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IESD RESEARCH PAPER

Effective Writing Strategy Instruction and Scaffolded Practice with Top Score Writing

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Introduction

Expectations for student writing proficiency in K-12 education are high. National and state standards, and the assessments that have been developed in support of them, typically require students to produce informational, argumentative, and/or narrative texts featuring clear purpose, focus, and organization; well-developed evidence and elaboration; and adherence to the conventions of standard English. All too often, students are unprepared to meet those expectations, while teachers may not feel they have the tools to help their students become successful writers—particularly in the elementary and middle/junior high school grades.

While the challenge is real, a substantial body of research provides valuable insights into effective instruction that can help students improve their writing skills. In particular, research supports the value of explicit instruction in writing strategies, utilizing a process of scaffolded practice to help students move toward independent use of those strategies in their own writing. This is the approach employed by Top Score Writing.

About Top Score Writing

Top Score Writing offers an easy-to-implement full-year writing curriculum for grades 2 through 8 that features explicit instruction in writing strategies for organizing and crafting informative/explanatory, opinion/argumentative, and narrative compositions to prepare students for state writing assessments.

- Top Score Writing uses a classroom-based approach designed to help all students achieve success on state writing assessments, including at-risk students.
- Strategies are taught using a sequence of modeling, followed by guided practice, then independent practice.
- Lessons at each grade level guide students through a process for each type of writing that starts with simple planning, then proceeds to development of an introduction, middle “body” paragraphs (including techniques for elaborating the topic), and a conclusion—all within the context of the type of writing prompts students might expect to encounter in state assessments. Students then practice writing and revising complete texts.
- Similar strategies are taught and reinforced for each text type at each grade level, adjusted to reflect the varying requirements of different types of writing and more sophisticated writing demands and capabilities at the higher grade levels.

About This Research Paper

This paper describes findings from a broad body of research related to writing strategy instruction and scaffolded practice as an element of that instruction, then describes ways that Top Score Writing aligns with those research findings.

Executive Summary

Top Score Writing utilizes research-supported methods to help students in grades 2-8 improve their writing in preparation for state assessments.

- Explicit instruction in strategies to support the writing process is beneficial in developing students' skill as writers.
 - An extensive body of research evidence supports the value of explicit instruction in writing strategies for students in general (Graham, Harris, & Chambers, 2016).
 - There is strong evidence for the value of writing strategy instruction for elementary students (Graham, Bollinger, et al., 2012).
 - Research evidence also provides strong support for writing strategy instruction for adolescent students (Graham & Perin, 2007a).
 - The benefits of writing strategy instruction extend to learning disabled students (Gillespie & Graham, 2014).
 - Top Score's curriculum is centered around the explicit teaching of strategies that cover the prewriting, drafting, and editing/revision stages of the writing process.
- Engaging in scaffolded practice with writing strategies helps students develop the skills they need in order to succeed in completing writing tasks on their own.
 - Research identifies scaffolded practice as a key element of effective writing strategy instruction (Graham, 2006; Gillespie & Graham, 2014).
 - Experts have offered evidence-based guidance on implementing effective scaffolded practice, including a gradual release of responsibility to students (Graham, 2008; Graham & Perin, 2007b; Rogers & Graham, 2008; Graham, Bollinger, et al., 2012).
 - Top Score Writing provides scaffolding in the form of cues that help students learn and practice writing strategies, utilizes a consistent pattern for writing strategy instruction that gradually transfers responsibility to the students, and provides extensive practice with use of writing strategies in context.

Value of Writing Strategy Instruction

What the Research Says

Explicit instruction in writing strategies is beneficial in developing students' skill as writers.

General Findings

An extensive body of research evidence supports the value of explicit instruction in writing strategies. Summarizing evidence from multiple sources of research, a chapter on “evidence-based practice” from the *Handbook of Writing Research* noted that

Effective instruction [as identified in the research] included teaching students specific strategies for (1) drafting paragraphs as well as (2) planning, revising, and editing text. . . . [H]ighly effective teachers taught students strategies for carrying out the process involved in planning, revising, and editing using modeling, explanation, and guided practice. (Graham, Harris, & Chambers, 2016, p. 221)

This conclusion was based on a “review of research reviews” drawing on two major evidence streams summarizing recent credible evidence into writing instruction: “quantitative (true and quasi-experiments, participants as own-control investigations, and single-subject design studies),” and “qualitative studies. . . examining the instructional writing practices of exceptional literacy teachers” (p. 212). More specifically:

- 42 studies involving true experiments, quasi-experiments, and participants as their own controls across grades 2-12 yielded an effect size of 1.26 ($p < .001$) for explicit instruction in writing strategies, considered a large effect (p. 218, Table 14.2).¹
- Similarly, moderate to large effects were found from single-subject design studies for strategy instruction in planning/drafting, editing, and paragraph construction (p. 220, Table 14.3).²
- Among the “ten writing practices applied in a majority of the qualitative studies with exceptional literacy teachers” (p. 219) were “teaching students how to plan, draft, and revise as well as teaching more basic writing skills” and “model[ing], explain[ing], and provid[ing] guided assistance when teaching” (p. 221, Table 14.4).

