

Explicit Writing Directions in an Elementary Setting: An Ex Post Facto Study

by

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Abstract

Writing skills are an important part of students' education, but, compared to math and reading, there is less research into the field of writing instruction and fewer curriculum options available. According to currently available research, explicit instruction of specific skills is the most effective method for improving students' writing ability. Based on the theoretical frameworks of social learning theory and social constructivism theory, Step Up to Writing (SUTW) is a commercially available writing curriculum using explicit writing instruction, with some research showing success improving students' writing ability. Most research into the effectiveness of SUTW has focused on middle school students and at-risk students. This dissertation attempts to address the gap in research by comparing the effectiveness of explicit writing instruction and SUTW in an elementary school to a control group. The experimental school for the study has been using SUTW for three years, while the control school, a sister school with similar demographics in the same district, did not. End-of-fifth-grade writing samples were collected from students from each school (control $N = 53$, experimental $N = 27$), anonymized, and scored by a collaborative team using a rubric. Results showed a statistically significant difference in the school mean scores in three of four areas evaluated: organization (effect size [ES] = 1.27), ability to express ideas with details (ES = 0.82) and use of language and style (ES = 0.67). No significant difference was noted in the final area of the rubric, neatness and use of grade-level conventions. Overall, total essay mean scores were significantly different (ES = 0.86). These results support current research which supports explicit instruction of specific skills as an effective curriculum option for writing skills, and SUTW as one viable curriculum option available for teachers to consider.

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Chapter 1: Introduction

Roughly three out of four American students fail to meet writing proficiency standards on annual standardized tests (Ciullo & Mason, 2017; National Center for Education Statistics [NCES], 2012). The situation is worse for learning disabled (LD) students, in which case the numbers are closer to one out of twenty (Ciullo & Mason, 2017). One reason students fail to meet these standards is the lack the prewriting skills of planning and organization (Evmenova et al., 2016; Lott & Read, 2015). Step Up to Writing (SUTW) is a commercially available writing, using explicit writing instruction, and claims to fill teachers' needs for a prescribed curriculum to improve writing skills (Auman, 2015). There have been 12 studies evaluating the effectiveness of SUTW, and the body of literature generally shows SUTW to be a promising curriculum option, with most of this research focusing only on special needs students (Voyager Sopris Learning, n.d.). Of the 12 studies, only four were quantitative, and these focused primarily on the middle school setting, leaving a gap in the literature assessing the effectiveness of SUTW in the elementary general education setting compared to a control group. This dissertation attempts to address the gap by providing a quantitative analysis of SUTW in the elementary, general education setting. This chapter covers the background of the problem, statement of the problem, purpose and significance of the study, the research question, research hypotheses, theoretical framework, definition of terms, assumptions, scope and delimitations, and limitations of the study.

Background of the Problem

According to social learning theory (SLT), learning takes place through reinforcing the imitation of observed behavior (Goldberg & Lowe, 2018; Social Learning Theory, 2019). Social constructivism expands on SLT, theorizing learning is best served by modeling desired behavior

and providing challenging learning activities for students (Buchheister, 2018). Explicit instruction is a research-based option for teaching segmented skills through modeling and providing meaningful practice (Harris et al., 2017; Hochman & Wexler, 2017; Hughes, Morris, Therrien, & Benson, 2017). Meta-analysis of writing instruction shows explicit teaching and specific strategy instruction are the most effective curriculum options for improving writing (Gillespie & Graham, 2014). Unfortunately, there is a disconnect between theory and practice in the classroom, with many teachers not allocating adequate instructional time for writing or not explicitly teaching skills when writing is addressed (Korth et al., 2017).

Statement of the Problem

Compared to reading and mathematics, the teaching of writing has been covered by fewer studies and peer-reviewed articles. In addition, there are less commercially available writing curriculum options available to teachers (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). The leading movement in the current literature on writing instruction is the teaching of specific skills through direct instruction (Harris et al., 2017; Philippakos, Munsell, & Robinson, 2018). Direct instruction of writing skills is supported by meta-analysis of available studies, which shows explicit instruction of the steps in the writing process and text structures with guided feedback are the most effective strategies (Gersten & Baker, 2001). Gillespie and Graham (2014) conducted the most recent meta-analysis of writing instruction in print, concluding strategy instruction, process writing, goal setting, and dictation are effective methods to improve writing skills with statistically significant results. Of the four writing instruction techniques, explicit instruction of specific skills was shown to be twice as effective as the others, although Gillespie and Graham (2014) noted there is a need for more examination with properly conducted controls and a comparison group. For SUTW, most of the available research relates to

case studies conducted in the middle school setting (Voyager Sopris Learning, n.d.). The problem to be studied is the gap in research evaluating the effectiveness of SUTW on the school-wide level in the elementary general education setting. This dissertation addresses this gap by comparing the writing skills of elementary students in a school using SUTW with students in a similar school which does not.

Purpose of the Study

SUTW addresses the educational need for a commercially available writing curriculum teaching specific skills (Auman, 2015). While there are some studies implying the effectiveness of SUTW, particularly with special needs students (Voyager Sopris Learning, n.d.), more research is needed to assess the value of the program in the elementary education setting. The purpose of this study is to conduct causal-comparative ex post facto research of explicit writing instruction, comparing the effectiveness of SUTW in the elementary general education setting with a control group. Students graduating from both schools were asked to respond to a prompt for the students' end-of-year writing assessment. The essay used (Appendix C) is an informational text taken from the district-required curriculum. Essays were anonymized and graded by a team of three scorers according to a rubric to determine if there is a significant difference in the quality of students' writing depending on which school attended. The rubric evaluates each essay and provides an overall numeric score based on four criteria: organization, expressing ideas with details, use of language and style, and grade-level conventions,

Significance of the Study

This study contributes to the knowledge base of writing instruction by addressing the shortage of research in writing instruction in general, and the specific gap in the literature comparing SUTW with traditional writing instruction at an elementary school with a diverse

population of students (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). The results can be used by the school district and administrators to analyze whether the SUTW curriculum should be discontinued or expanded to other schools and added to the general body of knowledge in the field of writing instruction for other educators making writing curriculum decisions.

Research Question

This study attempted to address the issue of how to improve student's writing ability. SUTW is one commercially available writing curriculum option. This study evaluated SUTW's effectiveness in an elementary setting.

Research Question: Did implementing SUTW improve students' overall writing abilities when answering a prompt according to a rubric at the research site?

Hypotheses

An examination of the relationship between using SUTW in an elementary school and students' writing abilities addresses the research question. The hypothesis of this study is

H_a: Compared to a control group, there is a significant improvement in students' overall writing abilities when taught using SUTW.

H₀: Compared to a control group, there is no significant improvement in students' overall writing abilities when taught using SUTW.

Theoretical Framework

Explicit instruction is grounded in the two learning theories: SLT and social constructivism theory. SLT, based on the ideas of Albert Bandura, postulates students learn new behavior through observation, imitation, and modeling of desired behaviors (Goldberg & Lowe, 2018; Social Learning Theory, 2019). When a student receives encouragement, new behaviors

are reinforced and the student is likely to repeat the actions which have been successful (Goldberg & Lowe, 2018; Social Learning Theory, 2019). This repetition is more likely to continue when the reinforcement is consistent through practice exercises while the new behavior is still becoming a natural action. Social constructivism theory complements SLT, explaining how complex behaviors can be learned when teachers provide scaffolding, or assistance to the students to complete tasks. As students learn to perform tasks independently, the assists (scaffolding) can be removed (Chittooran, 2018; Saleh & Danish, 2018).

Using SUTW, teachers put the theories of SLT and social constructivism into practice by explicitly explaining 65 different writing skills, modeling the behaviors, and providing scaffolded assistance to students to use with the new skills. As students become more adept to the new skills, following the models provided by the teacher, supports are gradually released. When ready, students are provided additional exercises to demonstrate mastery independently (Auman, 2015).

Definitions of Terms

Various terms which may be unfamiliar to the reader are used in the study. Terms are defined in this section to enhance understanding for the reader. These definitions explain the meaning of each term when used in reference to this study and are anchored with supporting references.

Explicit instruction. Teaching by segmenting skills, clearly stating how to perform the skill, modeling, and scaffolding, providing practice with feedback, and requiring independent practice (Hughes et al., 2017). Explicit writing instruction entails using explicit instruction to teach any type of specific skill to aid in the writing process. Specific strategies include organizing, putting ideas into text, and editing work (Lampi & Reynolds, 2018).

Grade-level conventions. The expected level of proficiency a student should have for the student's grade level for spelling, grammar, punctuation, and capitalization, and other grammar rules (Wilson, Chen, Sandbank, & Hebert, 2018).

Rubrics. Tools for evaluating students' work. The dissertation uses an analytic rubric designed by Voyager Sopris (Auman, 2015) which has hierarchical descriptors of student work to evaluate specific traits of student writing (Schoepp, Danaher, & Kranov, 2018).

Step Up to Writing (SUTW). A commercially sold writing curriculum designed to improve students' written expression skills. SUTW is not one specific strategy, but a group of over 65 strategies explicitly taught to students. The program is meant for all school-age children, starting with approaches for kindergarten and continuing through high school (Auman, 2015).

Writing ability. The combination of skills necessary to express oneself in print (Balta, 2018). Effective writing includes the ability of the writer to plan what to write, express thoughts, follow expected conventions, and proofread work (Biscontini, 2018). For this study, *writing skills* are operationally defined as the ability to achieve high marks on rubrics evaluating writing ability.

Assumptions

The term *ex post facto* comes from Latin and means "from after the action" (M. Allen, 2017, p. 468). This study compares groups without a pretest and assumes the two groups had similar backgrounds, started at the same point, and any difference found stems from the intervention, which is different for the two (M. Allen, 2017). This study compares scores for essays graded from two schools. Both schools are in the same school district with nearly identical socioeconomic and multicultural demographics. Based on the similarities of the two schools, this study assumes the independent variable of the SUTW intervention is the only

distinguishing factor for the essays' scores. The inclusion criteria, discussed in further detail in Chapter 3, required students not be in special education or receiving English Second Language services. Following this criterion should provide a normal distribution of data with no outliers.

Scope and Delimitations

The scope of the study was to focus on students' writing ability at two elementary schools. The study was limited to one experimental school, due to the opportunity provided by this school voluntarily adopting the SUTW intervention three years earlier. Two boundaries for the study were time and financial constraints for hiring a team of graders for the essays. These boundaries made a longitudinal study with pre- and post-test data impossible. Data collected was a one-day sample of students' performance on a writing task after the intervention had been in place for three years and students were graduating elementary school. Previous studies have analyzed the efficacy of SUTW for students with disabilities or poor, first language English abilities (Voyager Sopris Learning, n.d.). To remove potential outliers and provide generalizable results for using SUTW in the general education setting, the study excluded students receiving services for moderate to severe LD or English as a foreign language (EFL) issues.

Limitations

The limitations for this study were the lack of standardized tests, pretest data, comparison of only one grade from only one year, and the number of students available (M. Allen, 2017). The school district for this study is in the process of adopting Common Core. With this change, new district-wide standardized tests are being adopted and neither school has had standardized English language arts (ELA) assessments for three years. This policy shift leaves this study with neither outside standardized test data to compare nor pre-study data to compare the two schools.

Due to the previously discussed time and financial constraints, the study only analyzed results from students completing elementary school from one year. While the student population at the control school is larger, the experimental school only has 50 students per grade. After accounting for voluntary participation and exclusionary criteria, there were only 27 essays in the study from the experimental school, which impacted potential validity and potential transferability to other schools (Frey, 2018).

Data analyzed were scores on end-of-year writing assessments graded according to a rubric. To address grader reliability and potential bias, all essays were photocopied, anonymized, and scored by a team of teachers who did not teach the students. The results of this study are from one comparison of two schools on one test date. Results can imply a relationship between the intervention and writing scores on a rubric but cannot be used to assume the same results will be found at other elementary schools (M. Allen, 2017).

Chapter Summary

Many students do not have the writing skills to pass proficiency assessments. Compared to reading and mathematics, there is a shortage of research, literature, and curriculum options for teachers to improve students' writing skills. SUTW is one curriculum option available for teachers, but there is a gap in the research evaluating the efficacy of the program in the elementary general education setting. The purpose of this study was to conduct causal-comparative ex post facto research of explicit writing instruction, specifically comparing the effectiveness of SUTW at a school which adopted the intervention with a control school with similar demographics in the same school district using regular instruction. Chapter 2 describes the literature search strategy for this study, explains the theoretical framework the intervention is

based on, and reviews recent literature on writing instruction paying attention to the rise of explicit writing instruction. Chapter 2 concludes with a review of all available studies of SUTW.

Chapter 2: Literature Review

This study investigates literature on explicit writing instruction with an emphasis on the SUTW, a commercially available writing curriculum. Writing skills are an important part of education (L. K. Allen, Jacovina, & McNamara, 2016; VanNest, 2016). Being able to write clearly conveying a message is necessary to building relationships and success in employment (Leonard, 2018). Writing skills are progressively more essential in the 21st-century workplace with half of employers citing writing skills as influencing promotion decisions (L. K. Allen et al., 2016; Yusef, Yunus, & Embi, 2018). Job applicants with inferior writing skills risk applications not even being considered (Bridges, 2015). Despite the clear need for writing skills, three out of four American fourth-, eighth-, and 12th-grade students fail to meet writing proficiency standards (Ciullo & Mason, 2017). SUTW is a K–12 commercially available writing program using explicit instruction to teach writing skills (Voyager Sopris Learning, 2017). This literature review summarizes the theoretical framework and current literature to answer the overarching research question of whether implementing explicit writing instruction using SUTW improves elementary students' writing ability. This dissertation addresses the shortage of current research comparing the effectiveness of explicit writing instruction and SUTW in an elementary school to a control group.

Despite the need for improved writing skills for students, teaching writing has received less attention in research than reading and math curriculum with fewer peer-reviewed articles. In addition, there are few commercially available curricula options available to teachers (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). Furthermore, writing is often overlooked in the classroom compared to reading and mathematics (Korth et al., 2017). Harward et al. (2014) noted many teachers spend much less time teaching writing than other subjects because

the teachers did not view themselves as good writers and were unsure of how to teach the topic. Compared to teachers who prioritized writing, teachers giving writing less attention did not feel adequately prepared to teach writing and were unsure of curriculum options. As writing is often deprioritized, students are left to develop writing skills simply through observation and exposure to good writing through reading (Büyüknarci, Hennes, Rietz, & Grünke, 2015; Lampi & Reynolds, 2018).

Meta-analysis of research into writing instruction shows explicit instruction of strategies to be an effective educational practice, which is not utilized enough in the classrooms (Gillespie & Graham, 2014). There are a significant number of teachers who are unaware of how to use explicit instruction and need training or a curriculum program to use. Some studies have shown SUTW to be an effective curriculum option for teaching writing skills through explicit instruction, but many of these studies were smaller case studies for middle school and at-risk students (Voyager Sopris Learning, n.d.). There have been a few elementary case studies for special needs students, but none of the available studies of SUTW are quantitative studies with general education elementary students. This lack of research in the elementary setting leaves a gap in the research evaluating the efficacy of SUTW for general education elementary students. An unpublished report by the publisher of SUTW, Voyager Sopris Learning, showed promising results for general education students in the middle school setting, but was conducted some time ago and more research is needed (Sopris West Educational Services, 2009). The purpose of this study was to address this gap in elementary school research with a causal-comparative, ex post facto study comparing writing samples taken from students completing elementary school. End-of-elementary-school writing samples for two schools with student populations of similar demographics were compared. Both schools have diverse student populations and demographics

similar to Title I schools. One of these schools adopted the SUTW curriculum four years ago as a supplement to the ELA textbook, while the other did not.

