Chapter XIII
Training and User Acceptance in a University ERP Implementation:
Applying the Technology Acceptance Model

Joseph Bradley
University of Idaho, USA

C. Christopher Lee
Pacific Lutheran University, USA

ABSTRACT

Training is still a neglected part of most ERP implementation projects. This case study investigates the relation between training satisfaction and the perceptions of ease of use, the perception of usefulness, effectiveness and efficiency in implementing an ERP system at a mid-sized organization. We view training satisfaction as a necessary condition for technology acceptance. Our surrogates for training satisfaction are (1) training level prior to implementation, (2) training level when measured after implementation, (3) understanding of features and functions, and (4) perceived need for more training because these factors contribute to perceived ease of use and usefulness. A survey of 143 employees involved in the implementation of ERP in a mid-sized university was conducted. ANOVA and t-tests were used to explore differences in training satisfaction among groups of users by gender, job type, and education level. We found that training satisfaction differed based on job type and gender but not education level. Multiple regression analysis suggests that (1) post implementation training satisfaction is related to ease of use and (2) current training satisfaction and user participation are related to our variables for usefulness, which are perceived efficiency and effectiveness of the ERP systems in doing respondents’ jobs.
INTRODUCTION

Enterprise Resource Planning (ERP) systems are complex, integrated, off-the-shelf IT solutions that promise to meet the information needs of an organization. ERP systems frequently replace aging and difficult-to-maintain legacy systems. Despite ERP’s promise, these systems are difficult, time consuming and expensive to implement. Many failed implementation projects have been widely cited in the business and academic press (Davenport, 1998; Steadman, 1999; Steadman, 1999a; Wah, 2000; Nelson, 2007).

In response to today’s constantly changing business conditions, many organizations are implementing ERP systems. Large sums are still being spent on ERP installations. A Forrester survey found that ERP and enterprise applications in general remain the top IT spending priority for 2005 (Hamerman & Wang, 2006). A survey of Society for Information Management members conducted in the summer of 2005 concluded that ERP is among the top six application concerns of its members (Luftman, Kempaiah, and Nash, 2006).

ERP systems allow organizations to put separate business processes together into one compact software system using what the vendors consider “best practices.” Integration of different business processes using off-the-shelf ERP solutions is predicted to reap benefits that will outweigh the costs involved with the implementation; however, practice has shown that ERP implementation is not an easy task. Davenport (1998) identified unsuccessful implementation efforts at Fox-Meyer Drug, Mobile Europe, Dell and Applied Materials. Steadman (1999) found that after spending $112 million on an ERP project, Hershey Foods was unable to fill Halloween candy orders in 1999, resulting in a 19% drop in quarterly profits. Wah (2000) observes that “ERP projects have snarled internal processes in big companies like Whirlpool, Hershey’s, Waste Management, Inc. and W. L. Gore & Associates.” Nike’s ERP implementation is included in a listing of “infamous failures in IT project management” because of a major inventory problem which resulted in a profit drop of $100 million in the 3rd quarter of 2000 (Nelson, 2007).

The case we report in this paper deals with a mid-sized university. Universities face many of the same problems as for profit organizations in installing ERP such as “the problems of coordinating resources, controlling costs, of stimulating and facilitating enterprise among the staff, and so on” (Pollock and Cornford, 2004, p. 32). In face of cut-backs in funding, many universities turned to ERP systems to improve efficiency and to become more responsive to student needs. Higher education institutions are not exempt from implementation difficulties. Universities often suffer lost revenue, wasted time, cost overruns and delays during ERP systems implementations. For example, the state of Ohio sued PeopleSoft for $510 million for fraud and breach of contract (Songini, 2004). The University of Massachusetts – Amherst experienced a “nightmare” at registration (Bray, 2004) and Indiana University experienced difficulties in financial aid payments (Songini, 2004a).

We know from the Technology Acceptance Model (Davis, 1989) that successful implementation requires user acceptance. Since ERP systems are potentially a disruptive technology change, organizations undertake training as a way to gain technology acceptance. Only a small number of existing studies examined the effectiveness of training and education in ERP system implementation at higher-education institutions. This lack of exploration of an important factor in successful ERP implementations is what led us to this study. The purpose of this paper is to explore the relationship of training and education to ERP project success. We use:
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