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Self-Regulated Strategy Development and Students with Emotional or Behavioral Disorders

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Chapter 1: Introduction

The ability to gather the appropriate information, organize thoughts, and successfully write them down is a difficult for many students. It can be particularly difficult for students with emotional or behavioral disorders (EBD) who tend to struggle with all stages of the writing process (Lane et al., 2010). Their internalizing and externalizing behaviors, and low tolerance for frustration affect their ability to maintain engagement in academic activities (Cuenca-Carline & Mustian 2013; Nelson, Benner, Lane, & Smith, 2004). Cuenca-Carline and Mustian (2013) contended that, in order to improve academic and post-school outcomes and for students with EBD, interventions must focus on increasing their self-determination skills.

Having free choice over personal acts and compulsions (Merriam-Webster, 2015) opens individuals to regulate personal wants and needs. This can become a negative for students with EBD who struggle to understand and control their impulses and actions. The control to write a quality persuasive writing, coupled with the ability to appropriately express individual needs and wants, increases the individual's potential to appropriately express themselves to others.

Self-Regulated Strategy Development (SRSD) is one strategy that purports to be a positive option for students with EBD. SRSD is designed to address difficulties with writing as well as attitudes, beliefs, and motivations related to the writing process (Ennis, Jolivette, & Boden, 2013). The SRSD model overtly teaches the writing process while concurrently emphasizing self-regulatory skills (Harris, Graham, & Mason, 2003).

In this paper, I examine the effectiveness of SRSD as a writing intervention for students with EBD. Specifically, I investigate the impact of SRSD instruction on students' ability to express themselves utilizing persuasive writing.

The SRSD Model

A surprisingly large number of students have difficulty communicating ideas and information, expressing feeling and experiences, and persuading others when writing (Applebee, Langer, Jenkins, Mullis, & Foertsch, 1993). During the past decade, two pieces of legislation were enacted that addressed this issue: the No Child Left Behind Act of 2001 and the Individuals with Disabilities Education Improvement Act of 2004. These legislative acts mandate that teachers use research-validated practices to improve students' writing (Minnesota Department of Education, 2015). However, data from the National Assessment of Educational Progress writing assessment of 2007 revealed that more than 94% of students with disabilities in grades 8 and 12 still did not demonstrate proficient writing skills on assessments of narrative, informative, and persuasive writing (Ennis & Jolivette, 2014).

SRSD is a flexible instructional model that is a research-validated practice that combines explicit instruction in self-regulation procedures with strategy instruction to teach the writing process (Santangelo, Harris, & Graham, 2008). Karen Harris and Steve Graham pioneered the SRSD model in 1980 and they have been involved in the research, modification, and implementation of the model since that time (Graham & Harris, 1993a). Although originally developed for students with learning disabilities (LD), students with LD and EBD often experience similar behavioral and learning problem issues (Rock, Fessler, & Church, 1997). Due to the deficit of self-management and self-regulatory skills for students with EBD and students with LD, researchers began to implement the technique developed for students with LD to students identified with EBD. Because students with EBD and students with LD both have deficits in self-management and self-regulatory skills, researchers began to implement the

technique with students identified with EBD (Bak & Asaro-Saddler, 2013; Cuenca-Sanchez, Mastropieri, Scruggs, & Kidd, 2012; Graham & Harris, 1993b).

Two important goals in SRSD writing instruction are to help students: (a) develop more effective strategies for planning, writing, and revising texts, and (b) use self-regulation skills to implement and monitor these strategies (Cuenca-Sanchez et al., 2012). To accomplish these goals, Graham and Harris (1993b) identified six stages of SRSD instruction. Ennis and Jolivette (2014) briefly described these six instructional stages:

1. *Teaching the skill*. Background knowledge is discussed, preskill/prerequisite skills are assessed, and concepts are taught.

2. *Discussion*. The teacher ensures the students are motivated and willing to learn the new strategy.

3. *Modeling*. Students are shown exactly how to use the new strategy.

4. *Memorization*. Students memorize the steps in the composing strategy and the meaning of any mnemonics used either to represent the strategy steps or some part of the steps.

5. *Collaboration*. The teacher supports and scaffolds students' use of the strategy.

6. *Independent performance*. The strategy is generalized to the student's writing, including future maintenance. (p. 32)

These stages are designed to provide a "flexible and recursive series of steps" to help teachers to improve students' writing skills (Graham & Harris, 1993b, pp. 658-659). Lessons should be taught at least three times per week, and each should last from 20 to 60 mins, depending upon the age of the students (Harris et al., 2003). The lessons include memorization

and self-monitoring steps. During the memorization steps, students are taught mnemonic tools to help them memorize the steps necessary to structure their writings in the appropriate manner. During self-monitoring, students are given tools to help them self-manage and assess their writings as well as set goals for future writings. This self-regulation allows the student to actively review his or her writing and then establish goals to improve target behaviors. The model was enhanced when Cuenca-Sanchez et al. (2012) embedded self-determination training with SRSD instruction to facilitate more positive self-perceptions during the writing process.

SRSD Theoretical Background

The SRSD model encourages students to develop self-regulation skills such as goal setting, self-instruction, self-monitoring, self-reinforcement, and self-evaluation. These self-regulation and self-management skills are major foci of the cognitive developmental theories on which the SRSD model is based. The SRSD approach integrates findings from researchers and educators who have focused on cognitive development and learning and those who have focused on the role of behavior and affect in learning and development (Harris, Schmidt, & Graham, 2015).

Cognitive theorists are concerned with an individual's thought processes and how these thought processes influence how we understand and interact with people, tasks, and the environment (Huitt, 2006). Cognitive theory emphasizes the responsibility of the mind's perceptions in determining behavior. With regard to SRSD, researchers are concerned with how the student interacts with the writing task. They are also interested in how writing is affected by a student's own thoughts or beliefs about his or her writing (Schunk & Zimmerman 1997).

Cognitive learning theory is traditionally divided into two different learning theories: social cognitive theory and cognitive-behavioral theory. Social cognitive theory is based upon the work of Albert Bandura, who stressed the importance of observational learning and the continuous interaction of behaviors, personal factors, and the environment. Cognitive behavior theory is based upon the work of Albert Ellis and Aaron Beck, who hypothesized that a person's thoughts, feelings, beliefs, and perceptions influence how he or she responds to daily stimuli.

Although the instructional model of SRSD has changed over time, the social cognitive framework on which it has been established provided a strong background to develop self-regulatory skills in for students of a variety of educational levels. Beyond the ideals of the social cognitive theories, the SRSD model of instruction focuses of the students' ability to develop high levels of self-regulation. The sociocultural theory and Vygotsky's zones of proximal development encompass these processes.

