What Is It?

Self Regulated Strategy Development (SRSD) for writing is an empirically validated model for supporting students as they compose text (Case, Harris, & Graham, 1992), by helping them develop relevant cognitive and self-regulation skills. Pioneered by Karen Harris and Steve Graham, SRSD for writing integrates three areas: (a) six stages of explicit writing instruction across a variety of genres; (b) explicit instruction in self-regulation strategies, including goal setting, self-monitoring, and self-instruction; and (c) development of positive student attitudes and self-efficacy about writing (see Harris, Graham, & Mason, 2003; Santangelo, Harris, & Graham, 2007). SRSD for writing has been studied in K-12 classrooms with students who struggle with planning, composing, revising, or evaluating writing. SRSD for writing encourages students to accomplish writing tasks through explicit instruction and simplifying the process of composing narrative, expository, and persuasive essays while integrating self-regulatory practices of goal setting, self-instruction, self-assessment, self-evaluation, and self-reinforcement. Numerous specific writing strategies have been developed for genres including story writing, narrative, expository, persuasive writing, and revising strategies (see Harris, Graham, Mason, & Friedlander, 2008). Each strategy includes a mnemonic acronym for learning the strategy steps. The story writing strategy, for example, uses "POW + WWW, What = 2, H = 2" in which the letters in POW represent steps: P = **P**ick my idea; O = **O**rganize my notes; W = **W**rite and say more. The WWW = **W**ho is the main character? **W**hen does the story take place, **W**here does the story take place? What = **W**hat does the main character do? and **W**hat happens then? H = **H**ow does the story end? and How does the main character feel?

For Whom Is It Intended?

SRSD for writing can be used across a wide age range with students who struggle with writing (Graham & Harris, 2003). The procedure has been well researched with students with learning disabilities (LD) in the upper-elementary and middle-school grades (De La Paz, 2000; 1999; Gersten & Baker, 2001; Santangelo et al., 2008); there is preliminary evidence of effectiveness with children as young as second grade (Saddler, Moran, Graham, & Harris, 2004). The flexible components of SRSD for writing enable practitioners to differentiate instruction to meet individual student needs. The approach has been used in inclusive classrooms, in small groups, and in one-to-one sessions with struggling writers, students with learning disabilities, and, to a much lesser extent, with students with emotional disabilities (Graham, Harris, McArthur, 2006; Graham, Harris, & Olinghouse, 2007; Lane, Harris, Graham, Weisenbach, Brindle, & Morphy, 2008).

How Does It Work?

In SRSD, writing is considered a problem-solving task that involves planning, knowledge, and skills (Graham et al., 2007). Planning includes planning, drafting, and revising the essay. Knowledge includes knowing information about the topic, the audience, and the genre (e.g., persuasive or narrative essay). Skills include the writing conventions of handwriting or keyboarding, spelling, and grammar. Given the complex demands of writing, self-regulation training is embedded in the explicit instruction so that students can eventually compose text with decreasing teacher direction and support. Self-regulation refers to "self-initiated thoughts, feelings, and actions that writers use to attain various literary goals, which include improving the writing skills and enhancing the quality of the text they create" (Zimmerman & Risemberg, 1997, p. 76). When writers use self-regulation, they regulate their environment and their behavior (including time spent writing and organizing ideas), and they enact internal control over their activities (through goal setting, task-analyzing objectives, and self-reinforcement). Table 1 presents some examples of self-regulation techniques. Self-regulatory techniques are integrated into each of the six stages of SRSD for writing that are guided systematically by teachers (Santangelo et al., 2007).

Stage 1: Develop Background Knowledge. Stage 1 involves increasing background knowledge. It might include discussions with students of how to write successfully, the purpose of writing, and what pre-skills are needed to achieve a writing goal. Teachers may assess for prior knowledge by collecting baseline writing samples. Development of any prerequisite background knowledge and skills specific to the genre of writing happens in this stage. For instance, if story-writing essays were targeted, the teacher and students would discuss what it means to write good stories and examine examples of good stories. Then the mnemonic acronym (e.g., POW+WWW, What = 2, and H = 2) and a mnemonic chart containing the strategy steps are introduced. Students work on identifying parts of a good essay after discussing individual components of the strategy. Self-regulation strategies, including goal setting, are also introduced.

