

Chapter 8

Evaluating the Usability Maturity of Enterprise Resource Planning Systems

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ABSTRACT

The enterprise resource planning (ERP) system is a complex and comprehensive software that integrates various enterprise functions and resources. Although ERP systems have been depicted as a solution in many organizations, there are many negative reports on ERP success, benefits, and effect on user performance. Previous research noted that there is a lack of knowledge and awareness of ERP systems and their overall value to ERP organizations. ERP systems have been widely studied during the past decade; yet they often fail to deliver the intended benefits originally expected. One notable reason for their failures is the lack of understanding in user requirements. There are many studies conducted to propose software quality models with their quality characteristics. However, there is currently no dedicated software quality model that can describe usability maturity and involve new features of ERP systems. This chapter proposes a framework for evaluating the usability maturity as a quality attribute of ERP systems.

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INTRODUCTION

There has been a strong debate on the value of ERP systems in organizations. Enterprise Resource Planning (ERP) system is a complex and comprehensive software developed to better integrate firms' functions and resources (Ifinedo & Nahar, 2006). Today, most organizations use the ERP systems due to cost reductions, improving responsiveness to customer needs, replacement of legacy systems, and faster data transactions. Ramdani (2012) noted that the question of the ERP system's value to the end users has been a key issue in many organizations. According to Koch (2011), ERP users can influence the success or failure of the ERP system. Peslak and Boyle (2010) suggested that users play an important role in achieving success in an ERP environment. Despite the large body of literature on ERP systems, there is a need to investigate the ERP system's success from the end users' perspectives (Kwak, Park, Chung, & Ghosh, 2012). Various factors relevant to ERP success or failure have been highlighted in past research; however, the focus has been on ERP success in developed countries. Moreover, many developing countries express interest in achieving ERP success in their organizations. Talet and Alwahaishi (2011) argued that an ERP system used successfully in one region might be a failure in other regions. According to Soltani, Elkhani, and Bakri (2013), the factors that affect ERP success in developed countries need to be researched in the context of developing countries. According to Zhu, Li, Wang, and Chen (2010), ERP systems have been utilized globally, yet they have failed to deliver the intended benefits. To provide a better understanding of ERP success at the individual level of analysis, this research explored the factors that influence ERP users in an ERP environment in the Middle East. An understanding of the factors that influence end users in an ERP environment is imperative for ERP success. Following from the above, the results of this study could be used to help organizations understand the factors that influence end users in an ERP environment. Nah, Tan, and Beethe (2005) asserted that the benefit of an ERP implementation depends heavily on how the system is operated by end users. Understanding the relative importance of end users' success factors in ERP systems can help information technology (IT) managers put more emphasis on the leading issues perceived by end users (Hsu, Lai, & Weng, 2008).

Other researcher define an Enterprise Resource Planning (ERP) system as 'a highly unified, consolidated and reliable network of business systems, built on a single integrated platform' (Vaman, 2007). The removal of barriers to sharing information between functional divisions and the holistic management of processes have enabled ERP systems to increase the operational processes, profitability and productivity of organisations (Magal & Word, 2012; McGauhey & Gunasekaran, 2007). In spite of the economic recession over recent years, ERP systems are dominant in the marketplace and this trend is expected to continue (Forrester, 2011). Several studies in industry

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