Vygotsky established four zones or stages through which children learn to complete new tasks (Schunk & Zimmerman, 1997). These zones take a child from early infancy to their late childhood. The first zone begins with a young infant's reflexive responses to environmental stimulus. Within this initial stage, parent responses regulate the infant's behavior. For example, when a child cries, a parent responds to address the behavior. The second zone begins as toddlers are able to purposefully influence others using signs. It is during the third state that children begin to regulate their own behavior by "actively organizing their stimulus fields to achieve desired responses" (Schunk & Zimmerman, 1997, p. 200). In the third zone, children are better able to use language to gain control over his or her environment. The fourth and final zone/stage completes the process of self-regulation.

According to Vygotsky, a child should be fully competent in the self-regulation process by early elementary school (Schunk & Zimmerman, 1997). The zones of proximal development provide a scaffolding of learning similar to the SRSD model. The verbal exchanges in Vygotsky's model and the reciprocal teaching in the SRSD model provide similar opportunities for learning. In both models, the overall goal is to internalize and self-direct beyond the initial learning process.

Research Question

Is Self-Regulated Strategy Development an effective approach for improving the writing skills of students with Emotional or Behavioral Disorders?

Focus of the Paper

Quantitative research studies published between 2009 and 2015 were reviewed for inclusion in Chapter 2. To be considered for review, the study participant must be a middle or high school student, or in grades 5 through 12. All study participants must also have been identified with an emotional or behavioral disorder. Study participants received educational services within inclusive classroom settings as well as those enrolled in alternative settings and Federal Settings 4 and higher.

To locate the peer-reviewed articles for the literature review, I used Academic Search Premier as the primary database, with additional articles found using PsychINFO. A variety of key search terms were used in combination to locate the articles. These keywords included but were not limited to *self-regulated strategy development, SRSD, emotional behavioral disorders, EBD, middle school, high school, writing, teaching methods,* and *best practice*.

Importance of the Topic

Students with EBD tend to struggle with all stages of the writing process (Lane et al., 2010). This sentiment has been echoed by teachers in both inclusive and special education settings. The internalizing and externalizing behaviors of students with EBD, accompanied by a low tolerance for frustration, affects their ability to maintain engagement in academic activities (Nelson et al., 2004). These issues can make writing assignments a stressful process and a difficult struggle for both the student and the teacher.

I have been a part of this struggle within my own classroom environment. I currently work in a Federal Setting 4 school for students with EBD. Although many students enjoy writing comic strips or rap songs, the process of a longer more formal writing assignment has been a daunting task. I have tried using many different strategies as well as different forms of assistive technology with limited success. For example, using a dictating software system is one strategy often recommended, but I quickly realized the writing portion of the assignment must be completed prior to the dictation phase. Even when assisted in the dictation of ideas, the amount of editing that must be completed to produce a piece of quality work will leave a student with EBD overwhelmed, frustrated, and with very little motivation to finish the project.

Improving the writing of students with EBD requires systematic, strategic instruction that addresses not only their cognitive needs but also their affective and behavioral strengths and weaknesses (Bak & Asaro-Saddler, 2013). SRSD is an example of such a systematic instructional approach. In my current teaching setting, implementation of an SRSD instructional approach may help my students with EBD develop quality writing skills.

Definition of Terms

Emotional behavioral disorder (EBD). The Minnesota Department of Education (2015) describes EBD as "a pattern of responses that adversely affect the educational, developmental, or social performance of a student. These behaviors include: (a) withdrawal or anxiety, depression, problems with mood or feelings of self-worth; (b) disordered thought processes with unusual behavior patterns and atypical communication styles; (c) aggression, hyperactivity or impulsivity."

Expository essay is a way to present others views or describe and event or situation in a complete and fair manner (EssayInfo Writing Guides, 2015).

Learning disability (LD)/ Specific Learning Disability (SLD) is a disorder of the basic psychological processes involved in mathematics, spoken language, or written language. These include conditions such as brain injuries or dyslexia (Minnesota Department of Education, 2015).

Modeling. According to Schunk and Zimmerman (1997), modeling occurs "when observers pattern their behaviors, strategies, thoughts beliefs, and affects after those of one or more models" (p. 195).

Mnemonic. Merriam-Webster (2015) defines mnemonic as "a technique of improving the memory." In the SRSD model, the mnemonic tools assist the students in remembering the structure of the type of writing.

Narrative essay is a form of expository writing that allows the writer the ability to think and write about themselves. Narrative essays are stories often told from the author's point of view (EssayInfo Writing Guides, 2015).

Persuasive essay is a written argument that attempts to change another person's point of view. The writer will use logic, reason, and facts to present a specific side of an argument (EssayInfo Writing Guides, 2015).

Recursive. Merriam-Webster (2015) defines recursive as "relating to, or constituting a procedure that can repeat itself indefinitely." Within the SRSD model, the stages can be repeated as frequently as needed.

Scaffolding is a means of adjusting and extending instruction so that the student is challenged and able to develop new skills (Bos & Vaughn, 2002).

Self-advocacy is "an individual's ability to effectively communicate, convey, negotiate, or assert his or her interests, desires, needs, and rights. It involves making informed decisions and taking responsibility for those decisions." Being able to self-advocate also means finding the necessary supports to meet an individual's needs (VanResen et al., as cited in Geller, 2004).

Self-determination. Merriam-Webster (2015) defines self-determination as "free choice of one's own acts or states without external compulsion." Within the SRSD model, students' self-determination increases along with their comfort level of the process.

Self-efficacy. Zito, Adkins, Gavins, Harris, and Graham (2007) defind self-efficacy as "one's beliefs about one's capabilities to learn or perform certain behaviors" (p. 89).

Self-instruction. Reid and Lienemann (2006) defined self-instruction as the "use of induced self-statements to direct or self-regulate behavior" (p. 78).

Self-regulation. Schunk and Zimmerman (1994) described self-regulation as obtaining goals through a systematic process of independent monitoring of progress being made toward an end goal.

Self-reinforcement is "a process whereby individuals control their own behavior by rewarding themselves when a certain standard of performance has been attained or surpasses" (Artino, 2011, p. 1322).

Chapter 2: Review of the Literature

The SRSD model for persuasive writing was originally developed to improve the writing skills of students with specific learning disabilities (SLD). Recently, more research has focused on the use of the SRSD model with students with emotional or behavioral disorders (EBD). Many students with EBD also manifest serious writing deficits, although less research has been conducted to investigate the effectiveness of writing interventions with these populations. The studies in this chapter evaluate the effectiveness of SRSD writing instruction on students who are identified as EBD or who exhibit significant emotional and behavioral challenges.

SRSD Studies

Mastropieri et al. (2009) conducted a multiple baseline evaluation of 12 eighth-grade students to determine if the SRSD model was an effective instructional technique for middle-school students who received EBD services in a separate setting. The students were selected for the study due to being identified as the lowest performers on writing exams. Students received instruction in the persuasive essay writing strategy POW+TREE, which included the six SRSD instructional phases described in Chapter 1. Students received instruction on the SRSD model during 55, 30-min class periods for a total of 29 hours of instruction over 5 months.