This chapter is organized to cover five main areas. A description of how the literature search strategy was conducted to include databases accessed. Next, the theoretical frameworks of SLT and social constructivism are reviewed to frame the discussion of writing instruction. This is followed by a review of what research says about writing instruction, with emphasis on explicit writing instruction. Next, all available studies on the effectiveness of SUTW are analyzed. The section concludes by summarizing the literature review and the gap in the research.

Literature Search Strategy

The Literature review concentrated on studies and peer-reviewed articles which addressed writing instruction. Particular attention was given to studies which analyzed teaching writing through *explicit instruction*, sometimes referred to in the literature as *direct instruction*, *skill instruction*, or *strategy instruction*. Studies addressing elementary writing instruction were of particular interest, especially if they addressed SUTW.

The primary tool for researching the literature review was EBSCO, using the American College of Education student portal. Supplementary searches were conducted using ERIC and the Jerry Falwell online library through Liberty University. SAGE Research was utilized for investigating specific research methods and terms. Finally, ProQuest Dissertations & Theses Global was accessed to search for recent work on the same or similar topic of this study. Descriptors used in the search engines included *writing*, *writing instruction*, *explicit writing instruction*, *direct instruction*, *elementary writing instruction*, *self-regulated strategy development*, *Step Up to Writing*, and *SUTW*. Additional searches were conducted looking for

specific work by Steve Graham, Karen Harris, or Zoi Philippakos, authors who have contributed noteworthy research to the field. Inclusion criteria to narrow the focus of the search were peer-reviewed, published since 2014, full text available in the American School of Education online library, printed in English, and results which add to the discussion of writing instruction in the elementary school setting. Of particular value were studies with a valid form of experimental design including a control group.

The publisher for SUTW, Voyager Sopris Learning, provides information for 11 published studies or master's projects evaluating the effectiveness of SUTW (Voyager Sopris Learning, n.d.) on the Voyager Sopris Learning website. These studies are summarized in this report, despite being published between 2005 and 2012, and not meeting the previously described criteria of being published since 2014. Most of these studies focused on the middle school setting, only investigating a few students, or were pre-/post-investigations without a control condition, as opposed to the multiyear elementary focus for this dissertation. One of the studies, a yearlong investigation of SUTW in a middle school in the Los Angeles Unified School District (LAUSD), was extensive and appears to have used valid experimentation protocols (Sopris West Educational Services, 2009). This researcher wrote to Voyager Sopris Learning and received the technical report for this study, which was written by Sopris West Educational Services, and does not appear to be published in any peer-reviewed journals.

Theoretical Framework

SLT and social constructivism theory provide the theoretical framework for the current study. Two leading educational schools of thought are behaviorism, which believes all actions can be explained by learned responses from the environment, and cognitivism, which explains action and learning as a mental process (Liem & Tan, 2018; Patterson, 2018; Staddon, 2018).

SLT blends these two opposing theories by defining *learning* as a combination of the environment and mental processes (Ormrod, 1990). Social constructivism theory complements SLT by providing the structure for how learning and improvement in behavior occur through scaffolding (Chittooran, 2018; Saleh & Danish, 2018). Effective teachers provide students with instruction for new skills and practice which is challenging for students, but at a level students can be successful with teacher assistance. These tasks are in learners' zone of proximal development (ZPD), the difference between what a learner can do without help, and what can be achieved with guidance from the teacher (Chittooran, 2018; Saleh & Danish, 2018).

Social Learning Theory

According to Goldberg and Lowe (2018), Bandura's SLT states people learn from one another through observation, imitation, and modeling. Bandura asserted once humans have observed and learned to model observed behavior, the actions are coded and serve as a guide for future action whenever the individual is in similar situations (Social Learning Theory, 2019). Cognitive, behavioral, and environmental influences are in continuous reciprocal interaction, where past behavior and patterns impact future behaviors. A teenager learning slang or profanity from peers is an example of SLT in action (Social Learning Theory, 2019). B. Miller and Morris (2016) noted the interaction and observation need not even be face-to-face and students can pick up behavior from virtual peers.

Under SLT, the four necessary conditions for effective modeling are attention, retention, reproduction, and motivation (Bandura, 1977; Social Learning Theory, 2019; Figure 1). When paying attention to others' behavior and retaining what was learned, an individual can attempt to reproduce the same behavior in a later, similar situation. Motivation is a key element for the process; when a behavior is reproduced and reinforced the individual is motivated to repeat the

behavior (Horsburgh & Ippolito, 2018). If the behavior is not reinforced, or is punished in some way, the action may not become permanent (Social Learning Theory, 2019). One key issue to note is the individual need not receive the reinforcement or punishment directly but can learn from observing as others receive the benefit or consequences of actions (Social Learning Theory, 2019). These principles for SLT are displayed graphically in Figure 1.

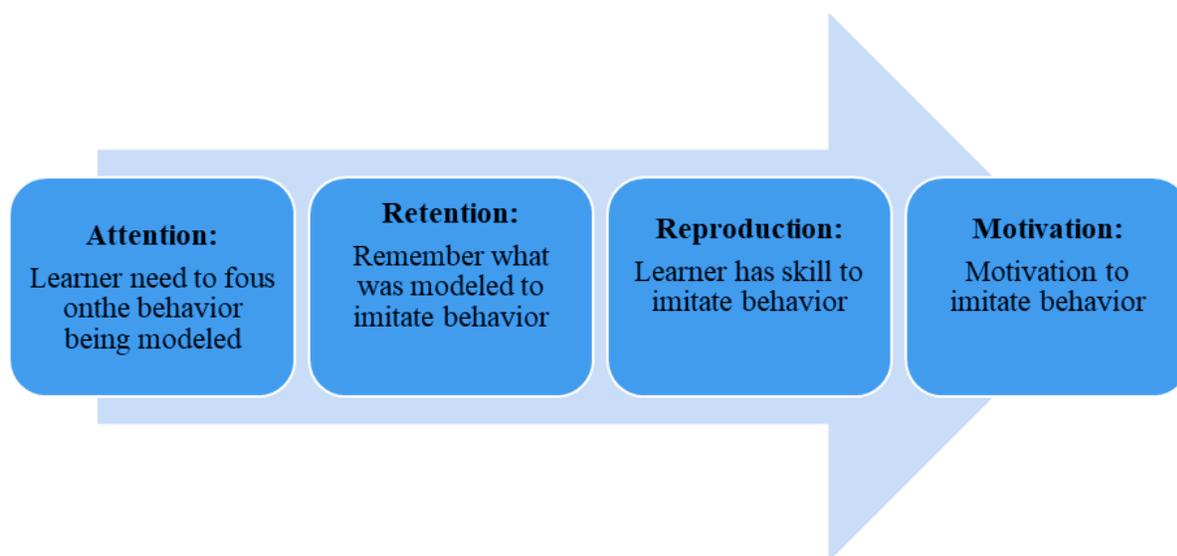


Figure 1: Four learning requirements for social learning theory.

Social cognitive theory, an extension of SLT, emphasizes the social aspect of the learning process with external and internal social reinforcement (Boston University School of Public Health, 2018). According to social cognitive theory, there is a dynamic and reciprocal interaction between the learner and the environment (Boston University School of Public Health, 2018). Key aspects of social cognitive theory which are useful in the school setting are goal setting and modeling. Teachers can help students by working together to create the goals defining what will determine success, and model the behaviors using the principles of social cognitive theory and scaffolding (Costlow & Bornstein, 2018).

Social Constructivism Theory

Social constructivism expands on the social aspect of learning from SLT, arguing learning is a process of an expert assisting a student by providing activities to support cognitive growth (Buchheister, 2018). The learning model is based on a model of construction workers who build a scaffold around a new building. As the frame and structures are built, the scaffold can be removed, allowing the new building to be independent. Scaffolding theory is grounded on the ideas of Vygotsky's social development theory where Vygotsky argues learning takes place in the ZPD (Saleh & Danish, 2018; Figure 2). ZPD refers to tasks beyond a student's current abilities but can be completed with assistance (Social Development Theory, 2014). Tasks too difficult to be performed, even with aid, are beyond the ZPD. Effective teachers identify students' current abilities and scaffold learning in the ZPD (Chittooran, 2018; Saleh & Danish, 2018).

Application of Theory

While the default teaching method used by some teachers of hoping students implicitly learn writing skills through reading and exposure to good writing works for some students, a specific writing curriculum is needed for most students (Harward et al., 2014). Explicit writing instruction applies the theoretical framework of motivation and learning from SLT and Vygotsky's ZPD and scaffolding theory (Campbell & Parke, 2018; Korth et al., 2017). Teachers provide instruction and practice in students' ZPD, gradually removing scaffolding as students internalize the behaviors (Chittooran, 2018). One way the intervention for this study, SUTW, applies theory to practice is through graphic organizers which guide each student's essays. Figure 2 provides a visual graphic for Vygotsky's theory and ZPD.

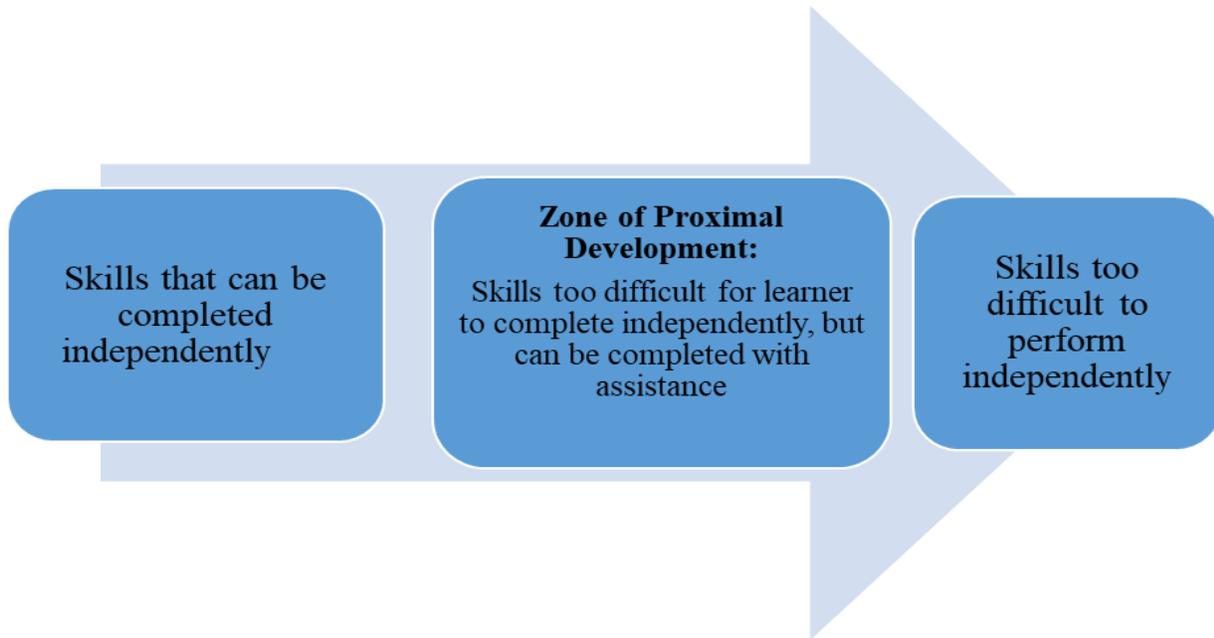


Figure 2: Zone of proximal development and place in the learning process.

In a study teaching writing to first graders, Meyer and Schendel (2014) provide an example of how to put social interaction and the ZPD theory into practice. Meyer and Schendel (2014) introduced new writing skills with examples, modeled these skills, and allowed students time to practice the skills providing support in students' ZPD. As students master the learning objectives, support is pulled back. Throughout the process, the student's role is of a collaborative participant (Fogel, 2016).

In elementary classrooms, SUTW scaffolding can use building blocks, physical representations to enhance the scaffolding experience beyond the theoretical to physical manipulatives. Using colored building blocks or other toys which can clip to each other, students are taught to build a paragraph with a green introduction, three to four red factual sentences, followed by a green conclusion. As each sentence is written, students put the blocks together to match the pattern. Once students have mastered the basic model, yellow blocks can be added to

symbolize support sentences. A model to follow would be green, red, yellow, red, yellow, red, yellow, green. As the paragraph structure is internalized, the physical support blocks (scaffolding) can be removed, and students imitate the learned behaviors independently (Chittooran, 2018).

Research Literature Review

This section addresses research in writing instruction with special emphasis on studies and findings for the effectiveness of explicit writing instruction (Harris et al., 2017; Hochman & Wexler, 2017; Hughes et al., 2017). Topics covered are (a) prevalence of students failing to meet proficiency standards, (b) why some students (and teachers) struggle with writing instruction, (c) the history of writing instruction in American schools, (d) explicit writing instruction, (e) meta-analysis of writing instruction studies, (f) a review of specific skills to be taught through strategy instruction, and (g) an analysis of the 12 available studies into the efficacy of SUTW (Voyager Sopris Learning, n.d.).

Prevalence

With the implementation of the No Child Left Behind Act (2002) and the Individuals with Disabilities Education Improvement Act (2004), all children in America were required to take annual assessments (Wright & O'Dell, 2013). Students with learning disabilities, who had previously been exempted from many assessments, were now required to take the same evaluations as general education students (Wright & O'Dell, 2013). While these tests covered a wide range of skills and subjects, low written expression scores became an area of concern. In 2002, the first year of available data after No Child Left Behind was enacted, students in Grades 4, 8, and 12 were evaluated by the National Assessment of Education Progress (NAEP), and roughly 75% of students failed to meet proficiency standards (NCES, 2002). The most recent

NAEP scores for writing are from 2011, and the numbers were practically the same with 72% to 73% of students failing to meet proficiency for these same grades (NCES, 2012). Compared to other core areas assessed like math and reading, these scores are consistently 10 % lower (NCES, 2012). LD students made up a significant proportion of those testing below the writing proficient level, with only 6% of fourth-grade, 5% of eighth-grade, and 5% of twelfth-grade LD students meeting the proficiency standard (Ciullo & Mason, 2017; NCES, 2012). This situation is concerning for LD students, who typically never demonstrate skills beyond the fourth-grade level on assessments (Wright & O'Dell, 2013).

Why Some Learners Struggle to Improve Writing Skills

Writing is the hardest thing students are asked to do and few become good writers independently (Hochman & Wexler, 2017). Unfortunately, many classrooms do not specifically teach students how to write (Harward et al., 2014). Teachers may assign writing tasks, but often do not provide explicit lessons on how to complete these tasks (Coker et al., 2016; Hochman & Wexler, 2017) with students expected to learn implicitly by reading and exposure to text (Harward et al., 2014). For the successful students, writing skills of organization, grammar, and the ability to proofread work develops naturally. LD students and other poor readers do not expose themselves to as many cases of good writing as general education students and, consequently, do not naturally develop these writing skills (Harward et al., 2014). One specific impediment to students' improvement in writing is not learning prewriting, planning, and organizational skills (Evmenova et al., 2016; Lott & Read, 2015). Gillespie and Graham (2014) note LD students and other poor writers spend less time planning, establishing ideas, and revising work.