Elementary Writing Instruction

Focusing specifically on writing instruction for elementary students, a What Works Clearinghouse practice guide issued by the Institute of Education Sciences, sponsored by the U.S. Department of Education, found a “strong evidence base” for the recommendation to “Teach students to use the writing process for a variety of purposes,” which consisted in part of “Teach[ing] students strategies for the

¹ “Effect size” is a broad indication of the impact of an instructional practice that can be used to standardize findings across multiple research studies. An effect size of 0.20 is generally considered a small effect, 0.50 is considered a moderate effect, and 0.80 is considered a large effect (Graham & Perin, 2007b, p. 13).

² Results were measured in PND (percentage of nonoverlapping data points), which is “an approach for calculating an effect size” for single-subject studies, consisting of “the percentage of data points in treatment that represent an improvement over the most positive value obtained during baseline. . . . PND was interpreted using the following criteria: PND greater than 90% was a large effect, PND between 70.1% and 90% was a moderate effect, PND between 50.1% and 70% was a small effect, and PND 50% or below was classified as not effective” (Graham, Harris, & Santangelo, 2015, p. 506). PND for strategy instruction in planning/drafting averaged 96% over 21 studies; for editing, 84% over 5 studies; for paragraph construction, 97% over 4 studies (Graham, Harris, & Chambers, 2016, p. 220, Table 14.3).

various components of the writing process” (Graham, Bollinger, et al., 2012, pp. 1, 9). “Strong evidence” is defined by the Institute of Education Sciences as “consistent evidence that the recommended strategies, programs, or practices improve student outcomes for a wide population of students. In other words, there is strong causal and generalizable evidence” (p. 3).

According to the report authors, “Students need to acquire specific strategies for each component of the writing process” (p. 15). Specific examples of effective strategies identified in the report included:

- Brainstorming/generating ideas, then creating an outline (grades 3-6)
- Various sentence generation strategies, including “us[ing] transition words to develop different sentence structures” and “practic[ing] writing good topic sentences” (grades 3-6)
- Self-evaluating (grades 2-6)
- Using a checklist of questions to revise (grades 2-6) (p. 16)

Writing Instruction for Adolescents

Research evidence also provides strong support for writing strategy instruction for older students. A meta-analysis found a weighted effect size of 0.82 for writing strategy instruction across 20 effect sizes for students in grades 4-10, described as “large . . . and statistically significant” (Graham & Perin, 2007a, pp. 460, 462).³ The authors characterized their findings as follows: “In summary, explicitly teaching adolescents strategies for planning, revising, and/or editing had a strong impact on the quality of their writing” (p. 463).

Writing Instruction for LD Students

The benefits of writing strategy instruction extend to learning disabled students as well. Across 15 studies, a meta-analysis found a large weighted effect size of 1.09 for strategy instruction (Gillespie & Graham, 2014, p. 463).⁴

- “Most studies ($n = 13$) involved students in Grades 4 to 8, with a majority taking place in resource room/pullout ($n = 7$) or self-contained special education classes ($n = 3$). In 11 studies, students learned strategies for planning and writing texts. Two studies involved strategies for revising and editing texts, and two studies involved strategies for planning, writing, and revising” (p. 464).
- Average weighted effect size for the 4 studies described as high quality by the researchers was 0.73 (p. 464). While lower than the weighted effect size for the entire body of studies, this still approaches the established criterion of 0.80 for a “large” effect.
- Based on these findings, the authors concluded, “The practical implications of these findings are that teaching students with LD to plan, write, and revise using strategy instruction is an effective method for improving their writing” (p. 468). They further stated:

The effects of strategy instruction . . . support [the] contention that the writing difficulties experienced by students with LD are due to strategic difficulties with planning, revising, and editing. When they are taught strategies for carrying out these processes, students with LD show considerable improvement in the quality of their writing. (p. 468)

³ $p < .05$.

⁴ $p < .001$.