The instructors were experts in teaching the SRSD procedures as well as working with students with EBD. Students were instructed in the POW+TREE persuasive essay-writing strategy. POW+TREE is an acronym to help students remember Pick my idea, Organize my notes, Write and say more, and Topic sentence, Reasons (write three or more with explanations), Ending (wrap it up), and Examine. Student essays were scored using a scale from 0 to10 based upon the presence of the appropriate essay parts and components. The *Woodcock-Johnson III*

Tests of Achievement were administered prior and subsequent to SRSD instruction to assess the students' ability to generalize the SRSD model to other writing probes.

The mean essay scores for all students were statistically significant at the $p < .01$ level, according to Wilcoxon matched-pairs signed ranks test. All students' scores improved from baseline to post-intervention in all assessment categories. The WJ-III gains were also statistically significant and indicated growth in students' writing abilities. Average essay performance data are presented in Table 1.

Table 1

Essay Results

	Baseline Mean (SD)	Post-intervention Mean (SD)	Post-fluency Mean (SD)	Maintenance Mean (SD)	Generalization Mean (SD)
Number of words	21.92 (10.78)	108.37 (50.39)	93.47 (32.28)	79.64 (48.77)	75.09 (48.55)
Number of parts	1.87 (0.66)	5.57 (2.13)	5.77 (1.58)	5.0 (2.40)	3.91 (2.95)
Number of paragraphs	0.17 (0.28)	1.43 (1.45)	0.95 (0.51)	0.82 (1.17)	0.73 (1.19)
Number of transition words	0.73 (0.36)	4.2 (2.17)	4.55 (1.55)	3.36 (2.50)	2.45 (2.01)
Quality scoring	1.71 (0.59)	4.33 (1.76)	4.48 (1.25)	4.27 (2.20)	3.36 (2.42)

Although the SRSD intervention was considered to be successful, the lowest performing writers at the beginning of the instructional process continued to be low performers overall, with the greatest declines at the maintenance testing. This decline was seen in all study participants due to the 11.5- to 15-week delay in post-instruction testing. Even though all students' maintenance results declined, results remained significantly higher than baseline testing. As the results showed, student growth continued to be limited by individual ability.

In a 2010 study, Mason, Kubina, Valasa, and Cramer provided SRSD instruction to five seventh- and eighth-grade students in an alternative school for students with EBD. Prior to the introduction of the SRSD instructional model, no formal explicit writing instruction was provided to the students as part of a typical school day. Typically, students completed 15 min shared of journal writing three times per week.

The authors completed a multi-probe multiple baseline design to evaluate the SRSD persuasive quick writing strategy. During baseline, students completed five to nine writing probes, as a means of establishing the individual writing performance of each student as well as the Writing Fluency subtest of the WJ-III.

During the instructional phase (Guided Practice), students were instructed in the POW + TREE strategy for writing persuasive essays during five 30-min lessons and three 10-min lessons. The SRSD POW+TREE instruction took place individually over 2 to 3 weeks. The final lesson was repeated, without support, until the student could independently complete a 10-min persuasive response with a 6-point or greater quality score. During the post-treatment phase, the probes, and WJ-III were re-administered. In addition, student interviews were completed to identify individual students' satisfaction level with the SRSD instructional model.

Student responses were rewritten into a Word document, identifying information was removed and a code assigned to each paper. Papers were corrected for spelling, punctuation, and capitalization to prevent scorers from establishing judgment about the writings. Writings were scored in three categories: quality, response parts, and number of words. Quality was evaluated based on a 0-7scale, with high quality responses receiving higher scores. The number of

response parts were counted and given a score based upon the total number of parts present.

Finally, word count was determined using the Microsoft word count function.

The results demonstrated the SRSD model increased the writing skills of all participants. The quality, number of parts, and number of words increased from baseline to post-intervention, and for the most part students maintained writing skills. These data are presented in Table 2.

Table 2

SRSD Mean and Standard Deviation Data

Phase	Quality *(SD)*	Number of Parts *(SD)*	Number of Words *(SD)*
		Dudley's SRSD Data	
Baseline	2.8 (1.79)	6.6 (1.82)	81.2 (21.25)
Guided Practice	6.71 (0.49)	9.14 (1.07)	103 (13.39)
Post-Instruction	6.4 (1.34)	8.6 (0.89)	88.8 (9.93)
Maintenance	5	8	90
		Miley's SRSD Data	
Baseline	4 (1.26)	8.66 (2.16)	119 (27.5)
Guided Practice	7 (0)	9 (0)	110.74 (27.5)
Post-Instruction	6.6 (.89)	9 (0.71)	126 (11.94)
Maintenance	7	9	133
		Walter's SRSD Data	
Baseline	4 (0.89)	9.17 (1.94)	165.17 (44.4)
Guided Practice	6.71 (.76)	9.71 (1.11)	105.29 (17.58)
Post-Instruction	6 (1.41)	10.2 (1.1)	110.6 (10.50)
Maintenance	7	11	104

		Neil's SRSD Data	
Baseline	4.13 (1.25)	6.38 (0.92)	79 (20.20)
Guided Practice	7 (0)	9.14 (0.38)	110.43 (12.26)
Post-Instruction	7 (0)	9 (0)	100.8 (17.89)
Maintenance	6	8	67
		Toby's SRSD Data	
Baseline	3.67 (1.73)	7.22 (2.82)	159.11 (18.74)
Guided Practice	6.71 (0.76)	9.14 (0.90)	92.29 (11.24)
Post-Instruction	7 (0)	9.8 (1.3)	96.4 (22.86)
Maintenance	7	9	71

The WJ-III writing fluency test scores improved significantly from pretest to the posttest ($t = 3.919$, $p = .017$). The significant increase of the WJ-III scores demonstrated the ability of the students to generalize the SRSD model to other writing probes. Informal student surveys revealed students were pleased with the SRSD model. One student claimed, "In my opinion teens my age should be taught the POW + TREE strategy."

Although the SRSD intervention increased students' writing scores, Mason et al. (2010) pointed out limitations. The main limitation was that all participants were male and included only one student of color, which makes it difficult to generalize to other populations. Another concern was the establishment of the 7-point maximum score in the quality of student response. The researchers questioned if a ceiling effect may have occurred. Even with these limitations, the authors concluded the study provides evidence of improvement in student writing quality.

Mason, Kubina, and Hoover (2011) also examined student performance using the POW+TREE format for writing persuasive essays. They led three high school students in SRSD instruction in addition to their general education language arts instruction. During baseline, students completed 10-min quick writing probes in order to assess quality, number of parts, and number of words. Students then participated in SRSD instruction over the course of a minimum of five 30 min instructional lessons that could be repeated until each student demonstrated the appropriate level of understanding of the given material.

Instruction was delivered individually prior to or following normal school hours based on the student's personal schedule. Two students participated in seven instructional periods, whereas the third student received five instructional periods. The students were given a

notebook which to record their responses over the four phases and told their ability to write persuasive essays would improve over the course of their instruction.