To improve student writing, teachers need to focus on the skill in the classroom (Hochman & Wexler, 2017), but a study by Graham (2016) noted how most teachers only spend 15 minutes a day on writing. Harward et al. (2014) studied why some teachers do not emphasize writing adequately, noting many teachers avoid the topic. Sometimes these teachers did not consider themselves to be good writers or did not know how to teach the topic. Research by Korth et al. (2017) revealed teachers realize the importance of writing and want to use explicit instruction but are unsure how and lack curriculum options. Harward et al. noted some teachers valued the process and were confident writers themselves. These teachers could integrate writing instruction with scaffolded practice.

History of Writing Instruction

Writing instruction and what is known about how to teach writing has evolved and improved. The first known writing instruction in American schools required students to copy sentences and identify parts of speech such as nouns and verbs (Neal, 2017). By the 1960s and early 1970s, the focus changed to grammar instruction to include diagramming sentences, with writing instruction generally isolated from other activities and did not include writing for real purposes (Culham, 2014b). Eventually, research showed isolated grammar lessons to be ineffective (Hochman & Wexler, 2017) and the focus changed to whole language, based on constructivism. With this shift, children's literature, daily writing activities, and advanced language activities were integrated (Culham, 2014b). The process approach of multiple drafts emerged in the 1970s; emphasizing planning, drafting, and revising (Rietdijk, van Weijen, Janssen, van den Bergh, & Rijlaarsdam, 2018). Teachers appreciated the new approach as previous approaches did not inspire writers (Culham, 2014b).

The 1980s and 1990s saw the next step in the evolution and application of the writing process approach, with the writing workshop focusing on planning. Organization is an important skill and one of the key differences between good and poor student writers (Evmenova et al., 2016). The other change during this period, traits of writing, not only focused on organization, but ideas, voice, word choice, sentence fluency, conventions, and presentation (Culham, 2014a).

Explicit Writing Instruction

Various experts summarizing the literature on writing instruction laud the virtues of explicit and direct instruction (Harris et al., 2017; Hochman & Wexler, 2017; Hughes et al., 2017). These practices have been found to be useful with LD students (Gillespie & Graham, 2014), students who are deaf or hard of hearing (Wolbers et al., 2015), English as a foreign language learners (Zhang & Cheung, 2018), as well as college students (L. C. Miller, Russell, Cheng, & Skarbek, 2015; Soiferman, 2017). This leads to the questions: What is explicit instruction? What is direct instruction? How are the two different?

Hughes et al. (2017) define *explicit instruction* as

A group of research-supported instructional behaviors used to design and deliver instruction that provides needed supports for successful learning through clarity of language and purpose, and reduction of cognitive load. It promotes active student engagement by requiring frequent and varied responses followed by appropriate affirmative and corrective feedback, and assists long-term retention through use of purposeful practice strategies (p. 143).

When put into practice, explicit instruction has five main pillars: segmented skills, modeling, scaffolding, practice with feedback, and independent practice (Hughes et al., 2017). Segmenting skills, sometimes referred to as *chunking*, involves teachers breaking down complex

tasks to more manageable parts in a logical sequence to ease steps for students (Hitt & Smith, 2017; Hughes et al., 2017). The tasks should be modeled by teachers, explicitly showing students how to perform a similar task. The modeling is enhanced by teachers who think out loud, tell students what they are doing and the thought process as the teacher goes through the task. Using clear, age-appropriate language at this stage has been shown to be important for student success (Hollo & Wehby, 2017).

Scaffolding applies to Vygotsky's ZPD from the previously described framework of social development theory (Chittooran, 2018; Saleh & Danish, 2018). The final phase of explicit instruction is purposeful independent practice, where students develop the ability to perform the task without the scaffolding in generalized situations (Gadd & Parr, 2017). A few necessary components for explicit instruction to be successful are teachers who sequence skills logically, verifying students have the background skills and knowledge for the target skill, and beginning lessons with a clear statement of expectations by the end of the learning session (Hughes et al., 2017).

Scaffolding. Scaffolding for writing instruction entails showing students how to organize a generic essay with a model, providing an example which follows the model, and providing independent practice to master the new task. Scaffolding with graphic organizers, which students internalize and begin to use independently with time, has been found effective in helping middle school writers who struggle with organizing writing (Greene, 2015). Another form of scaffolding for essays is paragraph frames, or basic essay models to be filled in. Campbell and Parke (2018) used paragraph frames with 23 eighth-grade students to introduce argumentative essays. At the end of the 12-week intervention, Campbell and Parke (2018) found improved overall writing performance compared to a control group. Gains were found in organization and supporting

ideas with evidence, two areas to be assessed by this study, but not in the third assessment category of following grade-level conventions.

Practice. One key attribute of explicit writing instruction is scaffolded practice on the specific skills being taught. Practice may seem natural and obvious but writing instruction has been described by some as the forgotten “R,” with teachers not emphasizing the topic with adequate practice time. Coker et al. (2016) conducted a study analyzing how much time teachers believe was dedicated to writing instruction compared to how much time was actually dedicated to the topic in the respondents’ classrooms. While the teachers self-reported 50 minutes a day, the reality was only half, 25 minutes a day. Puranik, Al Otaiba, Sidler, and Greulich (2014) found the average time per day in kindergarten to be only eight minutes, with as little as one minute a day at the beginning of the year. Of the time dedicated to writing instruction, only about one-third of this time covered planning and organizational skills, with teachers primarily focusing on spelling and grammar (Coker et al., 2016). In a study of 21 teachers across nine schools, Puranik et al. (2014) noted writing instruction usually was done in the whole group setting with little time to practice skills.

Gadd and Parr (2017) conducted an observational study of nine highly successful upper primary and middle school teachers in New Zealand, who consistently had great success teaching writing. These teachers emphasized purposeful writing practice with opportunities to practice skills the learners themselves found meaningful. Writing practice should not be grammar worksheets, but writing tasks to implement explicitly taught skills, preferably supporting content area lessons (Coker, Jennings, Farley-Ripple, & MacArthur, 2018). Teachers, who struggle to find the time for writing in the classroom, should note integrating writing tasks with content

reading has been found to improve critical reading skills (Coker et al., 2016; Joseph, Alber-Morgan, & Neef, 2016).

Feedback. Independent work with explicit training should be in the students' ZPD, where students attempt to imitate models with the assisting scaffolding. One of the key requirements for growth at this point is providing constructive feedback (Hughes et al., 2017; Institute of Education Sciences, 2017). Heppner (2017) noted growth can come from one-on-one teacher-student interactions, as well as peer review, and how all classmates, regardless of writing ability, are able to contribute useful feedback when provided training. Peterson and Portier (2014) observed students follow through revising content and conventions 90% of the time when provided teacher or peer feedback.

Learning how to give feedback is a skill which needs to be taught explicitly as students work to properly provide feedback for classmates (Philippakos & MacArthur, 2016a). Feedback is not an easy task to teach, as students generally want to skip the revision process when writing, let alone lack the interest to revise work for another person (Philippakos & MacArthur, 2016b). Ideally, this feedback should focus on content and style of writing rather than on just language usage and writing conventions (Heppner, 2017). Teachers who provide students with genre-specific rubrics, and model the use of the tool, have found students become valuable proofreaders, aiding classmates' writing. As an added benefit, the students become more critical readers themselves (Philippakos, 2017a). For example, when evaluating persuasive essays, students with evaluation criteria understand the purpose is to convince an audience and begin to look beyond grammar and analyze classmate's success at meeting the goal of an argument, considering evidence and organizational structure (Philippakos & MacArthur, 2016a, 2016b).

Mnemonics. Teaching mnemonics is a useful tool in explicit instruction and a part of the SUTW program for this study. When mnemonic memorization tools are combined with the skills students have been explicitly taught, the process is more likely to imprint in the students' memory, and students are able to recall the skill when needed (Harris et al., 2017; Wright & O'Dell, 2013). Ciullo and Mason (2017) analyzed four specific writing mnemonics: POW (Pull apart the prompts, Organize notes, Write and say more), TIDE (Topic sentence, Important evidence, Details to support evidence, Ending), TREE (Topic sentence, Reasons: three or more, Explanations, Ending), and C-SPACE (Characters, Setting, Plot, Action, Characters, Ending), and how to teach mnemonics to upper elementary students with explicit instruction. POW is a general memorization strategy for any type of prompt, reminding students to carefully review the prompt, organize thoughts and notes (or use a graphic organizer), and compose an essay using these notes. POW should be used with one of the other three mnemonics, and each should be used for a specific type of essay. TIDE goes with informative writing and has evidence to be specifically successful for LD students in science classrooms (Ciullo & Mason, 2017). LD students' persuasive writing has been helped by the TREE strategy in both elementary and middle school classrooms. The final mnemonic to match with POW, C-SPACE, is useful for narratives and story writing. Ciullo and Mason stressed mnemonics cannot merely be posted on walls or be presented in isolation. Each mnemonic needs to be presented separately and explained, giving students ample opportunity to consider how to use the mnemonics and practice with them.

Direct Instruction versus direct instruction. The term *Direct Instruction* (DI), sometimes called *big DI* since both words are capitalized, was first used in the 1960s (Hughes et al., 2017). DI is based on research into analysis of communication between the teacher and the

student, how knowledge is organized, and identification of universal principles about how the environment influences behavior (Hughes et al., 2017). DI and direct instruction (di) both emphasize explicitly stating, demonstrating, and showing students how to accomplish a desired task. DI differentiates itself from di by including specific sequenced curriculum content, whereas the little di does not and is just a philosophical approach. Both explicit instruction and direct instruction teach students specific strategies with scaffolded practice, and with explicit instruction and direct instruction being similar, some have argued the two are the same thing. Hughes et al. (2017) explain the relationship by noting how there is often a tendency in education to repackage terminology to be new or cutting edge. Pragmatically speaking, the two terms are the same, and, for the purposes of this study, the terms are used interchangeably. Some publishers, like Voyage Sopris for this study, may use the principles of explicit instruction or direct instruction, but the terms themselves do not refer to specific curriculum content.

Self-regulated strategy development. Self-regulated strategy development (SRSD) is a research-based set of practices developed by Harris and Graham in the 1980s to teach writing and other skills to LD students (Harris et al., 2017; Institute of Education Sciences, 2017). SRSD is not a curriculum to purchase, but an approach using explicit instruction to focus on specific strategies following six steps: (a) develop background knowledge, (b) discuss the new strategy, (c) model, (d) memorize the new skill, (e) support it, and (f) provide independent practice (Philippakos et al., 2018). The first step requires identifying the student's specific skill deficits and building prerequisite skills. Next, the teacher discusses the new strategy identified for the student's improvement. Hopefully, during this time, the teacher is motivating the student for personal growth, allowing students to make goals (Harris et al., 2017). While modeling, the teacher should be using think-aloud practices demonstrating how to complete the new task.

During the memorization phase, teachers should employ mnemonics and scaffolding to enhance internalization of the new skill. The last two steps (support and independent practice) require tailored practice with feedback and gradually reducing support until independent mastery is achieved. The Institute of Education Sciences (2017) analyzed nine studies with 37 individual cases using SRSD for writing achievement. SRSD had a positive effect 88% of the time with no students having a negative effect. While SRSD is not a commercial product, but a set of teaching practices, teachers can obtain training in the system through thinkSRSD.com (Professional Learning for SRSD, n.d.).

Meta-Analysis of What Works in Writing Instruction

At the turn of the century, Gersten and Baker (2001) conducted a meta-analysis of all available writing research, concluding three instructional components essential for effective writing instruction for students with LD are explicit instruction in the steps of the writing process, explicit instruction in text structures of various writing genres, and guided feedback from the instructor or peers during the writing process. Graham and Perin (2007) followed this research with a meta-analysis of studies focusing on LD students in Grades 4–12, citing the high numbers of students failing to achieve proficiency on standardized tests. The study identified 11 key elements needed to improve students' writing to include explicitly teaching specific strategies, planning, organizing, prewriting, and studying models of good writing.

Gillespie and Graham (2014) conducted the next most comprehensive meta-analysis of quantitative studies on writing instruction, identifying 26,000 separate pieces of work addressing writing curriculum. From these articles, 43 studies were identified for further analysis meeting the studies protocols of including LD students, evaluating a specific writing intervention, and having true experiment design and group comparison. Six specific types of writing instruction or

treatments were identified: strategy instruction, dictation, procedural facilitation, prewriting, goal setting, and process writing. Meta-analysis concluded all six methods had a positive effect and improved LD students' writing, but for procedural facilitation and prewriting, the improvement was not statistically significant. The four remaining options (strategy instruction, process writing, goal setting, and dictation) each showed statistically significant results for improving LD students' writing. Of note, data showed strategy instruction (explicit writing instruction) to be roughly twice as effective as other interventions (Gillespie & Graham, 2014). This conclusion is consistent with the earlier study by Graham and Perin (2007), noting the effectiveness of explicitly teaching writing skills.

Writing instruction practices are not dictated in the Common Core standards, but certain writing skills are a key part of the Common Core benchmark standards. Graham, from the previous study, paired up with Harris, and Santangelo (2015) to expand on the results and data from previous meta-analyses and identified specific research-supported writing practices aligned with Common Core Standards. Graham et al., (2015) concluded the following practices were effective in improving students' writing skill: (a) creating a positive writing environment (make students' writing visible and shared, have high but realistic expectations, discuss ideas); (b) assigning thought-provoking writing assignments; (c) having students write frequently (extra 15 minutes a day); (d) having students compose text together; (e) giving specific feedback on how to improve (i.e. add three new ideas, address the other side of an argument); (f) using 21st-century technology when composing; (g) teaching foundational skills necessary for success (spelling, handwriting, grammar); (h) increasing knowledge about topics before writing (content vocabulary, relevant facts); and (i) using writing to support content growth for other subjects. When teaching grammar skills, teachers should model good writing and proofreading, as

traditional grammar instruction (worksheets on specific grammar mechanics) has been found to be generally ineffective by multiple studies (Graham et al., 2015).

Graham et al. (2015) recommended using the process approach to address most of the previous teaching practices, as 80% of studies assessing the process approach found positive effects. A key area of weakness for poor writers needing specific training through the process approach is planning and organizing, and various researchers have found graphic organizers to be a key tool to address this deficiency (Greene, 2015). Graham et al. (2015) noted how all of the practices listed support a social contextual framework for learning. Proofreading skills, for example, can be explicitly modeled by the teacher and then completed with peers.

