IMPROVING NARRATIVE WRITING SKILLS OF SECONDARY STUDENTS WITH DISABILITIES USING SELF-REGULATED STRATEGY DEVELOPMENT

A Dissertation in
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by
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ABSTRACT

New policy outlines high standards for narrative essay writing at the secondary level. Unfortunately, students with disabilities often produce disorganized narratives with fewer narrative elements than their peers without disabilities. A multi-probe, multiple baseline design across three students, replicated once, was used to examine effects of Self-Regulated Strategy Development (SRSD) for the POW (Pick my genre then idea, Organize my notes, Write) + STACS (Setting, Tension, rising Action, Climax, Solution) strategy on narrative essay-writing skills of adolescents with disabilities. Results indicated students’ improved the quality of their narratives and included a greater number of strategy-specific and story grammar elements following instruction. Participants were also able to transfer skills across a history or social studies setting and could more accurately differentiate narrative writing prompts from expository and persuasive writing prompts. Treatment acceptability and implications for future research and practice are discussed.
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Chapter 1

Introduction

Written narrative expression is a tool for constructing meaning from experience and communicating real or imagined events to the world (Bruner, 1990; McKeough, Genereux, & Jeary, 2006). It provides individuals with a voice, or outlet, to tell a story. In schools, especially at the secondary level, narrative essays (e.g. stories, personal narratives, or biographies) are commonly written across subject areas to facilitate deeper understanding of content (Valasa & Mason, in press). For example, a teacher may ask students to use narrative form to write and tell about the life of a particular historical figure, aiming to encourage deeper understanding through reflection, synthesis, and explanation of learned information. Students at the secondary level also commonly use narrative form to communicate life experience, feelings, or morals on college admissions or scholarship applications.

Integration of written narrative expression across the secondary curriculum is emphasized in the mandated national curriculum (CCSS, 2014). According to the Common Core State Standards, now adopted by 43 states, all students at the secondary level are required to, “write compositions to describe real or imagined experiences through description of context and characters, appropriately sequenced events, and development of a logical conclusion.” Moreover, narrative writing at the secondary level should, “include narrative techniques (e.g. transition words, dialog, and descriptive details) (CCSS, 2014).” However, despite the power of narrative form and national curriculum standards, students at the secondary level are not writing proficient narratives. Eighty-one percent of eighth grade students did not write a proficient narrative essay on the National Assessment of Educational Progress (NAEP; 2011) test. Adolescents with high-incidence disabilities [e.g., learning disability (LD), emotional behavior disorder (EBD), attention deficit hyperactivity disorder (ADHD), language impairment (LI)] have even greater
difficulty using written narrative expression (Montague & Leavell, 1994), placing this population at a great disadvantage for achieving success across contents and for attaining access to higher education and employment.

Specifically, students with disabilities often have difficulty using genre-specific text, generating ideas, and generally produce shorter, less structured essays with more errors than their peers without disabilities (Taft & Mason, 2011). Self-regulation instruction has been recommended to assist struggling writers with common deficits in the metacognitive processes of writing as needed for planning, evaluating, revising or adjusting actions (De La Paz, 1997; Graham & Perin, 2007). According to Zimmerman’s (2002) theory of self-regulation, deficits in learning are linked to lack of ability to self-regulate. Self-regulation, or “the self-directive process by which learners transform their mental abilities into academic skills (Zimmerman, 2002, p. 65),” involves knowledge required to complete an academic task and the self-awareness, self-motivation, and behavioral skill necessary to carry out the task. Self-regulation can vary across academic settings and tasks; it is not a single trait students possess or lack. In fact, self-regulatory processes can be taught and often result in increased student achievement and motivation.

Self-Regulated Strategy Development (SRSD) is an instructional approach designed to facilitate self-regulatory processes for an academic task (Graham & Perin, 2007; Mason & Graham, 2008). The SRSD approach combines strategy instruction and explicit instruction in several self-regulatory processes (i.e. goal-setting, self-monitoring, self-reinforcement, self-instructions) (Mason, Reid, & Hagaman, 2012). Stages for strategy acquisition progress as follows: (a) develop necessary prerequisite skills for strategy mastery, (b) discuss the strategy and explain how the strategy will improve writing skills, (c) memorize the strategy steps, (d)
provide an explicit model that includes verbalization of the thought process used to apply the strategy, (e) provide guided practice, and (f) provide ample independent practice and opportunities for generalization. Explicit instruction (i.e. teaching in a direct, systematic, success-oriented manner) in self-regulation procedures is imbedded throughout instruction (Archer & Hughes, 2011; Mason et al., 2012; Mason & Graham, 2008).

Graham, Harris, and McKeown (2013) conducted a meta-analysis to examine the effects of SRSD writing instruction for students with LD. Results indicated a large average effect size (ES) of 2.37 for quasi-experimental and experimental designs. The authors identified SRSD as an effective instructional procedure for teaching genre-specific writing strategies to struggling writers, confirming findings from previous reviews of writing (Valasa, Mason, & Hughes, 2014). The authors recommended future researchers investigate SRSD for new writing strategies to address a wider range of tasks across genres and contents (Graham, Harris, & McKeown, 2013). Existing writing research at the secondary level rests heavily within the persuasive and expository genres. Narrative-specific writing strategies for students with disabilities at the secondary level are lacking (Valasa et al., 2014); this is problematic, genre-specific writing strategies (i.e. writing strategies designed specifically for persuasive, expository, or narrative genres) are not easily transferred between genres (Monroe & Troia, 2006).

Genre-specific writing strategies help students to identify basic essay elements within a given writing genre and to use this knowledge to construct an essay. Each genre involves basic, unique essay elements. For example, a narrative writing prompt might read, “Write a story about a day in the life of your favorite celebrity.” An appropriate response would include basic narrative elements (e.g. setting, starter event, action, climax, ending, and reaction) (Stein & Glenn, 1979). A narrative-specific writing strategy might help strengthen student ability to identify basic
narrative elements and to plan, write, and edit a narrative essay. If a student were to use a persuasive-specific writing strategy to respond to the narrative writing prompt above, he or she might instead explain why a particular celebrity is his favorite, including all basic persuasive elements (i.e. topic, reasons and explanations, a counter-argument, and conclusion). Doing so would produce a weak, unsuccessful narrative.

As noted, very few studies have specifically aimed to improve narrative writing skills of students with disabilities at the secondary level and several aspects of the national narrative writing curriculum have not yet been addressed (Valasa et al., 2014). Only two strong, peer-reviewed narrative essay intervention studies have been conducted at the secondary level (Graham & Harris, 1989a; Sawyer et al., 1992). Both studies used SRSD for the W-W-W, What = 2, How = 2 strategy to help students remember the parts of a story by answering the following questions: (a) Who is the main character? Who else is in the story? (b) When does the story take place? (c) Where does the story take place? (d) What does the main character want to do? (e) What happens when he or she tries to do it? (f) How does the story end? (g) How does the main character feel? The studies yielded improved essay quality and greater number of narrative elements, providing strong support for SRSD in increasing story writing achievement for adolescent students with disabilities. However, both studies were conducted over two decades before the national curriculum standards for writing were established and do not fully address the narrative technique outlined in CCSS (2014). Furthermore, both studies analyzed responses to picture-based story prompts, rather than text-based personal narrative or story prompts typically assigned at the secondary level.

Narrative writing prompts at the secondary level are typically word-based, rather than picture-based, and require students to write personal or imaginative narratives on a given topic.
For example, a narrative prompt at the secondary level might read: “When we first arrived on the island, we saw mountains and fields with lots of colorful flowers and large, strange-looking trees. There were no people. No humans had ever been here before. The first animal we saw was so tall that it had to bend down to eat the leaves off the treetops…Imagine that you are one of the people exploring this remote island. Write a story that begins where this journal entry ends (National Assessment of Educational Progress, 2011).” Because struggling writers and students with high-incidence disabilities at the secondary level are required to develop narratives in response to grade-level prompts in inclusion classrooms and on state and national assessments (NAEP, 2011; New Jersey Assessment of Skills and Knowledge, 2013), development of research designed to assist students in responding to secondary-level, word-based writing prompts is crucial for student writing success at the secondary level. Researchers have recommended that, to better address CCSS (2014) standards in secondary settings, future narrative writing intervention research for students with disabilities include genre-specific strategies designed to match writing prompts at the secondary level (Valasa et al., 2014).

In 2014, Valasa conducted a pilot study designed to assist students in responding to secondary level, text based narrative writing prompts and to address the recommendations made by Graham and colleagues (2013). Valasa (2014) developed and explored the effects of SRSD for a new narrative writing strategy, POW (Pick my genre then idea, Organize my notes, Write), + STACS (Setting, Tension, rising Action, Climax, Solution). The POW + STACS strategy was developed to help students with disabilities to respond to secondary-level, text-based narrative writing prompts and to use narrative technique outlined in CCSS (2014). A pre- and posttest control group design was used to examine the effects of the intervention on essay quality, story grammar elements, and strategy-specific essay parts. Six students were randomly assigned to
No significant differences were found between groups at pretest on any of the measures. Results indicated adolescent students with and without disabilities in the treatment group wrote significantly higher quality narratives with more narrative elements than their peers in the control group. In addition, according to a social validity scale developed by MacArthur and Philippakos (2010), participants believed SRSD instruction for the POW + STACS strategy helped them write better narratives. The participants also stated the strategy should be taught to others and they expected to use this strategy in the future.

The first part of the strategy, POW, is a planning strategy that has been successfully used to foster idea generation across several persuasive and expository writing studies at the secondary level (e.g., Hoover, Mason, & Kubina, 2012; Mason, Kubina, Valasa, & Cramer, 2010). POW is an open ended planning strategy; it allows for pairing with any genre-specific strategy and allows students to generalize planning skills across any genre (Graham, Harris & Mason, 2005; Mason & Shriner, 2008).

In the recent pilot study, Pick my idea was changed to Pick my genre and idea to assist struggling writers at the secondary level with differentiation between text genres and still allow for generalization of planning skills. Part of planning and utilizing a genre-specific strategy at the secondary level requires the ability to differentiate between text genres, in other words, to recognize whether the text-based prompt calls for an opinion, narrative, or expository response and choosing the appropriate strategy to assist with the writing process (Valasa et al., in press). Pick my genre then idea allows opportunity for appropriate strategy selection and then idea selection. An explicit instruction component is also imbedded at the beginning of every POW + STACS lesson to further support accurate genre identification.

The second part of the piloted strategy, STACS, outlines an appropriate structure and
sequence for any narrative (e.g. personal narrative, biography, story). Parts of the narrative strategy (i.e., Setting, Tension, rising Action, Climax, Solution) were developed based on narrative elements (main character, locale, time, starter event, goal, action, ending, and reaction) identified by Stein and Glenn (1979). Development of narrative events is supported using grade-level, cross-curriculum narrative vocabulary [i.e. setting, tension, rising action, climax, solution (CCSS, 2014)]. Students are also explicitly taught to utilize transition words, dialog, and detail - narrative techniques emphasized in secondary CCSS curriculum benchmarks. Given the matched content of POW + STACS with the current national writing curriculum and improved writing performance of participants in the pilot study, the current study was designed to further investigate the effects of SRSD for POW + STACS on narrative writing skills.

**Self-Efficacy for Self-Regulation**

Independent use of academic and self-regulatory strategies rests on student confidence in using these strategies (Usher & Pajares, 2008). Without self-efficacy for self-regulation, students may be less likely to initiate and complete important academic tasks (Klassen, Krawchuk, & Rajani, 2008). Therefore, it is especially important to not only provide students with knowledge and self-regulatory skills, but also ensure high levels of self-efficacy for self-regulation. Self-efficacy for self-regulated learning has been established as a measurable, uni-dimensional construct that is positively correlated with academic self-efficacy, self-concept, task goal orientation, and achievement. A recent study conducted by Klassen et al. (2010) found students who displayed low self-efficacy for self-regulated learning reported higher levels of procrastination on academic tasks. Writing was highlighted as the task students were most likely to intentionally postpone. Thus, it is important students possess confidence and persistence in knowledge and self-regulatory skills on writing tasks.
While writing researchers have not yet analyzed self-efficacy for self-regulation for adolescent students with disabilities, many have measured student self-efficacy for writing [i.e., self-beliefs in one’s capabilities to complete a writing task (Bandura, 2006)]. Findings were mixed. Several studies have documented the positive effects of strategy instruction for writing strategies on self-efficacy (Cuenca-Sanchez, Mastropieri, Scruggs, & Kidd, 2012; MacArthur & Philippakos, 2010; Wong, Butler, Ficzere, & Kuperis, 1996). Conversely, many intervention studies have also noted no gains or slight gains in self-efficacy following intervention, even when the treatment produced moderate-large effects on the quality of student writing (Graham & Harris, 1989a; Graham & Harris, 1989b; Sawyer et al., 1992; Wong, Butler, Ficzere, & Kuperis, 1997). Researchers have attributed lack of gains in self-efficacy to student over-estimation of writing abilities and under-estimation of task demands prior to intervention. Graham and Harris (1989a) noted “unrealistically high pre-task expectancies [of students with learning problems] may also be due to comprehension deficiencies, use of a self-protective coping strategy, or a developmental delay in the ability to match demands to ability level.” Given the problems with measuring writing self-efficacy of students with disabilities and in order to gain an understanding of student confidence in utilizing self-regulatory strategies for writing, the current study aimed to measure self-efficacy for self-regulation.

The following research questions were addressed:

- What are the effects of SRSD for the POW + STACS strategy on the quality, number of story grammar elements, and number of strategy-specific elements of narrative essays written by adolescents with high-incidence disabilities?
• Does SRSD for the POW + STACS strategy increase student ability to accurately
differentiate text-based narrative writing prompts from persuasive and expository writing
prompts?
• Does providing a student with instruction and tools for self-regulating narrative writing
performance affect his or her self-efficacy for self-regulation?
• Can students maintain overall performance across a three week time interval?
• Following instruction, can students independently respond to a history or social studies
based narrative writing prompt given in their history or social studies classroom?
• How do participants perceive the intervention?
Chapter 2

Method

Design

A multi-probe multiple baseline design across three students, replicated once (six participants total), was used to examine the effects of SRSD for the POW + STACS strategy on essay quality, and number of story grammar and strategy-specific elements. The following guidelines for single-case research established by Kratochwill et al. (2010) and Horner et al. (2005) were utilized to ensure methodological rigor: participants adequately described, participant selection adequately described, description of instructional setting adequately described, dependent measures quantified, dependent measures reliable, multiple baseline data points collected, multiple intervention points collected, treatment fully described, treatment fidelity established, testing procedures adequately described, and social validity established.

At least five baseline probes were administered to each student. Instruction for each student did not begin until a stable baseline was established and the preceding student reached criterion performance of writing an essay with five narrative parts (setting, tension, rising action, climax, solution) within a 45-minute timeframe for two consecutive instructional days. A forty-five minute timeframe was selected for criterion because this was the same amount of time provided for writing essays on the state test. A parameter of 50% variability was used to establish a stable baseline (Alberto & Troutman, 2009). Determination of a stable baseline and evaluation of criterion performance was determined using the strategy-specific element scale (described below in Instrumentation and Scoring). Five probes were administered following instruction to evaluate independent performance. One of the 5 post-instruction assessments was a generalization prompt based on grade-level social studies or history content and another was a maintenance probe administered 3 weeks following instruction.
Setting

The study took place in a language arts (LA) resource room of a public urban middle school in the Northeastern United States. The school served approximately 1,100 (55% African American, 18% White, 15% Hispanic, 9% Asian, and 3% American Indian) students in grades 6 through 8. In this district, resource classes contained students with high-incidence disabilities who were responsible for meeting common core narrative writing standards (CCSS, 2014). Students in the LA resource classroom were taught by 1 tenured special education teacher with over 20 years of teaching experience. Students received approximately 6.5 hours of LA instruction per week from this teacher. According to the LA resource room teacher, no formal essay writing instruction took place during the study. The teacher told the researcher she planned to teach persuasive, informative, and narrative writing following the holiday break (the study took place near the beginning of the school year). Current writing opportunities in the LA resource classroom included short-constructed responses to reading comprehension questions, spelling and handwriting practice, and daily sentence construction and grammar instruction.

