Chapter 7.5
Examining the Merits of Usefulness Versus Use in an Information Service Quality and Information System Success Web–Based Model

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ABSTRACT

Managers are increasingly facing the question of how to convey electronic information to e-commerce users in a manner that enables those individuals to resolve information search related problems more easily. Information service quality and the associated performance is challenging to manage in Web-based interactions because such settings involve several features (i.e., less tangible contact, more uncertainty, differing feedback loops between business and consumer) not found in more traditional exchanges. In an attempt to capture a broader view of the quality of information service offerings in ecommerce settings, the model compares the DeLone and McLean's framework (2003) that includes use as an outcome measure with a model suggested by Landrum and Prybutok (2004) that features usefulness as its outcome measure. A random survey of Army Corps of Engineers library customers was performed at two library sites within the Corps.

INTRODUCTION

In their efforts to manage Web-based interactions, managers face the need to convey information to targeted individuals. Many Web-based interactions are conducted without consumers engaging in face-to-face contact. Therefore, a major objective of Web-based environments is to deliver required information in a timely fashion to Web-linked constituents. Two real world conditions that regularly arise in Web-based interactions arise from consumer behavior concepts: information overload and selective attention (Berthon, Hulbert, & Pitt, 1999). Most Web-based consumers do not or can not devote the time necessary to process all available information. Therefore, prudent selection of information, in addition to a high quality presentation, is important.

While the phenomenon of using the Web to search for information has evolved during the last decade, many organizations are only beginning to address individual preferences and the associated perceptions of the Web environment (Beatty, Shim, & Jones, 2001). Consequently, insight is needed into the factors that create situations where problematic information system interactions are likely (Liu, Arnett, Capella, & Beatty, 1997). For both practical and theoretical reasons, it is important to conceptualize the processes and procedures associated with Web-based information service. An information service based conceptualization permits useful distinctions to be drawn between different levels of information service (Barnes & Vidgen, 2001). Information service quality (ISQ) is relevant to those distinctions and is defined as how well the information provided meets or exceeds the user's expectations (Barnes & Vidgen, 2001; Pitt, Watson, & Kavan, 1997).

While several variables that affect information system success have been identified (DeLone & McLean, 1992), the role that information service plays in the success of information systems has not been widely investigated. Numerous researchers contend that ISQ and the associated information

service performance is an important variable that affects the success of information systems (Rands, 1992; Ferguson & Zawacki, 1993). However, the nature of that role is not clearly understood. Although numerous studies examine IS success factors, few studies incorporate service quality into an IS success model. In addition, although Rai, Lang, and Welker (2002) compare DeLone and McLean's (1992) model with Seddon's (1997) model, these two models do not consider service quality as one of the success factors in the model. Because service quality is becoming increasingly important in the IT service industry, the study reported was designed to address the impact of service quality on two IS success models. This study contributes to the literature in the following ways. First, it examines the effects of service quality in IS success models. Second, the study empirically validates DeLone and McLean's (2003) model. Third, it compares and contrasts DeLone and McLean's (2003) model developed by Landrum and Prybutok's (2004). And finally, the study assesses the effect of objective measure—use versus subjective usefulness in IS success models - by examining the predictive validity of various independent variables on use versus usefulness.

Consistent with this conceptual foundation, the following research questions are addressed in this article:

- What is the identity of the factors that influence the relationship between information service and information systems success in Web-based interactions?
- Is "usefulness" or "use" the better construct when measuring information success?

RESEARCH MODEL

The most popular instrument available to measure service quality is SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988). SERVQUAL was

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