



Introduction

Teaching and learning writing

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In the majority of societies across the world competence in writing is demanded in many aspects of day-to-day life (Swedlow, 1999). Thus it is important that children become competent writers and writing is, therefore, a major concern of educators. While the definition of a competent writer may be fluid, and a point for debate, there does appear to be a consensus that we need to pay more attention to the teaching and learning of writing (for example, see National Commission on Writing, 2005, in the USA, the 'every child a writer' proposal in the UK, DCSE, 2007, and a cross psychology review by Rijlaarsdam *et al.*, 2005). These reviews all point out that more needs to be done in the school to support the teaching of writing through new and innovative teaching methods built on the latest research.

However, writing is a complex skill and can be studied in many different ways. Psychology is but one of many disciplines contributing to research on the teaching and learning of writing. The purpose of this monograph is to highlight recent national and international psychological research on the teaching and learning of writing to inform educational psychologists and education professionals alike. The contributions are derived from the proceedings of the *Psychological Aspects of Education: Current Trends* conference funded by the *British Journal of Educational Psychology* and held at Oxford Brookes University in July 2007.

The studies in this monograph fall into two broad and overlapping areas of interest. The first is concerned with charting performance and development in writing skills in typical and in special populations (Galbraith, Myhill, Dockrell, & Connelly; Fayol, Zorman, & Lété, pp. 63–75; Berninger *et al.*, pp. 77–95). The second area is concerned directly with assessment, assistance and instruction in writing (Graham & Harris, pp. 97–113; Harris & Graham pp. 115–137; Barnett, Henderson, Scheib, & Schulz, pp. 139–159; MacArthur, pp. 161–177).

Part I: Modelling performance and charting development in writing skill

In order to best inform educational practice it is necessary to have a full picture of the writing process and how writing skills develop in children. Considerable advances have

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been made in understanding the cognitive processes underlying reading development, and this has led to effective interventions. In contrast, our understanding of the cognitive processes underpinning writing and writing development is less advanced (Graham, 2008). The field of reading research has been propelled forward by the many recent models of reading development examining the complexities of the processes involved. These models were developed once researchers began questioning in detail the assumptions about how the many aspects of the reading process actually worked together. Writing researchers have tended to be more cautious in developing those kinds of models but now there is a more firm basis of research evidence more models are being proposed (Levy & Marek, 1999; McCutchen, 2000; Torrance & Galbraith, 2006). We can also see that the papers in this section are linked by their open questioning of previously common assumptions about the relationships between variables involved in the development of writing.

For example, the paper by Galbraith (pp. 5-26) sets out to argue that the role of implicit text production processes has been overlooked and the role of explicit thought in writing has been overemphasized. Galbraith makes the point that language production for writing is not a simple translation process of thoughts into words as is commonly assumed. He proposes a dual process model of writing based on a convincing series of experiments highlighting differences between knowledge retrieval and knowledge constituting processes.

Myhill (pp. 27-44) also points out in her paper that writing is not simply translating thoughts in your head. In a detailed and well illustrated paper she examines the writing of secondary school students from a linguistic theory approach. She clearly demonstrates that children need to develop a linguistic repertoire for writing that is different from that for talking. The poorer writers in her study were those children who wrote more the way they actually talked.

Language as a limiting factor is also the theme of the paper from Dockrell and Connelly, pp. 45-61. Here a review is presented showing that children with specific language impairment (SLI) struggle with writing throughout their school career. Although in the general population many children have difficulty with the production of written text (Hooper, Swartz, Wakely, de Kruif, & Montgomery, 2002; McArthur & Graham, 1987), writing is particularly poor in this special population. The importance of competent oral language skill as a baseline for writing development would seem obvious (Shanahan, 2006). However, what is not so clear is how oral language actually impacts on the different writing processes. The text production skills of children with language difficulties seem particularly hard hit with both vocabulary deficits and spelling problems contributing heavily to poor performance.