Participants

To meet selection criteria, students needed to have difficulty writing. Specifically, students needed to (a) be diagnosed with a high-incidence disability, (b) have scored below proficient on the writing section of the New Jersey Assessment of Skills and Knowledge (reliability = .82-.91), and (c) be identified by their LA teacher as a struggling writer. Parental consent was required for participation in the study. All students who met selection criteria (n = 17) received a consent form (IRB #45696). The informed consent form is attached in Appendix B. Seven students met selection criteria, returned approved consent forms, and became participants in the study. However, during baseline, the district determined one of the participants could not provide proof of address within the district. This student was not allowed
back to school and was therefore removed from the study. Table 1 outlines characteristics of the remaining 6 participants. Two participants were in the 6th grade, 2 were in 7th grade, and 2 were in 8th grade. Five participants were male and 1 was female.

Table 1. Participant Characteristics

<table>
<thead>
<tr>
<th>Name</th>
<th>Grade</th>
<th>Gender</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith</td>
<td>6</td>
<td>M</td>
<td>11.2</td>
<td>Caucasian</td>
<td>EBD</td>
</tr>
<tr>
<td>Carlos</td>
<td>6</td>
<td>M</td>
<td>11.9</td>
<td>Hispanic</td>
<td>LI</td>
</tr>
<tr>
<td>Maria</td>
<td>8</td>
<td>F</td>
<td>13.8</td>
<td>Hispanic</td>
<td>LD</td>
</tr>
<tr>
<td>John</td>
<td>8</td>
<td>M</td>
<td>13.9</td>
<td>Hispanic</td>
<td>LD</td>
</tr>
<tr>
<td>Alex</td>
<td>7</td>
<td>M</td>
<td>13.0</td>
<td>African-American</td>
<td>SLD</td>
</tr>
<tr>
<td>Martin</td>
<td>7</td>
<td>M</td>
<td>12.11</td>
<td>Asian</td>
<td>EBD</td>
</tr>
</tbody>
</table>

Note. M = male; F = female; EBD = Emotional Behavioral Disorder; LI = Language Impairment; LD = Learning Disability; SLD = Specific Learning Disability

**Keith.** Keith was a 6th grade student with EBD who was 11 years and 2 months old at the beginning of the study. According to Keith’s Individual Education Plan (IEP), he performed below grade level on all subjects, including writing. He performed below proficient on the writing section of the NJASK test. Keith was assisted by a teacher’s aide throughout the day and a behavior plan was included in his IEP. Goals to improve social and organizational skills and self-control were outlined in the behavior plan. At the beginning of the study, Keith stated that he did not like writing and his favorite subject in school was art.

**Carlos.** Carlos was 11 years and 9 months old and in the 6th grade. Carlos was classified with language impairment and his IEP outlined academic goals across all subject-areas. The LA resource room teacher commented that Carlos often seemed excited when assigned a writing task, but nonetheless struggled to perform at grade level in writing. Carlos scored below
proficient on the writing section of the NJASK administered during the previous year. Carlos told researchers he enjoyed writing, but his favorite subject was mathematics.

**Maria.** Maria was a 13 year and 8 month old 8th grader who was diagnosed with LD. She was new to the district at the beginning of the study. Maria was performing below grade level in all subjects and her IEP outlined specific goals for reading and writing. Although Maria told researchers she enjoyed writing, she mentioned her favorite subject was gym. Maria performed below proficient on the writing section of the NJASK assessment administered during the previous year.

**John.** John was 13 years and 9 months old and in the 8th grade. John was diagnosed with LD. According to his IEP, John was performing below grade level on all subjects and in the previous year, he scored below proficient on all sections of the NJASK assessment. John’s English teacher mentioned that John typically exhibited appropriate classroom behavior, but struggled with most reading and writing tasks. John told researchers he enjoyed writing and his favorite subject was Social Studies.

**Alex.** Alex, a 13-year-old 7th grader, was diagnosed with SLD in reading, although, his IEP outlined academic goals across all subject areas. His teacher noted he was currently performing below grade level in all subjects and struggled with writing. In the previous year, Alex scored below proficient on the writing section of the NJASK assessment. Alex told researchers he did not like writing and his favorite subject was gym.

**Martin.** Martin was a 12-year and 11-month-old, 7th-grade student who was diagnosed with EBD. His IEP outlined several behavior goals including goals to improve appropriate social skills and increase self-control. Martin was performing below grade level on all subjects. The LA resource room teacher told researchers Martin’s behavior often interfered with completion of
assignments and that he lost his temper and left class without permission several times per week. Martin told researchers he liked writing, but his favorite subject was art.

**Instrumentation and Scoring**

Writing prompts used for assessment and instruction were taken from grade-level state and national assessments (see Appendix C). Prompts were randomized for each student. Generalization prompts are also displayed in Appendix C. These history or social studies-based narrative prompts were recommended by the students’ history or social studies teacher and were based on grade-level content from a previously completed unit. For each assessment probe, the student was given the prompt, 2 sheets of paper, and a pencil. The instructor would say, “Listen carefully as I read the writing prompt.” After reading the prompt, the instructor would say, “You will have 45 minutes to respond to this writing prompt. You may begin.”

Two trained teacher-graduate students, blind to the research questions and hypothesis, served as raters for the study.

**Story Grammar Elements.** Well-written narratives often follow a common, predictable structure, consisting of basic story grammar elements (Stein & Glenn, 1979). According to Stein and Glenn (1979) story grammar elements consist of main character, locale, time, starter event, goal, action, ending, and reaction. Definitions and examples of each story grammar element are provided in Appendix D. The Story Grammar Elements Scale was developed by Graham and Harris (1989a) and is designed to assess inclusion of eight story grammar elements identified by Stein and Glenn (1979). Evidence to support the validity of the Story Grammar Element Scale has been obtained by several investigators who reported the scale is significantly correlated with performance on standardized writing tests, with other measures of story structure, with story
For each story grammar element, 0 points were awarded if the element was not present, 1 point if the element was present and 2 points if the element was highly developed. For the action element, essays could earn up to 2 additional points for a second highly developed, logical action event. In total, each essay could receive 18 total story grammar element points. Scorers were provided practice scoring several essays lacking specific elements and essays with present vs. highly developed narrative elements during training. Interrater reliability (Pearson’s product-moment correlation) was calculated at $r = .98$. Both scorers scored all essays for story grammar elements. Scores obtained by the two scorers were averaged.

**Essay Quality.** Essay quality was evaluated according to a 5-point traditional holistic rating scale, with 1 representing lowest quality and 5 representing highest quality writing. The scale is intended to assess aptness of word choice, imagination, appropriately sequenced events, sentence structure, and grammar (all current requirements of CCSS). Evidence to support the validity of the holistic quality rating scale described has been established by investigators who reported the scale is significantly correlated with other measures of narrative writing (i.e. number of story grammar elements) (Sawyer et al., 1992).

Consistent with Graham’s (1982) recommendations, scorers were instructed to read each story attentively, but not laboriously to obtain a general impression of the quality and to consider aptness of word choice, imagination, appropriately sequenced events, sentence structure, and grammar. Both scorers scored all essays. Scores provided by each scorer were averaged. Interrater reliability (Pearson’s product-moment correlation) was calculated at $r = .92$. 

length, and with overall quality of student’s written work (Graham & Harris, 1989a; Graves, Montague, & Wong, 1990; Sawyer et. al., 1992).
Strategy-Specific Elements. Strategy-specific elements are the written parts of the POW + STACS strategy. The Strategy-Specific Element Scale is intended to measure whether specific strategy elements (setting, tension, rising action, climax, solution, transition words, dialog, and details) were mastered following instruction. Data from this scale can help confirm whether SRSD for the POW + STACS strategy did indeed lead to treatment effects. The scale is also designed to be highly aligned with current national curriculum writing standards. A recent pilot study indicated this measure to be significantly correlated with other established measures of narrative writing (i.e. Story Grammar Element Scale; \( r = .80 \)).

Strategy-specific elements were scored by counting the number of STACS elements present in the essay. A point was awarded for setting (where/when the narrative takes place), tension (what happens to begin the plot or conflict in the narrative), rising action (the events leading up to the most exciting part of the narrative), climax (the most exciting, highest point in the narrative), and solution (how the problem is solved). One point each was awarded for presence of transition words, dialog, and detail (8 points possible). Interrater reliability (Pearson’s product-moment correlation) was calculated at \( r = .98 \). Scores obtained by the two scorers were averaged.

Self-Efficacy for Self-Regulated Learning. The Self-Efficacy for Self-Regulated Learning Scale (SESRL; Reliability = .83; Usher & Pajares, 2008), a scale adapted from Bandura’s (2006) Children’s Self-Efficacy Scale by Usher and Pajares (2008), was administered to measure student self-efficacy for self-regulated learning in writing before and after the intervention. Evidence to support the validity of this scale has been established by Usher and Pajares (2008) in a validation study. Students were instructed to “think about writing/language arts class and respond as honestly as possible” to the following (7) items: How well can you
finish your work on time? How well can you study when there are other interesting things to do? How well can you concentrate on your school work? How well can you remember information presented in class and in your school books? How well can you arrange a place to study where you won’t get distracted? How well can you motivate yourself to do schoolwork? How well can you participate in class discussions? Students rated each item from 1, *not well at all*, to 6, *very well* on their copy of the SESRL. It is important to note that the word “home” was taken out of the first and fifth question to clearly measure self-efficacy for self-regulation in school. Each student’s responses to the SESRL Likert scale were summed by the researcher to obtain an overall score at pretest and then again at posttest.

**Treatment Acceptability.** Following instruction, students were asked five questions developed by MacArthur and Philippakos (2010) to establish social validity of the strategy: 1) Did the strategy help you write better narratives? 2) How difficult was the strategy? 3) What parts were hard? 4) Do you expect to use the strategy? and 5) Should we teach it to others? Students wrote responses to each question.

**Narrative Genre Identification.** To determine whether students were able to identify when to apply the POW + STACS strategy, students were given a researcher-made assessment with seven sixth- and seventh-grade-level writing prompts taken from state and national assessments before and after instruction (see Appendix E). Participants were told to “Read over the each prompt carefully. Place an “N” next to a prompt if it is a narrative writing prompt and an “X” if it is not a narrative writing prompt.” Students were not given feedback on their responses. To establish validity, the assessment was administered to 2 special education teachers who were considered by their state to be highly qualified to teach English. Both scored 100% on the assessment. When asked whether or not the assessment would be appropriate for evaluating
student ability to read each prompt and determine if it is a narrative writing prompt, the experts agreed the assessment would, indeed, be appropriate. Each question was scored by the researcher as correct or incorrect. A final score was obtained by adding the number of correct responses.

**Procedures**

Students were pulled from English class to receive instruction. Sessions lasted 30-40 minutes and replaced time spent in the LA resource room. Five lessons were given over 5 sessions. Students were given 2-3 lessons per week and instruction was provided over 3 weeks. The researcher was responsible for delivering all lessons (for full lesson plans, see Appendix F). A booster session was provided for Martin, who was suspended for 10 school days during the post-instruction phase (2 weeks before the district’s holiday break). After suspension, he was absent for 2 school days and did not return to school until after the holiday break. Because it had been over a month since Martin finished POW + STACS lessons, the researcher repeated Lesson 5 before continuing post-instruction assessments.

Instructional materials included POW + STACS lesson plans, POW + STACS mnemonic chart (see Figure 1), POW + STACS graphic organizer (see Figure 2), POW + STACS self-statements sheets (see Figure 3), and POW + STACS self-monitoring chart (see Figure 4).
Figure 1. POW + STACS Mnemonic Chart

**POW + STACS Mnemonic Chart**

**Climax**
- Write about the most exciting, highest point in the narrative?

**Solution**
- How is the problem solved?
- How does the narrative end?

**Rising Action**
- Describe the events leading up to the most exciting part of the narrative.

**Setting**
- Where/when does the narrative take place?
- Introduce the main characters.

**Tension**
- What happens to begin the plot in the narrative?
- What makes this day different than any other day?

**POW + STACS Graphic Organizer**

**POW + STACS Graphic Organizer**

**Climax**

**Solution**

**Rising Action**
1. __________
2. __________

**Setting**

**Tension**
Figure 3. *POW + STACS Self-Statements Sheet*

![POW + STACS Self-Statements Sheet](image1)

Figure 4. *POW + STACS Self-monitoring Chart*

![POW + STACS Self-Monitoring Chart](image2)
Lesson 1. The purpose of Lesson 1 was to develop background knowledge and discuss the strategy. During this lesson, the teacher and students established the importance of narrative writing and using strategies for writing. The instructor and students also discussed when a narrative strategy should and should not be applied. The instructor then used lesson plans to develop the strategy and self-regulation using the POW + STACS Mnemonic Chart. Next, students evaluated current writing behavior using their own pretest essay and the POW + STACS Self-Monitoring Chart. Last, the students set more specific goals with the instructor. At the end of every lesson, students were reminded that they would be asked to say all of the POW + STACS strategy parts at the beginning of the following lesson.

Lesson 2. During Lesson 2, the instructor modeled the process of writing using the POW + STACS Graphic Organizer. First, to set the context for learning, students drew the story plot line and wrote down as many strategy parts as they could remember. The instructor pointed out which parts were missing and the students and teacher practiced this until the students could say all of the parts. Then, the instructor provided a quick review of their Lesson 1 discussion of the narrative genre and when to apply the POW + STACS strategy. Next, the teacher modeled the strategy. During this model, the teacher introduced how to add TDD’s (Transition words, Dialog, and Descriptive Detail) to enhance narrative writing. Together, the instructor and students graphed the model essay, noting and discussing each part. Last, the students were asked to remember things the instructor said while working to get started and keep going. Students used their Self-Statements Sheet to write down things to say to themselves while working.

Lesson 3. The teacher and student practiced collaboratively writing a narrative essay in Lesson 3. As with all of the lessons, the teacher began by asking students to draw a story plot line and write down as many POW + STACS strategy parts they could remember. The teacher
and students practiced this until the students could say all of the parts. As with Lesson 2, the teacher briefly reviewed the Lesson 1 discussion of when to apply a narrative writing strategy. Next, the instructor provided supported practice. Using the student’s pretest narrative, the teacher and students wrote all of the narrative elements present into the appropriate sections of the POW + STACS Graphic Organizer. The students and instructor developed ideas to fill in missing sections of the graphic organizer. With the support of the instructor, the students re-wrote their essay using the POW + STACS Graphic Organizer and the Self-Statements sheet. Students were reminded to use TDD’s while writing. Last, students graphed the number of strategy elements on their POW + STACS Self-Monitoring Chart.