Kaldenberg, Ganzeveld, Hosp, and Rodgers (2016) conducted the most recent meta-analysis of writing instruction attempting to compare the efficacy of employing interventions with the SRSD model with non-SRSD writing instruction. Using the same search criteria as the Graham and Perin (2007) study and limiting the analysis to published, peer-reviewed journals, Kaldenberg et al. (2016) identified 640 studies. Of these studies, 23 met the inclusion criteria (intervention aimed at writing skills, baseline and intervention data, Grades 4–12, minimum of three LD students). The meta-analysis found both the SRSD model and non-SRSD interventions to be successful with no statistically significant differences. Kaldenberg et al. (2016) did note both the SRSD and non-SRSD effective studies employed aspects of explicit instruction and noted studies found to improve students' writing contained the following elements: “sequencing, drill-repetition-practice, segmentation of teaching instruction, directed question and responses, controlling for task difficulty, technology, and strategy cues” (Kaldenberg et al., 2016, p. 951).

Specific Writing Skills to Teach

Data from the meta-analysis studies show strategy instruction, process writing, goal setting, and dictation to be the most effective writing curriculum options, with strategy instruction having twice the effect size as the three other options (Gillespie & Graham, 2014). What are the strategies? Different researchers have found success explicitly teaching various skills to include spelling (Heppner, 2017), paragraph structure (Campbell & Parke, 2018; Harris et al., 2017), and opinion writing (Philippakos, 2017b). Two additional skills requiring strategy instruction are organization and summarizing.

Organization. Poor writers often do not spend adequate time in the prewriting phase of planning (Evmenova et al., 2016; Lott & Read, 2015). Through explicit writing instruction, teachers show different organizational techniques for planning stages, scaffolding, and modeling the step. Organizational options include bubble maps (with different circles coming out of a main idea) for descriptive or informational writing, flow maps when items need to be organized sequentially, and multi-flow maps for analyzing cause and effect relationships (Lott & Read, 2015). J. L. M. Smith, Sáez, and Doabler (2018) noted teaching physical organizational techniques reduces students' cognitive load, as writers no longer need to be mindful of multiple ideas, trying to keep the thoughts in logical sequence while writing. The techniques are specifically helpful for LD students with reduced working memory abilities (Cowan, 2018). In a study for English as a Foreign Language learners, Mohseniasl (2014) observed students benefited from explicit writing strategy instruction for prewriting skills, not only improved writing skills, but decreased apprehension to writing, presumably due to confidence in understanding how to approach tasks.

Graphic organizers are one organizational tool to assist writers during the prewriting process to prepare the students' ideas and the order in which information will be presented. While composing, students refer to the graphic organizers to keep the student's thoughts clear and ensure all areas are covered. An effective teaching strategy is to initially provide students with detailed organizers, but, over a series of many lessons (or years), the level of detail is gradually decreased until the organizers are no longer needed (Greene, 2015). Graphic organizers are a key component of the SUTW writing program, where students are taught simplistic organizers in the younger grades and more detailed organizers in the higher grades. In addition, the program teaches different types of organizers for three different types of writing: narrative, argument/opinion, and informative/explanatory.

Summarizing. The ability to summarize content in written text is a skill students are often not specifically taught, and students are left to learn the task independently, or not at all. In a German study, Büyüknarci et al. (2015) found success teaching students summary skills using direct instruction in a 10 lesson pre-/post-comparative study with 51 upper elementary and middle school LD students. In a study of second language English learners, Cho and Brutt-Griffler (2015) observed students want reading and writing instruction integrated but lacked the skills to summarize without plagiarizing or understood the reasons why plagiarism is wrong. By focusing on teaching paraphrasing skills, intermediate and advanced English learners improved both writing and reading skills.

The Writing Revolution

The Writing Revolution, formerly known as the Hochman method, synthesizes current research into writing with principles for effective writing instruction based on explicit instruction (Hochman & Wexler, 2017). Under the Writing Revolution, sentence writing is a basic building

block for writing, required by early writers to build longer essays. Rather than using specific grammar lessons, grade-level conventions should be taught in the context of student writing embedded in the curriculum, as opposed to an add-on, which pulls on limited instructional time. Writing tasks which are embedded in content instruction supplement the teaching, providing improved writing skills, as well as understanding of the topic, and improved critical reading skills. For students, the most important writing phase is often composing of text, but to see the gains in reading and thinking skills, teachers should emphasize planning and revising (Hochman & Wexler, 2017).

Step Up to Writing

So far, this literature review has focused on theory of writing instruction and general research into writing instruction. This section of the literature review focuses on the writing curriculum option of this dissertation, SUTW, a supplemental writing program some schools are using to address the needs of struggling writers (Mitchell, 2014). There are 12 available studies on SUTW available to review: one observational study, four case studies (six or fewer students), three repeated-measures experiments (no control group), three comparison studies, and one mixed-methods study.

Preliminary studies without comparison groups. The earliest in-print study of SUTW was by Thayer (2005), who was a student-teacher at a school which had recently adopted SUTW. Using yearlong observations and interviews with three students and three faculty members, Thayer (2005) concluded SUTW had a positive impact on student progress with standardized test scores in reading, writing, and mathematics, improving in the years directly after SUTW was implemented. Two of the three students self-reported having improved organizational skills and oral expressive language. While the SUTW program does not

specifically address speaking skills, the students reported improvement was due to the new writing organizational skills. The color-coded traffic light signal method was specifically mentioned as helpful for organizing thoughts (Thayer, 2005).

Case studies. One of the specific organizational skills in the SUTW program is to teach students to construct one-paragraph essays with a topic sentence, three or four detail sentences, and a conclusion (Velasco, 2009; Voyager Sopris Learning, 2017). Once mastering this structure, the next step in the learning progression is to add supporting sentences to the details. SUTW uses a stoplight visual with introduction and conclusion sentences green, details yellow, and supporting sentences red. The yellow symbolizes slowing down to add information and the red symbolizes stopping to support the detail. Basic organizational structure for a paragraph is green, yellow, yellow, yellow, green. The advanced structure for older students would be green, red, yellow, red, yellow, red, yellow, green (Voyager Sopris Learning, 2017). Aldrich (2009) examined the effectiveness of the SUTW program with specific emphasis on the color-coding strategy with three struggling students in a self-contained third-grade classroom. After eight weeks, two of the three students' writing and organization had improved and were motivated to move through the steps of the writing process. Specific progress was made in note-taking, organizing one paragraph essays, and confidence as a writer. Aldrich (2009) did note how the improvement was slight, but these were LD students and felt more time was needed for further progress.

Prewriting and planning are an important skill for good writing (Evmenova et al., 2016). Graphic organizers are one of the tools explicitly taught to students through SUTW to use during planning and to organize thoughts when writing (Voyager Sopris Learning, 2017). Esmat (2009) and Nguyen (2009) each found these graphic organizers helpful in separate case studies for

struggling learners. Esmat worked with four-second graders, one of whom was an English language learner, noting improved organization and ability to focus on a specific topic. Students used checklists and were able to internalize the procedure and find a sense of responsibility while writing. While there were four specific struggling students for Esmat's study, the entire class of 18 students reported liking the graphic organizers. Specific reasons provided by the case study students included "It puts everything in order" (Esmat, 2009, p. 38), "You think and write more" (p. 38), and "I do not have to think when I do my writing, because all of my ideas are there" (p. 38). Nguyen's case study of five struggling fourth and fifth graders found similar positive results, with the checklists helping students pull details out of text in a logical progression in the planning stage. The graphic organizers aided in synthesizing the information in one paragraph essays with the required topic sentences, supporting details, and conclusions (Nguyen, 2009).

The previous three case studies analyzed all noted the success of SUTW aiding LD students in Grades 3 through 8 with planning and overall writing skills. Velasco (2009) supported these findings with six second-graders with a wide range of academic needs in a self-contained classroom using multiple interventions, to include SUTW's graphic organizers. Following whole class direct writing instruction during a nine-week intervention, the students improved organization and overall writing ability. Specific improvement was noted in the use of transition words, putting sentences in order, and adding more details. Velasco concluded the findings suggest the value of explicitly teaching outlines and planning from a prescribed writing program.

Repeated measures studies. Three repeated-measures assessments of SUTW were identified in the literature: Russell (2010), Cihak and Castle (2011), and Steever (2012). Russell introduced the program with 16 deaf and hard of hearing middle school students in a two-year

study to assess the intervention's ability to assist the students' success in a general education class. Students were provided daily 55-minute instruction through SUTW in language arts classes, as well as in cross-curricular writing activities in other classes. Students' scores on the California end-of-year standardized tests before and after intervention showed statistically significant improvement suggesting the viability of the program to aid in written expressive skills (Russell, 2010).

Cihak and Castle (2011) introduced SUTW to 40 eighth-grade students showing the program assisted both LD and general education students with organization and general writing ability. Students were able to see specific strategies laid out, internalize those strategies, and then demonstrate mastery of those skills in class on a standardized test. After five 90-minute lessons explicitly introducing organizational skills and providing practice, the essays of 100% of general education students and 84% of the LD students met the competency level. While not all the LD students in the study met mastery level, all demonstrated some improvement, and 100% of the LD students had failed to demonstrate writing competency on the study's pretest (Cihak & Castle, 2011).

Goal setting is one of the specific writing treatments Gillespie and Graham's (2014) meta-analysis showed as effective for improving LD students' written expression. Teachers are more effective when students are motivated to learn, and students who are internally motivated can be more successful than those studying only to seek external rewards (Erdem & Cicekdemir, 2016). Being internally motivated means one is eager to learn the material for the sake of learning and bettering themselves, and not for some physical reward (Gullu, Sahin, & Kiziloglu, 2018). Even when students are properly internally motivated, teachers need to make efforts to keep the students motivated at different stages during the learning process. Steever (2012)

introduced goal setting from the 6+1 Traits Writing program and SUTW in a Title I elementary school fourth-grade class and found positive results with most students improving standardized test scores. Specific advice Steever (2012) noted for future educators intending to use goal-setting include: define goals in student-friendly terms, distinguish between short-term and long-term goals, model setting goals, allow time to check for progress weekly or biweekly, discuss feelings when goals are not met, share personal examples of failing to meet goals, set class goals, and track all group and individual goals (Steever, 2012).

Research with Control or Comparison Groups

SUTW has been evaluated and reported on by a handful of researchers in case studies or pre-/post-studies, but there is a shortage of studies evaluating the effectiveness of SUTW throughout an entire school with a large number of students (more than 40) over an extended period time (more than one or two months). One exception filling this gap is a report by the publisher of SUTW, Voyager Sopris Learning, in the LAUSD (Sopris West Educational Services, 2009). Emerson Middle School implemented SUTW for approximately 1,440 students during the 2001–2002 school year. Writing samples for Emerson sixth graders were compared with students at a control school in the same district with a similar demographic which had not implemented the program. Results of pre-/posttest comparisons showed students from both schools had improved writing ability, but the Emerson (SUTW intervention) group had statistically significant greater improvement (i.e., improving 15 percentile points as opposed to 3 percentile points for the control school). The Emerson students' improvement was consistent for students in all subgroups of the school to include general education (13 percentile improvement), special education (16 percentile improvement), English learner (16 percentile improvement),

Free/Reduced Lunch (12 percentile improvement), and Gifted Students (13 percentile improvement; Sopris West Educational Services, 2009).

K. A. Smith (2008) reported mixed results on a month-long pre-/posttest analysis of different aspects of SUTW where 170 sixth-grade students were randomly assigned to one of three treatment conditions and provided 18 hours of SUTW instruction. The first group's lessons entailed a combination of SUTW paragraph instruction with SUTW vocabulary instruction; the second group received SUTW paragraph instruction with SUTW summary instruction, while the control students' 18 hours focused exclusively on SUTW paragraph instruction. A decline was noted from all three groups in reading for narrative texts, with improvement in expository writing skills as well as reading comprehension of expository texts. No effect difference was noted between the three groups. According to Smith, while the data did not show evidence supporting a comparative advantage for either SUTW vocabulary or SUTW summary writing as opposed to teachers dedicating instruction time solely on the SUTW paragraph instruction, the results do support teachers providing additional specific writing instruction of some form.

Rozeski (2012) conducted a mixed-methods approach study comparing Response to Intervention, Sheltered Instruction Observation Protocol, and SUTW using California Standardized Test results in a multi-grade-level study (Rozeski, 2012). SUTW was the only one to achieve improved California Standardized Test results, but the improvement was not statistically significant. Sheltered Instruction Observation Protocol had the highest approval rating by the teachers, with 76.2% of responders considering the program to be either somewhat or highly effective, as opposed to 64.1% approval for SUTW. These approval ratings were surprising for Rozeski, who expected SUTW to have the highest approval rating, as teachers received the most training for this program. Most teachers had a generally negative approval

rating for Response to Intervention (RTI), with only 37% rating RTI either somewhat or highly effective.

While the Rozeski (2012) study has results indicating promising results for SUTW, there are validity concerns to consider. First, the data for the teacher survey is questionable due to only a 14% response rate. Furthermore, and more importantly, the data collected for the comparing student success is dubious as Rozeski included math results with ELA scores. Math scores are not a claimed benefit for SUTW.

One specific mnemonic used in the SUTW curriculum is CUPS (Capitalization, Usage, Punctuation, Spelling) to aid students in remembering the steps in the editing process. Wright and O'Dell (2013) conducted the most recent published SUTW study evaluating the effectiveness of this part of the SUTW curriculum with an after-school writing program for 40 Grade 4–8 struggling writers. Two groups of students were given direct instruction for editing skills, but only one group of students was taught to remember the steps with this mnemonic. Wright and O'Dell (2013) concluded both groups of students improved through the instruction, but the mnemonic group had greater improvement.

Chapter Summary

Experts, data, and meta-analysis suggest explicit strategy writing instruction providing scaffolding and meaningful practice is a research-based effective teaching strategy for writing. One of the key attributes found to help students with direct writing instruction is modeling the goal behavior (López, Torrance, Rijlaarsdam, & Fidalgo, 2017). Specific skills which have improved through direct or explicit instruction include spelling (Heppner, 2017), paragraph structure (Campbell & Parke, 2018; Harris et al., 2017), opinion writing (Philippakos, 2017b), organization (Lott & Read, 2015; J. L. M. Smith et al., 2018), and summarizing (Büyüknarci et

al., 2015). One should not assume explicit instruction will be effective for all strategies without research. Lopez (2015) found no improvement in attempting to improve EFL learners' use of articles with explicit instruction.

Despite research showing the usefulness for explicit instruction, there is a disconnect between theory and practice, with many teachers not adequately modeling or scaffolding (Korth et al., 2017). One reason for this disconnect is due to there being limited commercially available writing curriculums available, compared to math and reading (Mitchell, 2014). SUTW is one curriculum option with 65 specific different writing strategies using explicit instruction (Auman, 2015).

Proper controls and comparison groups are needed to evaluate the effectiveness of writing interventions. Most current writing studies do not have these protocols, which, unfortunately, is common in educational research (Gillespie & Graham, 2014). An additional validity concern for writing studies are dependent variables which do not truly measure what has been taught (i.e., writing ability) (Gillespie & Graham, 2014). For example, studies comparing general standardized test results which include math scores. Meta-analysis studies for writing instruction in this literature review excluded these types of studies, yet as this study reviewed all available studies which specifically analyzed SUTW, these studies were included in this literature review. For example, the first SUTW study noted, Thayer (2005), reported significantly increased math scores on the state assessment after the school introduced SUTW. While there is a correlation, causation is questionable as SUTW does not address math skills, nor does the publisher claim improved math ability as an advantage to the program.