Two advanced graduate students with previous training scored the students responses and interrater reliability ranged between 95% and 98% within one point. After a minimum of five SRSD lessons, all participants showed improvements in the target areas of response quality, number of parts, and number of words written. Individual student data are presented in Table 3.

Table 3

Student SRSD Data

Phase	Quality *(SD)*	Number of Parts *(SD)*	Number of Words *(SD)*
		Kevin's SRSD Data	
Baseline	2.20 (1.10)	3.60 (1.14)	78.00 (12.31)
Instruction	5.17 (1.47)	7.50 (1.76)	141.00 (29.05)
Post-Instruction	3.67 (1.51)	6.17 (0.75)	112.17 (7.22)
Maintenance	3.50 (0.71)	5.50 (2.12)	134.50 (47.38)
		Heath's SRSD Data	
Baseline	4.00 (0.63)	6.67 (2.16)	95.33 (34.85)
Instruction	5.00 (1.41)	8.75 (0.96)	120.50 (31.86)
Post-Instruction	6.33 (1.03)	8.83 (0.75)	136.60 (30.04)
		David's SRSD Data	
Baseline	2.86 (0.38)	3.71 (0.49)	41.86 (9.30)
Instruction	6.00 (1.00)	8.40 (0.55)	91.40 (7.33)
Post-Instruction	5.14 (1.21)	7.43 (1.13)	80.71 (24.70)
Maintenance	6.50 (0.71)	8.50 (0.71)	100.50 (19.09)

The results indicated the instruction of the SRSD model increased quality of writing in all observed areas. Following the completing of testing, students were asked how they perceived the SRSD instructional model. All three students indicated the strategy helped them become better writers. For example, they reported, "It has helped me become a better writer," "I have a strategy," and "I can organize my thoughts and think better."

The authors acknowledged limitations to their study that included prior relationships with the students involved in the study, which may have increased participants' motivation. One-on-one instruction was identified as another potential limitation to the quality of research.

Cuenca-Sanchez et al. (2012) continued to examine the effects of using the POW + TREE writing strategy of the SRSD model. The research was completed in a public day school for students with severe EBD located on the East Coast of the United States. The authors conducted a treatment/control experimental design to evaluate the effectiveness of the SRSD strategy on seventh-grade students with EBD. Eighteen seventh-grade students were randomly assigned to either the experimental group for SRSD instruction or the control group for typical writing instruction.

Pretests established no significant difference between the treatment and control group in any measured areas. Within the experimental and control groups, classes of three to four students were created for instruction, which was provided during the seventh period of the school day. When a student was unable to attend, he or she was given a make-up period. All instruction began at the same time and was given four times per week, in 30-min sessions over 33 days.

Several measures were used to assess outcomes. Student essays were scored to assess writing skills with regard to number of words, number of sentences, number of transition words, number of essay parts, number of paragraphs, and quality of writing. Quality of writing was assessed using a 0-10 scale, with high quality writings receiving greater numbers. *T*-tests were used to analyze the findings.

Students in the experimental group performed statistically significantly better at the .05 level of significance than the control counterparts in the areas of knowledge of persuasive essay parts ($t_{(19)}$ = 11.07. p = .000), self-efficacy ($t_{(19)}$ = 2.24. p = .037), and self-determination ($t_{(19)}$ = 2.29. p = .033). Students' performance for number of words and transition words, decreased in the maintenance and generalization phases. The results are shown in Table 4.

Table 4

Descriptive Data for Essay Results

	Pretest Mean *(SD)*	Post-intervention *(SD)*	Maintenance *(SD)*	Generalization *(SD)*
		Number of Words		
Experimental	42.63 (35.34)	131.54 (36.90)*	121.27 (62.20)	98.18 (50.76)
Comparison	52.80 (86.43)	57.60 (31.19)	92.20 (107.94)	111.80 (125.30)
		Number of Sentences		
Experimental	2.45 (2.69)	14.36 (5.39)*	13.00 (7.73)*	10.90 (7.14)*
Comparison	1.70 (2.35)	2.80 (2.78)	3.80 (3.82)	4.30 (4.11)
		Number of Transition Words		
Experimental	0.82 (0.98)	9.27 (4.07)*	7.81 (5.13)*	6.54 (4.78)
Comparison	1.30 (1.83)	1.10 (1.45)	2.10 (2.07)	2.50 (2.71)
		Number of Essay Parts		
Experimental	2.63 (1.56)	9.27 (1.27)*	7.45 (3.61)*	6.81 (3.49)*
Comparison	2.90 (1.96)	2.60 (2.67)	3.90 (2.99)	1.50 (1.65)
		Number of Paragraphs		
Experimental	0.36 (0.50)	4.00 (2.19)*	3.18 (2.52)*	2.18 (2.08)*
Comparison	0.20 (0.42)	0.40 (0.52)	0.30 (0.48)	0.50 (0.70)
		Quality Scoring		
Experimental	2.27 (1.19)	8.27 (1.27)*	6.54 (3.44)*	6.09 (3.72)*
Comparison	2.50 (1.58)	2.30 (2.11)	2.70 (2.00)	1.10 (1.19)

*Significant difference at p < .05.

The Writing Fluency subtest of the WJ-III used to assess fluency did not generate statistically significant results. Self-efficacy was measured using a 7-item pre-post questionnaire. Students in the experimental group rated their self-efficacy significantly greater

than the students in the control group ($t_{(19)} = 2.24$, $p = .037$). Following the intervention,

students were interviewed about their experience. Students in the experimental group indicated

the POW + TREE was a positive strategy for writing persuasive essays. They also indicated they

enjoyed writing the essays while students in the control expressed negative feelings to all of their

instruction.

Cuenca-Sanchez et al. (2012) expressed concern over the sample size involved in the

study. They also expressed regret for not tracking time on task as a comparison tool as other

previous studies have done. However, even with these limitations, the current research adds to

the evidence of SRSD being a highly effective strategy for writing instruction for students with

EBD.

Cuenca-Carlino and Mustian (2013) trained special education teachers to instruct students

using the SRSD persuasive writing model with embedded self-determination training. The intent

of this instruction was to show how persuasive writing can assist students in advocating for their

needs and wants. The study was conducted in a midwest private day school that served students

with behavioral and mental health needs that included Attention-Deficit Hyperactivity Disorder,

anxiety disorders, and Oppositional Defiant Disorder. Utilizing the SRSD model, the teachers

conducted classroom instruction with small groups of nine students or fewer for 40-min sessions,

4 days a week. Other students were present in the classroom but were not part of the data

collection.

Three trained special education teachers provided instruction for the nine middle school

special education students over the course of 3-4 weeks. During instructional time, the teachers

were video recorded, and two graduate students then examined the video for 120 components of

the model. Interobserver agreement of the treatment fidelity checklists was initially 97%, but

then reached 100%.