Lesson 4. The teacher provided guided practice while the students wrote an essay in Lesson 4. As with all of the lessons, the teacher began by asking students to draw a story plot line and write down as many POW + STACS strategy parts they could remember. The teacher and students practiced this until the students could say all of the parts. As with Lessons 2 and 3, the teacher briefly reviewed the Lesson 1 discussion of when to apply a narrative writing strategy. Next, the students will wrote an essay in response to a writing prompt using the graphic organizer, mnemonic chart, and self-statements sheet. The teacher reminded students to use TDD’s while writing to make their narrative stronger. The instructor only provided support if the student missed a critical part of a narrative essay. Last, students graphed performance on their POW + STACS Self-Monitoring Chart.

Lesson 5. The purpose of Lesson 5 was for students to independently practice writing an essay without the graphic organizer and within a 45-minute timeframe. Before writing, the instructor asked the students to draw a story plot line and write down as many POW + STACS strategy parts they could remember. The teacher and students practiced this until the students
could say all of the parts. As with Lessons 2 and 3, the teacher briefly reviewed the Lesson 1 discussion of when to apply a narrative writing strategy. The students then wrote an essay without the support of the teacher or graphic organizer and within 45 minutes. Last, students graphed performance on their POW + STACS Self-Monitoring Chart.

**Instructional Fidelity**

The instructor followed highly detailed lesson plans in order to ensure treatment was delivered as intended. A checklist was also used during lessons to allow for ease of delivery and to avoid potentially skipping sections of plans (see Appendix F). Each lesson part was checked off as delivered.

A trained observer collected observation data for 33% of lessons. During observer training, the researcher reviewed all procedures with the observer. The observer then evaluated video-taped SRSD for POW + STACS mock lessons using the checklist until the observer counted number of steps completed with 100% accuracy for 3 consecutive mock lessons. A step was marked “complete” by the observer if all components of the lesson step were delivered as described. Session integrity was calculated by dividing the number of instructional steps completed by the total number of instructional steps in the lesson and multiplying by 100. Treatment fidelity for instructor checklists and observations was calculated at 100%.

**Data Analysis**

Visual analysis of level, trend, and variability across baseline, instruction, and post instruction phases was conducted to analyze the effects of the intervention (Kratochwill et al., 2010). Two additional features, immediacy of effect, or “the change in level between the last 3 data points in one phase and the first three data points of the next (Kratochwill et al., 2010)” and overlap, were also used to assess effects. Overlap was calculated by counting the number of data
points in a phase that overlap with data from the previous phase, dividing by the total number of data points in that phase and then multiplying by 100.

Means and standard deviations of the SESRL and the narrative genre identification assessment were calculated. Both assessments were administered pre and post intervention. A paired t-test ($p < .05$) was run on data from the SESRL and narrative genre identification assessment to evaluate whether student self-efficacy for self-regulated learning and ability to identify narrative writing prompts increased following the intervention. Raw treatment acceptability data is analyzed to obtain information about individual student responses to questions.
Chapter 3

Results

Student’s narrative writing skills improved following SRSD instruction for POW + STACS. Number of strategy-specific elements, number of story grammar elements, and quality scores are displayed across Figures 5, 6, and 7, respectively. Table 2 displays means ($M$) and standard deviations ($SD$) for strategy-specific elements, story grammar elements, and essay quality scores across baseline, instruction and post-instruction phases. Student self-efficacy for self-regulation did not improve significantly following SRSD instruction. Student ability to identify narrative writing prompts, however, did improve significantly following SRSD instruction for the POW + STACS strategy. Pretest and posttest scores on the SESRL and Narrative Genre Identification Assessment are outlined in Table 3. Overall, raw treatment acceptability data indicates students positively perceived the intervention.

Baseline scores remained stable for all students throughout initial baseline probing, according to the strategy-specific element scale. In other words, all baseline scores remained within the set parameter of 50% variability. In addition, all students met criterion performance during Lesson 4, thus, instruction could begin after Lesson 4 for the next student who had demonstrated a stable baseline over 5 initial probes.
Figure 5. Strategy specific element scores

Note. Scores from the generalization probe are represented with a triangle and scores from the maintenance probe are represented with a circle.
Figure 6. Story grammar element scores

Note. Scores from the generalization probe are represented with a triangle and scores from the maintenance probe are represented with a circle.
Figure 7. Essay quality scores

Note. Scores from the generalization probe are represented with a triangle and scores from the maintenance probe are represented with a circle.

Strategy-Specific Elements

Each student’s level and trend improved from baseline to instruction and post instruction and observed effects were immediate in the instruction phase. In addition, no overlap existed between data in the baseline phase and data in the instruction or post-instruction phases. Keith’s strategy-specific element score improved from a range of 1 to 2.5 at baseline to 6.5 to 8 at post instruction. Carlos’ scores improved from a range of 2.5 to 6 at baseline to 7.5 to 8 at post instruction. Maria’s range improved from 1 to 3.5 at baseline to 6 to 8 at post instruction. John’s
strategy-specific element scores improved from a range of 1 to 2 at baseline to 5.5 to 7 at post instruction. Alex’s performance improved from scores of 1 at baseline to a range of 5.5 to 6 at post instruction. Last, Martin’s range improved from 3.5 to 5 at baseline to 6 to 7 at post instruction. All strategy-specific element scores were higher at maintenance than at baseline. No overlap exists between data in the baseline phase and data in the maintenance phase. Mean strategy-specific element scores for each student ranged from $M = 1.00$ to $M = 4.40$ at baseline, $M = 6.33$ to $M = 7.67$ during instruction, and $M = 5.88$ to $M = 7.88$ following instruction (see Table 2). Maintenance scores ranged from 4.50 to 8.00.

**Story Grammar Elements**

Level and trend of each student’s story grammar element scores improved from baseline to instruction and post instruction and observed effects were immediate in the instruction phase. No overlap existed between data in the baseline phase and data in the instruction and post instruction phases for all students with the exception of Carlos’ performance where there were 2 overlapping data points between the data in post instruction and the data in baseline (50 percent). Keith’s performance on the story grammar element measure ranged from 1.3 to 3 at baseline to 12 to 14.5 at post instruction. Carlos’ scores greatly decreased in variability from baseline to post instruction phases, ranging from 2 to 15 at baseline to 13.5 to 16 at post instruction. Maria improved her range from 2 to 7 at baseline to 9.5 to 15.5 at post instruction. John’s performance ranged from 2 to 4 story grammar elements at baseline to 9 to 13.5 at post instruction. Alex improved from 1 to 6 at baseline to 9.5 to 12 at post instruction. Last, Martin’s scores ranged from 7.5 to 11 at baseline to 12 to 12.5 at post instruction. No overlap existed between maintenance data and data in the baseline phase for each student. Mean story grammar element scores for each student ranged from $M = 2.40$ to $M = 8.90$ at baseline, $M = 10.50$ to $M = 13.67$ at
instruction, and \( M = 10.50 \) to \( M = 14.88 \) at post-instruction (see Table 2). Maintenance scores ranged from 8.50 to 15.50 on the story grammar element measure.

**Essay Quality**

Level and trend improved from baseline to instruction and post instruction phases and observed effects were immediate in the instruction phase for all students, with the exception of Carlos. Carlos’ quality level remained somewhat stable during instruction and did not improve until post instruction. No overlap existed between data in the baseline phase and data in the post instruction phase for Keith, Carlos, Maria, John, and Alex. All of Martin’s post instruction quality scores (100 percent) overlapped with 1 of his baseline probes. Martin’s scores were somewhat variable during baseline, ranging from 2 to 3. Following instruction, Martin earned a quality score of 3 on all essays. Keith also improved his range from 1 to 2 at baseline to 3 to 4 at post instruction. Carlos’ scores ranged from 1 to 3 at baseline and 3.5 to 4 at post instruction. Maria improved her performance with scores ranging from 1 to 2 at baseline to 3 to 4 at post instruction. John and Alex improved their ranges from 1 to 1.5 and 1 to 2 at baseline, respectively, to consistent scores of 3 at post instruction. Mean quality scores for individual students ranged from \( M = 1.10 \) to \( M = 2.60 \) at baseline, \( M = 2.67 \) to \( M = 3.67 \) during instruction, and \( M = 3 \) to \( M = 3.75 \) at post-instruction. Maintenance scores ranged from 2.00 to 4.00.
Table 2. *Strategy-Specific Elements, Story Grammar Elements, and Quality*

<table>
<thead>
<tr>
<th>Student</th>
<th>Phase</th>
<th>SSE $M$ (SD)</th>
<th>SGE $M$ (SD)</th>
<th>Quality $M$ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith</td>
<td>Baseline</td>
<td>1.50 (0.61)</td>
<td>2.40 (0.65)</td>
<td>1.40 (0.55)</td>
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<tr>
<td></td>
<td>Instruction</td>
<td>7.67 (0.58)</td>
<td>12.33 (1.26)</td>
<td>3.67 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Post-Instruction</td>
<td>7.38 (0.75)</td>
<td>13.25 (1.04)</td>
<td>3.50 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>6.00</td>
<td>10.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Carlos</td>
<td>Baseline</td>
<td>4.40 (1.39)</td>
<td>7.30 (5.19)</td>
<td>2.60 (0.89)</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td>7.50 (0.50)</td>
<td>12.33 (0.76)</td>
<td>3.00 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Post-Instruction</td>
<td>7.88 (0.25)</td>
<td>14.88 (1.31)</td>
<td>3.75 (0.29)</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>8.00</td>
<td>15.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Maria</td>
<td>Baseline</td>
<td>2.00 (0.94)</td>
<td>3.40 (2.04)</td>
<td>1.50 (0.50)</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td>6.83 (0.29)</td>
<td>13.67 (2.47)</td>
<td>3.33 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Post-Instruction</td>
<td>7.13 (0.85)</td>
<td>13.00 (2.66)</td>
<td>3.50 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>6.00</td>
<td>13.50</td>
<td>2.50</td>
</tr>
<tr>
<td>John</td>
<td>Baseline</td>
<td>1.50 (0.50)</td>
<td>2.70 (0.97)</td>
<td>1.10 (0.22)</td>
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<tr>
<td></td>
<td>Instruction</td>
<td>7.67 (0.29)</td>
<td>13.17 (3.25)</td>
<td>3.33 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Post-Instruction</td>
<td>6.13 (.63)</td>
<td>10.50 (2.04)</td>
<td>3.00 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>6.00</td>
<td>8.50</td>
<td>2.00</td>
</tr>
<tr>
<td>Alex</td>
<td>Baseline</td>
<td>1.00 (0.00)</td>
<td>2.40 (2.07)</td>
<td>1.20 (0.45)</td>
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<tr>
<td></td>
<td>Instruction</td>
<td>6.33 (0.58)</td>
<td>10.50 (0.87)</td>
<td>2.67 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Post-Instruction</td>
<td>5.88 (0.25)</td>
<td>10.88 (1.11)</td>
<td>3.00 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>4.50</td>
<td>9.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Martin</td>
<td>Baseline</td>
<td>4.30 (0.67)</td>
<td>8.90 (1.52)</td>
<td>2.30 (0.45)</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
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<td>12.17 (0.29)</td>
<td>3.00 (0.00)</td>
</tr>
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<td></td>
<td>Post-Instruction</td>
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<td>12.25 (.29)</td>
<td>3.00 (0.00)</td>
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<tr>
<td></td>
<td>Maintenance</td>
<td>7.00</td>
<td>12.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>

*Note.* SSE = strategy-specific element scale; SGE = story grammar element scale; $M$ = mean; $SD$ = standard deviation

**Self-efficacy for Self-regulation**

Mean scores on the SESRL improved slightly from pretest ($M = 26.83; SD = 9.24$) to posttest ($M = 28.17; SD = 7.47$), however, a dependent t-test revealed the difference was not statistically significant. Individual participant scores on the SESRL are displayed in Table 3. Keith, Maria, John, and Alex improved scores on the SESRL from pretest to posttest. Carlos and Martin scored lower on the posttest than on the pretest.
Table 3. Participant scores on SESRL and Narrative Genre Identification Assessment at pre and posttest

<table>
<thead>
<tr>
<th>Name</th>
<th>SESRL Pretest</th>
<th>SESRL Posttest</th>
<th>Narrative Genre Identification Assessment Pretest</th>
<th>Narrative Genre Identification Assessment Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith</td>
<td>11</td>
<td>17</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Carlos</td>
<td>39</td>
<td>31</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Maria</td>
<td>27</td>
<td>35</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>John</td>
<td>26</td>
<td>36</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Alex</td>
<td>26</td>
<td>28</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Martin</td>
<td>32</td>
<td>22</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>M</td>
<td>26.83</td>
<td>28.17</td>
<td>3.33</td>
<td>6.33</td>
</tr>
<tr>
<td>(SD)</td>
<td>(9.24)</td>
<td>(7.47)</td>
<td>(1.86)</td>
<td>(.82)</td>
</tr>
</tbody>
</table>

*Note.* SESRL = Self-efficacy for self-regulated learning scale; *M* = mean; *SD* = standard deviation

**Narrative Genre Identification**

Table 3 displays participant scores for the Narrative Genre Identification Assessment at pre and posttest. A dependent t-test revealed students significantly improved their ability to differentiate narrative writing prompts from persuasive and expository writing prompts (*p* = .014) following SRSD instruction for the POW + STACS strategy. Scores improved from a mean of 3.33 (*SD* = 1.86) at pretest to *M* = 6.33 (*SD* = .82) at posttest.

**Treatment Acceptability**

All six students responded that SRSD for the POW + STACS strategy helped them to write better narratives. All also noted they believed it should be taught to others and they expected to use the strategy in the future. Maria and John agreed the strategy was easy to learn. However, Keith and Carlos both said it was “half” easy. Martin said the strategy was “a little easy” and Alex said it was “a little hard” to learn. In response to the question, “What parts were hard?” John and Maria wrote that none of the parts were hard. Carlos and Martin agreed that the “Tension” in STACS was the
most difficult part. Alex said “writing” was the most difficult part and Keith said “thinking” was the most difficult part.
Chapter 4

Discussion

The purpose of this study was to evaluate the effects of SRSD for the POW + STACS strategy on narrative writing skills of adolescent students with disabilities. Results indicated students’ narrative writing skills improved following SRSD instruction for POW + STACS. These results confirm findings of previous studies and reviews that have documented the effectiveness of SRSD in strengthening genre-specific essay writing skills of adolescents with disabilities (Graham et al., 2013; Graham & Perin, 2007; Taft & Mason, 2011; Valasa et al., 2014).

Prior to the current study, little research had specifically investigated narrative essay writing with adolescents with disabilities. Narrative essay writing research from over 2 decades ago indicated SRSD as an effective method of instruction for facilitating narrative essay writing skills (Graham & Harris, 1989; Sawyer et al., 1992). Since then, however, the topic of narrative essay writing at the secondary level for students with disabilities has not been addressed, regardless of changing curriculum demands on new generations (Valasa et al., 2014). The POW + STACS strategy was developed based on instructional methods and recommended key narrative elements from foundational narrative writing studies (Graham & Harris, 1989; Sawyer et al., 1992; Stein & Glenn, 1979) and was intended to enable students to respond to secondary-level writing prompts commonly found on current state and national assessments (NJASK, 2013). The current investigations confirm the findings of foundational narrative essay writing studies, displaying the effectiveness of utilizing SRSD for a narrative-specific writing strategy. Results extend the narrative essay writing literature by contributing a new strategy designed to match CCSS demands.
Results from visual analysis of level, trend, variability, immediacy of effect, and overlap indicated a functional relation existed between student number of strategy-specific elements and story grammar elements written and the SRSD for POW + STACS intervention. In other words, all students made large gains in number of strategy-specific elements and story grammar elements. Patterns across phases for each of these measures were similar, documenting strong experimental control. Carlos’ data was highly variable on the story grammar element measure during the baseline phase. Initially, Carlos’ baseline variability was viewed as a limitation. Analysis of Carlos’ story grammar element data across all phases revealed variability on this measure decreased greatly during instruction and post instruction phases. The researchers determined this effect was indeed favorable because it indicated Carlos was able to achieve predictable, increased story grammar elements during instruction and post instruction phases, rather than the variable performance observed during baseline. Similar positive effects on strategy-specific element and story grammar element measures were found during the SRSD for POW + STACS pilot study (Valasa, 2014).