Twelve different studies have evaluated the efficacy of SUTW, but only four of these were quantitative using a control group. The majority of available SUTW research is a

combination of preliminary case studies or were classroom-level studies without control groups to use for comparison (Voyager Sopris Learning, n.d.). All eight of these studies showed positive and promising results for SUTW, specifically for improving students' need for organizational skills, but due to the design of the studies, generalization to other populations is limited and more research is needed (Gillespie & Graham, 2014). Russell's (2010) study had particularly strong results showing SUTW to be successful with deaf students, but as Russell (2012) noted, the findings were for a limited size test group and follow up research is needed to validate the findings.

The LAUSD study (Sopris West Educational Services, 2009), the Smith (2008) study, and Wright and O'Dell (2013) study were quantitative studies conducted in middle schools and each appear to meet the criteria for a valid writing study as prescribed by Gillespie and Graham (2014) with proper controls and fidelity. Of note, the data from the LAUSD study shows students from both schools finished the year with statistically similar writing scores (54th percentile for the experimental school, 55th percentile for the control school). The students from the SUTW school started the study with significantly lower scores on the pretest than the control school (29th percentile vs. 52nd). What is unknown is if the apparent success of the program and statistically significant improvement would still be evident if students from the two schools started with similar writing ability. In addition, the results of the LAUSD study are from the publisher for SUTW, and do not appear in any peer-reviewed journals.

Less than 5% of current writing research is with elementary children, and much of what is available is not from quantifiable studies (Jones, 2015). Looking at the body of research on writing instruction available, explicit writing instruction improves students' writing ability (Ciullo & Mason, 2017; Hochman & Wexler, 2017; Lampi & Reynolds, 2018), and meta-

analysis shows this instruction has a competitive advantage over other teaching practices (Gillespie & Graham, 2014). Despite this research, explicit instruction is not utilized enough in the classroom (Coker et al., 2016). One reason is teachers are unaware of how to implement writing instruction (Harward et al., 2014). SUTW is one curriculum option to address this problem. There is a gap in research for quantifiable studies investigating the effectiveness of SUTW in the general education setting on the elementary level. The studies available show promising results but primarily focus on the middle school level (Voyager Sopris Learning, n.d.). This research is valuable but may not be transferable to the elementary setting. As one researcher for SUTW noted, middle school students already have working knowledge of the writing process (K. A. Smith, 2008).

Chapter 3 covers the methodology for the research to address the overarching question of whether SUTW improves elementary students writing ability. The treatment program will be explained to include defining the population sample and data collection procedures. The chapter concludes by addressing threats to validity and reliability.

Chapter 3: Methodology

The purpose of this ex post facto study is to address a gap in the research evaluating the effectiveness of explicit writing instruction, specifically the commercially available SUTW curriculum. Compared to teaching reading or math skills, there are fewer curriculum options and less research for writing instruction (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). The problem manifests itself with many teachers avoiding teaching writing due to being unsure how to approach the topic (Harward et al., 2014) and students left to learn writing skills through observation of text while reading (Lampi & Reynolds, 2018). Explicit writing instruction gives students clear explanations of what to do, models the desired new writing skill, and provides guided practice. The target intervention for this study, SUTW, uses the principles of explicit instruction (Auman, 2015).

Meta-analysis shows explicit writing instruction to be effective, but there is a shortage of properly conducted studies comparing explicit instruction to a control group (Gillespie & Graham, 2014). SUTW has been evaluated in various pre-/posttest studies, but there is a gap in the field for studies comparing SUTW with a control group for elementary general education students. The experimental school for this study is a K–5 school which implemented SUTW as an additional curriculum tool to the district’s required ELA curriculum. The control school is in the same district with a similar demographic population but did not adopt SUTW. The essays of students graduating from the experimental school were compared with essays from students graduating from the control school. The research question guiding this study is:

Research Question: Did implementing SUTW improve students’ overall writing abilities when answering a prompt according to a rubric at the research site?

An examination of the relationship between using SUTW in an elementary school and writing ability will assess the research question. The hypotheses to be evaluated are

H_a : Compared to a control group, there is a significant improvement in students' overall writing abilities when taught using SUTW.

H_0 : Compared to a control group, there is no significant improvement in students' overall writing abilities when taught using SUTW.

This chapter covers the methodology followed for the study. This description starts with an overview of the research design and the rationale for the study to include operationally defining the variables for this ex post facto study. Next, the research procedures are reviewed, including a description of the sample population and inclusion/exclusion rules. The treatment program is described to include essay sample collection procedures. A description of the essay grading protocols is described, to include the rubric (Appendix C) used. The method of data analysis using an unpaired, one-tailed t -test calculated with a confidence level of 95% (Bazeley, 2018; Frey, 2018) will be explained to include addressing threats to reliability, validity, anonymity, and ethical procedures.

Research Design and Rationale

The purpose of this study was to conduct quantitative, ex post facto research on the effectiveness of explicit writing instruction and the implementation of SUTW at an elementary school. Ex post facto studies, sometimes known as causal-comparative, or "after the fact" (Frey, 2018, p. 251) studies, investigate the results of changes which have already been implemented. Performing experimental studies placing individuals into experimental and control groups is sometimes impractical or even immoral. In addition, getting schools to agree to experimentation and changing curriculum for a study can be highly impractical. As an alternative, the ex post fact

study investigates events which have already occurred (Fulmer, 2018). This method has been used by many researchers in the field of education due to these advantages and ethical issues (Frey, 2018; Fulmer, 2018; Ng'eno & Chesimet, 2015).

In addition to the ethical reasons, the ex post facto quantitative design has other advantages over qualitative or experimental studies. Qualitative studies require surveying subjects to interpret responses and make inferences (Christensen, Johnson, & Turner, 2010). These inferences are open to bias and incorrect conclusions (Frey, 2018). Assuming there are proper controls, quantitative studies require straightforward interpretation of data and are less susceptible to researcher bias (Frey, 2018).

While quantitative studies have advantages, ex post facto research is just one type of quantitative research, and was chosen, as opposed to experimental research design, in part for pragmatic reasons, but for the values of ex post facto research. The current study examines the impact of students being exposed to the independent variable for multiple years in a natural setting, while experimental research typically only exposes subjects to treatment temporarily in a laboratory setting (Frey, 2018). Due to these differences, laboratory research can have limited external validity compared to ex post facto research examining real-life scenarios (Frey, 2018).

Independent variables in research are the conditions which are controlled, distinguishing the groups to be examined, while dependent variables are the specific variables to be tested and measured (Frey, 2018). Ex post facto studies are retrospective, because the independent variable and group differences have already occurred, and the researcher examines what differences occurred “after the fact” (Frey, 2018, p. 251). In this study, the independent variable is whether students were taught using explicit writing instruction, and the dependent variable is students’ writing ability at the end of elementary school. Specific data analyzed was scores on end-of-

fifth-grade writing samples graded according to a rubric (Appendix C). This study hypothesized students taught using explicit writing instruction will provide better writing samples.

Starting with the 2016–2017 school year, the experimental school adopted SUTW to supplement the district-provided ELA curriculum. This program was adopted immediately by some teachers, more slowly by others, and has been a school-wide intervention since the fall of 2017. SUTW was not implemented at the control school, which continued with regular ELA instruction using the district provided curriculum. Aside from choosing to use SUTW or not, both schools are similar. Both schools are in the same district and serve the same target population. As families move into the community are in effect assigned to one school or the other randomly based on availability, they have identical racial and socioeconomic demographics. The only significant distinguishing variable between the two schools is a discrepancy in size, with roughly 400 students at the experimental school and over 1200 at the control school. Roughly 50 fifth graders graduate each year from the experimental school, compared to over 200 at the control school.

Collecting student essays and having a team of scorers grade the essays was chosen as the dependent variable, since evaluating standardized ELA test scores from district-wide assessments was not a viable option. Since the district is in the midst of changing standardized test assessments, standardized ELA assessments have not been collected for the past two years and will not be collected again until the spring of 2020. Furthermore, the standardized ELA assessments scheduled for 2020 do not specifically address writing skills while the rubric used for this study does. As noted in Chapter 2, comparing data which does not specifically address writing skills is a weakness with some previous SUTW studies (Thayer, 2005; Voyager Sopris Learning, n.d.).

Since standardized writing skills data does not exist, original data needed to be collected. For the purpose of this study, only the graduating elementary students were assessed on responses to one prompt. The study design might be more effective if more grades had been included (Wilson et al., 2018), but this study was limited to one grade for two reasons. First, the fifth-grade students are graduating from elementary school and represent the product of two to three years of exposure to the independent variable. Second, assessing more grades would require more financial resources to compensate the scorers for additional work.

Research Procedures

As previously described, the purpose of this study was to conduct ex post facto research of explicit writing instruction. End-of-year writing samples from students at a school which adopted explicit writing instruction through SUTW was compared with a control school which did not use SUTW. The purpose of the study was explained to the parents by sending home a description of the study and requested informed consent (Appendix A) as required for ethical studies of possibly vulnerable or minor populations (Frey, 2018). Returned sheets were collected by the classroom teachers and provided to the researcher. Appendix B was read to students in class requesting assent. The forms explained only permission to grade students' papers was being requested, and participation did not require any extra activity. Incentives for participation were not offered, although the results can aid in future school- and district-level curriculum decisions. Individual results and scores will not be available or reported.

Population and Sample Selection

The experimental school graduates 40–50 students each year from two classes, while the control school has over four times this number in eight classes. From the eight teachers at the control school, three volunteered to participate when asked by the Grade 5 lead teacher. The

population for this study were fifth-grade students graduating in June 2019 from either of the two classes at the experimental school or the three classes at the control school. To ensure validity for the study and avoid outliers, some potential participants were excluded (Frey, 2018).

Exclusionary criteria included any students who have not attended either school for at least six months (enrolled after November 15, 2018), who are receiving special education services, or who are considered English as a second language (ESL) Levels 1 through 4 (Level 5 ESL is considered near proficient). Parents were informed of the study and consent as well as student assent collected by classroom teachers sending home permission forms (Appendix A and B). Grade 5 team leaders from each school were asked to withhold essays from the researcher for any students not meeting all of the inclusionary requirements.

Instrumentation

SUTW, published by Voyager Sopris, uses explicit, direct instruction to teach writing skills. The multilevel (K–12) program uses modeling and practice for 65 different specific skills (Auman, 2015). The program takes a multisensory approach with visuals, graphic organizers, and manipulatives for the students to use during the writing process.

An effective quantitative tool for grading essays is a rubric (Frey, 2018; Schoepp et al., 2018). A team of three scorers, one teacher and two paraprofessionals, graded the students' essays using the SUTW Grade 3–5 Informative/Explanatory Rubric (Appendix C). The teacher who chaired the scoring team teaches PE but is a former elementary general education teacher and principal. Aside from being full-time paraprofessionals, both paraprofessionals are studying to be teachers and nearing graduation. As part of the study's exclusionary criteria is students receiving special education services, neither of the paraprofessionals work with students in the study. All three scorers are from the experimental school. The researcher attempted to hire a

scorer to represent the control school, but no one was interested or available. Essays from the two schools were anonymized and mixed together by the researcher, to avoid any potential bias by the scorers. Exemplar sample essays were provided to the team by the fifth-grade teachers, to show what to look for when grading according to the rubric. Written permission by e-mail was received from Voyager Sopris to use the rubric and evaluate the effectiveness of the program for this doctoral study. The original rubric is labeled Tool E4-36a in the SUTW curriculum resources (Auman, 2015).

Intervention/Program

During the 2015–2016 school year, the experimental school slowly implemented SUTW as a supplemental curriculum. The main ELA curriculum at both the experimental and control school at the time was Reading Streets from Pearson Publishing. This resource was changed to Benchmark Advanced for both schools in the fall of 2018, due to a district curriculum decision to change textbooks. As a supplemental resource, SUTW was implemented by one teacher, new to the experimental school, during the 2015–2016 school year. Other teachers at the experimental school took notice, were interested in the program, and a small handful of teachers experimented with implementing the program themselves in 2016–2017. Staff was provided two 30-minute in-service training sessions, and most of the classroom teachers started to use the program. Starting with 2017–2018, SUTW became an officially adopted supplemental writing strategy at the experimental school, required in all classes. Staff was again provided with two 30-minute in-service training sessions for the year. The amount of time dedicated to the program varied by classroom, with an estimated average of two to ten class periods per month being used school-wide.

Data Collection and Preparation

In May of 2019, fifth-grade students were given 60 minutes to write an informative essay answering a prompt (Appendix D) in the students' regular classrooms, while being monitored by the students' classroom teachers. Essays were collected from the classroom teachers, provided to the researcher, photocopied, coded, anonymized, and shared with the grading team. The rubric measures students' ability to meet grade-level expectations to organize writing, to express ideas responding to the prompt, to use language (variety of sentences with formal style/vocabulary), and to be neat and follow grade-level grammar conventions (capitalization, word use, punctuation, and spelling). Prior to receiving the essays, the graders were provided sample essays and scores in order to work as a team to have unified grading standards (Schoepp et al., 2018). After reviewing exemplars, the team graded the first few essays collaboratively to work together on norming and having similar grading standards. Once all scorers were confident and ready to proceed, each essay was scored by two graders receiving an overall score ranging from zero to 16. If the overall score by the two graders differed by more than two points, a third-grader provided an additional score. Each essay's final score was the average score of the two or three graders. Hard copies of essays and materials were locked in a filing cabinet with electronic copies of data secured on a password-protected computer. All records will be stored for three years and then destroyed.

Data Analysis

The purpose of this ex post facto study was to research the effects of explicit writing instruction, using SUTW, on students' writing ability (Frey, 2018). The team of graders used a rubric (Appendix C) to provide the researcher with raw scores for each essay graded in five categories: organization, ideas/content, language style, neatness/grade-level conventions, and

overall score (Auman, 2015). An unpaired, one-tailed *t*-test was used to evaluate the hypothesis, using a confidence level of 95% (*p*-value of 0.05), to determine if there is significant difference between the dependent variables for the overall score or the four subcategories of the rubric (Bazeley, 2018). The researcher sorted the essays by the assigned codes, calculated mean scores, standard deviations, *p* scores, *t* scores, and effect size for each category using a combination of Microsoft Excel software, the statistical calculator available on the VassarStats (2018) website, and the calculator on the Social Science Statistics (2019) website.

Reliability and Validity

Meta-analysis of all available studies on the effectiveness of explicit writing instruction by Gillespie and Graham (2014) shows direct instruction is positively correlated with improved writing ability. Despite these results, Gillespie and Graham note studies are only as accurate as the methodology used, and there is a shortage of studies evaluating writing instruction using proper controls and groups for comparison. Reliability and validity are required elements to evaluate the quality of a study and the findings (Frey, 2018). For a study to be reliable, the results need to be repeatable, with different researchers able to produce the same results (Frey, 2018). The most significant reliability concern for this study is scorer reliability, comparing one essay grader with another essay grader. Raters' scores on individual essays are susceptible to the halo effect, lack of rater concentration, and inconsistent interpretations (Wilson et al., 2018). These threats were addressed by providing the scoring team with anonymous essays and exemplars. Each essay was graded by two independent scorers, with the average recorded. If the overall scores of these first two individual scorers differed by two or more points, a third scorer was used and averaged with the first two.

