Evaluating the Effectiveness of
SQWrite on Student Writing Achievement: An Outcomes Study
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After using SQWrite for only 12 weeks of instruction, statistically significant gains were demonstrated in Total Words Written, multiple paragraph usage, multi-sentence introductory paragraphs, multi-sentence concluding paragraphs, transitional phrases to introduce body topics, and more robust thesis sentences. Implications for improvements in mainstream student writing are discussed.

Study Objective

This study explored the impact of SQWrite instruction on fourth and sixth graders' writing achievement. This Outcomes Report presents quantitative baseline versus post-implementation data regarding individual students' writing achievement.

Methods

90 fourth and sixth graders at the Alexander Graham Bell Elementary School, a K-8 public school, in Chicago, Illinois received SQWrite instruction. Instruction of the 10 SQWrite 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 SQWrite instruction on student writing achievement.

Teachers participated in 6 hours of pre-instruction training (three hours over two days). Teachers also participated in one hour Q & A training sessions after implementation of Lesson 3, Lesson 6, and at the conclusion of the SQWrite implementation.

Pre and post student data were assessed to document student achievement. 72 fourth grade and 18 sixth grade pre and post essays were assessed. Assessment criteria included Median 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 thesis sentence that is free of grammar and syntax errors.

Results

Significant narrative writing improvements were observed for both fourth and sixth grades. Specifically, writing achievement increases exceeding 50% improvement were found in the following areas of assessment:

- Median Total Words Written
- Elaboration and details
- Organization of ideas
- Use of distinct paragraphs
- Presence of multi-sentence introductory paragraphs
- Use of multi-sentence concluding paragraphs
- Use of transitional phrases to introduce paragraphs

BACKGROUND

The National Center for Education Statistics (2008) recently 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. SQWrite was developed to specifically address this need.

SQWrite 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. SQWrite 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. SQWrite is designed for delivery in a classroom setting and is aligned with the Common Core and RTI Standards (at www.learningbydesign.com see *How SQWrite is Aligned to the Common Core Standards* and *How SQWrite Can be Used in an RTI Setting*).

SQWrite is designed for Tier 1 (universal) instruction of students in fourth through twelfth grades. SQWrite 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. SQWrite 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 SQWrite intervention will meet grade-level writing competency expectations allowing them to re-integrate into mainstream classes.

PILOT STUDY PROCEDURE

The present study aimed to document the effectiveness of a writing curriculum to improve student writing achievement.

Professional Development

Prior to the use of SQWrite, teachers participated in a mandatory professional development training in order to control for fidelity of instruction. Training consisted of two 3-hour pre-implementation training sessions. Teachers learned the research-basis regarding executive functioning and oral language and engaged in behavioral modeling of the SQWrite method. Specifically, all 10 SQWrite lessons were modeled and then teachers practiced the SQWrite method for each of the ten lessons. Following each lesson, teachers built essays using the SQWrite Teacher's Guide.

Subsequent teacher training occurred in the form of 1-hour Q & A sessions following implementation of Lesson 3, Lesson 6 and at the conclusion of the SQWrite instruction.

Collection of Baseline Data

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

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

The data were compiled by an assessor who was uninvolved in the implementation of the study and unfamiliar with the SQWrite curriculum. The assessor had no communication with the Alexander Graham Bell Elementary School or the teachers or students involved in the study. Further, the assessor received no information as to whether the essays were baseline or post assessment written products. The criteria were chosen due to their correlation to the Common Core Standards for structure and organization. This data were analyzed based on the following criteria.

- Total Words Written (TWW) – no time limit
- Multiple paragraph breaks (more than 3 paragraphs)
- Multi-sentence introduction paragraphs
- Multi-sentence conclusion paragraphs
- Transitional phrases for body 1
- Thesis sentence written with proper grammar and syntax

SQWrite Intervention Implementation

SQWrite 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 SQWrite 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 72 fourth and 18 sixth graders' pre and post SQWrite narrative essays were assessed. In the post assessment, students utilized the SQWrite Q Card and Thought Organizers. It is noted that more students actually participated in the instruction. Of these, students were excluded from this sample due to absences during either pre or post writing assessment. Further, a lower number of sixth graders were included in the assessment due to logistical needs.

RESULTS

Tables 1 and 2 depict the writing gains shown for fourth and sixth graders respectively. In both tables, students showed substantial gains in their post-test essays under SQWrite instruction when compared to the baseline measurement.

TABLE 1
Fourth Grade Pre-Post Test Gains

Writing Criteria	Pre-SQWrite (baseline)	Post-SQWrite
Median Total Words Written	111	212
Multiple Paragraph Breaks	7%	94%
Multi-Sentence Introduction Paragraphs	25%	75%
Multi-Sentence Conclusion Paragraphs	0%	89%
Transitional Phrases (Body 1)	7%	81%
Thesis Sentence – Grammar/Syntax Error Free	75%	90%

Note. N = 72; % indicates the percentage of students meeting the given criterion.

TABLE 2
Sixth Grade Pre-Post Test Gains

Writing Criteria	Pre-SQWrite (baseline)	Post SQWrite
Median Total Words Written	289	341
Multiple Paragraph Breaks	72%	100%
Multi-Sentence Introduction Paragraphs	39%	100%
Multi-Sentence Conclusion Paragraphs	28%	94%
Transitional Phrases (Body 1)	67%	100%
Thesis Sentence – Grammar/Syntax Error Free	72%	89%

Note. N = 18; % indicates the percentage of students meeting the given criterion.

DISCUSSION

This pilot study allowed the research team to assess the positive impact of SQWrite 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 12 weeks of SQWrite implementation, results clearly depict significant gains in students' essay writing achievement. Students in both fourth and sixth grades significantly improved their Total Word Written (TWW), use of multiple paragraphs, development of multi-sentence introductory and concluding paragraphs, use of transitions to introduce body paragraphs, 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. SQWrite'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 TWW and other measures, students' writing products were more elaborated, detailed, and organized.

The Alexander Graham Bell School teachers responded so favorably to the improved student writing, a full school (K-8) SQWrite adoption is under way. They 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 SQWrite greatly minimized teacher guidance in helping students "getting started." Throughout the SQWrite 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 SQWrite using research design that will allow for increased precision regarding individual student improvement.