In addition to improved performance on strategy specific element and story grammar element measures, a functional relation existed between essay quality and the intervention. This was evidenced by increased quality scores from baseline to post instruction for Maria, John, Keith, Carlos and Alex. Quality effects for Carlos were not immediately observed during the instruction phase, but no overlap existed in data from baseline to post instruction, indicating overall improvement in essay quality. All of Martin’s post-instruction quality scores, however, overlapped with 1 of his baseline probes. Although the data revealed Martin was capable of writing a high quality essay before instruction, his variability greatly decreased in instruction and post instruction phases and Martin was able to produce sustained, high quality essay writing
performance following instruction. In other words, the decrease in variability indicated SRSD instruction for the POW + STACS strategy was effective in enabling Martin to write predictable, high quality essays. Overall, analysis of data revealed improved narrative writing skills from baseline to post instruction phases following SRSD instruction for the POW + STACS strategy.

Results also indicated all students were able to maintain improved performance on the strategy-specific element and story grammar element measures 3 weeks after instruction. In addition, half of the students (Carlos, Keith, and Maria) were able to maintain improved performance on the essay quality measure 3 weeks following instruction. The remaining 3 students, John, Alex, and Martin scored lower on the maintenance probe in comparison to the post instruction probes. The quality of John’s maintenance essay (2.00) did remain above his baseline range (1.00 to 1.50), but was a full point lower than the score he consistently earned during the post instruction phase (3.00). Alex and Martin’s essay quality also decreased from post instruction to maintenance. Unfortunately, their maintenance scores overlapped with performance in the baseline phase. Booster sessions have been recommended by narrative writing researchers to sustain improved performance on all measures (Graham & Harris 1989a). Results from quality measures for John, Alex, and Martin indicate booster sessions may have been necessary for maintaining strong narrative essay quality over time.

Analysis of generalization data revealed all students were able to transfer skills learned and respond to a history- or social studies-based writing prompt in the history or social studies classroom. This finding is particularly significant. Narrative essays are often used across contents at the secondary level to facilitate reflection or deeper understanding of content and to assess student understanding of a topic (Valasa & Mason, in press). The results of the current study
show students with disabilities can succeed on cross-content writing tasks following strategy and self-regulation instruction for writing.

Students were also able to significantly improve their ability to differentiate text-based narrative writing prompts from text-based persuasive and expository writing prompts following SRSD instruction for the POW + STACS strategy. Prior to instruction, students earned an average of $M = 3.33$ out of 7 possible points on the Narrative Genre Identification Assessment. Following instruction, students improved their average to $M = 6.33$. This is another important finding. Students need to know when to apply a strategy in order to independently use the strategy in the future. Often times in writing research, researchers will measure strategy acquisition and generalization of strategy-use within a new setting or subject-area (see Appendix A). However, student ability to read a prompt and determine whether a narrative, persuasive, or informative strategy applies is a requirement for successful, independent strategy-use across the curriculum and on state and national tests. Therefore, future researchers are encouraged to test for student ability to read a writing prompt and identify the appropriate writing genre and strategy.

Unfortunately, providing students with instruction and tools for self-regulating narrative writing performance did not significantly affect self-efficacy for self-regulation. Keith, Maria, John, and Alex improved scores on the SESRL from pretest to posttest, however, Carlos and Martin scored lower at posttest than at pretest. This result was somewhat interesting, given Carlos and Martin scored higher on essay quality, strategy-specific elements, and story grammar elements at baseline than the other 4 students. It could be that both Carlos and Martin had experienced some success with writing in their resource classroom, were confident in their writing skills, and as a result, overestimated their ability to self-regulate their writing before
instruction. Following self-regulation instruction, the students might have re-evaluated the high writing task demands and given themselves lower scores on the SESRL items. This effect has also been found in studies that have measured self-efficacy for writing in adolescents with disabilities (Graham & Harris, 1989a). It is important future research further explore self-efficacy for writing and self-efficacy for self-regulated learning for students with disabilities at the secondary level because, as noted by Usher and Pajares (2008), independent use of academic and self-regulatory strategies rests heavily on student confidence in using these strategies.

Although students did not make significant gains on the SESRL, all of the students noted they expected to use the strategy in the future. Students also stated SRSD for the POW + STACS strategy helped them to write better narratives and they believed it should be taught to others. Maria and John believed the strategy was easy to learn, however, the other 4 students responded they believed the strategy was somewhat difficult to learn due to “writing,” “thinking,” or the “tension” element. Alex and Keith, who cited “writing” and “thinking,” respectively, as the most difficult part of the strategy, were the only 2 students who stated they did not like writing at the beginning of the study. It could be that these students still genuinely did not enjoy the process of writing following the intervention. Nonetheless, both Keith and Alex greatly improved their narrative writing skills following instruction. At baseline, Keith wrote the following narrative essay:

*She told her parents more about it then they let her go.*

After SRSD instruction for the POW + STACS strategy, Keith wrote:

*Sam went to the zoo at 12:00PM. He saw tigers, monkeys, and lions so far. Suddenly, he finds the cages are unlocked! Then all of the animals get out of the cages. Sam yells, “RUN!” People start running and screaming and yelling, “HELP!” Sam finds a phone and calls the*
police. Sam say “The animals escaped from their cages, please send help!” After a while animal control comes and saves the day.

Keith’s posttest narrative includes a setting, stronger sequence of events (i.e. rising action leading to a climax), dialog, transition words, and more detail.

**Limitations**

Although the current study has documented the effectiveness of SRSD for the POW + STACS strategy, several limitations exist. First, the researchers did not score generalization essays for content accuracy. Results indicated students were able to successfully construct a strong narrative in a history or social studies setting around a history or social studies topic; however, it is unknown whether students accurately reported described events using content knowledge. Scoring for historical accuracy would have provided useful information as to whether or not students were able to use the strategy to include accurate information learned in class or from primary or secondary texts (De La Paz, 2010). In other words, it would be helpful to understand whether students could independently utilize the strategy to succeed on writing-to-learn tasks at the secondary level.

Second, the researchers were unable to finish collecting post test data as planned from Martin due to his suspension. Because his 10-day suspension was so close to the holiday break, Martin was not re-admitted into school for close to 1 month following the suspension. Martin received a booster session upon his return and finished post testing, including generalization and maintenance, after the booster session. Martin’s posttest, generalization, and maintenance data should, therefore, be analyzed and compared with other participants’ data with caution.

Last, it should be noted none of the students achieved an essay quality score of 5. Only Keith, Carlos, Maria, and John earned quality scores of 4. Though students showed great
improvement in number of narrative elements, strategy-specific elements, and essay quality, students did not achieve highest scores for word choice, imagination, appropriately sequenced events, sentence structure, and grammar. Due to the nature of the holistic scale, it is unknown whether word choice, imagination, appropriately sequenced events, sentence structure, or grammar prevented mastery. Nonetheless, lack of perfect quality scores may indicate students need further support in these areas to achieve the highest score on quality measures.

**Future Research**

Based on results and analysis of the current study, it is recommended future research replicate this study to strengthen evidence documenting the effectiveness of SRSD for POW + STACS and extend results to other students responsible for meeting CCSS who may have characteristics different than the current participants. Before implementing the intervention with new populations, it is important to test whether effects are generalizable to students with unique characteristics, writing struggles, and/or disabilities. SRSD has a strong research base because it has been thoroughly tested across disability populations, age groups, and regions (Graham et al., 2013). It is important to also ensure the strategies with which we are pairing this instructional approach are equally effective in engendering academic success.

Future replications should incorporate 3 adaptations. First, given 2 of the 5 participants indicated “tension” as the most difficult part of the strategy, it may be necessary to plan for additional discussion of this element during Lessons 1 and/or 2. Second, students are required to write essays using discipline-specific content at the secondary level (CCSS, 2014). Conducting the study within a content-area classroom and scoring for content accuracy would be helpful in determining student ability to generalize the strategy across contents and to participate in writing-to-learn activities. Finally, in 2015, students will need to produce typed narrative essays
on the Partnership for Assessment of Readiness for College and Careers assessment (PARCC, 2015). Although many students with disabilities at the secondary level have difficulty typing (Igo, Riccomini, Bruning, & Pope, 2006), it is important to begin assessing student ability to plan and write using tools and technology similar to those available for the PARCC exam. Doing so would assist teachers in preparing students with skills necessary to help students with disabilities to succeed on the national college and career readiness assessment.

**Conclusion**

Written narrative expression provides individuals with a voice to tell a story. Narrative essay writing that includes setting, characters, appropriately sequenced events, transition words, and dialog is a requirement of the secondary curriculum. SRSD for POW + STACS was found to be effective for improving narrative essay writing skills of students with disabilities at the secondary level. Strategy and self-regulation instruction did not improve students’ self-efficacy for self-regulation. However, students improved their ability to accurately identify narrative writing prompts and were able to successfully use the strategy to write a strong narrative in a history or social studies setting. Future replication studies are encouraged to provide teachers with a highly research-based teaching strategy for enabling students with disabilities at the secondary level to achieve success with written narrative expression across the curriculum.
References


Appendix A

Review of Essay-Writing Interventions for Adolescents with High Incidence Disabilities

Lauren Lucille Valasa

Linda Mason, Ph.D.

Charles Hughes, Ph.D.

Academic intervention research often reflects classroom curriculum demands. Initiatives, such as the Common Core State Standards Initiative (CCSS, 2014) mandate that students master narrative, persuasive, and expository essay writing across writing tasks. In these contexts, students are also expected to demonstrate skilled keyboarding for the production and publication of written compositions. Students are required to begin generalizing essay-writing skills across all genres in all academic content areas by the onset of sixth grade. Thus, it is crucial that teachers understand the skills students need for essay writing and have instructional methods for addressing standards and benchmarks.

Several benefits of the initiatives for writing standards have been identified. Graham and Harris (2013), for example, note that CCSS (2013) writing reforms may result in increased emphasis for writing performance improvement. Increased emphasis for writing performance could positively influence reading comprehension, subject-matter knowledge, and network-communication skills such as email, text, blog, and social media. In addition, CCSS benchmarks provide a clear understanding of what is needed for writing proficiency and help educators better identify appropriate grade-level skills. Benchmarks also help teachers identify students who may not be meeting standards and who may need remediation. CCSS emphasizes writing instruction as a school-wide responsibility, rather than a skill taught during Language Arts instruction, providing increased opportunities for students to practice using writing skills across settings using content-knowledge.
However, despite CCSS (2013) mandates and advantages, most typically achieving students in the U.S. are not proficient writers. According to results from the National Assessment of Educational Progress report (NAEP, 2011), 80% of students in 8th grade and 70% of students in 12th grade are not writing proficient persuasive (argumentative essays intended to support claims with clear reasons and relevant evidence), narrative (essays intended to develop real or imagined experiences or events), and expository (essays intended to examine a topic and convey ideas, concepts, and information) essays. A NAEP proficient writing level indicates competent writing skills; any level below proficient is indicative of partial mastery. Adolescents with high-incidence disabilities [i.e., learning disability (LD), emotional behavior disorder (EBD), attention deficit hyperactivity disorder (ADHD), speech or language impairment (SLI), and developmental delay (DD)] have even greater difficulty writing the coherent essays required. Students with disabilities often struggle with idea generation, have difficulty using genre-specific text, and generally produce shorter, less structured essays with more errors than their peers without disabilities (Taft & Mason, 2011). Furthermore, written compositions of adolescents with high-incidence disabilities are well below high standards required for higher education and employment (Mason & Graham, 2008).

Unfortunately, essay-writing intervention approaches for adolescents with disabilities is understudied, leaving teachers without clearly defined evidence-based practices that are directly reflective of CCSS (2013) demands (Graham & Harris, 2013; Graham, Harris, & McKeown, 2013; Mason & Graham, 2008; Taft & Mason, 2011). In a synthesis of writing intervention techniques, Graham and Perin (2007a) reviewed empirical studies (i.e. true and quasi-experimental) conducted with adolescents in fourth through 12th grade. Elements such as providing strategies for planning, writing, and revising, goal-setting, and explicit models were
recognized as effective, research-based writing intervention techniques. However, these techniques were selected as effective for typically achieving students without an analysis of effective techniques for adolescents with disabilities. Moreover, omission of single-case studies may have excluded effective writing intervention research for struggling writers and students with disabilities, as single-case experimentation is a commonly used methodology in special education research (Horner, Carr, Halle, Mcgee, Odom, & Wolery, 2005).

Mason and Graham (2008) also reviewed writing intervention programs of studies for adolescents in fourth through 12th grade. Although the review was expanded to include single-case designs, only intervention studies for students with LD were included. Recommendations for effective instruction components for students with LD included imbedding self-regulation (goal-setting, self-monitoring, self-reinforcements, and self-instructions) practices throughout instruction, allowing opportunities for teacher-student conferencing, and providing scaffolded, guided practice to foster generalization and maintenance. In a subsequent review, Taft and Mason (2011) synthesized writing research for students with disabilities other than LD by providing an analysis of all types of writing approaches and interventions across all grade levels. Self-Regulated Strategy Development (SRSD), an instructional program used to facilitate strategy use and develop self-regulation skills, was noted to be an effective program for students with disabilities other than LD.

More recently, Graham et al. (2013) conducted a meta-analysis to examine the effects of SRSD writing instruction for all students with LD. Result indicated a large average effect size (ES) of 2.37 for quasi-experimental and experimental designs. The authors indicated SRSD to be an effective instructional procedure for teaching writing to students with LD and recommended
future researchers investigate new writing strategies to address a wider range of tasks across genres and contents.

The reviews of writing research for adolescents with disabilities have noted effective procedures used to improve writing performance; however, reviews have not evaluated intervention with a focus on specific CCSS (2013) writing standards. CCSS calls for student achievement in three writing genres - persuasive, narrative, and expository. Table 1 displays key standards for mastery across genres. Each genre is unique in nature and several essay formats exist within each genre. Persuasive essays can involve writing to state an opinion or writing to persuade an audience. Persuasive essays typically introduce claims, cite reasons and explanations supporting claims, and conclude with statements supporting the claim. This format is clearly outlined in CCSS. Expository essays also involve an introduction of a topic and a conclusion. However, CCSS outlines that students should “organize content using strategies.” These strategies can be utilized to organize compare/contrast, cause/effect, classification, and definition expository text structures.

Several text structures also make up the narrative writing genre; narrative essays involve stories, biographies, and personal narratives. CCSS suggest all narratives include description of characters, appropriately sequenced events, and a logical conclusion. Narrative “events” are not clearly defined. Story grammarians (Stein & Glenn, 1979), however, have outlined narrative elements (main character, locale, time, starter event, goal, action, ending, and reaction) that should be considered when sequencing a narrative. In addition, CCSS states good narratives include narrative techniques (i.e. transition words, dialog, and detail).
With increased demands on students with disabilities to write and generalize persuasive, narrative, and expository essays across all content-areas by sixth grade, a reference of effective essay interventions with regard to government-initiated standards is timely.