Validity refers to whether a study is sound or believable and if the conclusions are reflective of reality (M. Allen, 2017). Different aspects are necessary to have a valid study, and one of these is measurement validity, whether a study measures what the study claims to measure (M. Allen, 2017). This study maintains measurement validity by directly assessing writing skills, the core goal of the research question. *Internal validity* refers to the extent the observed change in the dependent variable can be attributed to the manipulation of the independent variable, as opposed to other possible confounding variables (M. Allen, 2017). As each of the two schools are similar in many ways (demographics, location, curriculum), there are no known confounding variables to threaten internal validity.

External validity refers to the ability of researchers to generalize results to other populations (M. Allen, 2017; Frey, 2018). Ex post facto studies do not have some of the limitations of experimental design and have a degree of external validity, allowing for a reasonable amount of generalization (Frey, 2018). Due to privacy issues, the name of the schools or district involved cannot be named, thereby partially impacting the ability for others to compare results with other populations. What can be stated is the two schools were American public schools, serving a large district with a diverse population. The size of the experimental group was limited to the school population, with the maximum number of participants limited to 40–50 students. A seven-step protocol with 95% confidence rating was used to avoid Type I and Type II errors (Bazeley, 2018). Although ex post facto research design is quite popular in education and behavioral research, there are limitations in the extent of internal and external validity. Despite this limitation, for ethical reasons, ex post facto is often the best design options (Fulmer, 2018).

The researcher for this study is a teacher at the experimental school, interested in finding if the implementation of SUTW has given the students at the research school an advantage over students not taught through SUTW. As an involved participant, bias by the researcher is a concern (M. Allen, 2017). Partially for this reason, a quantitative study was chosen, having an inherent advantage over a qualitative study in addressing potential research bias (Leung & Shek, 2018). By using numeric data to analyze and controlling for all foreseeable confounding variables, the study can remain objective and unbiased.

Ethical Procedures

The researcher, all three scorers, and the dissertation chair (advisor) completed Collaborative Institutional Training Initiative for studies involving human research. As this study involved elementary-aged students, all necessary steps were taken to ensure ethical procedures were followed. The end of the year essays were a required task from the school district. No additional requirements were being placed on the students for this study. One of the advantages of causal-comparative studies is being an ethical alternative to experimental research with real live validity (Fulmer, 2018).

Prior to commencement of the study, permission to study SUTW was requested and received by e-mail from Maureen Auman, the creator of SUTW, and from Karon Brown, Senior Vice President in charge of product management for Voyager Sopris, the publisher for SUTW. All necessary ethical procedures were followed, including receiving signed permission requested from the local school principals, superintendent, the school district, and the American College of Education Institutional Review Board (IRB). The purpose and procedure for the experiment were explained to the lead teachers for the fifth-grade teams from both schools, and these lead teachers coordinated with the homeroom teachers on having the informed consent letter sent home with

the students (Appendix A). Homeroom teachers have homework folders which go home each night with a section for papers to be signed and returned. The consent form has a line to either agree to be in the study or to opt-out. After collecting parent consent, student assent was requested by teachers reading Appendix B. The form asks for the students to opt into the study in grade-appropriate language, including an option not to participate in the study (Frey, 2018). Essays were anonymized and coded and provided to graders to score according to a rubric (Appendix C) without knowledge of which school the essays come from. In this dissertation and any follow-up reports, individual paper scores remain anonymous, with only school averages calculated and analyzed. The names of the schools or school district involved are not included. All data and papers retrieved are being stored in a locked cabinet or on the researcher's password-protected computer for a period of three years after publishing the study and then will be destroyed.

Chapter Summary

As noted in the literature review, explicit instruction teaching specific skills is a research-based approach to teaching writing with support from meta-analysis showing explicit instruction to be the most effective teaching method with the greatest effect size (Gillespie & Graham, 2014). Despite this research, due to a lack of training and curriculum options, many teachers avoid teaching writing or do not know how to use explicit instruction (Harward et al., 2014). SUTW is a commercially available writing curriculum using explicit writing instruction, and there is some research showing its viability; but much of this research is smaller case studies focusing on special needs students (Voyager Sopris Learning, n.d.). The quantitative studies of SUTW which are available focus on middle schools (Voyager Sopris Learning, n.d.). There is a

gap in the research of a quantitative study evaluating the effectiveness of SUTW for general education elementary students. This dissertation attempts to address this gap.

This chapter reviewed the methodology used for this study to research the effectiveness of SUTW implemented at an elementary school compared to a control school in the same school district. End-of-fifth-grade writing samples were anonymized and graded by a team of graders using a rubric. All necessary ethical considerations to protect individuals were followed including gaining permission from the publisher of the curriculum, local school district, parents, as well as obtaining student assent in child-friendly language. Main threats to reliability and validity were addressed, as well as researcher controls to address these threats (Frey, 2018). Microsoft Excel software, the VassarStats website, and the calculator on the Social Science Statistics website were used for data analysis. In Chapter 4, results of the data will be presented, showing results of data analysis and the unpaired, one-dimensional t -test.

Chapter 4: Research Findings and Data Analysis Results

According to the 12 SUTW studies reviewed in Chapter 2, current research suggests SUTW is an effective writing curriculum option (Voyager Sopris Learning, n.d.). These studies primarily focused on special needs students, and the only quantifiable studies available investigated SUTW on the middle school level (Voyager Sopris Learning, n.d.), leaving a gap in research evaluating the effectiveness of SUTW in the elementary general education setting. The purpose of this study was to address this gap by comparing writing samples of students graduating from an elementary school using SUTW to samples from a similar elementary control school which had not been using SUTW. The research question guiding this study was whether implementing SUTW improved students' overall writing ability when answering a prompt according to a rubric at the research site. This question was investigated by evaluating whether end-of-the-school-year essays submitted by students graduating from the experimental school had higher scores compared to essays submitted by students from a similar school in the same school district with similar demographics.

The hypotheses evaluated were

H_a : Compared to a control, there is a significant improvement in students' overall writing ability when taught using SUTW.

H_0 : Compared to a control, there is no significant improvement in students' overall writing ability when taught using SUTW.

The purpose of this chapter is to report the data collected and the results of analyzing this data. The chapter begins with a review of the data collection procedures to include the essay collection process and scoring. The heart of this chapter is reporting the results of an unpaired one-tailed t -test followed by an evaluation of effect size. Threats to reliability and validity of the

study's results are addressed. The chapter concludes by previewing the implications of the results and discussion which will be addressed in Chapter 5.

Data Collection

After acquiring university and the school district IRB approval, the fifth-grade lead teachers from the control and experimental school were asked to coordinate with the teachers at each school collecting the students' writing samples. Permission slips to acquire parental informed consent and student assent (Appendix A and B) were sent home through a combination of e-mail and sending a slip home with the students in homework folders. In late May 2019, students from the two fifth-grade classrooms at the experimental school and three fifth-grade classrooms at the control school were given the end-of-year essay prompt (Appendix D) and 60 minutes to write the essays in class. To ensure uniformity of testing conditions in all classrooms and at both research sites, teachers were asked to follow the same directions in all classes (Appendix E).

The population of interest for this study was general education students completing fifth grade in elementary school. Inclusion criteria stipulated students be in general education on the day of the essay collection and attended the school for at least six months. Students on an Individualized Education Program (IEP) or considered ESL Levels 1–4 by the school's determination were excluded from the study. The school district considers ESL Level 5 to be almost fluent and these students were included in the study. After students had written the essays, one teacher asked about students on an IEP only for math needs, but not determined by the school to have English or writing needs, a scenario not considered when establishing the study protocols. Following the letter of the predetermined protocols, teachers were asked to withhold essays from any students on an IEP, regardless of the students' disability or need.

To ensure anonymity and avoid scorer bias, essays were photocopied, assigned a three-digit identifier randomly determined by Microsoft Excel, and names removed. Hard copies of essays and material were stored in a locked filing cabinet with electronic copies of data stored on a password-protected computer. The essays were provided to the team of three scorers the week of June 3 who worked as a team after school for three days to score the essays according to a rubric (Appendix C). Each essay was scored by two different evaluators. If the overall scores varied by more than two points, a third scorer would evaluate the essay. Each essay's final score was the average of the two (or three) scores.

Participation

There were only two fifth-grade classrooms at the experimental school (SUTW), and both were included in the study. From these two classrooms, a total of 29 students met the inclusion criteria and all but two of these students returned permission slips to be included in the study. The 27 students from the experimental school in the study represented 93% participation.

The experimental design and IRB permission from the participating school district allowed for approximately 50 essays from the control school. The lead teacher from the control school asked three of the eight fifth-grade teachers to collect permission slips, and after accounting for inclusion criteria, the lead teacher had 34 essays for the study. To increase participation, the lead teacher at this non-SUTW school asked two more fifth-grade classroom teachers to collect essays and volunteers for the study. These two additional classrooms collected the samples and permission slips approximately one week after the primary classrooms' samples and permission slips were collected. With these additional two classrooms, the control school submitted a total of 53 essays out of 82 potentially eligible students in the five classrooms (65% response). Responses from the control school might have been lower than the experimental

school due to a temporary instruction by the control school administrator to stop collecting permission slips while clarifying a procedural IRB permission issue. After clarifying IRB status, teachers were allowed to continue collecting permission after three days.

Data Analysis and Results

The data analysis was performed through a combination of Microsoft Excel, the statistical calculator available on the VassarStats (2018) website, and the calculator on the Social Science Statistics (2019) website. Descriptive statistics were calculated to determine the mathematical mean and standard deviation for the four subcategories of the rubric in addition to the overall scores of the essays. These statistics were used to answer the research question for this study. A p -value $< .05$ was used to determine whether to accept or reject the null hypothesis while conducting an unpaired one-tailed t -test. This p -value of $< .05$ represents a 95% confidence of avoiding a Type I error. Type I errors occur if the hypothesis is rejected when the hypothesis is true (M. Allen, 2017). The descriptive statistics for the study are in Table 1.

Table 1

Descriptive Statistics—Mean Scores for Essays

Group	Organization	Ideas/ content	Language/ style	Neat/CUPS	Total
Control					
Mean	0.86	1.56	1.85	2.39	6.66
<i>SD.</i>	0.68	0.70	0.35	0.59	1.92
SUTW					
Mean	1.78	2.10	2.10	2.35	8.33
<i>SD</i>	0.78	0.59	0.42	0.53	1.97

Comparing the mean scores from Table 1, the experimental group generally scored higher than the control group. The overall mean score for the experimental group was 8.33 ($SD = 1.97$) compared to 6.66 ($SD = 1.92$) for the control. The higher scores for the experimental group can be attributed to higher scores in three of the four grading categories: (a) organization (1.78 compared to 0.86), (b) ideas/content (2.1 compared to 1.56), and (c) language/style (2.1 compared to 1.85). For the last category, neatness and CUPS (grammar), the control mean was slightly higher (2.37 compared to 2.35). This information is shown graphically in Figure 3.

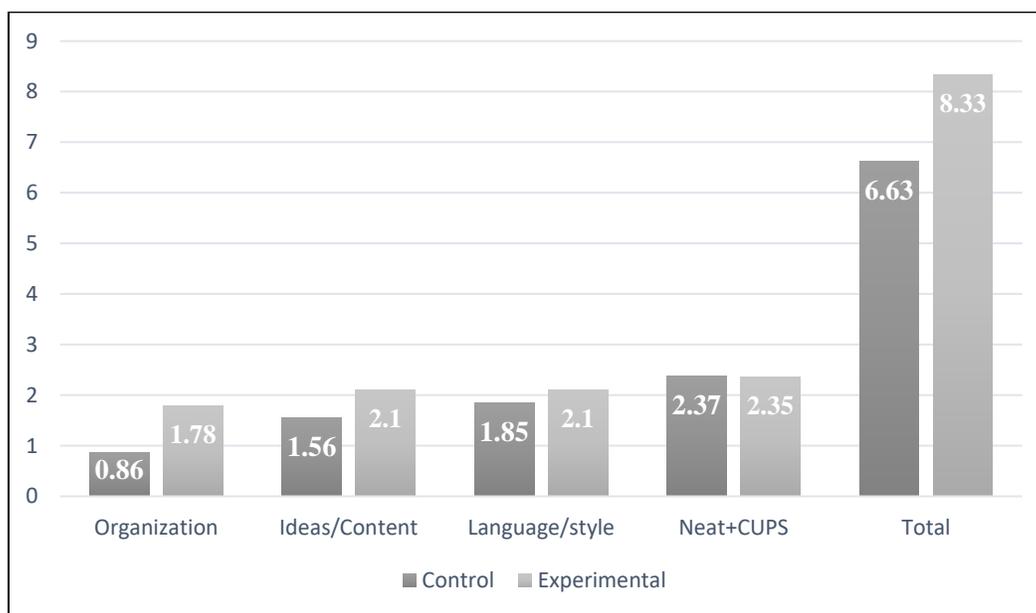


Figure 3: Writing scores comparing essays from control school and SUTW school.

Before conducting a *t*-test to evaluate if the discrepancy between the means is significant, researchers should first analyze the variances for the different scores, which are assumed to be normal and homogeneous for *t*-tests. The homogeneity of variance for all five mean scores was calculated using the statistical calculator on VassarStats website and determined to be 0.19 for organization, 0.19 for ideas/content, 0.13 for language/style, 0.28 for neatness/CUPS, and 0.45 for the total overall scores. These variance scores are greater than the 0.05 alpha level in all

cases. These results show the two sample groups have statistically similar differences in all five scenarios, and the use of a one-tailed independent t -test is appropriate in all cases.

The results of the one-tailed independent t -test, shown graphically in Table 2, has interesting results for scholars. The statistics calculator on the VassarStats (2018) website reported the differences in the overall two mean scores to be 1.6761 with a t score of +3.65 and a p score for a one-tailed test to be 0.000236. As this p score is less than 0.05 (95% confidence), the data shows there is strong evidence to reject the null hypothesis and support the hypothesis which proposed there would be a significant improvement in students' overall writing ability when taught using SUTW.

Further analysis of the means of the subscores used to obtain the overall mean reveals more information for scholars to consider. The first subcategory scored was organization and had the largest statistical discrepancy in mean scores, 0.913. The statistics calculator on the VassarStats website calculated the t score at +5.39, and the p -value for the one-tailed, independent t -test less than 0.0001. This discrepancy is significantly lower than the 0.05 confidence, indicating a powerful difference in the two groups' mean scores for organization.

Differences in mean scores were noted in the next two areas of the rubric, ideas/content and language/style. The difference in means for ideas/content was 0.5428 with a t score of +3.47 and p of 0.0004255. This result is statistically significant being less than the standard of 0.05. The difference for language/style mean scores was smaller, 0.2559, with a t score of +2.9, but the power was still less than the decision rule of 0.05 at 0.002423. For both categories, the null hypothesis of no significant difference can be rejected with minimal concern for a Type I error.

The fourth and last category of the rubric was neatness/CUPS where the schools scored similarly with the control school slightly higher than the SUTW school, 2.39 compared to 2.35.

