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RESTORING A SENSE OF CONTROL DURING IMPLEMENTATION: HOW USER INVOLVEMENT LEADS TO SYSTEM ACCEPTANCE

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ABSTRACT

In an effort to implement information systems successfully, developers have experimented with a variety of approaches. User involvement has emerged as one of the most popular. It is now widely believed that involving users in various aspects of implementation will lead them more readily to accept and use a new system. However, empirical tests of the "user involvement-system acceptance" relationship have generated only mixed results (Ives and Olson 1984; Baroudi et al. 1986). Although this body of research has been criticized on a number of methodological grounds, Ives and Olson note that a more fundamental flaw has been the lack of a theoretical explanation for the relationship.

In this paper, the authors present a theoretically grounded perspective to account for effects of involving users during implementation. The experience of the typical non-technical user just before, during, and after system implementation is examined. Borrowing from social psychology and organizational science, a perspective on the user's situation, experience, and needs is assembled. It proposes that (1) computer implementation represents a threat to users' perceptions of control over their work; (2) computer implementation represents a period of transition during which users must cope with differences between old and new work systems, including changes, contrasts, and surprises.

In an implementation approach derived from the first tenet of this perspective, the key is to provide users with opportunities to engage in activities which restore the sense of personal control over work that has been threatened by and during system implementation. Perceived control is seen to be the critical phenomenon underlying effects of user involvement during implementation.

A field experiment was conducted to provide an initial test of the portion of the perspective concerned with perceived control. The implementation of a computer-based payroll and personnel management information system in state government agencies was studied. Payroll and personnel clerks served as subjects. Experimental group subjects experienced a modified implementation process designed to increase the workers' sense of personal control. Three sets of questionnaires were administered: as workers first learned of the planned conversion ten weeks before cutover; two weeks after cutover; two months after cutover.

As hypothesized, treatment group subjects were significantly more satisfied with the new system than were control group subjects. Additionally, experiences reported in the treatment group were more positive in terms of users' perceptions of interactions with system implementors and of attitudes expressed by their managers.

The theoretical perspective suggests that user involvement is effective because it restores or enhances perceived control. It also suggests that means other than direct user involvement can enhance the perception of control and may produce similar effects -- perhaps with lower organizational costs.

Further work is needed to go beyond this initial test of the "perceived control-user involvement" perspective. The paper identifies possible next steps as well as practical implications of the perspective. In addition, empirical work is needed to develop the second portion of the perspective in which implementation is considered to create a transition experience for users. The authors note that the extent to which strategies for facilitating other types of transitions can be applied to the situation of system implementation bears systematic examination.