**Current Study**

The purpose of this literature review is to synthesize the research on essay-writing interventions for adolescents with high incidence disabilities and to discuss the extent to which the research base is reflective of high CCSS (2013) initiatives. Quantitative experimental studies focused on interventions for improving narrative, persuasive, and expository essays of students in sixth through 12th grade with high-incidence disabilities are reviewed. Results are organized around the following research questions:

1) What were outcomes of essay-writing interventions for adolescents with high-incidence disabilities across classroom setting, participant characteristics, and narrative, persuasive, and expository writing genres?
2) What was the quality of the research for each writing genre?

3) How well is the research base within each writing genre addressing CCSS (2013)?

**Method**

Studies included in this review met all of the following criteria: (a) used quantitative intervention methods [i.e., true experiment (randomized control trial), quasi-experimental group (non-randomized group studies, single group pre-test/post-test), or single-case] to analyze the effects of an essay-writing intervention on narrative, persuasive, or expository compositions, (b) targeted writing performance of students in sixth through 12th grade in secondary (i.e., middle or high school) settings who were diagnosed with EBD, LD, ADHD, SLI, or DD, and (c) published in peer-reviewed journals. Only interventions for instruction in persuasive, narrative, or expository essay writing were considered acceptable independent variables. Thus, interventions that did not focus on constructing an essay (e.g. editing strategies, fluency interventions, interactive journaling, and note taking methods) were excluded from this review. Quick writes (i.e., an organized, short constructed response to teacher prompts) and summary writing, while a valuable form of written expression, were also excluded from the review, as the review is intended to focus on essay compositions (Graham & Perin, 2007a; 2007b; Mason, Benedek-Wood, & Valasa, 2009).

To locate studies for review, searches of ERIC, ProQuest Education Journals, and PsychINFO databases were conducted using the keywords *writing, writing intervention, middle school, high school, essay intervention, narrative essay, persuasive essay, expository essay, compare-contrast essay, special education, and disability*. Keywords and keyword combinations were entered into title, abstract, and descriptor fields. Next, a hand search of reference lists of all
identified articles was conducted to avoid potential omissions. Twenty-six studies met inclusion criteria.

Effect sizes (ES; standardized mean difference) based on researcher reported essay strategy specific elements and quality scores for group studies and percentage of all non-overlapping data (PND; the percentage of data in the treatment phase that exceeds the most positive result documented in the baseline phase) for single-case studies were obtained (Thompson, 2007). Effect sizes, if not reported, were calculated by subtracting the posttest mean of the control group from the posttest mean of the treatment group and dividing by the pooled standard deviation. For pre and posttest or repeated measures quasi-experimental designs, effect sizes were calculated using gain scores. Cohen’s benchmarks for group studies were classified as small (.20), medium (.50), or large (.80 or greater) (Cohen, 1988). It is important to note effect sizes from designs with a control group (randomized control trials and quasi-experimental group designs) are not comparable to designs without a control group (repeated measures and pre and posttest designs), as randomized control designs and quasi-experimental designs could yield smaller effects due to more rigorous design methodology. Effect sizes are calculated to provide standardized information about overall treatment impact on behavior.

PND is a widely implemented and recommended method for quantitatively synthesizing single-case treatment effects and was therefore chosen to evaluate effect sizes in single-case studies (Scruggs & Mastropieri, 2001). As noted in the recent meta-analysis of writing interventions conducted by Graham et al. (2013), PND is the most commonly used method of evaluating effects across writing reviews and meta-analyses. In other words, use of PND makes it easy to situate findings within the current research base and compare findings across other reviews and meta-analyses of writing. Moreover, PND has established benchmarks within
writing research for small, medium, and large effects, which is useful for the purpose of this review. PND is presented simply to provide standardized information about overall treatment impact on behavior.

If not researcher reported, PND was calculated by dividing the number of data points exceeding the most positive result in baseline by the total number of data points in the intervention phase and multiplying by 100. PND for single-case studies were also classified as small (50-70%), medium (70-90%), or large (90% and above). While effects sizes and PND are not comparable, each provides meaningful, standardized information about overall treatment impact on behavior and is, therefore, reported to enable standardized assessment of intervention strength (Mason & Graham, 2008). Unless reported by the researcher, all ES and PND calculations were computed using the data provided by study authors.

Quality indicators were also utilized to assess quality of research. Nine indicators adapted from Gersten, Fuchs, Compton, Coyne, Greenwood, and Innocenti, (2005) by Graham and Perin (2007a), each holding a value of 1 point, were used to evaluate group studies: (1) random assignment of subjects, (2) mortality equivalence between conditions, (3) no ceiling or floor effects for the primary measure, (4) pretest equivalence across conditions, (5) instructor training described, (6) type of control condition described, (7) Hawthorne effect controlled, (8) treatment fidelity established, and (9) teacher effects controlled (e.g. instructors blind to research questions). For pre and post-test and repeated measure designs, mortality equivalence between conditions, pretest equivalence across conditions, and type of control condition described were considered unmet, as these designs do not involve a control or comparison condition. As a result, randomized control trials and quasi-experimental group designs that included a comparison condition were able to meet a higher number of indicators, signifying a stronger design with
greater internal validity. Additionally, if no confound for Hawthorne effect was documented, Hawthorne effect was assumed controlled.

Quality indicators for single subject studies (Horner et al., 2005) were adapted by Mason and Graham (2008) and were reported for groups of studies based on persuasive, narrative, and expository genre. One point was assigned for each of the 11 indicators: (1) participants adequately described, (2) participant selection adequately described, (3) description of instructional setting adequately described, (4) dependent measures quantified, (5) dependent measures reliable, (6) multiple baseline data points collected, (7) multiple intervention points collected, (8) treatment fully described, (9) treatment fidelity established, (10) testing procedures adequately described, and (11) social validity established. Indicator criterion was based on procedures described by Horner et al., (2005). All quality indicators were calculated for group and single-case designs in this way by the first author.

Results

Findings are organized into three main sections to address research questions: participant and setting characteristics, intervention outcomes, and CCSS (2013) standards. A total of 27 studies were reviewed. Table 2 displays study design characteristics, participants, and setting. Eight studies were randomized control trials (RTC), six used quasi-experimental group designs, three utilized a pre- and post-test single group method, and ten used single-case designs.

Fifteen studies implemented a persuasive essay-writing intervention, four studies implemented a narrative essay-writing intervention, and eight studies implemented an expository essay-writing intervention as the independent variable.
Table 2

*Participants, Setting, and Procedures*

<table>
<thead>
<tr>
<th>Author &amp; Year</th>
<th>Sample size (n)</th>
<th>Gender</th>
<th>Disability</th>
<th>Grade</th>
<th>School/Setting/Instructor</th>
<th>Design</th>
<th>Instructional Procedure</th>
<th>Genre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barry &amp; Moore, 2004</td>
<td>n = 20</td>
<td>15m, 5f</td>
<td>LD</td>
<td>9</td>
<td>Rural/resource/teacher</td>
<td>Pre and post test</td>
<td>SI</td>
<td>Expository/Persuasive</td>
</tr>
<tr>
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<td>n = 15</td>
<td>11m, 4f</td>
<td>LD</td>
<td>10</td>
<td>Suburban/resource/researcher</td>
<td>Quasi-experimental</td>
<td>SRSD</td>
<td>Expository</td>
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<td>Cihak &amp; Castle, 2011</td>
<td>n = 19</td>
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<td>LD, ADHD, EBD</td>
<td>8</td>
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<td>Quasi-experimental</td>
<td>SI</td>
<td>Expository</td>
</tr>
<tr>
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<td>20m, 1f</td>
<td>EBD</td>
<td>7</td>
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<td>SRSD</td>
<td>Persuasive</td>
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<tr>
<td>De La Paz, 1999</td>
<td>n = 6</td>
<td>5m, 1f</td>
<td>LD</td>
<td>7-8</td>
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<td>Single-case</td>
<td>SRSD</td>
<td>Expository</td>
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<td>LD</td>
<td>8</td>
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<td>Quasi-experimental</td>
<td>SRSD</td>
<td>Persuasive</td>
</tr>
<tr>
<td>De La Paz &amp; Graham, 1997</td>
<td>n = 42</td>
<td>33m, 9f</td>
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<td>5-7</td>
<td>Suburban/pull-out/graduate students</td>
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<td>SRSD</td>
<td>Persuasive</td>
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<td>Persuasive</td>
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<td>RTC</td>
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<td>Diagnosis</td>
<td>Setting</td>
<td>Research Design</td>
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<td>Approach</td>
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<td>SRSD</td>
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<td>SRSD</td>
<td>Persuasive</td>
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<td>MacArthur &amp; Philippakos, 2012</td>
<td>n = 6</td>
<td>5m, 1f</td>
<td>LD</td>
<td>Private school/pull-out/researcher</td>
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<td>SRSD</td>
<td>Compare-contrast</td>
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<td>14m, 1f</td>
<td>EBD</td>
<td>Alternative Program/graduate students</td>
<td>Single-case</td>
<td>SRSD</td>
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<td>Pre and post test</td>
<td>Combined SRSD and VV</td>
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<td>RTC</td>
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<td>Wong et al., 1996</td>
<td>14</td>
<td>NS</td>
<td>LD</td>
<td>8-9</td>
<td>Urban/resource/researcher</td>
<td>Quasi-experimental</td>
<td>SI</td>
<td>Persuasive</td>
</tr>
<tr>
<td>Wong et al., 1997</td>
<td>14</td>
<td>10m, 4f</td>
<td>LD</td>
<td>9-10</td>
<td>Suburban/resource/researcher</td>
<td>Pre and post test</td>
<td>SI</td>
<td>Compare-contrast</td>
</tr>
</tbody>
</table>

*Note.* NS = not specified, m = male, f = female, LD = Learning Disabled, EBD = Emotional Behavioral Disorder, RTC = Randomized control trial, SRSD = Self-regulated strategy development, SI = Strategy instruction, SIM = Strategic Instruction Model, VV= Visualizing and verbalizing. Sample size includes students with disabilities only.
Participants and Setting

A total of 426 students with disabilities were participants in 27 studies. Disability, gender, setting, and instructional delivery information for individual studies is noted in Table 1. Eighty-five percent ($n=363$) of students were diagnosed with LD, 12% ($n=51$) with EBD, 2% ($n=9$) with ADHD, less than 1% ($n=1$) with ADHD/SLI, less than 1% ($n=1$) with ADHD/DD, and less than 1% ($n=1$) with SLI. In the 21 studies that specified participant gender, 74% ($n=226$) were male and 26% ($n=80$) were female.

Twenty-six percent ($n=7$) of studies took place in an inclusion classroom, 22% ($n=6$) in the resource room, 7% ($n=2$) in an alternative program for students with emotional/behavioral difficulties, and 44% ($n=12$) administered treatment individually or outside of the regular daily setting. Instruction was delivered by the classroom teacher in 26% ($n=7$) of studies, trained graduate students in 22% ($n=6$), trained undergraduate students in 11% ($n=3$), and the researcher or a research assistant in 37% ($n=10$). One study did not specify who provided instruction (Ferretti et al., 2000).

In the 24 studies that documented school district classification, 54% ($n=13$) of schools were considered suburban school districts, 21% ($n=5$) urban, 17% ($n=4$) rural, and 8% ($n=2$) urban/suburban.

Intervention Outcomes

The following section is a review of outcomes by essay strategy specific elements and quality for each study across persuasive, narrative and expository genres. Outcomes of studies within each writing genre are organized by intervention program [e.g., SRSD or Strategic Instruction Model (SIM)] or instructional methodology (e.g., goal-setting, concept mapping, or strategy instruction). Key characteristics of intervention programs and methodologies are
outlined in Table 3. It is very important to note many components of various instructional programs/methodologies overlap. The original authors’ terms for their interventions were used to categorize instructional programs/methodologies. Quality indicators are used to review quality of research by genre.

Table 3

<table>
<thead>
<tr>
<th>Instructional Program and Methodologies</th>
<th>Description</th>
<th>Key Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRSD</td>
<td>Instructional program used to facilitate strategy use and develop self-regulation skills (Harris, Graham, Mason, &amp; Pressley, 2008).</td>
<td>• Stages for acquisition: (a) develop necessary prerequisite skills for strategy mastery (b) discuss the strategy and explain how the strategy will improve writing skills (c) memorize the strategy steps (d) provide an explicit model that includes verbalization of the thought process used to apply the strategy (e) provide guided practice and self-regulatory procedures (f) provide ample independent practice and opportunities for generalization. • Four self-regulation procedures (goal-setting, self-monitoring, self-instruction, and self-reinforcement).</td>
</tr>
<tr>
<td>Strategy Instruction</td>
<td>Strategy instruction is a teaching methodology used to assist students in appropriately executing and maintaining strategy-use (Wong, 1998).</td>
<td>• May look different across studies • Modeling, collaborative planning, scaffolding, drafting, revising, and collaborative revising (Swanson, 1999).</td>
</tr>
<tr>
<td>Goal-setting</td>
<td>Goal setting studies aimed to display the impact of goals on written compositions and self-regulatory skills of adolescents with LD (Fornetti et al., 2000; Fornetti et al., 2009; Page-Voth &amp; Graham, 1999).</td>
<td>• Attainable, proximal, genre-specific goals guide the writing process</td>
</tr>
<tr>
<td>SIM</td>
<td>SIM utilizes explicit direct instruction of writing strategies (Thiemann et al., 2009).</td>
<td>• Components of SIM instruction: (a) establishing the purpose of the strategy (b) teaching how, when, and why to use the strategy (c) different ways to remember the strategy (d) developing goals for learning the strategy (e) modeling the strategy (f) guided practice (Lenz &amp; Deshler, 2004).</td>
</tr>
<tr>
<td>Concept-Mapping</td>
<td>Instructional approach used to enable students to create a visual representation of text structure and ideas.</td>
<td>• Also known as semantic mapping and graphic organizing</td>
</tr>
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</table>

**Persuasive Essay-Writing.** SRSD was utilized as an instructional approach in ten persuasive essay intervention studies (Cuenca-Sanchez et al., 2012; De La Paz, 2005; De La Paz & Graham, 1997; Graham & Harris, 1989b; Jacobson & Reid, 2010; Kiuhara et al., 2012; Mastropieri et al., 2009; 2012; Monroe & Troia, 2006; Sexton et al., 1998). Strategy instruction was implemented in two studies (Barry & Moore, 2004; Wong et al., 1996).

**SRSD.** Effects of SRSD in the reviewed persuasive writing studies were evaluated by counting the number of strategy specific functional persuasive essay elements (premise, reason,
conclusion, elaboration, and nonfunctional elements) and calculating quality according to a traditional holistic rating scale (i.e. a point scale designed to enable scorers to assign a numerical value to represent overall essay organization, sentence structure, vocabulary, ideas, and coherence).

