Digital Literacy Education for the Development of Digital Literacy

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ABSTRACT

The primary purpose of this study is to examine the effect of digital literacy education (DLE) on the development of digital literacy through a local digital technology community center, particularly for those with a lack of digital literacy. This study focuses on measuring significant differences between before and after digital literacy education through pre- and post-performance tests and surveys. This study also measures the relationships between the DLE and computer and Internet use. The mean comparison of the paired-samples t test results of this study shows an increase in the mean from pretest to posttest, implying the enhancement of digital literacy as a result of the education. The ultimate goal of the digital literacy education in this study is to provide people, who are the digitally illiterate, with learning and digital opportunities to improve their digital literacy through education in an informal setting and to facilitate digital connection and inclusion.

1. INTRODUCTION

The use of information and communication technologies (ICTs) at work, school, and home is pervasive and becoming an essential part of people's daily lives. ICTs have transformed everyday activities. People need to know how to use ICTs, such as computers and the Internet, and they need to develop their digital literacy in this digital age. Digital literacy represents a person's knowledge of and skills in using ICTs and the ability to perform a variety of complex tasks using them effectively and efficiently in digital environments (Jones-Kavalier & Flannigan, 2008). This conceptualization reflects that digital literacy has become the skill required for people to gain information, personally develop and achieve, communicate and interact with others, acquire jobs, attain economic success, and actively participate in citizenship and collaborative networks online (EC, 2011).

Digital literacy is increasingly important for digital inclusion and digital citizenship. Many people take for granted the knowledge of how to use computers and the Internet and perform basic tasks using them. However, individuals who are still digitally illiterate or have a lack of digital literacy have been excluded from the digital world (Orrick, 2011; Seale, 2009; van Dijk, 2006). The lack of skills and knowledge of how to operate and use ICTs is a critical barrier to the enhancement of digital literacy. The disparity in use of ICTs for a wide variety of activities has raised concern about the digital literacy gap, which can expand the inequality between the information rich and the

information poor (Seale, 2009; Selwyn, 2006; van Dijk, 2006).

The digital literacy gap is considered one of the important social fairness issues confronting digital society (Seale, 2009). Those living in marginalized circumstances continue to show low levels of digital literacy, a contributing factor to the digital literacy gap (Hadjerrouit, 2010; Junge & Hadjivassiliou, 2010). The reason the digital literacy gap matters is that those with a lack of digital literacy can be further marginalized, given that information, communication, business, and prevailing social functions are increasingly structured on the Internet. To reduce the digital literacy gap, digital literacy education (DLE) is considered key, particularly for those with a lack of digital literacy (Hohfeld et al., 2008; Seale, 2009). Digital literacy education aims to support learners' knowledge and skill construction processes through education and practices to enhance their digital literacy.

The primary purpose of this study is to examine the effect of digital literacy education (DLE) on the development of digital literacy through a local digital technology community center, particularly for those who lack digital literacy. This study focuses on measuring significant differences before and after digital literacy education through pre- and postperformance tests and surveys. The study also measures the relationships between the DLE and computer and Internet use. The ultimate goal of the digital literacy education in this study is to provide people, who are the digitally illiterate, with learning and digital opportunities to improve their digital literacy through training in an informal setting and to facilitate digital connection and inclusion.

2. LITERATURE REVIEW

2.1. Digital Literacy

The diffusion of ICTs into almost every aspect of daily life and the use of digital technology by diverse populations have triggered a discourse regarding the nature of changes in digital literacy (Nawaz & Kundi, 2010). Digital literacy has

transformed from being solely technological and functional skills into an everyday literacy in digital environments, representing a power realm (CRILT, 2009). Gilster (1997), who popularized the term *digital literacy*, defined it as "the ability to understand and use information in multiple formats" (p. 1). The term *digital literacy* is often used as a synonym for *digital competence*, and is also interchangeable with *digital skills*, *digital and media literacy*, *ICT skills*, *eSkills*, *ICT literacy*, *media literacy*, and *information literacy* (e.g., Crawford & Irving, 2007; EC, 2011; Eshet-Alkalai, 2004; ETS, 2007; Ezziane, 2007; Hargittai, 2005; Hobbs, 2010; Potter, 2010). Digital literacy in this proposed study refers to the necessary digital skills and knowledge to operate and use computers and the Internet, communicate and interact with others using those media, create content in a variety of digital forms, and function in a knowledge- and information-based society.

A significant aspect of developing digital literacy is that digital literacy has practical value in accomplishing a wide variety of tasks—for instance, in accessing health, government, and public service information online and taking advantage of opportunities for online business, education, and learning. In addition, the development of digital literacy enables people to participate in community activities and take social action online (Hobbs, 2010). As such, digital literacy is considered a social, political, economic, and cultural product, and has significant implications for current education, culture, society, and community development in the digital age (Bruce, 2003; Nawaz & Kundi, 2010). This perspective highlights the need to develop individuals' digital literacy and the importance of becoming digital citizens to participate in the digital society (Junge & Hadjivassiliou, 2010).

Being digitally literate also encompasses the development of cognitive, creative, critical, and social capabilities beyond basic functional skills to use ICTs, which are increasingly being diffused into everyday contexts, such as in personal and social life and at work (Junge & Hadjivassiliou, 2010). Hobbs (2010) suggested

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