Stage 2: Discuss It. The second stage emphasizes the importance of how and when to use the SRSD model and the selected SRSD writing strategy. The role of student effort in learning the strategy and the self-regulation procedures is discussed. Self-monitoring is particularly emphasized during this stage in relation to goal setting. Goal setting involves identifying reasonable, measurable, and attainable goals. The goals, which are individualized, are developed based upon individual skills and a task analysis of the end product (e.g., length of writing, number of story elements in a story). Students may sign individual learning contracts containing the final goal of writing the targeted essay independently to formalize a commitment to learning the writing strategy and the self-regulation components. Stages 1 and 2 may be completed in a single lesson.

Stage 3: Model It. In the third stage, teachers model

Self-Regulation Technique	What does this look like?	Example
Self-Monitoring	Student graphs progress of performance towards an established goal for his or her writing in order to gain feedback (Goal setting)	I will write a paper that is 70 words (student graphs progress over a month). Student signs a contract committing to learning a new strategy and teacher commits to doing his or her best to teach that strategy
Self-Instructions	During the **Discuss It** stage, the student is introduced to self-instructions or a checklist for monitoring his or her progress from one step to the next of a given strategy. During the **Support It** and **Independent Performance** Stage, students may have tactile and visual cue cards for supporting Stage 4.	✓ get materials _ develop an idea _ organize notes _ write and say more
Self-Reinforcement	Student generates individual and positive statements to aid targeted difficulties which are then rehearsed cognitively (self-speech) and read for encouragement and motivation of task completion	"I can do this if I use my strategy and take my time" "First, I need to brainstorm." "What a great ending!"
Metacognition	The teacher models aloud the steps and thought processes for how to use the strategy using self-talk and all of the self-regulation techniques	Teacher uses a think-aloud or pre-records the "thinking" used when employing the strategy
Self-Assessment	Individualize cue cards or make a checklist for students to self-probe and evaluate their own performance	"Did I list ideas for both sides?" "Can I think of anything else?" "Did I help my partner?" "Am I getting frustrated?"

Table 1: Sample Self-regulation Techniques

writing and self-regulation strategies through a think-aloud format. Students observe teachers: (a) referring to a mnemonic visual, as in the POW+WWW, What = 2, and H = 2 example, (b) using a graphic organizer to identify components within model compositions, and (c) rehearsing the mnemonic strategy. The graphic organizer, which mirrors the targeted writing strategy, contains spaces that guide student note-taking while planning and organizing the essay. For example, in the POW+WWW strategy, graphic organizers contain prompts and spaces for answering all of the guiding questions: Who? When? Where? What? What? How and How? With younger children, cue cards containing prompts with and without pictures for each strategy step may be used. The pictures would be faded out once students mastered the strategy steps.

Self-reinforcing positive self-statements are introduced in this phase. These states are self-regulatory techniques used to support the motivational and attentional functions during the writing process. Statements include what to say to think of good ideas, what to say while working and what to say when checking work. Students are asked to generate their own positive self-statements for before, during, and after writing. Self-reinforcement statements like, "This is tough, but I can do it if I try!" can be motivating because they give students a sense of responsibility for ("owning") their own learning and achieving success independently. After the essay

is completed, students are taught how to graph essay components as a way to determine whether all required story components are in the written essay.

Stage 4: Memorize It. During the fourth stage, students practice the steps of the strategy and the meaning of any mnemonics used to reinforce fluency. Teachers provide students with cue cards (described above), common think sheets, planning sheets, and graphic organizers, that act as concrete reminders of the critical steps involved in writing compositions (Baker, Gersten, & Graham, 2003).

Stage 5: Support It. In the fifth stage, teachers provide scaffolding and continuous feedback while students practice writing. During this stage teachers may work collaboratively with the students following all of the planning and organizing steps to ensure student success. Gradually, as students begin to master the components of the essay writing process, the cue and prompt cards, mnemonic charts containing strategy steps, and graphic organizers are removed. Generally, Stage 5 takes the longest of the six stages for students. When required, "booster" lessons will be introduced to reinforce or scaffold the use of the strategy and/or the mnemonics.

Stage 6: Independent Performance. During the final stage, students require little to no support from teachers. Students write independently without the use of the graphic organizers and, because they have internalized the strategy steps, they use fewer audible self-statements. During this stage students continue with goal-setting and self-monitoring procedures but may extend their learning to work collaboratively with other students and to work independently (Harris et al., 2008).

What are the Writing Strategies?