SRSD was used to teach the TREE (Topic sentence, Reasons, Examine reasons, Ending) strategy to adolescents with disabilities in two single-case studies (Graham & Harris, 1989b; Sexton et al., 1998). Both studies yielded an increased number of essay strategy specific elements and essay quality during the intervention phase. PND was calculated using data provided by the study authors: PND for Sexton et al. (1998) was medium, 88%, for quality and small, 58%, for essay strategy specific elements. PND for Graham and Harris (1989b) was large, 100% for essay strategy specific elements. PND for quality was not computable, as mean holistic quality ratings for each student were provided rather than individual quality scores. Graham and Harris (1989b) found students were not able to generalize writing gains across genres. Sexton et al. (1998), however, noted generalization through students’ use of TREE when administered a prompt by a teacher other than the study instructor. Both studies documented slightly decreased essay strategy specific element and quality scores during maintenance phase in comparison to treatment phase; however, gains maintained above baseline (PND = 100%).

Mastropieri et al. (2009) and Mastropieri et al. (2012) used single-case methodology to implement SRSD for the POW (P = Pick my idea, O = Organize my notes, W = Write and Say More) + TREE strategies for students with EBD, again documenting increased number of essay strategy specific elements and essay quality with PND at 100% for both measures in both studies. As in the Graham and Harris (1989b) and Sexton et al. (1998) studies, scores in Mastropieri et al. (2009; 2012) decreased during the maintenance phase in comparison to the
treatment phase but were above those noted at baseline (PND = 100%). In RTC study, Cuenca-Sanchez et al. (2012) also implemented SRSD for POW + TREE strategies. A large effect size for number of essay strategy specific elements (ES = 3.19) and essay quality (ES = 3.43) was calculated using the data reported by study authors. The study authors reported significant results on both measures. Students in the treatment condition outperformed students in the control condition on a maintenance probe given 2 weeks after instruction (ES = 1.36). To facilitate student ability to generalize the strategy across content areas, instructors encouraged students to think of other contexts where they can use the strategy and modeled how to write a persuasive essay using science and social studies content. Students in the treatment condition wrote qualitatively better essays than students in the control condition on a generalization probe (ES = 1.8).

A second line of SRSD persuasive writing research stems from a RTC conducted by De La Paz and Graham (1997) during which students were taught the STOP and DARE (Suspend judgment, Take a side, Organize ideas, and Plan more as you write; Develop your topic sentence, Add supporting ideas, Reject at least one argument for the other side, and End with a conclusion) strategy. A large, significant effect for dictation and advanced planning strategy use in quality (ES = .90) and number of essay strategy specific elements (ES = 1.15) was calculated using the data reported by study authors. Gains were maintained according to a maintenance probe administered 2 weeks after instruction. Jacobson and Reid’s (2010) single case study used the STOP and DARE strategy and documented a large effect (PND = 100%) for both essay strategy specific elements and quality. However, Jacobson and Reid (2010) reported decreased quality scores from post-instruction to maintenance phases (PND = 67%). To meet high school writing task demands, Kiuhara et al. (2012) added the AIMS (Attract the reader’s attention, Identify the
problem of the topic, Map the context of the problem, and State the thesis) strategy to SRSD for STOP and DARE. The intervention produced a moderate effect (PND = 74%) for quality and moderate-large effect (PND = 90%) for essay strategy specific elements. PND was calculated using study data reported by the authors.

In a quasi-experimental group study, De La Paz (2005) used SRSD for the STOP and DARE strategy combined with strategy instruction in historical reasoning. Students were taught to reconcile conflicting historical information and to display understanding of content in a persuasive essay. To meet standards for students at the secondary level, De La Paz (2005) increased expectations for length, elaborations, and number of supporting reasons. Using pre- and post-test data reported by the study author, a large effect (ES = 1.09) for quality and moderate effect (ES = .70) for essay strategy specific elements was calculated. De La Paz (2005) also reported large, significant effects at post-test for quality (ES = 1.19) and essay strategy specific elements (ES = 1.17) compared to a control group. No students with disabilities were in the control group. Small-medium effects were documented on a historical accuracy measure for the pre- and post-test comparison (ES = .42) and control group (ES = .57) comparison. Maintenance and generalization data were not collected.

In the tenth SRSD persuasive writing study, Monroe and Troia (2006) used SRSD for the CDO (Compose, Diagnose, and Operate) and SEARCH (Set goals, Examine paper to see if it makes sense, Ask if you said what you meant, Reveal picky errors, Copy over neatly, Have a last look for errors) strategies. Although number of essay strategy specific elements and quality increased, a standardized mean difference could not be calculated because standard deviations or individual scores were not provided.
Results of SRSD persuasive writing studies can be examined with confidence. Five single-case designs met 11 out of 11 quality indicators (Graham & Harris, 1989b; Kiuhara et al., 2012; Mastropieri et al., 2009; 2012; Sexton et al., 1998). Jacobson and Reid (2010) met 10 out of 11 indicators; social validity was not established. The RTC studies conducted by De La Paz & Graham (1997) and Cuenca-Sanchez (2012) met 9 out of 9 quality indicators. The quasi-experimental study conducted by De La Paz (2005) met 8 out of 9 quality indicators; students were not randomly assigned to treatment and control conditions. Monroe and Troia’s (2006) pre- and post-test design met 2 out of 9 indicators. Missing indicators included lack of random assignment of subjects, mortality equivalence between conditions, pre-test equivalence across conditions, teacher training description, control condition description, methods to control for teacher effects, and establishment of treatment fidelity.

**Goal setting.** Effects of goal setting in the reviewed persuasive writing studies were evaluated by counting the number of strategy specific functional persuasive essay elements (premise, reason, conclusion, elaboration, and nonfunctional elements) and calculating quality according to a traditional holistic rating scale (i.e. a point scale designed to enable scorers to assign a numerical value to represent overall essay organization, sentence structure, vocabulary, ideas, and coherence). In a RTC study, Page-Voth and Graham (1999) demonstrated student ability to create higher quality persuasive essays with a greater number of essay strategy specific elements when provided with genre-specific goals (e.g., a goal to increase the number of supporting reasons, a goal to increase the refutation of counterarguments). As reported by the study authors, students in both a goal setting and goal setting plus a strategy significantly outperformed students in the no treatment control condition on quality (ES = 1.18) and essay strategy specific element (ES = 1.53) measures.
Two studies conducted by Ferretti and colleagues analyzed the effects of general goal setting (i.e., students were instructed to write a persuasive response and support their position) versus elaborated goal setting [i.e., students were provided with the general goal as well as genre-specific sub-goals (e.g., statement of belief, two or three reasons for belief, examples or supporting information for each reason, two or three reasons why others might disagree, why those reasons are wrong) based on elements of argumentation] (Ferretti et al., 2000; Ferretti et al., 2009). As reported by Ferretti and colleagues, students in both studies, in the elaborated goal conditions, produced qualitatively stronger persuasive essays (average ES = .63) according to a holistic rating scale with more essay strategy specific elements. Feretti and colleagues reported significant effects in both investigations. Effect sizes could not be calculated for number of essay strategy specific elements because mean and standard deviation scores for essay strategy specific elements were not reported.

Page-Voth and Graham’s (1999) RTC met 9 out of 9 quality indicators; Results should be examined with great confidence. Studies by Ferretti and colleagues met 6 out of 9 indicators; instructor training, methods of controlling for teacher effects, and methods of establishing treatment fidelity were not addressed.

**Strategy instruction.** Following common principles of strategy instruction outlined in Table 3, Wong et al. (1996) taught students to write persuasive essays with a planning, writing, and revising strategy. Students worked collaboratively to revise each other’s compositions. Following instruction, Wong et al. (1996) reported students wrote with greater clarity (i.e., degree of absence of ambiguities in essays) and cogency (i.e., degree of persuasiveness of arguments presented in essays) according to a holistic scale (ES for clarity = 2.17; ES for cogency = 2.74). Wong et al. (1996) also reported a large, significant effect compared to the
control condition (ES = 2.55). Effects were reported to maintain one week after instruction.

Wong et al. (1996) did not measure essay strategy specific elements or collect generalization data. This quasi-experimental design met 5 of the 9 quality indicators used to measure strength of group designs. Elements lacking included random assignment of subjects, instructor fidelity described, and establishment of treatment fidelity. The authors also reported a floor effect.

Strategy instruction was also utilized in a quasi-experimental study aimed to increase state competency exam persuasive writing scores (Barry & Moore, 2004). Stages of strategy instruction in the study conducted by Barry and Moore (2004) involved explaining of the purpose of the strategy, modeling, providing opportunities for student practice, providing corrective feedback, and holding a peer review session. Students were taught to use their fingers as an iconic memory stimulus for identifying the paragraphs (introduction, 3 body paragraphs containing supporting reasons, and conclusion) of a persuasive composition. While a large, significant effect (ES = .92) on state testing scores was computed using the data reported by study authors, the quasi-experimental study met only 3 (control condition described, no ceiling effects or floor effects for the primary measure, and Hawthorne effect controlled) of the 9 quality indicators.

**Narrative Essay-Writing.** Three narrative intervention studies explored the effects of variations of SRSD on the narrative essays of students with LD (Graham & Harris, 1989a; Patel & Laud, 2009; Sawyer et al., 1992). In 1 study, researchers analyzed the effects of providing students with procedural and substantive facilitators on narrative writing skills. Effects of all narrative writing studies were evaluated by counting the number of story-grammar elements (main character, locale, time, starter event, goal, action, ending, and reaction) and calculating quality according to a traditional holistic rating scale (i.e. a point scale designed to enable scorers
to assign a numerical value to represent overall essay organization, sentence structure, vocabulary, ideas, and coherence).

**SRSD.** Graham and Harris (1989a) taught the W-W-W, What = 2, How = 2 strategy to help students remember the parts of a narrative essay by answering the following questions: (a) Who is the main character? Who else is in the story? (b) When does the story take place? (c) Where does the story take place? (d) What does the main character want to do? (e) What happens when he or she tries to do it? (f) How does the story end? (g) How does the main character feel? Graham and Harris (1989a) implemented W-W-W, What = 2, How = 2 across two treatment conditions: (1) instruction including self-regulation procedures, and (2) instruction without explicit instruction in self-regulation. Combined pre- and posttest means and standard deviations of intervention conditions were provided by study authors. Both intervention conditions produced significant increased essay strategy specific elements (ES = 2.2) and essay quality (ES = .61) in comparison to pre-test scores. Graham and Harris (1989a) found students maintained writing skills two weeks after instruction and were able to independently generalize skills to the general education setting.

In a replication study, Sawyer et al. (1992) compared SRSD for W-W-W, What = 2, How = 2 across full SRSD instruction, strategy instruction without explicit instruction for self-regulation, and direct teaching. A control condition was added in order to strengthen internal validity of results. Students in the full SRSD condition outperformed students in the instruction without explicit instruction for self-regulation condition and direct teaching condition. A large effect on number of essay strategy specific elements (ES = 3.67) and overall story quality (ES =1.85) in comparison to the control condition was calculated using data reported by study authors (although study authors reported significant results for number of strategy specific
element measures, no significant differences were found for quality measures). Students in instruction without explicit instruction for self-regulation (ES = .52) and direct teaching (ES = .97) also improved quality of narrative compositions compared to the control condition. Strategy use across all intervention conditions slightly decreased on maintenance probes administered four weeks after instruction. However, researchers noted results suggested maintenance was highest in the full SRSD condition.

**Patel and Laud (2009)** evaluated SRSD for POW + W-W-W, What = 2, How = 2; however, during the “W” phase students were encouraged to visualize and verbalize (V&V) structure words- what, size, color, number, shape, where, when, background, movement, mood, and perspective- to enhance story detail. Large, positive gains were computed using study data on the number of essay strategy specific elements (ES = 8.97) and the quality (ES= 1.38) of student compositions. The study was conducted with three students. Significance was not reported.

**Strategy Instruction.** Researchers used a multiple baseline design to examine the effects of providing students with procedural and substantive facilitators on narrative essay skills in 1 study (Montague & Leavell, 1990). Following baseline data, students were provided with Treatment 1 (procedural facilitators). These were story grammar cue cards and instructions to check off story parts during the writing process. Next, Treatment 2 (substantive facilitation) was administered. During Treatment 2, students were provided with small group instruction, including a review of story grammar elements, practice writing and evaluating stories, and character development lessons. Researchers reported students made mild to moderate improvements in the number of story grammar elements and in quality of narratives (PND =
21%). PND was calculated using essay quality data reported by study authors. Maintenance data was not collected.

Studies conducted by Graham and Harris (1989a) and Sawyer et al. (1992) were well-constructed, randomized experimental designs that met 9 out of 9 quality indicators for group studies. Results of these studies can be examined with confidence. However, Patel and Laud (2009) met only 2 (no ceiling or floor effects for the primary measure, Hawthorne effect controlled) of the 9 quality indicators. The study conducted by Montague and Leavell (1990) met 7 of the 11 single-case quality indicators (i.e. participants, setting, selection criteria described, dependent measures quantified, dependent measures reliable, multiple intervention points collected, and treatment procedures described).

**Expository Essay-Writing.** Strategy instruction was utilized as an instructional approach in two expository essay intervention study (Wong et al., 1997; Cihak & Castle, 2011), SRSD in four studies (Chalk et al., 2005; De La Paz, 1999; 2001; Macarthur & Philippakos, 2010), SIM in one study (Therrien et al., 2009), and concept mapping in one study (Strum & Rankin-Erickson, 2002).

*Strategy instruction.* In an early study, students with LD were taught to write compare-contrast type essays on computers with a planning, writing, and revising strategy (Wong et al., 1997). Following principles of effective writing strategy instruction (modeling, collaborative planning, scaffolding, drafting/revising, and collaborative revising) students were taught to effectively collaborate to revise each other’s compositions. Following instruction, students wrote with greater clarity, aptness (i.e., appropriateness of ideas/details in supporting comparisons and contrasts), and organization according to a holistic scale (ES = 1.56). The large, statistically significant effect was reported to maintain one week after instruction. Wong et al. (1997) did not
measure expository essay strategy specific elements. This pre and post-test design met 5 of the 9 quality indicators used to measure strength of group designs. Elements lacking included random assignment of subjects, mortality equivalence between conditions, pretest equivalence between conditions, and type of control described.

In a quasi-experimental study, Cihak and Castle (2011) explored effects of strategy instruction for the expository writing program, Step-Up to Writing. Five lessons were given to provide students with instruction in organizing, outlining, structuring, and using transitions and details in expository essays. A large, statistically significant effect (ES = 3.80) was calculated on student writing according to a state test-scoring rubric using data reported by study authors. Number of essay strategy specific elements was not measured. While the intervention yielded a large effect size, caution should be taken in interpreting results. The study met only 2 (Hawthorne effect controlled and no ceiling or floor effects for the primary measure) out of 9 quality indicators.

**SRSD.** Effects of SRSD in the reviewed expository writing studies were evaluated by counting the number of strategy specific essay elements (premise, reason, conclusion, elaboration, and nonfunctional elements) and calculating quality according to a traditional holistic rating scale (i.e. a point scale designed to enable scorers to assign a numerical value to represent overall essay organization, sentence structure, vocabulary, ideas, and coherence). De La Paz (1999, 2001) explored the effects of SRSD on the expository compositions of adolescents in two single-case designs. Students were taught to write expository essays using SRSD for the PLAN (Pay attention to the prompt, List main ideas, Add supporting ideas, Number your ideas) and WRITE (Work from your plan to develop your thesis statement, Remember your goals, Include transition words, Try to use different kinds of sentences, and Exciting, interesting,
$100,000 words) strategies. Instruction resulted in increased essay strategy specific elements and quality in both studies. De La Paz (1999, 2001) was also able to document lasting effects on a maintenance probe administered four weeks following instruction. PND for essay strategy specific elements and quality were calculated using data reported by study authors; essay strategy specific element scores resulted in 89% PND and quality scores resulted in 89% PND for the first study (De La Paz, 1999). For the second study, essay strategy specific element scores resulted in 100% PND. PND could not be calculated for quality using data provided in the second study because individual quality scores were not reported.