Writing samples from the students were taken as a baseline prior to any SRSD instruction

to establish a baseline and once again following the intervention. Student writings were

evaluated on many factors including number of words written, number of sentences, number of

paragraphs, number of transition words, essay parts, and a holistic quality score. The mean

scores on all writing criteria differed significantly from the baseline to post interventions phases

and significant gains were observed in all writing factors. Data are presented in Table 5.

Table 5

Baseline and Post-Intervention Data

Writing Factor	Baseline *(SD)*	Post-Intervention *(SD)*
Words	51.59 (40.21)	173.69 (31.5)
Sentences	3.45 (3.26)	15.64 (4.34)
Paragraphs	.41 (0.433)	3.11 (1.73)
Transition words	.26 (0.45)	9.17 (3.86)
Essay parts	2.89 (1.76)	10.00 (1.66)
Holistic score	2.31 (0.964	8.45 (1.12)

Beyond the improvement in the persuasive writing of the students, a pre-post Likert scale

was used to measure self-determination and self-efficacy. Using the Wilcoxon matched pairs

signed rank tests on gain scores of self-determination revealed a statistically significant

difference: $z = -2.69$, $p < .05$. These results indicate students gained more understanding about

self-determination during the instructional period. In addition to the pretest/posttest format, the

authors also used a Likert scale questionnaire to measure self-determination. A Wilcoxon

matched pairs signed rank test on this test also revealed a significant gain in student self-

determination: $z = -2.08$, $p < .05$. To measure self-efficacy, a nonparametric analysis of gain

scores was conducted. Once again the Wilcoxon matched pairs signed rank tests on gain scores indicated significant gains occurred: $z = -2.55$, $p < .05$.

The results indicated the introduction of the SRSD writing instruction model benefited the students in many ways. At the core of the instruction, the students showed gains in their writing over the 4-week course, although no comparison group was included in the study. In addition to writing gains, students also demonstrated an increased understanding of the positive outcomes associated with more efficient self-determination and self-efficacy. The authors recommended that teaching students to write persuasive essays directly related to their IEP could produce more long-term self-advocacy gains.

Ennis et al. (2013) examined the ability to expand SRSD to elementary-age students in an urban residential school in the southeastern United States. The school had recently implemented a school wide Positive Behavioral Intervention and Supports (BPIS) plan. Twenty-five students in grades 3-6 participated in the study that took place during summer school sessions.

Students were divided into three mixed-age and ability classes, and each group received 45-min language arts classroom instruction on a daily basis. Sixteen students were assigned to two intervention groups that received SRSD writing instruction 2 to 3 days a week. The intervention group was then divided into two groups of eight students. Class 1's SRSD instruction was conducted in 12 sessions over 6 weeks. Class 2 completed the SRSD lessons in 16 sessions over 6 weeks. The control group contained nine students who received typical writing direct instruction and activities.

Students received instruction in the STOP and DARE mnemonics of the SRSD model. These tools help students to remember to Suspend judgment, Take a side, Organize ideas, Plan more as you write; and Develop your topic sentence, Add supporting ideas, Reject at least one argument for the other side, End with a conclusion.

At the beginning of the study, no significant differences were reported between the groups in the three identified areas of elements, overall quality, and total written words. Posttest data showed all students improved, but the intervention group outperformed the control group. Following the posttest, a maintenance test was administered. Students in the control group returned to pretest levels, whereas those in the intervention group continued to improve. The intervention results are presented in Table 6.

Table 6

Intervention Results

	Intervention			Control		
	Pre-Intervention M *(SD)*	Post-Intervention M *(SD)*	Maintenance M *(SD)*	Pre-Intervention M *(SD)*	Post-Intervention M *(SD)*	Maintenance M *(SD)*
Elements	2.06 (1.39)	4.40 (1.96)	3.64 (1.6)	2.00 (1.41)	2.78 (1.20)	2.14 (0.69)
Quality	6.49 (3.74)	13.47 (4.82)	13.21 (4.85)	9.22 (3.83)	10.56 (2.74)	6.57 (2.37)
Total Words	21.38 (21.08)	42.87 (21.03)	42.21 (23.78)	15.59 (9.20)	26.00 (13.28)	14.43 (3.55)

Following study completion, the students also indicated to researchers how much they enjoyed the SRSD model. Specifically, students expressed that they enjoyed working with their peers and teachers. Students also started using the STOP and DARE techniques for writing in additional classes following the study.

The authors identified two main sources of concern regarding the quality of results obtained: lack of random assignment to intervention and control groups and limited attendance

due to behavioral disruptions or therapy sessions. Even when these limitations are considered, the authors believe the results to be a promising lead into future research.

Hauth, Mastropieri, Scruggs, and Regan (2013) evaluated students' ability to apply SRSD persuasive writing to content areas outside of language arts. These highly taught eight, eighth-grade students with EBD divided into three small groups using the POW + TREE mnemonics of the SRSD model. The six instructional phases described in Chapter 1 were implemented in this study.

All student lessons and writing sessions were videotaped to monitor student performance and ensure treatment fidelity, which reached a mean of 98%. For every writing task, students were given the option between two writing probes in an attempt to increase student interest.

Prior to receiving SRSD instruction, student baseline was established using five writings with at least three of the responses essay parts being within a range of three. In Phase I, students moved through the six SRSD instructional phases. Following instruction, students repeated the baseline writing testing. The second phase of the study involved the inclusion of five lessons during civics instruction. Once again, five posttests were administered to evaluate the students' performance. Maintenance testing was completed 33 and 34 days following Phase II. The first maintenance probe was a generic essay and the second was specific to the civics content area.

Students' videos were also monitored by outside observers to determine the amount of time each student spent on the planning and writing phases of responses. The data presented in Table 7 revealed that students spent significantly more time on both planning and writing following SRSD interventions.

Table 7

Student Minutes Spent Planning and Writing Persuasive Essays

	Baseline Mean *(SD)*	Post-SRSD intervention mean *(SD)*	Post-SRSD + content intervention mean *(SD)*	Maintenance SRSD mean *(SD)*
Total time planning	00:00 (-)	6:38 (2:27)	8:39 (1:45)	6:31 (1:26)
Total time writing	3:05 (2:10)	14:35 (5:48)	12:16 (5:21)	11:50 (4:05)

Two trained observers outside of the school setting scored all writing probes using a 1-10 holistic rating to score the number of essay parts, sentences, words, paragraphs, and transition words. Wilcoxon tests all areas to be significantly improved compared to the baseline data. Although student means decreased during the maintenance testing, results remained significantly higher when compared to the baseline testing. Performance means for all phases of the study are presented in Table 8.

