Portfolio assessment is an ideal way to bring together many of the recommendations we have presented for SRSD evaluation. When students maintain portfolios, both teachers and students benefit. Students learn to engage in reflective self-evaluation, come to understand that development is as important as achievement (a major tenet of many process approaches to writing), and begin to take greater responsibility for their own learning. Teachers gain new insights about both assessment and teaching, and a greater understanding of their students' development and learning. Portfolio assessment does require that teachers establish the credibility of this approach with students and then become intimately involved in the maintenance and evaluation of student portfolios. However, once teachers and students become comfortable with this form of assessment, positive results occur for both.

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A few final tips for SRSD

Take it slow

For teachers just starting out with strategy instruction, we recommend starting slowly. It is tempting to try SRSD in the areas of instruction that present the greatest challenges or with students who are experiencing the most difficulty. However, despite good intentions, it is not fair to either party to take on too much too fast. Instead, begin with relatively simple strategies in an area with which you are comfortable and anticipate success, and with students who are willing to learn the strategies. Initial failure can make it difficult for both teachers and students to persist, and conversely, nothing succeeds like success. Teachers can move on to greater challenges as they gain experience. We also recommend that strategies be offered to students, not forced on them.

Take advantage of strategies already developed

It is often easier to begin strategy instruction with an existing, already proven strategy, such as the three-step strategy with TREE or SPACE, the W-W-W strategy, or the STOP & LIST strategy. Rather than attempting to simultaneously create an effective strategy and become comfortable with the process of helping students master the strategy, teachers can take advantage of a strategy that has already been developed and validated (cf. Harris & Graham, 1996a). Once the teacher and students are familiar with SRSD, then they can work together to create and evaluate new strategies, as they will often need to do to address their unique needs and situations.

Learn together

If at all possible, teachers should collaborate with other teachers, as well as their students, while they learn to implement SRSD in the classroom. Professional collaboration allows teachers to share their personal triumphs and challenges with strategy instruction and serves to facilitate supportive feedback and problem solving.

Conclusion

Harris and Graham have emphasized from the beginning that SRSD should not be thought of as a panacea; promoting students' academic competence and literacy requires a complex integration of skills, strategies, processes, and attributes. However, by establishing affective, behavioral, and cognitive goals for instruction, SRSD represents an important contribution to teachers' instructional repertoires. Evaluations of SRSD by teachers and students have been positive, indicating sound social validity. One teacher, for example, commented that she could "see light bulbs going on" as her students learned to use writing strategies (Danoff et al., 1993, p. 315). One student proclaimed that SRSD should be "taught to all schools in the country" (Graham, Harris, & Troia, 1997, p. 16), and another noted that "the W-W-W strategy really builds up your resources." Perhaps the best description of our goals for SRSD was one student's comment that "Now this writing stuff makes sense!" When writing makes sense and children develop ownership of powerful self-regulation and writing strategies, every child can indeed write.

About the authors

Steve Graham is a Professor in the College of Education at the University of Maryland. He has pursued his interest in writing by examining what children know about writing, how their mastery of mechanics enhances or impedes writing progress, what strategies students use and rely on when composing, and if approaches such as strategy and self-regulation instruction, the process approach to writing, and word processing are effective in fostering children's growth and interest in writing.

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About the book

Teaching Every Child Every Day Learning in Diverse Schools and Classrooms

Karen R. Harris, Steve Graham, Don Deshler & Michael Pressley, Editors Brookline Books 1997 - ISBN 1571290400

The increasing academic, economic, linguistic, and racial diversity in American classrooms represents both an additional challenge and a rich resource for literacy and education. This book focuses on successful teaching and learning in these diverse classrooms, with the idea that such instruction can be enhanced by an integrative instructional approach -- combining competing models of teaching and learning in ways that maximize the strengths of each while compensating for weakness of specific models. Powerful knowledge develops in both teachers and students through a variety of student and teacher actions, ranging from explicit instructional approaches to discovery-oriented approaches. **Buy Now**

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