Spelling is also dealt with in the paper by Fayol, Zorman, and Lete, pp. 63-75. Here the authors questioned the frequently reported? strong correlation between reading and spelling. As with language, reading is assumed to be a prerequisite for writing by many authors, although the amount of studies investigating links between aspects of reading and aspects of writing is rather small and has shown a mixed bag of results (Shanahan, 2006). By testing both reading and spelling in one large population, Fayol and colleagues demonstrate in their paper that there can be a dissociation between these skills in some writers. The fact that this is associated with phonological deficits and processing speed makes for an interesting educational point.

Berninger and colleagues take the idea of testing skills to identify patterns in populations one step further by studying idea generation (prior to a writing task) and the associated brain activation patterns identified by MRI scanning. Here they show that

good and poor writers could be differentiated in their idea generation skills by different patterns of response in the brain. The areas that were highlighted provided further evidence that good writers had better working memory and were thus more efficient at idea generation, further illuminating connections between complex cognitive skills.

Part 2: Assessment, assistance and instruction in writing

The papers in this section focus directly on the educational demands of writing in the school environment. In particular, Graham and Harris, in their joint chapters, reflect the research focus in the USA on specific educational implications for writing instruction (See the recent COST Action IS0703: The European Research Network on Learning to Write Effectively, 2007, proposal for more detail on the divergence between the USA and European research directions in writing research). The papers here allow us to integrate lessons and research from the USA on these issues.

Graham and Harris expand on the recent highly acclaimed 'Writing next' report (Graham & Perin, 2007) and other meta-analyses and meta-syntheses to detail a number of explicit recommendations for the teaching of writing in their article. The authors are quick to point out that these are recommendations based on the available research not prescriptive methods and there are a number of careful and common sense caveats to be considered. This is a powerful summary of the effective strategies that can be drawn upon to improve the writing of children between the ages of ten and eighteen.

The direct focus on educational attainment in writing continues in the article by Harris and Graham on *Self-regulated strategy development in writing*. This is an approach to writing instruction developed over many years and the chapter is full of detail on how this approach can be successfully implemented in the classroom. The authors note that their approach is centred on 'theoretical pragmatism' and that it is more important to ask the right questions rather than be driven by just one approach or one theory.

In order to identify and assist struggling writers in the classroom, we need accurate assessment tools. Focusing on transcription skills, Barnett and colleagues describe, in their article, the development of a test to measure handwriting speed (the DASH). The publication of standardized norms of handwriting speed allows researchers to move forward in their understanding of the complex interplay between handwriting fluency and success in writing more generally. It also enables practitioners to identify those with difficulties and plan appropriate support. Such support can take various forms including special tuition in handwriting, extra time in examinations and the teaching of keyboarding skill and use of other technology.

There has been a large investment in the use of information technology in the classroom over the last decade. However, a recent research review on technology for literacy in the UK (Torgerson & Zhu, 2003) made the startling conclusion that there was no evidence that information technology was making any difference to literacy attainment. The article by MacArthur reviews in detail current knowledge known about the impact of technology on children learning to write. The author demonstrates that there can be benefits of using information technology in the classroom particularly for struggling writers. MacArthur also makes a clear statement that children need to be carefully shown and instructed in how to get the best out of any new technological tool for writing. He suggests that many schools do not even allow children to get the best out of simple word processing tools through not providing enough practice or instruction in typing. New tools are of little use unless young writers know how to use them to best effect.

Taken together, these papers emphasize the complexity of the writing process and the various levels of analysis that can be used, ranging from the purely biological (brain activation) to overt behaviour. This corpus of work illustrates the breadth of current research, spanning different components of the writing process including the generation of ideas, linguistic planning, spelling, and handwriting. Such a combination of different approaches is needed to obtain a better understanding of the writing process, which we hope will in turn contribute to improved practice and performance in the classroom.

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