Table 8

Student Essay Performance

	Baseline Mean *(SD)*	Post-SRSD intervention mean *(SD)*	Post-SRSD + content intervention mean *(SD)*	Generalization mean *(SD)*	Maintenance SRSD mean *(SD)*	Maintenance SRSD + Content mean *(SD)*
Words	38.65 (27.23)	128.65 (30.72)	141.10 (29.98)	133.88 (52.35)	118.75 (32.49)	134.13 (46.88)
Sentences	2.63 (1.74)	10.20 (2.36)	11.48 (3.28)	10.63 (4.37)	9.88 (3.04)	11.88 (3.72)
Paragraphs	0.50 (0.60)	2.45 (0.60)	2.85 (0.74)	2.63 (0.74)	2.63 (1.06)	2.88 (0.83)
Transition words	1.50 (0.94)	6.15 (1.15)	5.88 (0.76)	5.75 (1.04)	5.50 (1.20)	6.25 (0.71)
Essay parts	1.87 (0.58)	10.87 (2.08)	12.17 (2.20)	12.12 (1.81)	11.13 (1.55)	11.13 (1.46)
Holistic quality	1.48 (0.49)	8.23 (0.84)	9.10 (0.63)	9.25 (0.88)	8.50 (1.60)	8.75 (1.28)

This study continues to grow the body of evidence of SRSD instruction for students with EBD. As with many of the current studies, the limited sample size limits the ability of the study

to be generalized to other students. However, the authors concluded this study—in conjunction with the existing body of evidence—demonstrates the SRSD model of persuasive writing yields a high level of benefit for students with EBD.

In a 2014 study, Ennis, Jolivette, Terry, Fredrick, and Alberto investigated the use of the SRSD model of instruction with 44 middle and high school students attending a residential school for students with EBD. The authors administered the treatment to the students 2 days a week, which is a lower intensity than is recommended. By tracking the quality of the students writing and academic engagement on a weekly basis, the researchers attempted to identified specific growth times in the SRSD instructional process.

Prior to the start of the SRSD intervention process, three highly trained special educations teachers were trained for 2 hours in the SRSD model. Teachers were also provided with all necessary instructional materials. Throughout the intervention process, teacher fidelity was monitored and was determined to be 98.44%.

Prior to the implementation, the students were administered the Writing Fluency and Writing Samples subtests of the WJ-III. The students were instructed in the STOP and DARE mnemonics of the SRSD model and monitored using piecewise hierarchical linear models. Writing achievement was measured based on essay part and essay quality. Using a WJ-III subtests, student gains in measured to be significant between pre-intervention and post-intervention tests ($t_{(26)} = 6.272$, $p < 0.000$).

Throughout the study period, students took part in weekly writing performance test to monitor student writing qualities more frequently than previous studies. The research timeline was divided into three sections used for analysis of student writings: (a) baseline, (b) weeks 1-5,

and (c) weeks 6-8. The researchers conducted a piecewise model to compare the rate of change during the three observed periods for each of the three observed writing areas.

1. Essay elements as measured through one point accumulated for each part present in the student writing. A minimum score of 0 with an unlimited maximum score was possible.

2. Essay quality given a 1-6 scale for the areas of, focus development, organization, fluency, and conventions with higher quality responses receiving high scores. A score range of 4-24 was possible.

3. Correct word sequences (CWS) including "assessment of spelling, capitalization, punctuation, syntax, and semantics. (p. 94)

The essay quality of student responses showed an average growth rate of 0.61 ($p < 0.001$) per week during weeks 1-5. However, these gains did not continued during weeks 6-8. Essay element scores of 0.49 ($p < 0.001$) and CWS scores of 11.52 ($p < 0.001$) showed similar results with growth only occurring in weeks 1-5.

Academic engagement was also measured as part of the research study. Once again a piecewise linear change model was used to compare the observed weeks. Initial engagement was observed to be 54.80% with an average weekly decrease of 3.10% ($p < 0.050$) per week of the baseline. Following baseline, students began to increase 1.52 % ($p < 0.019$) per week for the remainder of the intervention.

The researchers identified many study limitations. The reduced amount of instructional time was not compared directly to any other levels of intensity. Another major limitation was the removal of 15 participants from the study due to discharge or transfers. These limitations do

not discourage the authors from believing this research as adding to the continuation of evidence of SRSD being a positive writing intervention for students with EBD.

Cramer and Mason (2014) evaluated the effects of the SRSD model with four pairs of students with EBD in alternative programs. The seventh- and eighth-grade students were taught to use SRSD for a 10-min quick writing and revision. A multiple baseline alternating treatment design (A-B-C-D) was employed to evaluate treatment outcomes.

During Phase A, baseline data were collected on the study participants. Phase B included POW + TREE instruction over the course of five 45-min instructional periods. Phase C included the SRSD LEAF Peer Revision Strategy. The four, 45-min LEAF strategy lessons are designed to help students remember: Listen, Explain, Ask yourself, and Finalize. During Phase D, researchers completed the alternating assessments.

Treatment and observer fidelity was upheld by through the use of audio-recorded lessons and was calculated at 99%. Trained evaluators independently scored the writing samples on a 0-8 scale in three areas: number of primary traits, response holistic quality, and number of words.

At the end of the instructional periods, all participants increased the quality and primary traits in their writing responses as evaluated on a 0-8 scale. All study participants achieved a perfect score of 8 following Phase B and C. Seven of the eight study participants at least doubled their baseline quality scores. Participants' mean holistic quality score increased from 3.3 to 7.58, although several participants continued to show a high level of variation of writing quality following the instructional phases. Table 9 provides a summary of baseline and treatment data.

Table 9

Means and Standard Deviations of Holistic Quality across Phases

	Phase A Baseline M *(SD)*	Phase B POW+TREE M *(SD)*	Phase C POW+TREE+ LEAF M *(SD)*	Phase D Alternating Treatment Independent Peer M *(SD)*	Phase D Alternating Treatment Independent Peer M *(SD)*
Aaron	3.60 (0.89)	8.00 (0.00)	8.00 (0.00)	8.00 (0.00)	8.00 (0.00)
Adam	4.40 (0.89)	8.00 (0.00)	8.00 (0.00)	8.00 (0.00)	8.00 (0.00)
Ben	2.60 (0.55)	5.33 (2.52)	7.33 (1.15)	6.67 (2.31)	8.00 (0.00)
Brian	3.20 (0.84)	5.67 (2.52)	7.33 (1.15)	6.67 (2.31)	8.00 (0.00)
Celia	4.20 (0.54)	5.67 (2.52)	6.33 (2.89)	7.00 (1.73)	7.00 (1.73)
Chaz	4.20 (0.45)	8.00 (0.00)	8.00 (0.00)	6.67 (2.31)	7.00 (1.73)
Darren	3.20 (0.84)	6.67 (2.31)	6.00 (1.73)	8.00 (0.00)	8.00 (0.00)
Doug	2.40 (0.89)	3.33 (4.16)	6.67 (1.53)	5.00 (0.00)	6.67 (1.53)

Mastery of the primary traits was set at a score of 10 on a 0-16 scale. All study participants increased their mean score on number of primary traits identified in their writing. The primary writing traits mean score for participants increased from 5.03 to 9.75. In some writing samples, evaluators identified a high level of variability, which they associated with outside influences that frequently affect students with EBD. Table 10 presents primary trait data.

