Chapter 66
The Relationship Between User Satisfaction, System Attributes and the Motivating Potential of System Use

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ABSTRACT

User satisfaction (US) is an important information systems success measure. This paper contributes to our understanding of US in workplace settings by conceptualizing US as resulting from user evaluations of both the attribute level performance of the system and its impacts on the motivating potential of their work. Data was collected from a sample of 154 nurses in a regional public hospital in South Africa who are users of an integrated hospital information system. The authors considered that use of the system has implications for the motivating potential of work through its impacts on skill variety, task identity, significance, autonomy, and work performance. Their results show that a system's impact on motivating potential is significant for US. Moreover, system quality, information quality, and user support attributes of the IS have significant direct effects on US as well as indirect effects through motivating potential. A high performing system is thus important for US as it provides a platform to increase the motivating potential of work.

INTRODUCTION

User satisfaction (US) is an important measure of information system (IS) success (DeLone & McLean, 1992; Zviran & Erlich, 2003). US is the affective response or attitude of an end-user towards a specific computer system application (Doll & Torkzadeh, 1988; Guimaraes & Igbaria, 1997; McGill, 2004). In settings where system usage is organizationally compulsory, the actual use of a system becomes

less relevant as an indicator of success (Brown et al., 2005; Iivari, 2005). Instead, US becomes a more meaningful indicator as it reflects a user's symbolic acceptance of the system (Rawstorne et al., 1998). US can be important for how wholeheartedly users engage in ongoing usage behaviors. For example, US has been found to motivate users to move beyond compliance and reluctant use towards enthusiastic and extended use (Amoako-Gyampah & Salam, 2004; Hsieh & Wang, 2007; Klein & Sorra, 1996). US is also important to how users experience and feel about their jobs (Ang & Soh, 1997; Hsieh et al., 2012).

Determining the factors that contribute to US has been the subject of much attention and various schools of thought have emerged (Harris, 2000). Early work defined US with reference to system attributes such as performance reliability, information content, and quality of service provisioned to users (e.g. Bailey & Pearson, 1983; DeLone & McLean, 1992; Doll & Torkzadeh, 1988; Ives et al., 1983). This work has shown that a system's attribute performance can be important for US. However, the mechanisms through which system attributes come to influence satisfaction outcomes are not sufficiently articulated (Briggs et al., 2008). Moreover, given that US can vary amongst users of the same system, a focus on system attributes alone is not considered adequate for explanations of US (Au et al., 2002). Other factors such as the user's frame of reference (Shaw et al., 2003) and opportunity for participation (McKeen et al., 2003) have thus been considered.

US has also been considered a function of the perceived usefulness of a system for job performance (Mahmood et al., 2000; Seddon, 1997; Torkzadeh & Doll, 1999). Empirical studies in various contexts have confirmed post-usage perceptions of usefulness as having strong associations with US (e.g. Bhattacherjee & Premkumar, 2004; Hsieh & Wang, 2007; Wu & Wang, 2006). However, few studies have considered how US might be influenced by system impacts on other work related needs and job characteristics such as task identity, skill variety, autonomy and self-development (e.g. Au et al., 2008; Clegg et al., 1997; Sun, 2010; Woodruff & Kasper, 1988; Yeh & Teng, 2012). Such factors may be particularly important in contexts where usage is compulsory (Au et al., 2008; Khalifa & Liu, 2004). In such contexts, users have little control over implementation processes and reduced freedom to decide on usage (Brown et al., 2002; Wu & Lederer, 2009). Yet the system will alter users' work practices and become the only way to perform certain job tasks. Moreover, as workarounds can be prohibited, users are rarely able to circumvent the job-related impacts of the system (Brown et al., 2002). How a user perceives the impacts of the system on their job characteristics is thus likely to be significant to their attitudes.

We contend that the study of US within workplace settings can benefit from paying more attention to the impacts of system use on the jobs of users, and to how such impacts combine with system attributes in the formation of user satisfaction. Specifically, we draw on Hackman and Oldham's (1976) job characteristics framework to examine the impacts of system use on the characteristics and motivating potential of a user's job. Further, DeLone and McLean's (2003) IS success model offers insights into the attributes of an IS that are important to US outcomes. From these two underpinnings, we conceptualize US as resulting from user evaluations of both the attribute level performance of the system and its contributions to the motivating potential of their jobs.

The empirical context for our study is a South African hospital where nurses are required to use an integrated hospital information system (HIS) to access and update operational, clinical and patient-related information. Nurses comprise the largest group of workers in any hospital (Lu et al., 2012) and interact most with HIS due to their role as generators and users of health information (Top & Gider, 2012). Prior work into HIS implementations has shown that nurses may not always be adequately involved in the selection, trial and implementation of new hospital IS (Smith et al., 2011). Nurses are often dissatisfied with systems, reporting them as unreliable, slow, complicated to use and often not supporting nursing

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