Migration to a New Electronic Mail System: Users’ Attitudes and Management Support for Achieving Use

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Using a pre- and post-implementation design and 114 respondents, this study tested a model of end users’ migration from an existing electronic mail (E-mail) system to a new E-mail system with both similar and different features. Hierarchical regression results indicated that as users’ expectations of the usefulness and ease of using the new E-mail system increased their pre-implementation attitude toward the new system also increased. Expectations of usefulness, ease of use, and post-implementation training were found not to contribute to the actual use of the new system. Employees’ sense of participation in implementing the new system and their experience using E-mail systems were strongly related to actual use of the new system. Results and limitations of this study are discussed, as well as future research issues and implications for practice.

Decisions by organizations to purchase the latest replacements or upgrades for existing software packages raise questions related to end user migration to new software. Will end users willingly move to the new software? Will they believe that the investment of their time to learn the new software will be worth the incremental improvement in their work created by using that software? Will end users make full use of the capabilities of the new software?

Research has shown that when management fails to provide an adequate support structure for software implementations employees experience stress, a lack of organizational commitment, absenteeism, and turnover (Davis, 1986). Upgrading to new software packages, however, is different from implementing entirely new software systems. With respect to upgrades, users have experience with the functions contained within the software and have embedded the software into their daily work routines. Their experience with the older system may provide a better understanding of the newer system and provide a greater comfort level with the process of change.

The need to make changes in work routines because of the change in software, however, may create barriers that will decrease the use of the new software package.

The present study examined employees’ use of a new electronic mail (E-mail) system that replaced a successful yet obsolete E-mail system in one organization. We studied the organizational support system designed to maximize the use of E-mail after the migration was complete. E-mail was the medium used by the organization to communicate policy, notices, and other important work related information. Few theories exist concerning organizational support structures because information technology is often viewed as the primary independent variable in acceptance related studies (Kling & Iacono, 1989). Focusing on providing managers with a tool for judging when new information technologies are acceptable to employees (Davis, Bagozzi, & Warshaw, 1989) is important. However, this approach does not provide managers with the insight necessary to choose an organizational support system to enhance use of E-mail in a system migration.
Modeling Management Support and User Participation in Software Migrations

The challenge to managers in dealing with new information technologies is how to promote organizational effectiveness (Gattiker, 1990). Effectiveness depends, in part, on how well end users utilize information technologies. Davis et al. (1989) technology acceptance model (TAM) examined the impact of external variables on beliefs, attitudes, and intentions to use information technologies. That model, however, did not explain the social influences by which external variables influence beliefs, attitudes, and intentions. Components of an organizational support system, such as management support, user participation, and training, were not investigated in the TAM model.

Our model for the analysis of an organizational support system and the impact of the system on employees' use of a new software package is depicted in Figure 1. The model focuses on three features of an organizational support system: (1) expected usefulness and ease of use of the software as perceived by end users, (2) end users' perceptions about management efforts to support the switch to the new system, and (3) the use of post-implementation supports such as training and participation.

The model examines the migration to a replacement E-mail system. End users derive initial expectations concerning the usefulness (X1) and ease of using the system (X2) from their prior experience with the existing E-mail system (Hiltz & Johnson, 1990; Rice, Grant, Schmitz, & Torobin, 1990). These initial expectations serve as one factor contributing to pre-implementation attitudes (X4) toward the new system (cf. Fishbein, 1979). Pre-implementation attitude is also influenced by the degree to which end users see management supporting (X3) the new software. For example, managers can support implementation of the new system by rewarding employees for willingness to use the system. Upon implementation, employees are required to make the newer system a part of their work routine. However, additional post-start-up support from management may be necessary to encourage users to enact the necessary behaviors. Post-start-up support involves providing opportunities for employees to participate in deciding how the implementation process is carried out (X5). Also, once the new system is on-line, training (X6) not only serves to increase users' comfort with the new system, but also provides a symbol of the degree of importance management attaches to the new system.

Expected Usefulness and Ease of Use

End users' perceptions of the impact of a new information technology on the way their tasks will be completed and on their personal work outcomes are important determinants of their attitudes toward that technology (Davis, 1989; Davis et al., 1989). Those attitudes may have a substantial influence on the outcomes of applying a new information technology to work. Rice et al. (1990) noted that current E-mail usage influenced end users' decisions to use new E-mail systems. We labeled these attitudes as expectations of how the new E-mail system would affect end users' work.

Hypothesis 1. As the expected usefulness of the newer version of the E-mail system increases, positive pre-implementation attitude towards the newer system also increases.

Hypothesis 2. As the expected ease of use of the newer version of the E-mail system increases, positive pre-implementation attitude towards that system also increases.

Perceived Management Support

Overall support by management is an important factor for achieving use of a software package. Managers support implementation of new information technologies by providing an environment in which subordinates can use the behaviors and skills learned in training (Fossum, 1990). End users

![Figure 1: Model of Users' Expectations and Management Support for Migration to a New E-mail System](image-url)
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