Table 10

Means and Standard Deviations of Primary Traits across Phases

	Phase A Baseline M *(SD)*	Phase B POW+TREE M *(SD)*	Phase C POW+TREE+ LEAF M *(SD)*	Phase D Alternating Treatment Independent Peer M *(SD)*	Phase D Alternating Treatment Independent Peer M *(SD)*
Aaron	4.20 (1.30)	10.00 (0.00)	11.33 (0.58)	10.33 (0.58)	10.00 (0.00)
Adam	7.20 (2.68)	10.00 (0.00)	11.00 (1.00)	10.67 (1.15)	10.33 (0.58)
Ben	3.60 (0.55)	7.67 (3.21)	11.67 (3.21)	9.33 (1.15)	10.00 (0.00)
Brian	6.00 (2.12)	8.67 (1.15)	10.00 (0.00)	9.33 (1.15)	10.00 (0.00)
Celia	4.00 (1.22)	7.67 (2.52)	8.33 (2.89)	9.00 (1.73)	9.00 (1.73)
Chaz	8.00 (2.35)	10.00 (0.00)	10.00 (0.00)	9.33 (1.15)	9.33 (1.15)
Darren	5.00 (1.58)	8.67 (2.31)	8.67 (1.53)	10.00 (0.00)	10.00 (0.00)
Doug	2.20 (1.30)	4.67 (5.03)	8.67 (1.15)	10.67 (3.79)	9.33 (0.58)

Word count did not show a significant increase throughout the evaluation process. The authors indicated that an increase of words written would not necessarily show an improvement in the quality of writing.

In student interviews conducted following the evaluation process, students indicated an awareness of their improvements using the SRSD model. Cramer and Mason (2014) contended the LEAF strategy may help students support the increase in quality and writing traits. However, they acknowledged that many of the students struggled with the peer interactions required.

McKeown, Kimball, and Ledford (2015) expanded the modeling a practice phases of the SRSD model in an attempt to show writing improvements for students with EBD. The authors used a multiple probe across participants' design to evaluate whether the use of audio feedback during the practice phase can increase the quality of and revisions to student writing. Six sixth-grade students attending a residential facility for students with EBD participated in the study.

The authors provided 10-hrs of one-on-one professional development to the teachers of the school. The teachers were instructed in the SRSD model of instruction as well as the use of the IPad app *Notability*. During the instructional phase the instructor uses the *Notability* app to teach students how to make revisions necessary to improve their writings. The teacher used positive prompts to communicate positive and negative aspects of the student writings.

The three baseline writing probes were administered prior to the intervention phase. The intervention phase included the SRSD instruction and instruction on how to use the *Notability* app. The students used the app to listen to the corrections while revising their own writings. Students were then given three post-intervention writing probes. All writings were evaluated initially as a draft and once again following student revisions. The students were allowed 45 min

for each writing probe: 30 min for the initial writing and 15 min for the revisions. The number

of revisions was tracked as well as the number of words and the holistic quality of the writing on

a 0-6 point scale.

During the baseline writing probes, the students chose to not revise any of their work.

Following the intervention, students made an average of 10.94 revisions per writing assignment.

The students monitored the length of their writings and overall quality of the writing prior to and

following the revisions.

All students improved their writings during revisions. The results are shown in Table 11.

Table 11

Mean Holistic Scores and Length of Stories

Student	Phase	Draft Score	Final Score	Change*	Draft Length	Final Length	Change*
Adam	Baseline	3.7	3.7	0.0	103.7	103.7	0.0
	Post-Intervention	3.7	5.0	1.3	92.0	162.7	70.7
	Change	0.0	1.3		-11.7	59.0	
Brad	Baseline	1.7	1.7	0.0	44.3	44.3	0.0
	Post-Intervention	2.7	3.7	1.0	70.3	101	30.7
	Change	1.0	2.0		26.0	56.7	
Chris	Baseline	1.8	1.8	0.0	62.0	62.0	0.0
	Post-Intervention	4.3	4.3	0.0	94.0	111.3	17.3
	Change	2.5	2.5		32.0	49.3	
Dillon	Baseline	2.0	2.0	0.0	58.0	58.0	0.0
	Post-Intervention	3.7	4.3	0.6	79.0	109.3	30.3
	Change	1.7	2.3		21.0	51.3	
Eddie	Baseline	3.3	3.3	0.0	82.3	82.3	0.0
	Post-Intervention	2.7	4.0	1.3	76.0	115.3	39.3
	Change	-0.6	0.7		-6.3	33.1	
Faith	Baseline	4.0	4.0	0.0	125.5	125.5	0.0
	Post-Intervention	5.3	5.7	0.4	219.3	227.7	8.4
	Change	1.3	1.7		93.8	102.2	

*= change due to revisions

Following the intervention, students were able to independently revise and produced higher quality writings. Given the differences between the baseline and post-intervention revised writing scores, the researchers asserted the SRSD model holds great promise for improving the writing skills of students with EBD. However, McKeown et al. (2015) cautioned that it may be difficult to reproduce in a more mainstream setting. The amount of time necessary for teachers to successfully implement these interventions in a larger setting could prevent the successful implementation.

Summary

In this chapter, 10 studies were reviewed to examine the effectiveness of the SRSD model of writing instruction for students with EBD. Table 12 provides a summary of the participants, methods, and results of each study.

Table 12

Summary of Chapter 2 Studies

AUTHOR (DATE)	PARTICIPANTS/SETTING	PROCEDURE	RESULTS
Mastropieri et al. (2009)	12 eighth-grade students attending a public day school for students with severe emotional and behavior disabilities	Multiple-baseline design comparing students pretest and post-intervention 10-min writing	Students showed significant improvements in number of words, number of parts, number of paragraphs, number of transition words, and quality scoring
Mason, Kubina, Valasa, & Cramer (2010)	5 seventh- and eighth-grade students attending an alternative school for students with EBD	Multiple-baseline design comparing students pretest and post-intervention 10-min writing	Students showed significant improvements in number of parts and quality of writing in post-intervention testing. Students also showed significant improvements in the WJ-III writing fluency subtest.
Mason, Kubina, & Hoover (2011)	3 high school students with EBD taking language arts classes in a general education classroom; 2 in co-taught settings	Baseline-intervention comparison	Students' writing improved in the areas of quality, response parts, and word count.

