Building IT capabilities: learning by doing

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Information and communication technologies (ICTs) are ubiquitous in much of the developed world. With the growing interest in business process outsourcing, further deployment of these technologies in developing countries is a valuable economic development tool. Unfortunately, digital inequity, stemming from shortcomings in National Information Infrastructure as well as lack of IT skills, language barriers, and illiteracy often constrain ICT adoption and use in developing countries. The case study presented here focuses on an e-learning initiative within Sri Lanka. A key government ministry selected 150 of its employees for inclusion in a hybrid learning post-graduate diploma program in public administration. While this program does not focus on teaching information technology skills, its hybrid context provides the added benefit of developing technology skills among participants. We followed the participants of the program from start to finish. Using a combination of quantitative and qualitative data, we found that over the course of the program, participants became more aware of Internet availability and female participants displayed improvements in computer self-efficacy. These results suggest hybrid learning programs, such as the one studied may indeed serve to simultaneously deliver content and improve IT skills and awareness.

Keywords: digital inequity; e-learning; content-based instruction; technology adoption; computer self-efficacy

1. Introduction

Digital inequity refers to unequal access to and use of information and communication technologies (ICTs) (DiMaggio, Hargittai, Celeste, & Shafer, 2004). Some previous work (Van Dijk & Hacker, 2003) has focused on the *access to* part of this definition, suggesting the development of a National Information Infrastructure (NII) and the corresponding improvements in technology access address the key digital inequality hurdle. Infrastructural development is a necessary element of closing the digital gap and such efforts are steeped in policy decisions and cultural norms (Garfield & Watson, 1997). However, we argue that the *use of* element of the above definition is more difficult. Individual citizens wishing to be competitive locally and abroad, especially in governmental and business-oriented positions need to know how to *use* technology (Hsieh, Rai, & Keil, 2008), suggesting the development of an NII is a necessary, but not a sufficient condition for shrinking the digital divide. Governmental efforts need to also focus on developing the complementary IT skills needed to leverage the infrastructure investments.

Developing knowledge and skills about ICT is fundamental to any development effort focused on securing a greater role within the information society for a developing country and its citizens (Avgerou, Navarra, Miller, Sahay, & Volkow, 2003). Such skill development can result in access to better and more timely information, better decision-making, and

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