Pros and Cons: Handwriting Versus Digital Writing

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# Abstract

This study compares three different writing conditions – pen and paper, tablet, and tablet with access to speech synthesis – within a class of fourth graders in Sweden. The aim was to examine if these different conditions for writing had any impact on students’ creation of narrative text. The empirical data consists of students’ texts, composed under these three conditions, completed with data from participant observations. The theoretical model, the Wheel of Writing, in combination with a process analysis described in Systemic Functional Linguistics, served as a basis for analysis of the texts. Observations were analysed using content analysis. Findings presented in this article are partly in line with previous research. Speech synthesis seemed to play a crucial role in improving students’ writing. The texts were affected in terms of increased text length, spelling, structure, and content when using digital resources. These results were most obvious for students with Swedish as their sec- ond language. One core finding, which was true for most students, was that processes describing action verbs increased when students wrote digitally. Contradicting this, when students wrote by hand they used more processes, describing feelings and verbal processes.

# Outcome

"The analysis revealed differences in some areas, and differences were found within the dimensions of vocabulary and grammar (language accuracy), text length, text structure, and abundance of material processes. L2 students wrote much longer texts, and they used more accurate and structural language when using tablets with access to speech synthesis. This also applied to students with L1 in terms of language accuracy but not the length of the text or the structure. The result of this section show that material processes dominated when students wrote digitally and that mental, verbal, and relational processes dominated when they wrote by hand. The observations indicate that students used speech while spelling, which resulted in less need for help. There was more interaction between students when they wrote digitally." (Authors, 156)