

Adoption and Utilization of Voice Mail

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Understanding how to assure adoption continues to be a challenging issue in information systems. Information systems or technologies which are not used cannot be effective. Consequently it is important to understand how individuals decide to adopt or to not adopt a particular system and/or technological innovation. This research seeks to add to our understanding of the system/technology adoption process by studying the adoption and utilization of a recently introduced voice mail system. The projected contributions of this research are in three areas. First, this research provides a synthesis of the two competing theoretical foundations underlying previous information system/technology adoption studies. Second, a new construct of managerial and practical significance is introduced. Finally, the traditional binary adoption/non-adoption measure is replaced with a multinomial measure.

Theoretically based studies of information system/technology adoption have relied upon either Roger's Innovation Diffusion Theory or the social psychology's Theory of Reasoned Action or its extension the Theory of Planned Behavior (TPB). Rogers' Innovation Diffusion Theory is based on the synthesis of hundreds of innovation diffusion studies. From these studies, empirical regularities have emerged to form a five stage adoption decision model. Most information systems research has focused on the second stage of Roger's model, the persuasion stage, where the individual forms an attitude toward the innovation prior to the adopt/reject decision. Inputs to the persuasion stage are most notably perceived characteristics of the innovation. For Roger's, the attitude formation which takes place in the persuasion stage is a "black box." The psychological theories explicitly address the attitude formation process. Thus TPB can be viewed as the inner workings of Roger's persuasion stage. TPB focuses on Attitude (an individual's evaluation of the desirability of using an innovation), Subjective Norms (an individual's perception of the relevant social pressures to use or not use an innovation), and Perceived Behavioral Control (an individual's perception of the presence or absence of requisite resources and/or opportunities to successfully use an innovation.) A mapping of Roger's constructs into TPB constructs unites these two theoretical approaches.

In mapping Roger's constructs into TPB constructs, it became apparent that the constructs that have been used in information systems research did not adequately cover the concept of Perceived Behavioral Control. Indeed, most of the interest has been focused on 'Ease of Use' and 'Relative Advantage' or 'Usefulness' measures. In TPB terms, these characteristics influence an individual's evaluation of the desirability of using the innovation (Attitude). The message to managers and system developers is to design in functionality and ease of use in order to stand a reasonable chance that the system will be adopted. But given a system with its ease of use and relative advantage, what can a manager do to increase the likelihood of adoption? Managers can influence the user's perception of the presence of resources and opportunities to successfully use the system (Perceived Behavioral Control). Within the information systems adoption literature, only the constructs of Voluntariness and Triability relate to Perceived Behavioral Control. These do not appear to adequately capture resources and opportunities for successful use. Thus this study adds a 'User Support' measure encompassing such things as user training and 'help' to more fully capture the theoretical construct of Perceived Behavioral Control.

Finally, information system/technology innovations contain a number of capabilities or features. Individuals may choose not to use the innovation at all, they may choose to use only a limited number of the features, or they may choose to become 'power users' using most of the features or capabilities. Given the array of capabilities/features available, it did not seem appropriate to restrict the usage measure to a dichotomous variable. Utilization of the innovations various capabilities or features will influence the individual and organizational benefits derived from adopting the innovation. By utilizing a richer adoption measure, this research seeks to identify those factors which influence utilization of the innovations features.

A survey instrument has been distributed to all individuals at an organization where voice mail recently became available. Responses will be analyzed and preliminary results are expected by March.