Chapter 4.3
Effects of Computer Self Efficacy on the Use and Adoption of Online Social Networking

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ABSTRACT

Online Social Networking (OSN) systems such as Ning, MySpace, Facebook and Friendster have achieved tremendous popularity. However, little research has been conducted to determine factors motivating users with varying capabilities to use and adopt OSN systems addressing target tasks, with varying system capabilities and characteristics. The relationships between user characteristics and use/performance have not been adequately addressed. This study used a cross-sectional survey of 262 graduate and undergraduate students to examine how end user Computer Self-Efficacy (CSE) affects performance and use of OSN systems and how "fit" determines whether there are user, task and/or systems characteristics associated with the best performance and usage levels. Significant direct and indirect relationships were found between CSE, task and system characteristics as measured by performance and use, and these relationships were further significantly strengthened when there was good "fit" between the variables. Results indicate that users having high self-efficacy "fit" with task or systems characteristics produce higher performance and use.

INTRODUCTION

OSN Websites are internet sites that facilitate building of personal social networks online. People throughout the United States and around the world are increasingly using these applications, and venture capitalists are funding online social networking companies at rates not often seen in today's economy (Wildbit, 2005; Kopytoff, 2004; Rosenheck, 2003). It is generally accepted that social networking software is a strongly emerging trend in information technology that impacts lifestyles and work. Leonard (2004) notes that,

"like e-mail, like using a search engine, social networking is a part of the Internet way of life. And [sic] it's barely getting started."

Friendster was the first social networking application to hit the market. Founded in 2002 by Jonathan Abrams, Friendster went online in March, 2003. By August, 2003, Friendster had over a million users and was growing by 15% per week (Rosenheck, 2003). In early 2004, Friendster claimed to have more than 5 million registered users (Kopytoff, 2004). By December, 2004, Friendster claimed to have more than 13 million registered users (Friendster, personal communication, December 15, 2004). As of late 2006, Friendster claimed to have over 20 million users for which there were over 19 million personal profiles (Wikipedia, 2006b). However, during the past few years, Facebook and MySpace have far outpaced Friendster which, as of 2006, only has 0.24% of the market (Auchard, 2006). Also in 2006, Facebook experienced users boycotting the system after making changes that creators considered upgrades. In 2009, Facebook finally and expectedly exceeded MySpace in U.S. traffic. The rapidity with which Friendster lost market share, the quick domination of MySpace and Facebook, the strong reaction against new Facebook features, and the (relatively) quick dominance of Facebook over MySpace are examples of enormous unpredicted changes in usage. Social networking is quickly becoming more relevant. It is part of the emerging Enterprise 2.0 paradigm. Newman and Thomas (2009) note that Enterprise 2.0 helps organizations by, "finding and retaining better employees, using employee time more effectively, communicating with the customer better, and receiving feedback faster. If only to prevent your organization from becoming obsolete, you will need to get on board with these new ideas and strategies" (p. 18). More adults are using social networking software, according to Solis (2009). As more people use social software and it becomes a larger part of peoples' lives, both for work and for recreation, it becomes increasingly important to fully understand the factors influencing acceptance, usability and use of these systems; and to incorporate user characteristics in their design.

These rapid changes in use and acceptance of OSN systems involving millions of users raise three important question addressed in this research. Does user computer self-efficacy cause end users to adopt and use OSN systems? How does the interplay of user, task and system characteristics affect utilization and end user performance? What factors affect the ability or desire of users to use more complex systems and perform more complex tasks?

Scope of the Study

This study conducted cross-sectional research to measure the patterns of OSN usage across 262 graduate and undergraduate students in the metropolitan DC area. The study examined user-reported usage and performance of OSN applications used by study participants. Major dimensions of the study included user characteristics, task characteristics and software characteristics constructs. Dependent variables included OSN performance and use.

Research Questions

The study focused on the following research questions: 1. How does a user's CSE affect individual perception of OSN system usefulness? 2. To what extent does increased CSE cause OSN users to perform better, use increasingly complex systems and engage in more challenging tasks? 3. Is there a synergistic effect between CSE and task or system complexity that yields increased performance or utilization among OSN users? 4. Are there fits among CSE task and system characteristics associated with the best performance and utilization among OSN users?