



The Utility of SQ Write to Improve Writing Quality in Fifth Grade

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After using SQ Write for only 10 weeks of instruction, statistically significant gains were demonstrated in total words written, multiple paragraph usage, use of transitional phrases to introduce body topics, use of a compound thesis sentence, use of three body paragraphs, inclusion of specific data and evidence to support body paragraphs, and a multi-sentence conclusion paragraph. The overall magnitudes of gains were large with students in the lowest quartile demonstrating the largest magnitude of improvement. Implications for improvements in mainstream student writing are discussed.

Study Objective

Prior research on the utility of SQ Write has indicated significant gains achieved in writing quality among elementary and middle school-aged participants. This study examined the impact of SQ Write instruction on fifth graders' writing achievement. Using a single-group, pre-post test design, the current study sought to further estimate the overall magnitude of change in student writing achievement following the SQ Write intervention.

Methods

Participants were 69 fifth graders at the Alexander Graham Bell Elementary School, a K-8 public school, in Chicago, Illinois who received SQ Write instruction. Instruction of the 10 SQ Write lessons were presented over two 40 minute class periods per week. Student pre-implementation narrative essays were compared with post-implementation narrative essays to assess the effectiveness of SQ Write instruction on student writing achievement.

Assessment criteria included total words written, use of multiple paragraphs, development of

multi-sentence introduction and conclusion paragraphs, use of transitions to introduce body one, development of a compound thesis sentence, use of three body paragraphs, reworded thesis sentence in the concluding paragraph, and use of evidence and details to support each body.

Teachers participated in a full-day training seminar designed to help implement and practice the key elements of the SQ Write program. The author provided additional teacher training in the form of coaching sessions lasting 45 minutes during implementation, between Lesson 3 and Lesson 6.

Results

Significant narrative writing improvements were observed for fifth grade participants. Specifically, writing achievement increases exceeding 50% improvement were found in the following areas of assessment (% increase):

- Total Words Written (95%)
- Number of paragraph breaks (74%)
- Number of transitional words (142%)
- Compound thesis sentence (220%)
- Three-body paragraphs (245%)

- Specific data/evidence (2100%)
- Multi-sentence concluding paragraph (93%)

BACKGROUND

In 2008, the National Center for Education Statistics reported on student writing competency. In 2002, 28% of fourth graders could write at a proficient level or above. In 2007, approximately 33% of eighth graders and 24% of twelfth graders could write at a proficient level or above. In 2007, only 2% of eighth graders could write at an advanced level. These statistics support the need for a systematic and explicit writing curriculum. SQ Write was developed to specifically address this need.

SQ Write is a comprehensive writing curriculum that applies current executive functioning and oral language research to teaching and learning how to independently write organized, detailed, and elaborated essays. SQ Write teaches students how to apply executive functioning and oral language skills to create logical, well-constructed essays that employ the metacognitive strategies of self-questioning, verbal rehearsal and mediation, and whole-to-part analysis. SQ Write is designed for delivery in a classroom setting and is aligned with the Common Core and RTI Standards (at SQWrite.com see *How SQ Write is Aligned to the Common Core Standards* and *How SQ Write can be used in an RTI Setting*).

SQ Write is designed for Tier 1 (universal) instruction of students in fourth through twelfth grades. SQ Write is also used in Tier 2 (selected; some students who need support in addition to universal intervention), Tier 3 (targeted; few students who need support in addition to universal and selected interventions), and special education small group instruction.

Response to Intervention (RTI) is a 3-tiered model of screening, identifying, addressing, and monitoring the progress of all students' academic and behavioral needs in their K-12 school setting. It is hypothesized that a sound explicit writing program that is based on language and executive functioning research can serve all students. SQ Write aims to provide a systematic and explicit writing instruction in Tier 1, mainstream classrooms, to meet the writing needs of learners to reduce the RTI and special education referrals. Also, if referred, for Tier 2, Tier 3, and special education services, students receiving the SQ Write intervention will meet grade-level writing competency expectations allowing them to re-integrate into mainstream classes.

