The Study

Methodology
Researchers set out to collect, categorize, and analyze experimental and quasi-experimental information on adolescent writing instruction in order to determine which elements of existing instructional methods are reported by research to be effective. The method used, known as meta-analysis, provides a quantitative measure of effectiveness using statistical analysis. One hundred forty-two scientific studies (including both learning-to-write and writing-to-learn) were examined. In each study, the performance of an experimental group was compared with the performance of a control group.

In Brief
This report responds to the need for information on how to improve adolescent writing skills. The study builds upon previously published *Reading Next* results and highlights a number of key elements essential to improving the often-neglected component of literacy—writing. Graham and Perin believe that writing in general—and teaching writing skills to struggling adolescent learners in particular—has not received enough attention by researchers and educators. Graham and Perin argue that for the 21st century, “writing well is not just an option for young people—it is a necessity” (p. 3). The authors offer the following statistics for consideration:

- 70 percent of students in Grades 4–12 are considered low-achieving writers.
- College instructors estimate that 50 percent of high school graduates are not prepared for college-level writing.
- 35 percent of high school graduates in college and 38 percent of high school graduates in the workforce believe that their writing does not meet expectations of quality.
- About half of private employers and more than 60 percent of state government employers state that writing skills impact promotion decisions.
- Poorly written applications are likely to doom candidates’ chances for employment.

The particular strength of this study is its use of meta-analysis, which allows researchers to determine the strength and consistency of the effects of different instructional practices on the quality of student writing. Graham and Perin gathered and grouped the research and sorted it by...
An effect size is a way to judge the differences between two groups. In this study, the different effects of instructional strategies could be tabulated and compared for a treatment group (students who received a writing intervention) and a control group (students who did not receive an intervention). The effect size then is representative of the power, or strength, of the intervention in producing improved writing quality in adolescents. Following is a listing of the eleven writing interventions Graham and Perin found to be effective, listed in order from greatest positive effect on quality student writing to the smallest effect size considered important in the analysis.

- Writing strategies
- Summarization
- Collaborative writing
- Specific product goals
- Word processing
- Sentence combining
- Prewriting
- Inquiry activities
- Process writing approach
- Study of models
- Writing for content learning

Greater detail on each of these approaches is provided in the following section; however, it is important to note that these interventions should be used together in what Graham and Perin call an “optimal mix” in order to have the greatest effect (p. 11). The optimal mix is not a specific prescription, but one that the school administrators and teachers need to discover based on student response and classroom culture. Analogous to medical treatment, Graham and Perin note that “educators need to test mixes of intervention elements to find the ones that work best for students with different needs” (p. 12). In addition, it is important to note that although all of the elements are supported by rigorous research, even when used together in an optimal mix, they do not constitute a full writing curriculum. This research does not serve as a magic bullet but as a menu of options that can offer a road to improving literacy through enhanced writing.

**Suggestions for School District Improvement**

The report identifies 11 elements of current writing instruction found to be effective in helping adolescent students learn to write well and to use writing as a tool for learning. These elements are supported by rigorous research and are expanded upon by Graham and Perin as follows:

1. **Writing Strategies** involve “explicitly teaching adolescents strategies for planning, revising, and/or editing, which has a strong impact on the quality of their writing” (p. 15). Graham and Perin also note that Self-Regulated Strategy Development (SRSD) is a good approach to teaching writing strategies. Citing De La Paz and Graham (2002) and Harris and Graham (1996), Graham and Perin list the six stages of SRSD, in which students are treated as active collaborators in the learning process, as follows:
   - **Develop Background Knowledge**: Students are taught any background knowledge needed to use the strategy successfully.
   - **Describe It**: The strategy as well as its purpose and benefits is described and discussed.
   - **Model It**: The teacher models how to use the strategy.
   - **Memorize It**: The student memorizes the steps of the strategy and any accompanying mnemonic.
   - **Support It**: The teacher supports or scaffolds student mastery of the strategy.
   - **Independent Use**: Students use the strategy with few or no supports. (p. 15)

2. **Summarization** involves explicitly and systematically teaching students how to summarize texts” (p. 4), which may involve either a rule-governed or intuitive approach.

