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Re.: Final Report for the research paper presented at the 11th Annual Hawaii International Conference on Education January 6th to January 9th, 2013 Honolulu, Hawaii

A. Paper entitled “*Assessing the Correlation between Educators' Use of Technology and the Personal and Contextual Factors in K-12*”

B. Research problem:

While technology availability and teachers’ skills are the main factors in the technology integration in the classroom, the success of the technology integration in school environment hinges on many other factors. During the last two decades, researchers attempted to identify the core variables underlying the technology integration process and the factors affecting its success. For example, studies found that teacher’s external work environment influences how they use technology resources to support teaching and learning (Ertmer, 2005). Other studies focused on examining the contextual factors at the school site that influences their technology integration decision (Chen, 2010).

While the majority of the prior studies identified factors affecting educators’ use of technology in K-12 and higher education, this study focuses on assessing the strength of association and the direction of the correlation between some of these factors and the educators’ use of technology, specifically in K-12 environment. The main purpose of this study is to evaluate the importance of the strength of association and direction of the correlation in helping administrators and developers to prioritize the deployment of the technology resources and its use.

C. Research procedure

This study used correlation analysis to measure the level of the correlations (strength of association and direction) between the personal and contextual factors and the educators’ use of technology in K-12. The investigators examined examples of factors that already exist in school environment and try to assess the level of strength and direction of association of those factors with educators’ technology use. The following are the factors included in the analysis:

- School size and technology availability
- School size and the frequency of using technology
- The type of Schoolwork and the frequency of technology use
- Teachers’ years of teaching experience and using technology

Population: Participants were teachers, administrators and consular randomly selected from 12 Arkansas Public Schools System during the winter and spring of 2011-2012 (n=486).

Instrumentation: Data was collected using an online questionnaire as a research tool developed by the investigators. This questionnaire covered the following areas: Demographic characteristics such as gender, income and the nature of school work. Other questions asked about the frequency of using technology in teachers' daily work, the amount to which they have access to technology, the proficiency level in using technology and the availability of technology in school.).

This study investigated the strength of association and direction of the correlation between four contextual and personal factors affecting the use of technology by educators in K-12. To examine these factors, the researchers examined three aspects of these relationships: First, is there evidence of its existence? Second, if so, what is its strength? Third, what is its direction?

D. Summary of findings

The most significant finding of this study is that the statistical significance of relationships discovered between educators' use of technology and different factors do not carry the same level of association or the direction of relationship. Therefore, in case of examining the factors affecting the use of technology by educators, it is the important, not only to investigate whether or not there is an observed relationship between these variables, but also to examine the strength and direction of this relationship.

Another important finding regarding the inconsistency in the unequal distribution of equipment between large, medium and small school district found in this study should not cause any concerns, as the lower classes (elementary) use different set of equipment than higher classes (middle and high school). For example, the larger the schools size the more LCD projectors or document cameras are available met by the finding that the smaller the schools district size the more Interactive whiteboard are available. Therefore, asking teachers what technology they use often in their teaching is a proper strategy to allocate the needed equipment for each level.

E. Conclusions and recommendations

The educational importance of this study found in the practical implications for administrators and policy makers to prioritize the allocation of the technology resources in public schools. The findings indicate that the significance of any of the examined factor does not only provide information about whether it correlates with the use of technology but also highlight the association level of this relationship. Thus the explanation power of this relationship may guide the administrators and policy makers into technology resources allocation decisions. The findings of this study could also give specific guidance to individuals who design and implement technology initiatives in K-12 by prioritizing the agenda for professional development programs and provide teachers with the more needed training.