STUDY PROCEDURE

The present study aimed to further document the effectiveness of SQ Write to improve student writing achievement and to better understand the overall magnitude of change achieved from the intervention

Professional Development

Prior to the use of SQ Write, teachers participated in a mandatory professional development training in order to control for fidelity of instruction. Training consisted of a full-day pre-implementation training session. Teachers learned the research-basis regarding executive functioning and oral language and engaged in behavioral modeling of the SQ Write method. Specifically, all 10 SQ Write lessons were

modeled and then teachers practiced the SQ Write method for each of the ten lessons. Following each lesson, teachers built essays using the SQ Write Teacher's Guide.

Subsequent teacher training occurred in the form of 45-minute coaching sessions between the implementation of Lesson 3 and Lesson 6.

Collection of Baseline Data

Prior to implementation of SQ Write, baseline student data was collected via a narrative writing sample. Students were asked to write a 5-paragraph essay based on the writing prompt: "Write about your favorite summer vacation."

Following SQ Write implementation of all 10 lessons, post-implementation data was collected. Students were asked to write a 5-paragraph essay based on the writing prompt: "Write about your favorite winter vacation."

The data was compiled by an assessor who was uninvolved in the implementation of the study and unfamiliar with the SQ Write curriculum. The assessor had no communication with the Alexander Graham Bell Elementary School or the teachers or students involved in the study. The criteria were chosen due to their correlation to the Common Core Standards for structure and organization. This data was analyzed based on the following criteria.

- Total words written (TWW) – no time limit
- Number of paragraphs
- Multiple paragraph breaks (more than 3 paragraphs)
- Multi-sentence introduction paragraphs
- Multi-sentence conclusion paragraphs
- Transitional phrases for body 1
- Compound thesis sentence
- Reworded thesis sentence in the concluding paragraph

SQ Write Intervention Implementation

SQ Write was implemented in each classroom two days per week per classroom period (approximately 45 minutes in length) according to the schedule below. It should be noted that due to school schedules and holiday breaks, these weekly lessons were not always conducted in consecutive weeks.

Week 1: Baseline collection

Week 2: Lesson 1 instruction, Review (self-questioning)

Week 3: Lesson 2 instruction, Review (whole-to-part idea generation, thematic commonalities)

Week 4: Lesson 3 instruction, Review (Understanding the SQ Write materials)

Week 5: Lesson 4 instruction, Review (Subtopics, extended topic)

Week 6: Lesson 5 instruction, Review (Introductory phrases per subtopic)

Week 7: Lesson 6 instruction, Review (Background facts)

Week 8: Lesson 7 instruction, Review (2 details per subtopic)

Week 9: Lesson 8 instruction, Review (1 detail bridge per detail)

Week 10: Lesson 9 instruction, Review (1 evidence/example per detail)

Week 11: Lesson 10 instruction, Review (Conclusion)

Week 12: Post-implementation data collection

Participants

A total of 69 fifth graders' pre and post SQ Write narrative essays were assessed. In the post assessment, students utilized the SQ Write Q Card and Thought Organizers to complete their essay.

RESULTS

Table 1 depicts the writing gains shown for fifth graders. As can be seen, students showed substantial gains in their post-test essays under SQ Write instruction when compared to the baseline measurement. Average increases in writing performance range from 7 to over 2000 percent across the eight measured criteria. Although all students appeared to benefit from SQ Write, an examination by pre-test performance (using total words written as a criterion) finds that students initially performing in lowest quartile realize the largest average gains in writing achievement, 368% versus students in the highest quartile, 58% thereby quickly closing the gap in writing performance (See Figure 2).