Chalk et al. (2005) also examined the effects of SRSD on the expository essays of adolescents with LD. Using a repeated measures group design, Chalk et al. (2005) used SRSD to teach (a) Think, who will read this and why I am writing it, (b) Plan what to say using DARE, and (c) Write and say more. Researchers observed a medium, statistically significant effect (ES = .60) on the quality of expository compositions. Students sustained improved scores on a maintenance measure given two weeks following instruction and during a generalization probe administered in the social studies classroom. Essay strategy specific elements were not measured.

Macarthur and Philippakos’ (2010) study taught adolescents with LD to develop and write compare-contrast essays. SRSD for the IBC (Introduction, Body, and Conclusion) and TAP (Topic, Audience, and Purpose), Brainstorm and Organize strategies were taught along with instruction on developing compare-contrast text structure. Macarthur and Philippakos noted increased essay strategy specific elements (PND = 100%) and quality (PND = 85%), indicating a large effect for essay strategy specific elements and moderate effect for quality. Of the four
students probed during the maintenance phase, two were able to maintain gains made immediately following instruction.

De La Paz (1999) and Macarthur and Philippakos (2012) studies met 11 out of 11 quality indicators. De La Paz (2001) met 10 out of 11 indicators; social validity was not established. Results of these single-case studies should be analyzed with confidence. The quasi-experimental group study conducted by Chalk et al. (2005), however, met 5 (no ceiling or floor effects for the primary measure, instructor training described, Hawthorne effect controlled, treatment fidelity established, and teacher effects controlled) out of 9 quality indicators.

**SIM.** Therrien et al., (2009) evaluated the Strategic Instruction Model (SIM) for The Essay Test-Taking Strategy, ANSWER: (a) Analyze the action words in the question, (b) Notice the requirements of the question, (c) Set up an outline, (d) Work in detail, (e) Engineer your answer, and (f) Review your answer. Effects of SIM were evaluated by counting the number of strategy specific essay elements (i.e. action words, underlining requirements, setting up an outline, listing details, engineering answer, and reviewing answer) and calculating quality according to a holistic rating scale (i.e. a point scale designed to enable scorers to assign a numerical value to represent overall essay organization, sentence fluency, word choice, voice, ideas and content, and conventions). Therrien and colleagues reported a medium effect (ES = .51-.68) for quality and large, significant effect (ES = 1.69) for number of strategy-specific elements. While the authors reported significant student gains in quality of student writing according sections of the rubric that were aligned with the strategy, no significant differences were found on sections of the quality rubric that were not aligned with the strategy. This RTC study met 9 out of 9 quality indicators established by Graham and Perin (2007a), signifying a strong experimental design.
**Concept mapping.** To examine the effects of concept mapping on the expository essays of 8th-grade students with LD, Sturm and Rankin-Erickson (2002) used a repeated measures within-subjects design comprised of three writing conditions: (1) no-mapping, (2) hand-mapping, and (3) computer-mapping. Students typed all essays on computers. Effect sizes were calculated using data reported by study authors. Results indicated students wrote higher quality essays (according to a holistic rating scale) using hand-mapping or computer mapping in comparison to a baseline probe (ES = .93). However, students also wrote qualitatively better essays in the no-mapping condition compared to baseline (ES = 1.63). Researchers attributed statistically significant gains in both conditions to writing instruction containing information about expository writing processes and conventions. Number of essay strategy specific elements was not used as a dependent measure. Sturm and Rankin-Erickson’s (2002) concept mapping study met 5 (no ceiling or floor effects for the primary measure, instructor training described, treatment fidelity established, teacher effects controlled, and Hawthorne effect controlled) out of the 9 quality indicators.

**Addressing CCSS**

Table 1 displays writing standards addressed in existing research. Persuasive writing research provided methods for enhancing student ability to write organized arguments that introduce claims, provide reasons and explanations to support claims, and offer concluding remarks to support the stated argument, as required by CCSS (2013). However, results reveal several aspects of CCSS persuasive writing demands that have not been adequately addressed. First, only one of 15 studies considered students’ ability in writing discipline-specific persuasive essays that acknowledge counter arguments (De La Paz, 2005). In all other studies, treatment was administered in a pull-out setting, resource room, self-contained classroom, or in an
unspecified classroom setting. None of the studies were conducted in a science classroom setting or aimed to encourage student use of science-specific content. However, Cuenca-Sanchez et al. (2012) provided a model of how to generalize the POW + TREE strategy across science and social studies settings and documented successful generalization of the strategy in comparison to the treatment group. Next, studies have not focused on teaching students to present accurate data using credible sources. Only one study facilitated student-use of accurate data from credible sources (De La Paz, 2005). Finally, researchers have not developed methods to enhance student ability to utilize technology to produce typed compositions within persuasive writing intervention studies.

Analysis of existing narrative essay intervention research shows researchers have developed strategies to address some aspects of CCSS demands. As mentioned, researchers have established instructional practices aimed at students’ development of imagined experiences through description of context and characters, appropriately sequenced events, and development of a logical conclusion (Graham & Harris, 1989; Montague & Leavell, 1990; Patel & Laud, 2009; Sawyer et al., 1992). However, results also reveal several aspects of CCSS narrative writing demands that have not been addressed. First, studies have not focused on the production of narratives based on personal experience. Most studies used W-W-W, What = 2, How = 2 to engender imaginative story-writing skills. Furthermore, none of the studies provided personal narrative or story-writing prompts using words. Instead, picture prompts were used as prompts to develop imagined experiences. Next, researchers have not included strategies to assist students in incorporating narrative techniques (i.e. transition words, dialog, and descriptive details). Finally, researchers have not developed methods to enhance student ability to utilize technology to produce typed compositions within narrative writing intervention studies.
Expository essay writing research has addressed some CCSS demands including instruction in strategies to enable students to introduce a topic, organize ideas, and provide a conclusion (Cihak & Castle, 2011; Chalk et al., 2005; De La Paz, 1999; 2001; MacArthur & Philippakos, 2010; Sturm & Rankin-Erickson, 2002; Therrien et al., 2009; Wong et al., 1997) and utilization of technology to produce typed essays (Sturm & Rankin-Erickson, 2002; Wong et al., 1997). However, several CCSS writing standards have not yet been addressed. First, aside from compare-contrast strategies, research has not provided expository text-structure (definition, classification, and cause/effect) specific strategies. It is not known whether or not existing interventions generalize across all expository essay text-structure types required by CCSS. None of the studies collected generalization data across various expository text-structures. Next, none of the expository writing interventions include instruction for including graphics to enhance reader comprehension. Finally, research has not targeted student ability to utilize domain-specific vocabulary. While one study (Chalk et al., 2005) documented successful strategy-use within the social studies classroom, dependent measures (essay length and holistic quality) did include student utilization of domain-specific vocabulary or content.

Discussion

The purpose of the present review was to explore the literature on essay-writing interventions for adolescents with high incidence disabilities. Specifically, essay-writing interventions implemented across persuasive, narrative, and expository genres for adolescents with high-incidence disabilities were reviewed and the extent to which research has addressed CCSS standards within each genre was evaluated. Results reveal several major findings: (1) Certain participant and school setting populations are underrepresented within the literature; (2) Most essay interventions designed to enhance writing skills for adolescent writing skills are
persuasive; few interventions aimed at improving narrative and expository essay writing skills;

(3) Within each genre, essay interventions that utilized SRSD and strategy instruction methodologies had the most support across the literature; (4) Research has not addressed many key components of CCSS for writing instruction. These major findings are discussed in detail below.

The majority of participants (85%) across studies were students with LD, further emphasizing the need for more writing intervention research aimed to enhance essay-writing skills of students with disabilities other than LD (Taft & Mason, 2011). Instruction was provided by the classroom teacher in only 26% (n = 7) of studies. Without data documenting successful teacher implementation of instruction, it is difficult to ascertain if teachers can independently implement interventions and engender outcomes similar to those documented in research. Thus, more research is needed to ensure interventions can be feasibly implemented by the classroom teacher. Furthermore, only 21% (n = 5) of studies took place in urban and 17% (n = 4) in rural school districts. In order to ensure results are applicable to students in urban and rural districts, studies should be replicated across urban and rural settings, as students in these settings could possess different characteristics/cultural differences that may impact outcomes.

Examination of results by genre revealed effective instructional approaches and interventions as well as gaps within essay writing intervention research. More than half of the studies that met inclusion criteria targeted persuasive writing performance. Within the persuasive genre, the SRSD and goal-setting (a component of SRSD) studies yielded large effects on writing quality through strong study designs. These results extend and strengthen results of prior reviews noted in the introduction that documented the effectiveness of SRSD for teaching writing (Graham et al., 2013; Graham & Harris, 2003; Graham & Perin, 2007; Mason &
Graham, 2008; Taft & Mason, 2011). To address middle and high school CCSS standards, future persuasive writing research should incorporate instruction in writing persuasive essays across content areas using accurate data and credible sources. Researchers should also match study settings to CCSS classroom expectations by incorporating student opportunities to produce typed essays.

Examination of results within the narrative genre reveals somewhat similar findings. However, only 2 studies, both conducted over 20 years ago, were strong experimental designs (Graham & Harris, 1989a; Sawyer et al., 1992). Both found medium effects for strategy instruction without explicit instruction in self-regulation on essay quality measures. Only one of the strong designs produced a large effect using SRSD for the W-W-W, What = 2, How = 2 strategy (Sawyer et al., 1992). These results are surprising considering the well-documented, highly positive effects of SRSD and strategy instruction for the W-W-W, What = 2, How = 2 strategy on narrative writing tasks at the elementary level (Harris et al., 2012). While SRSD and strategy instruction for the W-W-W, What = 2, How = 2 strategy has resulted in large effects on the quality of narrative compositions at the elementary level (Harris et al., 2012), it could be that a different strategy, designed to match writing prompts and demands at the secondary level, would yield consistent, large effects for adolescent students with high-incidence disabilities. More research is needed to conclusively recommend SRSD and strategy instruction without explicit instruction in self-regulation as best-practice narrative essay intervention techniques for adolescents with disabilities. To better address CCSS standards in secondary settings, future narrative writing intervention research for students with disabilities should include methods for responding to written, grade-level, personal experience and story prompts using appropriate
narrative sequence. Moreover, instruction should include methods for facilitating student use of narrative techniques and technology to produce typed compositions.

Within the expository genre, three strong single-case designs documented medium-large effects on the quality of student essays for SRSD (De La Paz, 2000, 2001; 2010, MacArthur & Philippakos, 2010). SIM was also found to have medium-large effects on quality of expository compositions of adolescents in a strong RTC design (Therrien et al., 2009). This result is parallel to previous research noted in the introduction documenting the effectiveness of SRSD and SIM for improving writing performance (Taft & Mason, 2011; Graham & Harris, 2003; Graham & Perin, 2007; Mason & Graham, 2008). Although these strong expository intervention studies for adolescent students with disabilities provide information about effective programs of instruction in the expository genre, CCSS standards require student mastery of compare/contrast, cause/effect, classification, and definition expository text structures across content-areas. Thus, future intervention studies should specify expository text-structure prompt type, document whether or not the intervention can be generalized across text-structures, and should include instruction for including discipline-specific content and vocabulary.

Limitations and Implications

The lack of long-term maintenance and generalization data across genres represents a large gap in the research base. Of the 15 studies that collected maintenance data, 6 reported decreased scores on maintenance probes in comparison to post instruction scores (Graham & Harris, 1989b; Jacobson & Reid, 2010; Mastropieri et al., 2009; 2012; Sawyer et al., 1992; Sexton et al., 1998). This result further emphasizes the need for booster sessions as part of the writing curriculum, previously recommended by Graham and Harris (1989a). Previous reviews
have also stressed the need for assessing the effects of writing interventions over an extended period of time (Graham et al., 2013).

As noted in results, generalization data were reported in 8 studies. In 5 studies, successful generalization was reported because students could write an essay in a different classroom or with a different teacher (Chalk et al., 2005; Graham & Harris, 1989a; Mastropieri et al., 2009; 2012; Sexton et al., 1998). Two studies reported students were unable to transfer newly acquired writing skills across genres (Graham & Harris, 1989b; Monroe & Troia, 2006). Student inability to simply generalize writing strategies across various genres highlights the need for further analysis and development of writing research within each genre.

Disappointingly, only 8% (n = 2) of studies documented successful generalization across varied content-area classrooms (Cuenca-Sanchez et al., 2012; De La Paz, 2005). In both studies, persuasive essay interventions were implemented. Students with disabilities are expected to write persuasive, narrative, and expository essays across all content areas (CCSS, 2012). For example, a student must write a cause/effect expository essay in science class using domain-specific vocabulary; then, must not only recognize a cause/effect expository prompt in social studies class, but also use domain specific vocabulary to respond to the prompt. Clearly, more research in writing across the content-area curriculum for adolescents with high-incidence disabilities is needed to ensure students can recognize/differentiate between text structures of, and use the appropriate strategy to respond to, prompts of various genres across content-areas. Future researchers should incorporate generalization instruction within interventions and generalization measures within designs to enable students at the secondary level to write seamlessly across content-areas and avoid over/under-generalization of strategy use.

Future Research
To meet CCSS demands, Graham and Harris (2013) have recommended enhancing teacher knowledge of writing development and implementation of evidence-based writing procedures for students with disabilities in general education settings. Thus, identification of specific, effective essay intervention procedures that are grounded in effective, research-based instructional methodology, and address CCSS writing standards, may help teachers provide effective essay writing instruction to students. However, results reveal U.S. CCSS demands are higher and broader than research has addressed. Based on the results of this review, it is recommended that future writing research for students at and above middle school level should (a) incorporate stronger methods for facilitating maintenance and generalization, (b) address student ability to utilize technology to produce typed compositions, (c) include methods of instructing students to incorporate domain-specific vocabulary, data, and credible sources, (d) ensure students can identify genres of prompts to allow for appropriate strategy use, (e) further develop strategies within the narrative and expository genres to account for all text-structures within those genres, and (f) utilize SRSD and SIM programs of writing instruction.

Students with disabilities often have severe persuasive, narrative, and expository writing deficiencies (Santangelo et al., 2008). As a result, students with high-incidence disabilities are failing to meet the demands of the CCSS (2013), higher education, and employment. SRSD and SIM approaches are promising intervention methods for facilitating essay-writing skills for adolescent students with high-incidence disabilities. However, further empirical research is needed to develop the research base to meet CCSS standards and identify methods to help students maintain and generalize skills across the content-area curriculum. Such investigations would be valuable to teachers who are in need of effective, evidence-based instructional
techniques to enable their students with writing difficulties achieve high levels of academic success across the curriculum.
References

*Reviewed Studies


adolescents in middle and high school. New York, NY: Alliance for Excellence in Education.


Education, 29, 78-89.


Appendix B

Informed Consent Form for Social Science Research at The Pennsylvania State University

Title of Project: Evaluating Effects of SRSD Instruction on Narrative Writing Skills of Students with Disabilities in Secondary Settings

Principal Investigator: Lauren Valasa, M.S.

Dear Parent(s) or Guardian:

We are conducting a research study to examine the effects of research-based writing instruction on narrative writing skills of students with disabilities in secondary settings. Please read below to learn about details of the study.