VassarStats calculated the discrepancy at -0.0356 with a t score of -0.26. The p score for a one-tailed test was 0.3977745. This p score is higher than 0.05, showing no significant difference between the groups for neatness/CUPS.

Table 2

Results of Independent One-Tailed t-Test

Category	Organization	Ideas/ content	Language/ style	Neat/CUPS	Total
Difference in mean scores	0.913	0.5428	0.2559	-0.0356	1.6761
t score	+5.39	+3.47	+2.9	-0.26	+3.65
p score	< 0.0001	0.0004255	0.002423	0.3977745	0.000236
$p < 0.05?$	Yes	Yes	Yes	No	Yes

The effect size (ES) was computed for the overall essay scores as well as the three subsections where a significant statistical difference was found (organization, ideas/content and language/style). ES, sometimes referred to as the *measure of association*, quantifies the relationship between two groups. While the previously calculated p -value demonstrates there is a statistical difference in some areas, the ES describes the degree of the effect (Statistics How To, 2019). Cohen (1977) provides some general guidelines to understand the strength of an ES. An ES of 0.2 is considered small, 0.5 medium, and 0.8 large. According to Cohen, the large ES has differences significant enough to be discerned by the naked eye. Hedges's g is an appropriate formula for computing ES for this study since Hedges's formula takes into account groups with different numbers of data points (Statistics How To, 2019). The formula used is $(\text{mean1} - \text{mean2}) / \text{standard deviation (pooled)}$. The pooled standard deviation for Hedges's formula takes into

account the different number of subjects and weights the statistic accordingly (Statistics How To, 2019). The statistical calculator available on the Social Science Statistics (2019) website calculated Hedges's g for this study finding the ES for organization to be 1.27 (large), ideas/content to be 0.82 (large), language/style was 0.67 (medium), and the overall ES was 0.86 (large). Considering the ES for neatness/CUPS would not be appropriate as no statistical difference was noted by the t -test, but just for information sake, the ES was calculated and came to nearly zero (-0.062).

Reliability and Validity

The mean scores for the essays analyzed for the study came from a group of three graders who scored the essays according to a rubric. Rubrics are an effective tool for obtaining a quantifiable score to grade and compare writing samples (Frey, 2018; Schoepp et al., 2018). Threats to reliability of the scores from the rubric were halo effect (scorer bias), lack of rater concentration, and inconsistent interpretations. The first threat, scorer bias, was of real concern as the team of scorers were educators who all work for the experimental school (a scorer from the control school was not able to be acquired). This threat was addressed by having all essays anonymized and shuffled. With the names removed, the scorers were unaware of which school individual essays were from. The second threat, scorer concentration, was a concern as the graders worked for eight hours each grading the 80 essays. One can never assure raters were consistently focused, but the scoring was divided up over three days to help improve concentration.

The largest reliability concern was scorer consistency. To address consistency, scorers worked together in the beginning grading the first few essays together to calibrate scores. The next few essays were scored independently but discussed after each essay while the team worked

to build consistency. Eventually, the team worked independently in the same room. The original directions called for all essays to be scored by two different reviewers with the average recorded and any essays with a score discrepancy greater than two points to go to a third scorer (and averaged with the first two scorers). In most cases, this process was followed, but in some cases, particularly early in the scoring when two scorers disagreed, the scorers would confer together and work to get a consensus score.

One final unexpected threat to reliability and validity for the study was a smaller sample size than originally expected. While both schools had relatively high participation, due to a high turnover of students during the school year with families moving, the potential pool of essays to compare was smaller than desired (inclusion criteria required students attended the school for at least six months). While the limited sample size is a concern, the *t*-test formula takes the number of data points into account when calculating power, and discrepancies were still found significant at 95% confidence level for all areas except neatness/CUPS.

Internal validity is concerned with how much any results found can be attributed to the independent variable as opposed to other confounding variables (M. Allen, 2017; Frey, 2018). One main concern for this study, discussed in the limitations, is the lack of pretest data. The level of the students' writing ability before the SUTW intervention was introduced is unknown. This issue is often a concern with ex post facto studies (M. Allen, 2017). What can be stated is the two schools pull from the same population and are equally reflective of the study population.

Content validity refers to if a test measures the target behavior for the study (Frey, 2018). Content validity was noted earlier in this dissertation as a specific weakness in some previous studies of SUTW which analyzed standardized test scores on state tests, but not specific writing skills. Some of the previous studies even compared, in part, math scores (Rozeski, 2012; Thayer,

2005). Content validity was assured for this study with the target skill, writing ability, being analyzed by comparing actual writing samples.

External validity refers to the ability of researchers to generalize results to other populations (M. Allen, 2017; Frey, 2018). As an ex post facto study, this research did not have some of the limitations of experimental design compared to studies in a laboratory and analyzed results of SUTW in a real-life setting. Ultimately, the study can only state the results for the subjects involved in this specific study, but the subject schools were similar to many other public schools in America (Frey, 2018).

Researcher bias is a concern for any study, and although this researcher does not directly teach any of the students included in the study, the researcher is employed at the experimental school. Quantitative studies are generally less susceptible to researcher bias than qualitative studies, providing objective data and straight forward interpretation (Frey, 2018). To control for unintended bias, the essays were scored independently by the scoring team, following pre-established scoring protocols.

Chapter Summary

The purpose of this quantitative study was to evaluate the effectiveness of SUTW and address the specific research question: Did implementing Step Up to Writing improve student overall writing ability when answering a prompt according to a rubric at the research site? To address this question, essays from students graduating from two similar schools, one which used SUTW and one which did not were compared. Results of an independent one-tailed *t*-test suggested significantly higher overall essay mean scores for essays written by students graduating from the experimental compared to the control school at over 95% confidence. Analyzing the mean subscores, revealed statistically significant differences in three of the four

areas in which essays were evaluated (organization, ideas/content, and language/style). No significant difference was found for the fourth category of the rubric, neatness/CUPS. ES was calculated and found to be moderate for language/style and large for organization, ideas/content, and the overall total scores. These results will be discussed in Chapter 5 with conclusions and recommendations for educators considering SUTW and writing pedagogy.

Chapter 5: Discussion and Conclusion

According to *The Nation's Report Card*, nearly three out of four American students' writing does not meet proficiency standards and this percentage has been consistent every year the NAEP has been reported (2002, 2007, and 2011) for all grades assessed (NCES, 2012). Despite these numbers consistently being lower than the other core education skills of math and reading (NCES, 2012), writing skills receive less scholarly attention with fewer studies and peer-reviewed articles (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). In the classroom, teachers often dedicate less time to writing compared to math and English (Korth et al., 2017). This lack of attention has been attributed by some to teachers' lack of confidence in teaching writing and unsure of curriculum options (Harward et al., 2014).

SUTW is one writing curriculum option available to teachers using the principles of explicit instruction of specific writing skills. While there are various studies showing SUTW's usefulness, many of the studies are smaller case studies for middle school and at-risk students (Voyager Sopris Learning, n.d.). The purpose of this study was to address the gap in research evaluating the efficacy of explicit instruction of writing skills for general education elementary students using SUTW. The research question guiding this study was whether implementing SUTW improved students overall writing ability when answering a prompt according to a rubric at the research site. Chapter 5 reviews the findings from Chapter 4, provide interpretations and conclusions from the data, review some limitations for generalization of the study's findings, provide recommendations for future researchers, and give suggestions for teachers and education leaders.

Findings

Writing samples from two groups of fifth-grade students completing elementary school were compared. The students came from two similar elementary schools, one which used SUTW and one which did not. Both schools are in the same school district, geographical area, and have similar student populations. The two schools use the same district provided curriculum, except one of these schools adopted the SUTW curriculum as a supplement to the ELA curriculum, while the other did not. The writing samples were anonymized and scored by a team of graders using a rubric (Appendix C).

An independent one-tailed *t*-test compared the mean scores of essays from the two schools to answer the research question of whether student writing ability improved at the experimental (SUTW) school compared to the control school. Statistically significant differences were found in the essays' overall mean scores with a *p*-value less than 0.05, suggesting SUTW did improve writing ability at the experimental school compared to the control. This difference in the data was attributed to statistically significant differences in the essays' organization, ideas and content, as well as language and style. For the fourth category of the rubric, neatness and grade-level conventions, no statistically significant difference was noted. Data showed the ES to be strong for the overall score (0.86), organization (1.27), and ideas and content (0.82), with moderate ES for the use of language and style (0.67). These results are all summarized in Table 3.

Table 3

Summary of Results

Hypothesis	Results
Compared to a control, there is a significant improvement in students' overall writing ability when taught using SUTW.	<ul style="list-style-type: none"> • Significant differences in group mean scores ($p = 0.000236$) • Large ES (0.86)
Compared to a control, there is a significant improvement in students' writing organization when taught using SUTW.	<ul style="list-style-type: none"> • Significant differences in group mean scores between the two schools ($p < 0.0001$) • Large ES (1.27)
Compared to a control, there is a significant improvement in students' ideas and content when taught using SUTW.	<ul style="list-style-type: none"> • Significant differences in group mean scores ($p = 0.0004255$) • Large ES (0.82)
Compared to a control, there is a significant improvement in students' language and style when taught using SUTW.	<ul style="list-style-type: none"> • Significant differences in group mean scores ($p = 0.002423$) • Medium ES (0.67)
Compared to a control, there is a significant improvement in students' neatness and use of grade-level conventions (capitalization, usage, punctuation, and spelling) when taught using SUTW.	<ul style="list-style-type: none"> • No significant differences in group mean scores (0.3977745) • ES irrelevant due to $p > .05$

Interpretations and Conclusions

SLT and social constructivism were the two underlying, theoretical frameworks guiding this study and the hypothesis of SUTW improving students' writing ability. SLT states people learn from one another through observation, imitation, and modeling. Under SLT, teachers should model and reinforce desired behaviors for students to learn and replicate (Bandura, 1977; Social Learning Theory, 2019). Social constructivism expanded on the modeling aspect of SLT, theorizing optimal learning takes place with an expert guiding a learner through activities just

beyond the student's current ability. Vygotsky referred to this area just beyond the learner's current ability as the ZPD (Saleh & Danish, 2018).

Chapter 2 notes how current research into effective writing instruction supports explicit instruction of specific writing skills and strategies (Harris et al., 2017; Hochman & Wexler, 2017; Hughes et al., 2017). These methods apply the theoretical framework of motivation and learning from SLT and social constructivism with teachers providing instruction and practice in students' ZPD, gradually removing educational scaffolding (supports) as students internalize the behaviors (Campbell & Parke, 2018; Chittooran, 2018; Korth et al., 2017). Meta-analysis of available studies into writing instruction shows explicit instruction of strategies to be the most effective educational practice with the greatest ES (Gillespie & Graham, 2014).

SUTW is one commercially available writing option which puts the theoretical framework of SLT and social constructivism into practice with explicit instruction of specific writing skills. According to Gillespie and Graham (2014), many studies analyzing the effectiveness of different writing curriculum options have design weaknesses, to include lack of proper controls, or not even having true experimental design with controls to compare against. Of the 12 available studies in print which analyzed and reviewed SUTW, only four contained quantifiable data of an experimental group with a control. All four of these studies showed promising results affirming the positive impact of using SUTW, but none of these studies focused specifically on elementary general education students, leaving a gap in the research which this study investigated.

The results of this study are consistent with the literature presented in Chapter 2 showing the effectiveness of explicit writing instruction. Statistical testing on the data allowed for a rejection of the null hypothesis, which stated there would be no significant differences in the

essays' overall scores with over 95% confidence, and there is an apparent correlation between the independent variable, SUTW, and improved writing ability. The data supports accepting the hypothesis of significant improvement in students' overall writing ability when taught using SUTW.

While there was only one hypothesis for this study (to compare overall writing scores on a rubric), the results can be broken down to analyze whether there was a significant improvement in students' writing ability in each of the four categories of the rubric. An analysis of the original hypothesis and the four subsections of the rubric are detailed in Table 1. Of note, the lowest mean scores on the rubric for both schools were for organization, but for the SUTW school, organizational skills were scored more than double those from the control (control = 0.86; experimental = 1.78; ES = 1.27). Statistically significant differences were noted for ideas and content (ES = 0.82) and language and style (ES = 0.67). This data, outlined in Table 1, suggests SUTW improved writing ability for the students at the experimental school, in these areas.

The fourth section of the rubric, neatness and CUPS (grade-level conventions), was the only area not to have a statistical difference. While neatness and CUPS were the only areas of the assessment to have statistically similar scores is unknown, one possibility is neatness is more of an inherent trait and difficult to be corrected through explicit instruction in the classroom. Additional research specifically addressing handwriting may be needed to address this area. As for CUPS, the teaching of grammar is common in many classrooms and the acronym CUPS is not exclusive to SUTW. This part of writing instruction, grammar, might have been emphasized in the control classrooms, and an informal conversation with one of the teachers from the control school revealed this specific acronym, CUPS, was used. This line of query was not further investigated since surveying teachers from the control school on the specific writing strategies

used was not a part of the study, nor cleared by the IRB. Future studies comparing SUTW with a control would be advised to consider this issue. A mixed-methods approach could provide quantifiable data for comparison as well as teacher interviews and opinions.

Limitations

As noted in Chapter 1, there are limitations for this study which educators need to consider when reviewing the results. Due to changing curriculum in the school district, standardized English assessments have not been conducted for three years, leaving no pre-intervention data to compare. To address this issue and produce data for post-intervention comparison, the study recruited and hired an independent team of scorers to evaluate writing samples. The situation left the limitation of not having data to assess the schools' mean scores prior to the implementation of SUTW, but this study has superior content validity of specifically analyzing data evaluating students' writing samples, as opposed to standardized district test scores used in previous studies which compared overall test scores combining writing ability with reading and math scores.

An additional limitation potentially reducing the generalizability of the study results was the limited number of essays compared. Due to IRB restrictions and financial constraints, the study only analyzed results from students completing elementary school in the fifth grade. While the student population at the control school is larger, the experimental school had less than 50 students in the fifth grade. After accounting for the study's exclusionary criteria, there were only 29 potential candidates for the study. All but two of these students returned parental permission and student assent form, leaving 27 for the study (93% response rate). Fifty-three essays were provided by the control school, but participation was lower (65%). While this study had more participants than many other SUTW studies in print, there were significantly less than the

LAUSD study available from the SUTW vendor (Voyager Sopris Learning, n.d.). Of note, group pool size is factored into *t*-tests, and the results were still found to be statistically significant due to the large discrepancy in mean scores.

For this study, statistical analysis of the data implies a relationship between providing instruction with SUTW and improved writing scores at over 95% confidence, but one cannot assume the same results will be found at other elementary schools (M. Allen, 2017). The results of this study are from one comparison of two schools on one writing prompt. The limitations noted in this section raise transferability concerns. While this study's data has a strong ES, scholars interested in writing curriculum cannot assume other schools will have the same result (Frey, 2018).

Recommendations

Compared to math and reading skills, writing instruction is given less focus in educational studies, there are fewer curriculum options available, and less time is committed to writing instruction in the classroom (Coker et al., 2016; Heppner, 2017; Hochman & Wexler, 2017). This study addressed the gap in research of a quantitative study evaluating SUTW efficacy on the elementary level. The data showed students at the SUTW school producing statistically significant better essay samples. These results reinforced meta-analysis from Gillespie and Graham (2014) showing the positive impact for explicit writing instruction.

