

Malpique, A., Valcan, D, Pino-Pasternak, D., Ledger S., &. (November, 2022). *Studying the Development of Handwriting and Keyboarding Skills in Early Education: A Pilot Study*. Paper presented at the Australian Association for Research in Education (AARE) Conference.

### **Abstract**

In today's digital world, children are expected to produce handwritten and computer-generated work to assess content knowledge across subjects and years. Considering the continuing digital revolution in education and learning, the *Writing for All* project was designed to investigate Year 2 students' abilities, motivation, engagement and self-efficacy in composing texts via handwriting and keyboarding and teaching practices promoting effective writing. The current study describes findings from the pilot phase of the project involving 49 children recruited at the end of Year 2 and enrolled in three primary classrooms from two primary schools in Western Australia. We addressed the following main questions: (1) Do handwriting and keyboarding differ on their contributions to Year 2's writing performance?; (2) What is Year 2 students' motivation, engagement and self-efficacy toward handwriting and keyboarding?; 3) What writing instruction may Year 2 children experience at the end of Year 2? Handwriting and typing outcomes were assessed (i.e., letter writing automaticity; writing quality; text length; and spelling) as well as children's motivation, self-efficacy and engagement in writing via paper and pencil and via keyboard. Finally, Year 2 teachers (4 female teachers) were surveyed on the amount and type of writing instruction provided.

Findings from this pilot study confirm and extend previous studies by showing how handwriting and keyboarding automaticity are related to the writing performance of Year 2 students. Results showed statistically significant associations between children's handwriting performance and keyboarding performance, indicating that children composed longer and higher-quality texts via paper and pencil than via keyboard. Current results further showed that the quality and the length of children's handwritten texts was associated with children's ability to automatically and accurately write alphabet letters. We also found a statistically significant difference between genders in the quality of handwritten texts favouring girls, with results suggesting that boys wrote longer texts by keyboard, but that girls produce higher quality texts via keyboard. Findings further indicated that

children preferred writing stories using a computer, but they found that they were better at writing using paper and pencil. Finally, teachers reported that children spent 80 minutes on average in writing activities in their classrooms each week, with results indicating that the teaching of spelling was prioritised over handwriting and typing. Implications for research and practice will be discussed.