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The relationship of Pre-service Education Majors' Multiple Intelligence Learning Styles to their Level of Digital Literacy

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THE RELATIONSHIP OF PRE-SERVICE EDUCATION MAJORS' MULTIPLE

INTELLIGENCE LEARNING STYLES TO THEIR LEVEL OF DIGITAL LITERACY

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

Chad D. Sherman

Indiana University of Pennsylvania

August 2011

Indiana University of Pennsylvania
The School of Graduate Studies and Research
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Title: The relationship of Pre-service Education Majors' Multiple Intelligence Learning
     Styles to their Level of Digital Literacy

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This study examined the level of digital literacy held by pre-service education majors (N = 101, Male = 30, Female = 71) enrolled in one of three digital instructional technology courses as a western Pennsylvania university. All measurement was done prior to any digital literacy instruction. The study investigated how the participants' levels of the eight multiple intelligence learning styles correlated with their level of digital literacy as determined by the Instant Digital Competence Assessment.

The literature review has identified several methods of implementing the multiple intelligences theory into digital literacy research. Gardner's (1983) theory of multiple intelligences argues that individualized instruction should be paired with individualized assessment. However, recent scholars have argued that a student's learning style can be used to improve and predict their digital literacy (Barbour and Cooze 2004; Gen 2000; McCoog 2007). The literature review has also critiqued several popular digital literacy assessment techniques.

The results revealed that level of verbal-linguistic intelligence significantly correlated ($p < .05$) with the subjects' level of digital literacy. The other seven multiple intelligence variables did not significantly correlate with the dependent variable. Further

statistical analysis demonstrated that each of the eight multiple intelligence variables (including level of verbal-linguistic intelligence) had a weak correlation ($r = .188$) with level of digital literacy when isolated from the other variables. When the eight independent variables were analyzed as a whole, they were found to be a poor predictor of the pre-service education majors' digital literacy capabilities.

The findings of this study indicated that the eight multiple intelligence variables should not be used as an accurate predictor of pre-service education majors' level of digital literacy. The findings suggest that the participants' digital literacy skills vary greatly. However, the study did not demonstrate that the eight multiple intelligence variables were responsible for this variation. It is suggested that there is a need for more research in areas of educational digital literacy.

The theory of multiple intelligences states that assessment should also match the students' unique learning styles (Gardner 1983). This study used a non-individualized assessment strategy. In order to find more significant correlations, further research should use a unique assessment strategy for each learning style.