How Top Score Provides Writing Strategy Instruction

Top Score’s curriculum is centered around the explicit teaching of strategies that cover the prewriting, drafting, and editing/revision stages of the writing process. Key strategies that are taught at each grade level and for each text type in Top Score include the following:

- Analyzing keywords in a writing prompt to identify genre/requirements
- Outlining main ideas and supporting details before drafting the composition
- Constructing introductory and concluding paragraphs
- Constructing body paragraphs with elaborative techniques
- Referencing sources for text-based writing (informative/explanatory and opinion/argumentative writing)
- Utilizing effective transitions
- Reviewing/editing students’ own work

For example:

- Students are taught to identify *explain* and *inform* as keywords indicating expository writing; *story* and *tell* as keywords for narrative; and *opinion*, *what you think*, and *how you feel* as keywords for opinion writing. Then they practice analyzing sample writing prompts to identify what type of writing is called for by that prompt.
- For introductory paragraphs to expository essays, students are taught to write a paragraph consisting of a hook sentence, introduction of the three main ideas or arguments they will cover, and a closing sentence. They are taught that this paragraph should be 3-4 sentences long.
 - Color coding is used to help students identify the elements of the paragraph (e.g., hook in red, three topics in blue, closing sentence in green).
 - Students are taught about different types of hooks, such as a question, restatement of the prompt, or statement about the topic.
 - Students are guided to incorporate the main ideas from the outline they previously created.
 - Students are taught to conclude the paragraph with a general statement about their topic. For informative/explanatory essays, they are taught that this can reference information from a text they have read. For opinion/argumentative essays, this can be a statement about their opinion.
 - For narrative writing, students are taught to write a beginning paragraph instead of an introductory paragraph.
- For each body paragraph of an expository essay, students are taught to cover one of their three main ideas or arguments.
 - Students are taught to provide two supporting details for each main idea or argument.
 - Each paragraph has a topic sentence, followed by two or more sentences about each of the supporting details. (Students in grade 2 are initially taught to write a five-sentence body paragraph, including two sentences for each detail; students in grades 3 and up are initially taught to write a seven-sentence body paragraph, including three sentences for each detail.)

Color coding is used to help students identify the elements of the paragraph (e.g., topic sentence in red, sentences for the first detail in blue, sentences for the second detail in green).

- After learning a basic body paragraph structure, students are taught strategies for elaborating their paragraphs, including incorporation of quotes and paraphrases from other texts and additional thoughts and ideas of their own.
- For narrative writing, students are taught to write paragraphs about the events in a narrative instead of body paragraphs about main ideas or arguments.
- For the conclusion paragraph of an expository essay, students are initially taught to restate their three main ideas or arguments, give their own thought or feeling about the topic, and add an ending sentence.
 - More specifically for informative/explanatory writing, they are taught to give an overview (summary) of the topic, restate their three main ideas, and then give their own thought or feeling about the topic.
 - For opinion/argumentative writing, they are taught to state their opinion, restate their three supporting reasons or arguments, and then give their own thought or feeling about the topic.
 - For narrative writing, they are taught to write a paragraph ending the narrative instead of a conclusion paragraph.

Value of Scaffolded Practice

What the Research Says

Engaging in scaffolded practice helps students develop the skills they need in order to succeed in completing writing tasks on their own.

Scaffolded Practice as a Key Element of Strategy Instruction

Scaffolded practice—that is, a process in which strategies are first explained and demonstrated to students, then practiced by students with teacher guidance, and finally practiced independently—has been identified in the research on effective writing strategy instruction as a key element of such instruction.

- For example, one of the first meta-analyses on the effectiveness of strategy instruction, noting that “the primary goal of strategy instruction is thoughtful and independent use of the target strategies,” included only studies in which students were “shown how to use the strategy (i.e., modeling); (2) there were at least 3 or more days of instruction; and (3) instruction progressed toward students’ independent use of the strategy” (Graham, 2006, pp. 188-189).
- Similarly, describing studies that showed the value of strategy instruction for LD students, Gillespie & Graham (2014) stated that this category “involved modeling how to use specific strategies for planning, writing, revising, and/or editing text and incorporated student practice of the strategies in at least two sessions with the goal of independent use over time” (p. 457).

