ASSISTIVE TECHNOLOGY TO ENHANCE WRITTEN EXPRESSION OF

STRUGGLING WRITERS IN ELEMENTARY SCHOOL:

A TABLET-BASED LITERACY INTERVENTION PROJECT

by:

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We accept this thesis as conforming to the required standard

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ABSTRACT

Assistive technology has been extensively used as method of improving learning for struggling students, despite the lack of empirical research to support this practice (Bebell & Pedulla, 2015; Cumming, Strnadová & Singh, 2014; Maor, Currie & Drewry, 2011). In an effort to discover effective strategies for struggling writers, the researcher investigated the effectiveness of the iPad application Clicker Docs, in combination with built-in tablet accessibility features as an intervention tool to improve writing for struggling writers. Using a switching replications quasi-experimental design, this study investigated the effectiveness of the application Clicker Docs and tablet accessibility features as a 6 week alternating intervention tool for improving writing. Aspects of writing included writing quality, as measured by student writing samples assessed with a teacher developed rubric, writing output, as measured by number of words per writing sample, and attitudes of struggling writers, as measured by the Writing Attitude Survey (Kear, Coffman, McKenna, & Ambrosio, 2000). Two groups of 11 students from grades 2-7 in a small rural school in B.C., who were identified with a disability or as a struggling writer, alternated participation in this intervention program that included two 25 minute intervention sessions per week. During the intervention program, every student was taught how to use accessibility features as well as how to use the application Clicker Docs on their own personal device. It was hypothesized that overall the writing of the students would improve following the iPad intervention. A mixed 2x2 repeated measures analysis of covariance (ANCOVA) with pre-test scores as covariate was used to analyze the results for each specific research question. Results showed a large significant effect of the iPad application Clicker Docs and accessibility features on writing quality at Post-test 2. On average, those in the iPad intervention group demonstrated better writing quality than those in the control group, when factoring in pre-test scores. In

addition, a medium significant effect of the iPad application Clicker Docs and accessibility features was found for writing output. Contrary to researcher hypotheses, on average, those in the iPad intervention group wrote less overall than those in the control group, when factoring in pre-test scores. No effect of the iPad application Clicker Docs and accessibility features was found for attitude towards writing.

Keywords: assistive technology, tablet computer, iPad, struggling writers, learning disabilities, writing quality, writing output, writing attitude, intervention, switching replications design,