

Review – ‘A walk through the landscape of writing: Insights from a program of writing research’

Graham, S. (2022). *Educational Psychologist*, 57(2), 55–72.

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The following is a summary of an [article written by Professor Steve Graham](#) of Arizona State University, published after he won an American Psychological Association (APA) award for Distinguished Psychological Contributions to Education. Professor Graham has researched and published in the area of writing development and writing instruction for over 40 years.

Factors that contribute to children’s growth as writers

1 Students’ writing knowledge

To write well, students need knowledge about composing their work. This includes knowledge of:

- the functions of different types of texts
- the attributes of written words and sentences
- the processes for planning and drafting
- writing topics.

Graham and others have conducted studies aimed at determining the level of writing knowledge of students with and without learning disabilities (LD). This research was done by interviewing students (asking them questions about writing). Unsurprisingly, the typically developing students had more knowledge about writing than did the students with LD. The typically developing students tended to see writing as more about the process (e.g., planning, revising), whereas the students with LD focused more on transcription (e.g., spelling, handwriting). Subsequent studies found that writing knowledge predicted writing performance, and meta-analyses have found that increasing knowledge of writing can enhance writing quality, but that more research is needed to determine how and when this occurs.

2 Strategic writing behaviour

Although there are many ways to approach a writing task, skilled writers have a set of strategies in common (e.g., goal setting, planning, revising). Graham and his colleagues have conducted research on the strategic writing behaviours of students with writing difficulties. It was found that those students did not plan their writing or write for very long. They seemed to view writing as a single process involving mainly content generation. Other studies looked at how well the use of strategic writing behaviours predicted quality of writing. For example, in one study, the quality of students’ planning was assessed in addition to their written text, and it was found that planning scores were particularly predictive of writing scores. Research in this area has led to the development of an approach known as Self-Regulated Strategy Development (SRSD), and is probably the most experimentally investigated writing intervention, with high effect sizes found for SRSD in meta-analyses.



3 Writing skills

This includes skills such as spelling, handwriting and typing. If students have difficulty with these transcription skills, their writing can be negatively affected because students must devote more cognitive resources to these skills rather than to composition. Sentence construction skills are also important to writing. Some studies, for example, have demonstrated that sentence-combining instruction can improve the sentence construction ability of both more and less skilled writers. Handwriting fluency has been found to predict writing quality, as has spelling (although the latter is a less reliable predictor and more research is needed).

4 Motivation

Findings from studies on motivation and writing are less consistent than for knowledge and skills. Some studies have found that motivational beliefs were strong predictors of writing performance, while others have provided very limited evidence that motivational beliefs predict writing performance. The literature on interventions aimed at increasing motivation to write is quite limited; however, one meta-analysis by Graham and colleagues found that studies examining the effect of improving writing motivation on writing quality had a large effect size of 1.07. More research is needed in the area of motivation to write.

Connections between writing, language, reading, and learning

1 Language and writing

A meta-analysis comparing the writing skills of students with and without language impairment found that

students with language difficulties scored lower on measures of writing quality, writing output, spelling, grammar and vocabulary. This research supports the contention that writing is a language-based activity and that difficulties with language have a detrimental effect on children's writing. More research is needed in this area, especially studies examining the effect that language interventions have on children's writing.

2 Writing and reading

The research of Graham and colleagues has been aimed at providing support for the theoretical contentions that reading and writing are connected and that teaching and engaging in one skill (reading or writing) enhances the other. As an example, a review comparing students with and without reading difficulties found that those with reading difficulties' skills in spelling, written vocabulary, syntax, writing quality, sentence creation, organisation of content, writing output and handwriting were lower than their age-matched peers. A second comparison was conducted in which students with reading difficulties were matched with younger students at the same reading level. For this comparison, the only difference between the two groups was in spelling. This review provides support for the contention that capable readers are better writers than weaker readers. Other research in this area has investigated the effects of reading instruction on writing and vice versa. For example, one study looked at whether writing practice and writing instruction enhanced reading. Students in Years 2 to 12 wrote about material they read and their reading comprehension improved. Reading instruction can also

have an effect on writing. A meta-analysis by Graham and colleagues found that studies involving the teaching of phonological awareness, phonics, and comprehension enhanced writing. Unsurprisingly, studies where instruction in reading and writing was combined enhanced both reading and writing!

3 Writing and content learning

Writing can result in increased incidental learning because when students write about what they are learning, they need to synthesise information as they convert ideas into text. Also, learning can occur when students retrieve writing ideas and content from episodic memory or external sources and evaluate and manipulate these in working memory. Graham and colleagues conducted a meta-analysis examining writing-to-learn in science, social studies and maths. Writing-to-learn was effective with school students of all ages and across all three content areas.

The identification of effective writing practices

Based on many studies and meta-analyses, Graham's recommended teaching practices are:

- 1 Students need to read and write. This includes such practices as extra reading and writing, writing about reading and writing-to-learn. This is the 'doing' part of writing.
- 2 Teachers need to teach writing and reading. This encompasses a long list of different aspects of writing that need to be explicitly taught to students. Some examples are sentence construction, strategies for planning, revising and editing,



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spelling, strategies for paragraph writing, handwriting, vocabulary, phonics and comprehension.

- 3 Students should receive feedback. This includes adult feedback, peer feedback (giving and receiving) and self-assessment.
- 4 Teachers should provide a supportive writing community – one where students are supported and feel able to take risks in their writing, and where they can be enthusiastic and motivated writers.

Writing instruction in schools

Surveys from around the world investigating teachers' writing practices have indicated that *some* teachers provided good, research-based writing instruction and devoted enough time to writing instruction and writing, but *most* teachers did not provide a solid writing program, did not devote enough time to writing instruction, and their students did not spend very much time writing. Some reasons have been suggested for this state of affairs, including a belief that good reading instruction is all that is needed to

become a good writer, that good writers are 'born and not made', that writing is not as important as other subject areas and that writing is acquired naturally and therefore does not need to be taught. Other reasons may be related to minimal requirements by education authorities, a low emphasis on writing in initial teacher education programs and teacher's beliefs about writing.

According to Graham,

“Better writing instruction depends on systemic changes which involve public perceptions, rock solid commitments by political and education systems to its value, and teachers who are prepared and want to teach it. The knowledge to make this happen exists but it is not clear if there is the will to do so.” (p. 67)

Graham concludes by stating that there

is a lot we know about how writing develops and how best to teach it, but there is still a lot of research to be done, including investigating the role of new writing technologies as they develop.

If you would like to hear Professor Steve Graham speak about writing development and teaching writing, he recently presented a public seminar for the Macquarie University Centre for Reading. You can access that presentation [here](#).

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