Several writing strategies across different genres have been taught successfully to students with learning disabilities. Table 2 presents examples of these strategies. Teacher-ready materials including graphic organizers, templates for mnemonics, and scripted lesson plans; Harris et al., (2008) compiled strategies and other materials in *POWERFUL Writing Strategies for all Students*. This text encourages teachers to be flexible in the selection of field-tested materials as modifications may be necessary and certain steps may need to be emphasized over others. The research literature indicates that the instruction for any one particular strategy using the SRSD model may take from 9 to 12 sessions each lasting 20-25 minutes (Harris, Graham, & Mason, 2006). However, more intensive longer sessions may be required. In previous research, lessons were reportedly delivered at least 3 times a week with "booster sessions" integrated, as needed.

What Does Research Say About SRSD?

In 2003, the National Commission on Writing in America's Schools and Colleges presented a report titled, *The Neglected "R": The Need for a Writing Revolution*. The executive summary of the report identified concerns about how often students write, how writing performance is measured, and the professional development of teachers regarding writing instruction. Test results from the National Assessment of Educational Progress (NAEP) suggest that American students can write, but few are able to create precise,

Type of Writing Genre	Mnemonic Device	Representative Steps
Story Writing	POW + WWW, W=2, H=2	P = Pick my idea O = Organize my notes W = Write and say more W = What 2 W = How 2
Story Writing	POW + C-SPACE	C = Characters S = Setting P = Purpose of what the main character tries to do A = Action to achieve goal C = Conclusion of action E = Emotions of main character
Opinion Writing	POW + TREE	T = Topic Sentence R = 3 or more reasons E = Ending to wrap it up E = Examine for all parts
Opinion Writing	STOP + DARE	S = Suspend Judgment T = Take a Side O = Organize ideas P = Plan more as you write D = Develop topic sentence A = Add supporting ideas R = Reject other side E = End with conclusion
Brainstorming or Planning	PLANS	P = Pick Goals L = List Ways to Meet Goals A = (filler letter) N = Make Notes S = Sequence Notes
Revision	SCAN	S = Does it make Sense? C = Is it connected to my belief? A = Can you add more? N = Note errors?
Essay Writing	PLAN + WRITE	P = Pay attention to prompt L = List main ideas to develop your essay A = Add supporting ideas N = Number major points W = Work from plan R = Remember your goals I = Include transition words T = Use different kinds of sentences E = Exciting, interesting $$$$$ words

Table 2: Examples of Writing Strategies

engaging, coherent prose. Test results are even more discouraging for students with LD who continue to have difficulty meeting grade level writing standards. The SRSD model involves an array of supports for students with LD and others with writing deficits. More than 40 studies (summarized in Harris, et al., 2008) and 5 meta-analyses (Gersten & Baker, 2001; Graham, 2006; Graham & Harris, 2003; Graham & Perin, 2007; Rogers & Graham, in press) have thoroughly validated SRSD as an instructional model for teaching writing. The research investigations have used single subject, group experimental, or quasi-experimental designs and have generally incorporated outcome measures such as length of student writing, time spent planning, number of story elements included, overall writing quality (e.g., organization, vocabulary, sentence structure, tone), as well as various measures of social validity and prompts assessing writing knowledge.

Consistent meta-analytic findings for writing instruction reveal that the SRSD model has positive effects for students with learning disabilities including an increase in writing knowledge, writing approach, self-regulation skills, and motivation. After receiving SRSD instruction, the writing performance of students with learning disabilities developed positively with more substantive content across a variety of genres of writing. Students require less teacher support and students utilized planning and revision procedures. Long-term maintenance of both writing skills and self-regulatory skills were encouraging, as well. For example, Graham and Perin (2007) reported a mean effect size for SRSD of 1.14, and consumer surveys have suggested that teachers as well as elementary and secondary students have viewed SRSD instruction very favorably.

Investigations over the past 12 years regarding the efficacy of SRSD indicate that the approach supports the affective, cognitive, and behavioral needs of individuals with LD and can be a highly effective and practical tool. The combination of strategic instruction and self-regulatory techniques has produced large instructional gains for students with LD who struggle with writing.

What Questions Remain?

As SRSD continues to be evaluated and employed across grade levels and among students with learning disabilities across various age spans, further areas for research surface. Presently, little is known about the effects of SRSD on the standardized test performance of students with learning disabilities. Although maintenance data demonstrate carryover effects, more research is needed on whether self-regulatory skills transition over extensive lengths of time and whether students can consistently generalize these attributes to other genres of writing.

How do I learn more?

Much has been written on the SRSD model. A comprehensive tutorial on SRSD can be found at the web site of the IRIS Center for Training Enhancements (see http://iris.peabody.vanderbilt.edu/index.html). From the homepage, select Resources, then select Learning Strategies. Select Modules, then click on "Using Learning Strategies: Instruction to Enhance Learning."

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