A system implementation study: management commitment to project management

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Abstract

Recent literature has shown a renewed interest in systems implementation research. Current trends in the organizational deployment of IT have motivated new studies of implementation efforts. This paper reports on one phase of a pluralistic investigation of systems implementation projects. A survey instrument, based on previously validated measurement items, is described; it was tested and validated. In the process, a method for appraising the significance of interaction effects was determined. The results of the analysis show that, for the data of this study, the organizational priority given to implementation projects by top management is only associated indirectly with improved user information satisfaction (UIS). Only when this priority occurs in the management of continuing development and enhancement, does top management support seem to be significant to users. It was also found that the efficiency and flexibility of the development process was significant in its own right, even without any effects of top management support.

1. Introduction

The implementation of automated support systems for information processing has long been a central issue. Much work has appeared addressing the disparity between high technical quality of systems and low success in their effective deployment. This paper reports on the first stage of case study investigation into implementation projects in two medium sized companies. Its objectives included the discovery of success factors in the context of large-scale systems, integrated across multiple corporate functional areas. The company sizes allowed the use of statistical survey sampling.

Early papers on systems implementation assumed that their quality could be evaluated in an absolute sense. Ein-Dor and Segev [19] noted the emphasis on physical installation; this was later characterized as 'system delivery' [11]. In reaction to this view, Lucas [52] defined it as including all phases of systems development. Cooper and Zmud [12] then expressed the need for a more specific "directing and organizing framework" for IS implementation research.

The working definition adopted for this research came from Swanson [72]. He used the phrase "system realization" and restricted the implementation process to the systems life cycle stages between design and use. Swanson defined implementation as "a decision-making activity that converts a design concept into an operating reality so as to provide value to

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the client." Numerous researchers have used definitions with equal scope. In 1994, Iivari and Ervasti used the term ''institutionalizing'' [34]. They noted the trend toward software acquisition and the relative scarcity of large-scale production systems developed in-house. Guimaraes and Igbaria [30] also commented on 'dramatic' changes to implementation efforts due to changed system characteristics. They suggested the need to reevaluate prior discoveries in the context of current trends. Lucas and Spitler [54], for instance, noted a lack of implementation field studies involving networked, multifunction workstations that are common in organizations today. In a recent survey exposition of this whole scenario [56], an operationalization of Swanson's model has been proposed as a unifying vehicle for new implementation research.

2. Implementation issues

2.1. Prior research

Numerous writings have assessed research in the implementation of information systems (IS). Many have attempted to synthesize the discoveries and suggest directions for continued research (see [27,65,73], for instance). The quantitative directions have been highlighted in the literature by different formulations for the concept of implementation success. Reviews have appeared of numerous studies whose success formulations use objective assessments [15,58,71]. Others discuss the heavily pursued use of perceptual, surrogate measures of intangible implementation effects [24,32]. The research has furnished a wide spectrum of issues that are important to effective IS implementation [46].

Qualitative work has also contributed insights to the literature in this area [21,57,62,75]. Numerous studies of failed implementation projects have appeared and the lessons they provide have been discussed [1,10,40,61]. Much of this ''intensive'' empirical research has allowed a deeper understanding of individual implementation issues. All of these contributions have supported a growing body of research, which now combines methods in pluralistic approaches to the study of IS implementation [23,48,59,74].

2.2. The research model

Swanson's model was adopted to serve as a conceptual framework for my project. It is a collection of nine factors critical to implementation success. Table 1 gives lists of the literature sources that support and help operationalize each of the nine factors in the research design.

2.2.1. User involvement
User involvement underlines the need for user participation in the implementation project. This factor also involves personal relevance of the system to the user.

2.2.2. Management commitment
This represents the apparent top level support for an implementation project.

2.2.3. Value basis
This expresses the general appreciation, on the part of its stakeholders, of the value that an implemented system brings to its organization.

2.2.4. Mutual understanding
This factor measures the user-to-designer bond and has been a topic of many papers, such as those discussing various uses of group and communication systems.

2.2.5. Design quality
The design quality refers to the general characteristics of modeling, presentation, and flexibility exhibited by a system. The ease with which the system can be adapted to accommodate change and preferences will affect the users' score for this.

2.2.6. Performance level
This represents the way users view the products and services provided by the system. It directly reflects the degree to which user expectations are met by the system on a day to day basis.

2.2.7. Project management
This factor refers to the way in which the implementation project is conducted, including its organization, scheduling, and responsiveness to stakeholders. User views of project management (PM) are important indicators of issues that impact implementation planning.