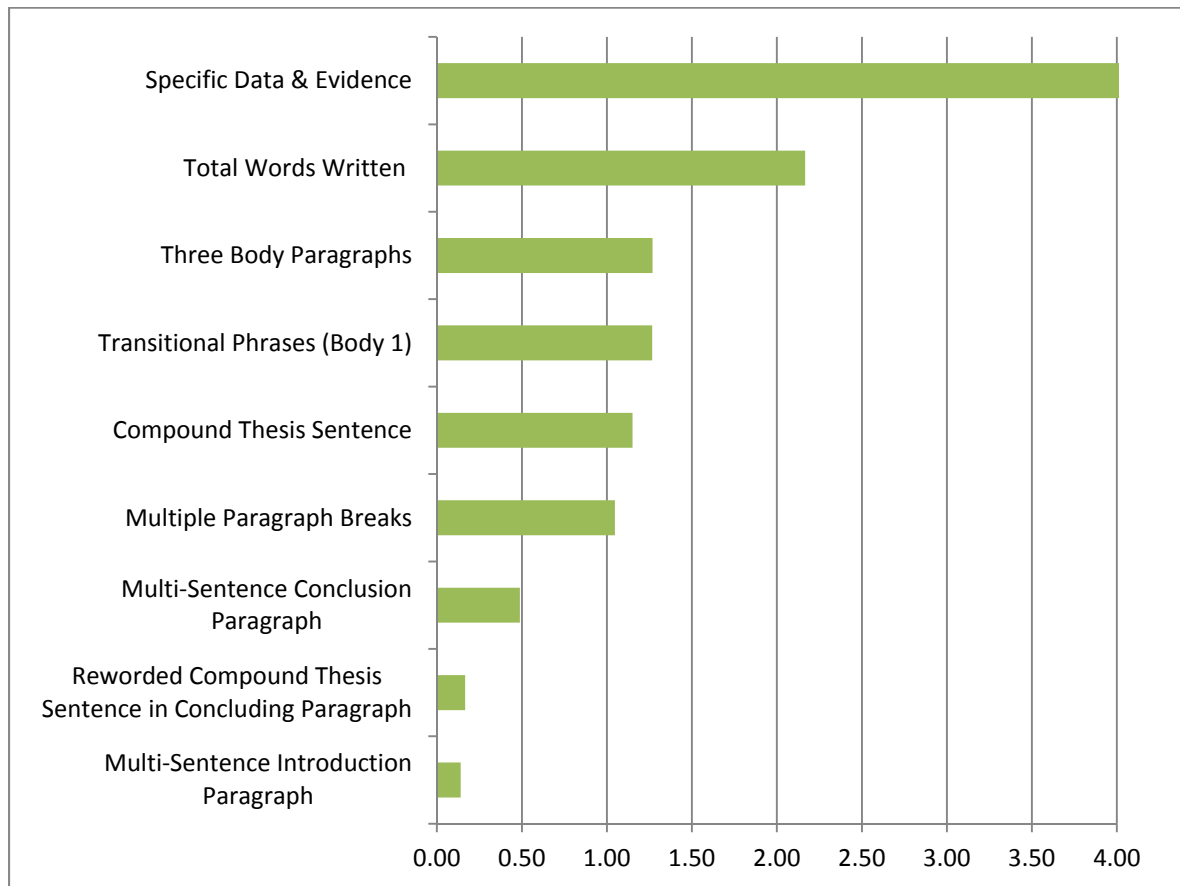
TABLE 1
Fifth Grade Pre-Post Test Gains

Writing Criteria	Pre-Post Average Percent Increase
Total Words Written	94.99
Multiple Paragraph Breaks	74.21
Transitional Phrases (Body 1)	142.86
Compound Thesis Sentence	220.00
Multi-Sentence Introduction Paragraph	7.41
Three Body Paragraphs	245.16
Specific Data & Evidence	2087.50
Reworded Compound Thesis Sentence in Concluding Paragraph	24.53
Multi-Sentence Conclusion Paragraph	93.33

Note. N = 69; numbers indicates percentage change from pre to post test.

In order to better understand the magnitude of the current findings, it is important to use metrics that would allow for a standardized comparison now and in the future; an effect size (*d*) calculation allows for such comparison. An effect size is the mean difference between the pretest and posttests in standard score form; that is, the ratio of the difference between the means to the standard deviation. Cohen (1988) considers effect sizes of .20, .50 .80 to be small, medium and large respectively in overall magnitude. The *d* values presented in Figure 1 are considered medium and large for educational interventions which suggest that SQ Write is an effective means for improving critical aspects of writing quality.