Based on these results and the information in the literature review, educators can improve writing instruction with two main changes. First, prioritize more time for writing instruction (Büyüknarci et al., 2015; Lampi & Reynolds, 2018). Second, extend instruction beyond focusing on improving grade-level grammar and mechanics to teach specific skills through explicit

instruction. SUTW is not the only option for teachers to put this theory into practice but is one research-based option to consider.

Future investigations can extend our knowledge of writing instruction, but researchers should note Gillespie and Graham's (2014) warning to use proper controls with a comparison group. Future experimentation should specifically analyze writing skills or writing samples, collect pre-/post-data, compare to a control, and attempt to evaluate on the school-wide level, as opposed to smaller case studies. For researchers evaluating SUTW, more work on the elementary level is needed to see if the positive results for this study can be replicated. In addition, research analyzing SUTW on the high school level appears to be untapped. Future researchers should consider being pioneers in this area.

Implications for Leadership

With the majority of American students consistently failing to meet writing proficiency standards (NCES, 2012), changes in writing instruction are needed. This study and current body of research into writing instruction suggest explicit writing instruction, using modeling and scaffolding focusing on specific skills, improves student writing ability. Unfortunately, many teachers do not use explicit instruction, let alone allocate enough time for writing instruction (Korth et al., 2017). Harward et al. (2014) note many teachers want to emphasize writing but are unaware of how to put the theory into practice. This study recommended teachers emphasize more class time for writing using explicit writing instruction.

School leaders should ensure teachers are emphasizing writing instruction alongside the other core subjects. Realizing teachers want to improve writing instruction, but are unaware of how to implement change, leaders should investigate providing appropriate writing curriculum

with adequate training. Using the intervention from this study, SUTW, is not the only writing curriculum available, but one school leaders should consider.

Conclusion

Chapter 5 provided a brief review of the background for this study, the need for research into writing instruction and curriculum, and reviewed the focal writing curriculum to be assessed, SUTW. The hypothesis of improved elementary students' writing ability compared to a control through SUTW was supported by the results of a one-tailed *t*-test showing statistically significant results and an overall strong ES (0.86). This ES is attributed to training in organization (ES = 1.27), detailed content (ES = 0.82), and improved use of language/writing style (ES = 0.67).

The history of writing instruction has seen different waves of change. The first main instructional shift was in the 1960s and early 1970s, with the push for isolated grammar instruction (Culham, 2014b). When research showed isolated grammar instruction to be generally ineffective, constructivism and whole language became the leading educational practice (Hochman & Wexler, 2017). Whole language was eventually replaced by the process approach, which has been the leading writing instructional method for the past few decades (Culham, 2014a; Evmenova et al., 2016; Rietdijk et al., 2018).

Writing skills are an important part of a successful student and adult (L. K. Allen et al., 2016; VanNest, 2016) and with roughly 75% of students consistently failing to meet writing proficiency standards (NCES, 2012), instruction needs to continue to evolve. Current research (Harris et al., 2017; Hochman & Wexler, 2017; Hughes et al., 2017), as well as meta-analysis of writing instruction (Gillespie & Graham, 2014), shows explicit instructions of specific writing

strategies to be the most effective writing curriculum option. This study supports this shift and advocates for using SUTW as a curriculum option to implement this change.

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Appendix A: Parent Permission

Writing Instruction Doctoral study

Hello, my name is Rich Ringling. I am working on a doctoral study analyzing the effectiveness of different writing programs. The purpose of the study is to evaluate the effectiveness of an explicit writing instruction through the use of the commercially available Step up To Writing curriculum.

What will be asked of your child?

All elementary students at your child's school are already being asked to write an essay to assess their end of year writing skills. I am asking permission to include this essay your child will already be writing in my study. The study will not require any time commitment for you or your child.

Risks/Benefits

There are no known risks for your child in participating in this study. Essays will be anonymized and individual scores will not be shared with anyone. Only school average scores will be included in my report. While there are no individual benefits for participating in the study, participation may help your teachers and the field of education in future curriculum decisions.

Privacy/Confidentiality

Your child's name will not be used when data from this study are published. Every effort will be made to keep records and other personal information confidential to include keeping records in locked cabinets or password protected computers.

Your rights

Participation in this study is voluntary. If you choose withdraw your child from the study, or your child decides to leave the study, notify me at 090-3875-1991 or rringling@hotmail.com.

Contacts for questions or problems?

Call me, Rich Ringling, at 090-3875-1991 or email rringling@hotmail.com. If you wish to contact my research supervisor his contact information is byron.barton@ace.edu +1(317) 829-9400.

Permission for a Child to Participate in Research

As parent or legal guardian, I authorize _____ (child's name) to become a participant in the research study described in this form.

Parent or Legal Guardian's Signature

Date

Appendix B: Student Assent

Title of Study: Writing Instruction

Researcher: Ringling

Writing Instruction Doctoral study

Hello, my name is Rich Ringling and I am studying different ways to teach writing. With your permission, your end of year essay will be compared with essays from students at another school.

Do I have to do anything?

Not really. All elementary students are already being asked to write an essay at the end of the year. I am just asking permission to use it. It will be photocopied, your name taken off, and compared with other essays.

Risks/Benefits/Privacy/Confidentiality

There are no risks for participating. Graders looking at the essays will not know who each essay belongs to.

Your rights

You have the right to choose to be in the study or not. If you say yes, but change your mind, please tell your teacher or notify me at 090-3875-1991 or rringling@hotmail.com. If you wish to contact my research supervisor his contact information is byron.barton@ace.edu +1(317) 829-9400

Permission

If you will let me use your essay, please sign the form below.

I, _____, give permission for my essay to be in the study.
Please print your first and last name

(Sign your name here)

(Date)

Informative/Explanatory Essay and Report Scoring Guide

Topic/Prompt = _____

	No Credit (0)	Below Basic (1)	Basic (2)	Proficient (3)	Advanced (4)	Score
Organization	<ul style="list-style-type: none"> — Introduction is missing — There is no conclusion, or it is not about the topic — Images or formatting are missing or off-topic** — Ideas are missing, unclear, or off-topic — Details and facts (the E's) are missing, not correct, or repeated — Reader will not learn anything about the topic 	<ul style="list-style-type: none"> — Introduction of topic is unclear or incomplete — Some transitions are used, but they don't connect ideas — Conclusion is not about the topic or is not a paragraph — Images or formatting are not related or confusing** — The ideas don't fit the topic — Body paragraphs may have few details and facts (the E's), or they are incorrect or don't fit the topic — Reader may be confused or will not have correct information about the topic 	<ul style="list-style-type: none"> — Introduction of topic is clear and fits part of task or purpose — Transitions connect most body paragraphs and ideas; some missing or repeated — Conclusion paragraph restates the topic — Images or formatting relate to topic** — Some ideas fit the topic — Body paragraphs have some details and facts (the E's) about the topic — Reader has some information but needs more to understand the topic 	<ul style="list-style-type: none"> — Introduction of topic has a plan and clearly fits the task and purpose — Transitions connect body paragraphs and ideas in an order that mostly follow a plan — Conclusion paragraph connects back to the topic — Images or formatting inform readers** — The ideas fit the topic and task or answer the prompt — Each body paragraph includes important details and facts (the E's) — Reader will understand the topic 	<ul style="list-style-type: none"> — Introduction has a plan and presents topic in an interesting way that clearly fits the task and purpose; may include a lead — Different transitions are used to connect body paragraphs and ideas in an order that follows a plan — Strong conclusion paragraph connects back to the topic in an interesting way — Images or formatting interest and inform readers** — The ideas fit the topic and task and answer the prompt completely — Each body paragraph has many interesting and important details and facts (the E's) — Reader will understand the topic in detail 	
Ideas/Content	<ul style="list-style-type: none"> — Sentences are not complete; do not make sense — Many words are repeated or not used correctly — No clear style 	<ul style="list-style-type: none"> — Many sentences are not complete, making it difficult for reader to follow — Some words are repeated or not used correctly — Style does not fit the task 	<ul style="list-style-type: none"> — Sentences are mostly complete, but with little variety — Words are used correctly and fit the topic — Style fits task 	<ul style="list-style-type: none"> — Sentences are complete and have some variety — Includes some action verbs, precise words, or content vocabulary — Style is formal and fits the task 	<ul style="list-style-type: none"> — Sentences are a variety of simple, compound, and complex — Many action verbs, precise words, content vocabulary, and descriptions are used — Style is formal and fits the task well 	
Language/Style	<ul style="list-style-type: none"> — Because of mistakes in CUPS, the reader can't understand the writing — Doesn't look like paragraphs — Not neat, can't be read 	<ul style="list-style-type: none"> — Many mistakes in CUPS make it hard for reader to understand writing — Attempts to write in paragraph format — Not neat, hard to read 	<ul style="list-style-type: none"> — Several mistakes in CUPS, but the reader can understand writing — Clear effort to write in paragraph format — Mostly neat, can be read 	<ul style="list-style-type: none"> — A few mistakes in CUPS that don't stop the reader from understanding writing — Writes neat, indented paragraphs — Neat and easy to read 	<ul style="list-style-type: none"> — Very few or no mistakes in CUPS — Clearly writes in essay/report format — Very neat and easy to read 	
Neat + CUPS*					Total Score (16 possible)	

*Neat = Neatness Conventions, or CUPS: C = Capitalization U = Usage P = Punctuation S = Spelling

**Not all topics, prompts, or tasks require images or formatting.

Appendix C: Rubric

Name: _____ Date: _____ Tool E4-36a

Appendix D: Essay Prompt

Read the passages “St. Louis: Gateway City” and “Houston Attracts Newcomers” on the following pages. Write a response to the following prompt:

Based on the two passages you have read, explain how a city attracts new people to move there. Use details from both passages to support your answer. Your writing must be in a 3 paragraph essay: Intro, Body, and Conclusion. You will have 60 minutes for this task. You can plan your essay in the space below, but put your answer on the lined paper provided.

St. Louis: Gateway City

Three centuries ago, St Louis was a tiny fur trading post set up on Native American land in what would become the state of Missouri. A diary from the time quotes Pierre Laclede, the Frenchman who founded the city. According to Laclede, the site had all the advantages that one could desire. He was mainly referring to location of the new city. The mighty Mississippi River was a perfect place for trading furs and other goods.

Gateway to the West

When lands west of the Mississippi River became incorporated territories of the United States, the small trading post called St. Louis gained much importance. In fact, it became the main gateway to the West. Traders and trappers stop there for provisions before heading to the new regions of the country. This “gateway” status encouraged more people to settle and start businesses there.

People, Industry, Pride

Over time, St. Louis grew into a big, booming city. Railroads were built, and shipping became big business on the Mississippi River. Immigrants poured in and helped build the city. They also found jobs in the many factories that sprang up there. Soon, St Louis was the fourth largest city in America. In 1904, it played host to a great World’s Fair. The words of a popular song expressed the pride of the city’s residents. “Meet me In St. Louie, Louie, meet me at the fair,” the song began using the residents’ affectionate nickname for their city.” The song also bragged, “Don’t tell me the lights are shining any place but there.”

Ups and Downs in the Twentieth Century

Over the decades, St. Louis continued to grow and prosper. More and more factories produced more and more goods, such as shoes, clothing, and cars. The city was also a key destination for African Americans who migrated there from the South during the first half of the 20th century. However, St Louis experienced hard times too. Like the rest of the country, it suffered through the Great Depression in the 1930s. As in other cities, many factories shut down there starting in the 1960s.

Changing with the Times

Today, the economy of St. Louis is less about factories and more about technology, finance, and services. The city has also become a leading health-care center. The city’s optimism about his future is captured on the city of St. Louis website, which states at St Louis is “ready to grow into its for century.”

Houston Attracts Newcomers

Could moving to Houston be in your future someday? This ever-changing, ever-growing city is a magnet for newcomers from the United States and other countries, too.

A People Magnet

Why does Houston attract people from so many places? First, it is part of the Sunbelt, the warm, sunny, southern part of the United States. Second, there's plenty of opportunity in Houston. There are many jobs in science, technology, engineering, and mathematics, and other kinds of employment, too. With wide open spaces surrounding it, Houston also has plenty of room for more development. But most of all, unlike many big cities, Houston boasts a low cost of living. Newcomers believe they will be able to afford homes, food, and health care. They hope to achieve a good standard of living here and improve their prospects for the future.

Big and Bigger

In the last few decades, Houston has grown bigger in area. The city's government website reports that its total area, including the related suburbs, is 8,778 square miles and adds the amazing fact that this area is "slightly smaller than Massachusetts but larger than New Jersey." Houston is also growing faster than almost any other American city in population. The US Census Bureau says the city's population is 2.1 million, and the whole area, including the suburbs, has a whopping 5.95 million people. Houston has also become the country's most diverse city. More than ninety languages are spoken the area, and two-thirds of its residents are of Mexican or other Hispanic ancestry.

A Business Magnet

What does the city do to attract newcomers? One answer is that Houston attracts and promotes business. The city of Houston website gives the startling fact: "If Houston were an independent nation, it would rank as the world's 30th largest economy." Many of the world's most important corporations call Houston home, and Houston is a world leader in some areas. For example, more than 5,000 energy businesses enrich Houston's economy. In fact some people call Houston the "energy Capital the world." It is also the tenth largest port in the world.

Better Quality of Life

How has Houston been changing for the better? A sense of confidence and moving forward pervades the city. Over the years, Houston has been adding the things that encourage people to move there, such as parks, the arts, and terrific restaurants. It now has more than forty institutions of higher learning, including colleges and universities. For those who want to protect their health it has the world's largest Medical Center. For opportunity and quality of life, Houston has it all!

Appendix E: Teacher Directions

End of Year Essay directions and prompt:

1. Pass out lined paper (provided) and essay prompt.
2. Have students write their full name, first and last, in the top right corner of the lined paper.
3. Read the following prompt from the directions:

Read the passages “St. Louis: Gateway City” and “Houston Attracts Newcomers” on the following pages. Write a response to the following prompt:

Based on the two passages you have read, explain how a city attracts new people to move there. Use details from both passages to support your answer. Your writing must be in a 3-paragraph essay: Intro, Body, and Conclusion. You will have 60 minutes for this task. You can plan your essay in the space below, but put your answer on the lined paper provided.

4. To ensure uniformity for all classes, use the lined paper provided, read the prompt with no further assistance, and provide 60 minutes for general education and level 5 ESL students. (IEP and ESL 1-4 students will not be a part of the study.)
5. Let me know when I can pick up the essays or photocopies. Please do not grade or mark the original in any way. I can make copies myself if you want the originals back.

Per my studies protocols, and permission from DODEA, I am only allowed access to the students’ essays that meet the following criteria:

-Student and parent have returned both permission forms.

-Student meets the study inclusionary criteria:

- Attended your school for at least 6 months (Oct. 15, 2018).
- General education student (Not on an IEP nor ESL levels 1-4, ESL level 5 students are part of the study).

To protect student personal information (IEP/ESL) DODEA and I are asking that you withhold essays from any students not meeting those criteria.

Thank you!

Rich Ringling

090-3875-1991

rringling@hotmail.com