Procedures:
Participation in this study will involve extra, one-on-one instruction with the certified special education teacher and researcher, Lauren Valasa. Lauren Valasa is a former teacher at X Middle School and is currently a doctoral candidate in Special Education at The Pennsylvania State University.

We anticipate that your child’s involvement will require 5-6, thirty-minute lessons during Language Arts class.

Confidentiality:
All of your child’s work will be anonymous. Only the researchers involved in this study will have access to any information that could identify your child. Essays will be numbered and stored in a locked file cabinet. When we publish any results from this study we will do so in a way that does not identify your child or the district.

Voluntary Participation:
Participation in this study is completely voluntary. You are free to decline to participate or to end participation at any time for any reason.

Risk/Benefits:
There is no risk involved for study participants. Benefits include possible improved narrative writing skills and extra, one-on-one instruction from a certified special education teacher and researcher.

Questions:
If you have any questions about this study, you may contact the investigator, Lauren Valasa by phone (732-241-5803) or email (LLV5000@psu.edu).

Agreement to Participate:
I have read the above information, have had the opportunity to have any questions about this study answered, and agree to have my child participate.

(Printed name) (date)

(Signature)
Appendix C

Writing Prompts

A. Imagine that school has closed due to a snowstorm that has passed through your town and left behind ten inches of snow. Write a story about an adventure that takes place in this snowy weather.

B. Carlos had only a few things that he really treasured, but he often misplaced them. When he got home from school one day, he could not find his favorite game. He thought he had left it in his room. Think about Carlos’ problem, and then write a story about what happens next.

C. Think what it would be like to live one day in the setting of your favorite book, short story, or television show. What would happen to you in this place? What would you do? Use your imagination along with your knowledge of history, science, current events, or your own observation to write a story about your experience in this place.

D. When we first arrived on the island, we saw mountains and fields with lots of colorful flowers and large, strange-looking trees. There were no people. No humans had ever been here before. The first animal we saw was so tall that it had to bend down to eat the leaves off the treetops. . . . Imagine that you are one of the people exploring this remote island. Write a story that begins where the journal entry ends.

E. A young girl was hoping to go with an after-school club that was going on a camping and hiking trip to one of New Jersey’s state parks. Her parents were reluctant to let her go on the trip. Write a story about the girl, her problem, and how she solves it.

F. A 6th grade student had a big test the following day. The championship basketball game was after school, and grandma’s 75th birthday party was at 6 PM that evening. How was he ever going to study? Write a story about this 6th grader, and how he deals with his problem.

G. Sasha dreams of becoming a famous inventor. She jots down ideas, and makes observations about how things work. She hopes to invent something that will help people. Imagine what Sasha might invent. Write a story about her invention, and how it can be used.

H. A girl arrives home from school to find that the backdoor is ajar. She is not sure if she should go in. What should she do? Write a story about the girl, and what she does next.

I. The boy packed his necessary belongings in his suitcase for a trip to visit his cousin. Several hours later, he reached his destination only to find he was missing an important item he intended to bring. Write a story about what you think he is missing, and what he does about it.

J. The last day of school was approaching. All of the students were excited in anticipation of the coming summer vacation. Sam had been planning his first day off from school. He could not wait. Then without warning something changed all of his careful planning. Write a story about what happened to change his plans.

K. Think of a time when you did something nice for someone else. What did this experience teach you about yourself? Write a narrative about doing something nice for someone.

L. It is always fun to visit a zoo, but did you ever think about what the animals do when the zoo is closed? You are in the zoo after it closes. Write about what you see and learn when the zookeeper forgets to lock the cages.
M. People learn things throughout their lives. Tell a true story about a time when you learned to do something.
N. Tell a true story about a fun or challenging time you had during bad or extreme weather.
O. We all have good times that stand out in our memories. Write a NARRATIVE about one of your pleasant memories.

*Grade 6 generalization prompt:* Imagine you could travel to any state. Write a story about your journey.

*Grade 7 generalization prompt:* Imagine you lived during the Ice Age. Write a story about a day in the life of an early hunter.

*Grade 8 generalization prompt:* Imagine you were a patriot during the Boston Tea Party. Write a story describing your experience.
Appendix D

Story Grammar Elements Scoring Guidelines
Scoring: 0 = not present, 1 = present, 2 = highly developed

8 Story Grammar Elements

- Main Character (2 possible):
  - Definition - introduction of the main character(s);
  - Example - *Momma bear, papa bear, and baby bear were having a great day.*

- Locale (2 possible):
  - Definition - where the story takes place;
  - Example - *The bears lived in a big forest*

- Time (2 possible)
  - Definition - time of day, week, year, etc.;
  - Examples - *Once upon a time...; on a sunny afternoon; after school*

- Starter Event (2 possible):
  - An action or happening that sets up a problem or dilemma for the story
  - Example - *One day a little girl named Goldilocks came to the empty house of the bears*

- Goal (2 possible):
  - Definition - The protagonist's reactions to the initiating event
  - Example - *She was surprised to see the house and noticed it was empty.*

- Action (2 points for possible for each highly developed, logical action event; 4 possible):
  - Definition - An action or plan of the protagonist to solve the problem
  - Example - *She went inside to find the three bears gone and ate the baby bear's soup, broke the baby bear's chair, and fell asleep in the baby bear's bed.*

- Ending (2 possible):
  - Definition - The result of the protagonist's actions
  - Example - *The bears return to find things eaten and broken and to find Goldilocks in the baby's bed.*

- Reaction (2 possible):
  - Definition - A response by the protagonist to the consequence
  - Example - *Goldilocks ran away. The bears lived happily ever after.*

Total: 18 Points
Appendix E

Narrative Genre Identification Assessment

1. Identify an activity, such as a hobby, pastime or sport, you enjoy or do well. Explain what you do and why you chose the activity.

2. Consider all the animals that could be pets. Select one that would make a good pet and explain why.

3. Photographs often remind us of special people or events that we might have forgotten. Write the story of a photograph of your family and tell why the photo holds a special memory for you.

4. Your school district is considering a rule that students may not carry backpacks to school. Do you agree or disagree? Write to persuade your principal to support your opinion.

5. Most people can remember a day or event in their lives that they would like to relive. Think about a particular time that you would like to relive. What happened? Why would you like to relive it? Write a narrative about a day or event you would like to relive.

6. You have decided to give a favorite possession to charity. Tell a story about the time when you gave this possession to charity and tell why the charity would be willing to accept it.

7. Your class is having a snack on Friday afternoon. Choose your favorite snack food and write to persuade your classmates why your choice should be served.
Appendix F

SRSD for POW + STACS Lesson Plans

POW + STACS Lesson 1

Purpose: Develop Background Knowledge, Discuss POW + STACS

Materials: POW + STACS Mnemonic Chart, pre-test narrative, POW + STACS Graphic Organizer, POW + STACS Self-Monitoring Chart

________ Step 1. Set the Context for Learning

Goal

Tell students you will be working with them to learn a new strategy to help them write better narratives. Explain to students strong narrative essays have many parts and often follow a general sequence (or order). Explain that a strategy can help remember that order, making the writing process easier. This way, they can spend more time thinking of creative events for their story and less time worrying about how to write an essay.

Begin Discrimination/Generalization

Discuss and define the narrative genre (essays intended to develop real or imagined experiences or events; Biographies, personal narratives, historical analyses, novels, and folk tales). Talk about each of these. Provide a few example narrative writing prompts students may have seen across contents.

Give several examples of persuasive, expository, and narrative prompts and practice identifying narrative prompts with students. Teach students key words often found in narrative prompts (e.g. “write a story” or “write a narrative”). This practice will later help students determine when it is appropriate to apply the strategy and avoid over-generalization of strategy application.

Establish Importance

Ask students why it is important to learn strategies (If they cannot respond, provide examples of strategies used in sports, video games, math, etc.). Ask students why it is important to learn strategies for narrative writing (i.e. help write better essays in all classes, decrease stress on NJASK, express your thoughts/ideas with ease, ask their favorite personal narrative or story).

________ Step 2. Develop the Strategy and Self-Regulation

STEP 2a: Introduce POW.
Put out the POW + STACS mnemonic chart so that only POW shows. Emphasize that POW can be used to help writers answer any writing prompt across any genre (narrative, expository, or persuasive).

P= Pick a genre then pick my idea

O=Organize my notes

W= Write and say more

Practice POW; turn the mnemonic chart over. Ask each student to explain what POW stands for and provide help as needed. Repeat and provide scaffolded support as needed.

**STEP 2b: Introduce STACS**

Show the students the STACS mnemonic chart. Say, “Let’s look at the structure and sequence of a good narrative essay.” Explain to students that a good story/narrative needs to begin with a solid foundation (point to the flat part of the story plot line on the graphic organizer). Provide students with an analogy of stacking books- you cannot stack books on one, small book. You need a nice, strong book as your supporting foundation. Likewise, you cannot begin events in a narrative unless you have a setting.

The **S**etting tells when and where the narrative takes place. You should also begin by introducing the main characters.

Next (follow finger along the STACS mnemonic chart), a good narrative tells what happens to begin the plot or conflict in the narrative. This is the **T**ension.

Tell students, “Now you have a solid foundation and can begin stacking! The events leading up to the most exciting part of your narrative is your rising **A**ction.” Follow with your finger up the STACS line as you explain rising Action.

Explain that the highest, most exciting point of your stacking is the top book! Say, “Likewise, the highest, most exciting point of your narrative is the **C**limax. This is when you write about the most exciting event in your story. The rising Action has lead you to this event!”

Say, “Last you see the see the **S**olution. The solution explains how the exciting part ends.”

Last, tell students good narratives often have transition words, dialog, and descriptive detail (TDD). Define and discuss examples of each of these.

**STEP 2c: Look at current writing behavior**

1. Hand student pre-test narrative essay
2. Tell students to read their response and see which parts they have. Tell them to write their parts in the graphic organizer.
3. Note parts missing.
4. Discuss that even though some parts are present, these parts can be improved. Do not make any additional notes for improvement today.

**STEP 2e: Graph current level of performance and set goals**

1. Give each student a self-monitoring chart. Have the student fill in the graph for the number of parts in their pre-instruction narrative essay. Be positive by letting students know they are just learning the narrative strategy and will improve performance.
2. Explain the goal, to write better narrative essays with all of the STACS parts.

_________**Step 3. Wrap-Up**

Tell students, “Next time you will practice the parts of POW + STACS from memory! I will also ask you what a good narrative needs!” Name each part very briefly.

POW + STACS Lesson 2

**Purpose:** The teacher models the process of writing an essay using the STACS graphic organizer.

**Materials:** POW + STACS Mnemonic Chart, POW + STACS Graphic Organizer, POW + STACS Self-Monitoring Chart, Self-Statements Sheet

_________**Step 1. Set the Context for Learning**

On a scratch piece of paper, have student draw a story plot line and write down as many strategy parts as he/she can remember. Reveal how many parts the student remembered and point out which parts were missing. Practice this until the student can say all the parts.

Review Lesson 1 discussion of narrative genre and when to apply the POW + STACS writing strategy.

_________**Step 2. Develop the strategy and self-regulation**

**STEP 2a: Model the Strategy**

The teacher will model writing an essay using the graphic organizer.

Add TDD (transition words, dialog, descriptive details)!

**STEP 2b: Graph Essay Parts**
Ask the student, “Does this essay have all of the parts of a strong narrative essay?” Together, the student and teacher will graph the parts of the essay on the STACS self-monitoring chart, discussing each part.

**STEP 2c: Develop Students’ Self-Statements**

Ask the students if they can remember 1) the things the teacher said to get started, 2) the things said while working, and 3) the things said when finished. Give the student a self-statements sheet. Ask the student to write down some things he can say to himself while working.

_____Step 3. Wrap-Up

Remind student that the teacher will ask about the STACS parts at the beginning of the next lesson.

**POW + STACS Lesson 3**

**Purpose:** The teacher and student practice writing a narrative essay collaboratively.

**Materials:** POW + STACS Mnemonic Chart, POW + STACS Graphic Organizer, POW + STACS Self-Monitoring Chart, Self-Statements Sheet, pre-test narrative

_____Step 1. Set the Context for Learning

On a scratch piece of paper, have student draw a story plot line and write down as many strategy parts as he/she can remember. Reveal how many parts the student remembered and point out which parts were missing. Practice this until the student can say all the parts.

Review Lesson 1 discussion of narrative genre and when to apply the POW + STACS writing strategy.

_____Step 2. Develop the Strategy and Self-Regulation

**STEP 2a: Supported Practice**

Using the student’s pre-test narrative, the teacher and student will write all of the parts present in the appropriate sections of the graphic organizer. The teacher and student will develop ideas to fill in missing parts of the graphic organizer (i.e. if the essay is missing a solution, the teacher and student will develop a solution). Next, the student will re-write the essay using the graphic organizer and self-statements sheet.

**STEP 2b: Graph Essay Parts**

Students will graph number of essay parts on the self-monitoring chart.
_____Step 3. Wrap-Up

Remind student that the teacher will ask about the STACS parts at the beginning of the next lesson.

POW + STACS Lesson 4

**Purpose:** The teacher provides guided practice while the student writes an essay.

**Materials:** POW + STACS Graphic Organizer, POW + STACS Mnemonic Chart, Self-Statements Sheet; POW + STACS Self-Monitoring Chart

_____Step 1. Set the Context for Learning

On a scratch piece of paper, have student draw a story plot line and write down as many strategy parts as he/she can remember. Reveal how many parts the student remembered and point out which parts were missing. Practice this until the student can say all the parts.

Review Lesson 1 discussion of narrative genre and when to apply the POW + STACS writing strategy.

_____Step 2. Develop the Strategy and Self-Regulation

*STEP 2a: Guided practice*

The student will write an essay in response to a writing prompt using the graphic organizer, mnemonic chart, and self-statements sheet. The teacher will only provide support if the student misses a critical part of a narrative essay.

*STEP 2b: Graph Essay Parts*

Students will graph number of essay parts on the self-monitoring chart.

_____Step 3. Wrap-Up

Remind student that the teacher will ask about the POW + STACS parts at the beginning of the next lesson.

POW + STACS Lesson 5

**Purpose:** The student practices writing an essay independently within 45 minutes.

_____Step 1. Set the Context for Learning

On a scratch piece of paper, have student draw a story plot line and write down as many strategy parts as he/she can remember. Reveal how many parts the student remembered and point out which parts were missing. Practice this until the student can say all the parts.
Step 2. Develop the Strategy and Self-Regulation

**STEP 2a. Practice**

The students will independently practice responding to the post-assessment writing prompt. Students will not use the graphic organizer or mnemonic chart. The prompt will be randomly selected from the list of writing prompts.

**STEP 2b. Graph Essay Parts**

Students will graph number of essay parts on the self-monitoring chart.

**Step 3. Wrap-Up**

Discuss progress made and transfer strategies (when/where the POW + STACS strategy might be useful in the future).
Curriculum Vita
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Education


Selected Publications


Professional Experience

2015 Instructor, Writing and content literacy for students with special needs, Special Education, The Pennsylvania State University, University Park, PA

2012-2015 Graduate Assistant, Department of Educational Psychology and Special Education, The Pennsylvania State University, University Park, PA

2009-2012 Special Education Teacher, Burnet Middle School, Township of Union Public Schools, Union, NJ

2008-2009 Graduate Research Assistant, Department of Educational Psychology and Special Education, The Pennsylvania State University, University Park, PA