Table 12 (continued)

AUTHOR (DATE)	PARTICIPANTS/SETTING	PROCEDURE	RESULTS
Cuenca-Sanchez, Mastropieri, Scruggs, & Kidd (2012)	18 seventh grade students with EBD attending the most restrictive and supported setting in the county.	Treatment and control comparison. Woodcock-Johnson III writing fluency subtest.	Treatment groups outperformed comparison students on persuasive essays.
Ennis, Jolivette, & Boden (2013)	25 upper elementary students with psychiatric diagnoses of EBD in a residential facility	SDQ, SSBD, WJ- III, Treatment and control comparison	Treatment group made significant gains across all variables of persuasive writing. The gains did not generalize to the WJ-III.
Cuenca-Carlino & Mustian (2013)	9 middle school students with a primary label of EBD	Likert scale questionnaire, single-subject multiple-probe-across-class participants	Students significantly improved their ability to plan and write persuasive essays.
Hauth, Mastropieri, Scruggs, & Regan (2013)	8 eighth-grade students with EBD attending small classroom settings within a public middle school	Single subject multiple baseline across participants	Students significant improved in all measured writing areas
Ennis, Jolivette, Terry, Fredrick, & Alberto (2014)	44 middle and high school students in an urban residential school for students with EBD	WJ-III, Piecewise linear change model comparing rate of change	Students showed significant improvements in pre and post interventions of the WJ-III, Student writing performance showed significant improvements in the initial phases of intervention
Cramer & Mason (2014)	8 middle school students enrolled in an alternative program for students with EBD	Multiple baseline alternating treatment	Participants increased quality and primary traits in writing responses.
McKeown, Kimball, & Ledford (2015)	6 sixth-grade students attending a residential facility for students with EBD	Multiple probe across participants' design	Participants used revisions to improve the holistic quality of response writings.

Chapter 3: Conclusion and Recommendations

Students with emotional and behavioral disorders (EBD) require systematic, strategic instruction that addresses not only their cognitive needs but also their affective and behavioral strengths and weaknesses (Bak & Asaro-Saddler, 2013). This instructional approach is particularly important when teaching writing skills. The purpose of this paper was to evaluate the effectiveness of the Self-Regulated Strategy Development model of writing instruction for students with EBD. I reviewed the findings of 10 studies in Chapter 2 that were conducted between 2009 and 2015 with students in grades 5-12. In this chapter, I discuss the findings and implications of these studies as well as describe recommendations for future research and practice.

Conclusions

All 10 studies used quantitative research designs, and two of these employed treatment and control groups (Cuenca-Sanchez et al., 2012; Ennis et al., 2013). Only one study took place in the general education setting (Mason et al., 2011), and two of the three participants in this study were in a co-taught classroom. The remainder of the studies took place in an alternative setting for students with EBD.

All studies indicated significant benefits for students with EBD using the SRSD model of persuasive writing. The primary focus of all the research studies was to determine if students' holistic writing scores would improve following the introduction of the SRSD intervention. Due to a variety of methods of scoring holistic writing quality, it was difficult to determine an overall average increase in holistic quality of writing among all the studies reviewed. However, it can be determined that the SRSD model of persuasive writing does increase holistic quality of

writing. The student scores increased between 1.5 and 7 points. When compared to a control group, the holistic quality scores of students receiving the SRSD intervention improved 6 points more than the control comparison groups.

Other writing areas showed improvements as well as students in response to SRSD instruction. Significant improvements were observed in the number of sentences, transition words, essay parts, and paragraph writing, although not all areas measured showed consistent improvement throughout the course of the SRSD instruction. For example, the number of words showed great variability throughout many of the studies reviewed. Often, the number of words written would not increase significantly, but the holistic quality of the writing did improve. This shows that students' initial baseline writings contained a lot of filler words but did not contain the necessary parts to be considered high quality.

Less frequently measured areas included time spent planning versus writing, academic engagement, and independent editing. Prior to the SRSD instruction, students spent no time planning. Following the intervention, the amount of time spent planning increased to about 6½ min. Although the writing time for students increased during the initial SRSD instruction, the amount of time spent writing decreased by 3½ min as the students became increasingly more confident. Academic engagement and editing skills also showed slight improvement. On average, the holistic quality of students' writings improved 1.5 points after completing independent edits.

Table 13 illustrates that writing quality was the most significant measure of a student's writing that was evaluated in the research. As mentioned, other factors were also measured in the studies, but were not central to all studies.

Table 13

Areas Scored in Individual Studies

	Words	Parts	Sentences	Paragraphs	Transition words	Quality	Time	Engagement	Correct word sequence	Edits
Mastropieri et al. (2009)	X	X		X	X	X				
Mason, Kubina, Valasa, & Cramer (2010)	X	X				X				
Mason, Kubina, & Hoover (2011)	X	X				X				
Cuenca-Sanchez, Mastropieri, Scruggs, & Kidd (2012)	X	X	X	X	X	X				
Ennis, Jolivette, & Boden (2013)	X	X				X				
Cuenca-Carlino & Mustian (2013)	X	X	X	X	X	X				
Hauth, Mastropieri, Scruggs, & Regan (2013)	X	X	X	X	X	X	X			
Ennis, et al. (2015)		X				X		X	X	
Cramer & Mason (2014)	X	X				X				
McKeown, Kimball, & Ledford (2015)						X				X

Students expressed that they enjoyed the SRSD instruction. However, the major complaint following the instruction was the high amount of writing necessary. Students felt the amount of writing became overwhelming. This could result in them becoming resistant to the instructional process.

Many of the studies utilized the Woodcock-Johnson subtests as a way to measure the generalization of the SRSD model. Over administration of these test can diminish the reliability of their measures and having students take two tests in a relatively short period of time can lead to potential problems with future testing needs. The minimal length of time between the administration of the pre- and post-intervention uses of the WJ III subtests may have led to the inconsistent generalization results.

Recommendations for Future Research

Future research should continue on the current path many of the studies have established. However, more studies should be conducted using control or comparison groups. Expanding upon the boundaries of the frequency of instruction compared to the quality gains will help to demonstrate the minimum instruction necessary to improve student writing while preventing the burnout effect of excessive writing samples.

Another area of expanded research includes the inclusion of SRSD instruction in the general education setting. In addition, the participant samples lacked diversity and included mostly White students. It is important to conduct studies with more diverse populations.

Implications for Current Practice

These studies were conducted in settings that are similar to the setting in which I teach—Setting IV school for students with EBD. As a very small school, we are constantly looking for

instructional options that can engage the students while providing high quality learning opportunities that fit into a limited budget. This model of instruction fits with the qualities that can provide our school with great opportunities for learning.

During the course of learning about SRSD, I have been able to make contact with the developers of a website dedicated to passing on information and educating teachers on the SRSD model. The thinksrsd.com website provides instruction for those interested in learning more about implementing the SRSD model within their classroom. I have been in contact with the supervisor of my school to open up the opportunity for the teachers within my school to receive this training to implement the SRSD model of instruction with our students. The flexible nature of the SRSD model provides our students with the opportunity to learn to express themselves in a positive persuasive manner.

Summary

After reviewing 10 studies, I have concluded SRSD has proven to be an effective model of writing instruction for students with EBD. Through pre- and post-intervention analysis or treatment/control comparison, SRSD was shown to significantly improve the holistic quality of students' writings as well as improving other areas of writing quality. Teachers should consider seriously implementing the SRSD model of instruction with students who struggle with writing.

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