



Chapter IV

Perceptions, User Satisfaction and Success: Testing the DeLone and McLean Model in the User Developed Application Domain

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ABSTRACT

DeLone and McLean's (1992) model of information systems success has received much attention among researchers. This study applies an adaptation of the full DeLone and McLean model, for the first time, in the user developer domain. Of the nine hypotheses derived from the model, four were found to be significant and the remainder not significant. There was strong support for the proposed relationships between perceived system quality and user satisfaction, perceived information quality and user satisfaction, user satisfaction and intended use, and user satisfaction and

perceived individual impact. This study indicates that user perceptions of information systems success play a significant role in the user developed application domain. There was, however, no relationship between user developers' perceptions of system quality and independent experts' evaluations, and user ratings of individual impact were not associated with organizational impact measured as company performance in a business simulation. Further research is required to understand the relationship between user perceptions of information systems success and objective measures of success, and to provide a model of information systems success appropriate to end user development.

INTRODUCTION

User developed applications (UDAs) are computer-based applications for which non-information systems professionals assume primary development responsibility. They support decision making and organizational processes in the majority of organizations (McLean, Kappelman, & Thompson, 1993). Perhaps the most important benefit claimed for user development of applications is improvement in employee productivity and performance, resulting from a closer match between applications and user needs, since the end user is both the developer and the person who best understands the information requirements. However, the realization of these benefits may be put at risk because of problems with information produced by UDAs that may be incorrect in design, inadequately tested and poorly maintained.

Despite these risks, organizations generally undertake little formal evaluation of the success of applications developed by end users, instead relying heavily on the individual end user's perceptions of the value of the application (Panko & Halverson, 1996). This raises the important issue of the need to be able to measure the effectiveness of UDAs. In view of the scarcity of literature on UDA success (Shayo, Guthrie, & Igbaria, 1999), models of organizational information systems (IS) success can provide a starting point. DeLone and McLean's (1992) model of IS success has received much attention amongst IS researchers (Walstrom & Hardgrave, 1996; Walstrom & Leonard, 2000). In their recent review of the model and the subsequent studies that have built upon it, DeLone and McLean (2003) report that a citation search in 2002 yielded 285 papers that have cited the model. Given the amount of support aspects of the model have received in various domains (see following discussion) the model can provide a foundation for further research on IS success in the UDA domain. This chapter describes a study designed to investigate the applicability of an adaptation of DeLone and McLean's (1992) model of IS success to UDAs.

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