3. **Collaborative Writing** involves developing instructional arrangements whereby adolescents work together to plan, draft, revise, and edit their compositions” (p. 16). Graham and Perin cite studies showing that student writing quality improves when students are allowed to work together and help each other; they also note that collaboration shows a strong impact on improving the quality of students’ writing.

4. **Specific Product Goals** involve assigning students specific, reachable goals for the writing they are to complete” (p. 17). This element of the writing process includes the assignment’s purpose and the characteristics of
the final product, such as writing a persuasive essay. Adding more ideas to an assignment when revising and using specific structural elements are two examples of goal setting, which is better than defining an overall goal for the product.

5. WORD PROCESSING “uses computers and word processors as instructional supports for writing assignments” (p. 4) and “can be particularly helpful for low-achieving writers” (p. 17). Using computers to write can be accomplished under teacher supervision or in collaborative groups of students and can help with spelling errors and legibility.

6. SENTENCE COMBINING “involves teaching students to construct more complex and sophisticated sentences through exercises in which two or more basic sentences are combined into a single sentence” (p. 18). One approach combines low achievers and high achievers in pairs for six lessons that teach combining simple sentences and embedding adjectives, adverbs, clauses, or phrases from one sentence to another.

7. PREWRITING “engages students by involving them in activities designed to help them generate or organize ideas for their assignment” (p. 4). Activities can involve information gathering or developing a visual representation of their project before they begin to write.

8. INQUIRY ACTIVITIES require students to analyze concrete information “to help them develop ideas and content for a particular writing assignment” (p. 4). “Effective inquiry activities in writing are characterized by a clearly specified goal (e.g., describe the actions of people), analysis of concrete and immediate data (observe one or more peers during specific activities), use [of] specific strategies to conduct the analysis (retrospectively ask the person being observed the reason for a particular action), and applying what was learned (assign the writing of a story incorporating insights from the inquiry process)” (p. 19).

9. PROCESS WRITING APPROACH “interweaves a number of writing instructional activities” (p. 4) that emphasize writing for real readers, self-reflective writing, personalized instruction, and the cycles of writing (planning, translating, and reviewing). The complexity of this approach may require specific professional development so that effectiveness can be optimized.

10. STUDY OF MODELS provides students with “good models for each type of writing that is the focus of instruction” (p. 20). In this element of the writing process, it is important to offer students the opportunity to read and analyze different types of writing and emulate these models of good writing in their own work.

11. WRITING FOR CONTENT LEARNING involves using writing as a tool for learning the subject matter. Although this approach has the least effect on writing quality and only a slight effect on learning content material, research shows it does have a consistent effect on both.

Challenges

In this age of accountability for reading and mathematics scores, writing can easily be overlooked, despite its link to literacy. In addition, teaching writing can be a difficult task for many teachers and sufficient professional development may not be available to adequately bridge the gap between a desire to teach effective writing and successfully doing so. Graham and Perin recognize these barriers to teaching writing and challenge teachers to overcome them and to recommit to teaching adolescents how to write well in order to learn the subject matter and progress as college students, effective employees, and active citizens.

Bottom Line

The Writing Next elements do not constitute a full writing curriculum any more than the Reading Next elements did for reading. However, all of the Writing Next instructional elements have shown clear results for improving student writing. The elements can be combined in many ways to strengthen adolescent literacy development. Graham and Perin hope that in addition to providing research-supported information about effective writing instruction for classroom teachers, this report will stimulate discussion and action at policy and research levels, leading to solid improvements in writing instruction in Grades 4–12 nationwide.
Other Resources


Administered by Learning Point Associates in partnership with the Southwest Educational Development Laboratory (SEDL), under contract with the Office of Elementary and Secondary Education of the U.S. Department of Education.