FIGURE 1
AVERAGE EFFECT SIZE (*d*) FOR ALL STUDY CRITERIA



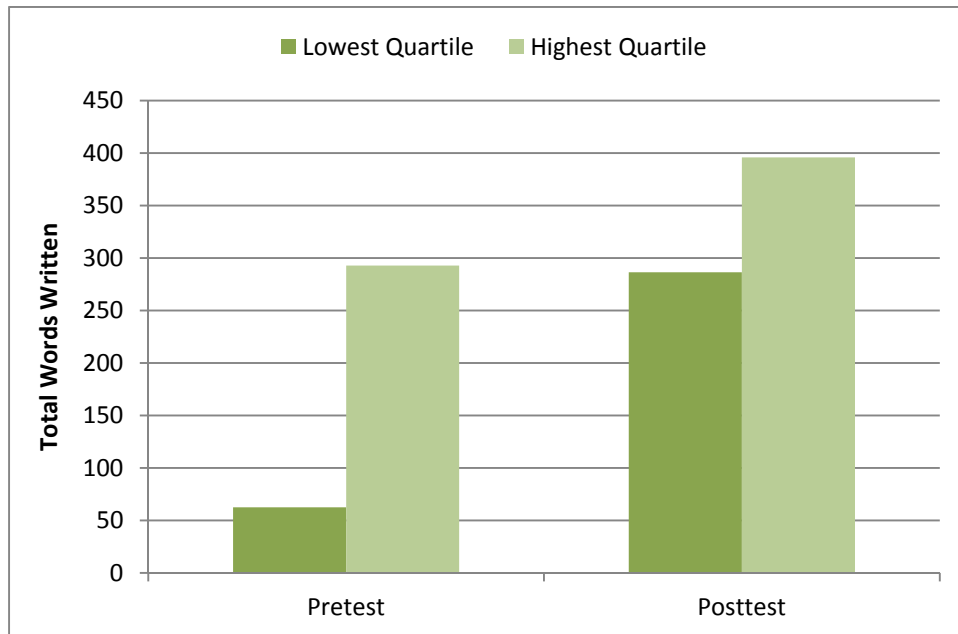
DISCUSSION

The present study allowed the research team to assess the positive impact of SQ Write instruction on student writing achievement. As the National Center for Educational Statistics (2008) clearly suggest, there exist a serious need for improved writing instruction as over 65 percent of mainstream students do not meet a proficient writing level.

Following 10 weeks of SQ Write implementation, results clearly depict significant gains in students' essay writing achievement. Students in fifth grade significantly improved their total words written, multiple paragraph usage, transitional phrases to introduce body topics, compound thesis sentence, use of three body paragraphs, specific data and evidence to support body paragraphs, a multi-sentence conclusion paragraph., and the development of a more robust essay thesis free of grammar and syntax errors. Current literature clearly states that the use of self-questioning, a graphic organizer, and

systematic and repeated oral rehearsal of the essay significantly improves student writing. SQ Write’s systematic, strategic and sequential use of these research-based components resulted in significantly improved student essay writing, per the Common Core aligned criteria. Clearly, per the criterion of total words written and other measures, students’ writing products were more elaborated, detailed, and organized.

FIGURE 2
TOTAL WORDS WRITTEN FOR LOWEST AND HIGHEST PERFORMANCE QUARTILES



The Alexander Graham Bell School teachers responded favorably to the improved student writing. Historically, the teachers especially noted the impact in student thinking and reasoning. Teachers reported improved writing independence through the pre-cursor self-questioning practice and student usage of the Q Card to independently and strategically self-question in the actual essay writing process. Multiple times, teachers remarked that the self-questioning and oral rehearsal emphasis in SQ Write greatly minimized teacher guidance in helping students “getting started.” Throughout the SQ Write instruction, students became more independent in starting their essay writing.

In this current study, results indicated significant improvements in student writing achievement. Information learned from this study is currently being used to assess SQ Write using research design that will allow for increased precision regarding individual student improvement.