Evidence-Based Guidance on Implementing Scaffolded Practice

Citing findings from earlier meta-analyses, a leading researcher into writing instruction argued, “[O]nly encouraging students to engage in [the processes of writing] is not enough. They need more direct assistance to apply the processes effectively” (Graham, 2008, p. 5). “Evidence-based practices” described by Graham in support of the recommendation to “help students become strategic writers” included the following:

- “Use of think sheets or graphic organizers that structure what students do as they plan, draft, revise, or edit” (p. 5, citing Graham & Perin, 2007b; Rogers & Graham, 2008).
- Use of “an effective method for teaching a writing strategy” that includes the following elements:
 - “Describe the writing strategy and the purpose for learning it.
 - “Make it clear when students should use the strategy.
 - “Show students how to use the strategy.
 - “Provide students with practice applying the strategy, giving assistance as needed.
 - “Continue instruction until students can use the strategy independently.
 - “Encourage students to apply the strategy in appropriate situations once instruction has ended.
 - “Ask students to evaluate how the strategy improved their writing.” (pp. 5-6, citing Graham & Perin, 2007b; Rogers & Graham, 2008).

Along similar lines, the What Works Clearinghouse practice guide, *Teaching Elementary School Students to Be Effective Writers*, recommended that teachers should “gradually release writing

responsibility from the teacher to the student” (Graham, Bollinger, et al., 2012, p. 17). Amplifying on this recommendation, the authors explained:

Writing strategies should be taught explicitly and directly through a gradual release of responsibility from teacher to student. . . .

Once students demonstrate an understanding of the strategy, the teacher should encourage students to practice applying it as they write independently. Teachers should make sure they do not release responsibility to students too early. In some cases, this may mean having students spend more time in activities that are teacher directed until they develop the knowledge and skills to become more independent. . . .

. . . While the amount of guided practice that individual students need will vary, practice is necessary for all students. In other words, it is not enough to simply describe the strategy and show how to use it. (p. 17)

This guidance was given in support of a recommendation for which the practice guide described the supporting evidence as “strong” (p. 9).

How Top Score Provides Scaffolded Practice

Top Score Writing helps support the transition toward independent student use of writing strategies in several ways.

Cues

Top Score provides cues that help students learn and practice writing strategies. For example:

- Teachers post anchor charts listing key elements of the strategies their students are learning.
- Students use graphic organizers to structure their ideas in a prewriting (outlining) context.
- Color coding is used to help students distinguish key elements of essays and paragraphs.
- Students utilize checklists in reviewing their own essays and those of other students.

Instructional Process

Top Score utilizes a consistent process for writing strategy instruction that gradually transfers responsibility to the students. The teacher models, gives students opportunities for guided practice with teacher assistance, and then provides independent practice opportunities.

- The teacher provides an explanation and modeling of what the strategy is and how it is used.
- Support is provided for student practice of the strategy (e.g., in the form of guiding questions, examples, graphic organizers, and anchor charts).
- The teacher guides the class through one or more examples in applying the strategy.
- Students practice applying the strategy individually, with the teacher circulating to provide help as needed.
 - The teacher evaluates and provides feedback.
 - This process is often repeated multiple times for key strategies or strategies students are likely to find particularly challenging.

- Students experiencing difficulty receive additional support as needed for mastering the strategy.
- Students apply the strategy independently and are evaluated by the teacher.

Practice in Context

Top Score provides extensive practice with use of writing strategies in context.

- Key writing strategies are taught and reinforced at each grade level.
- Strategies for expository writing are taught first in a set of basic lessons at each grade level, then more specifically in lessons for informative/explanatory and opinion/argumentative writing.
- Each writing lesson takes place in the context of a writing task that is based on expectations for state assessments, starting with a sample prompt.
- Students practice each strategy multiple times, first in lessons focusing on that strategy, and then as part of a process of drafting complete sample essays.

Conclusion

Students in the elementary and middle/junior high school grades must improve their writing skills—not only to help them meet the requirements of state writing assessments, but more importantly, to prepare them for the future demands of high school, college, career, and life. Top Score Writing provides teachers with a curriculum utilizing research-supported methods that can help students meet those demands.

Consistent with research on effective writing instruction, Top Score provides explicit teaching of writing strategies covering the prewriting, drafting, and editing/revision stages of the writing process. These strategies are taught across multiple grade levels and text types. Top Score’s teaching methodology utilizes cues that help students learn and practice these strategies, a consistent process that starts with teacher modeling and continues to guided practice and independent practice, and extensive use of writing strategies in context. Taken together, this approach helps students develop the skills they need in order to succeed in completing writing tasks on their own.

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Note: Steve Graham, a professor at Arizona State University and author or coauthor of all of the research sources cited in this paper, is a leading researcher on writing instruction. For more than 30 years, he has studied how writing develops, how to teach it effectively, and how writing can be used to support reading and learning. He has no affiliation with Top Score Writing or IESD.