Chapter 18

Toward an Understanding of the Behavioral Intention to Use a Groupware Application

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INTRODUCTION

Over the past decade, groupware technologies, such as e-mail, electronic bulletin boards, and group support systems, have become an important part of the business computing infrastructure in many organizations. Organizations adopt groupware applications to enhance communication and collaboration among group members and thus improve group performance. While some groupware applications, e.g., e-mail, have been commonly accepted, many other applications, especially those that require significant collaboration and cooperation among users, are not widely used in organizations and their potential benefits are far from being fully realized (Orlikowski, 1993). Although numerous laboratory and field studies have consistently shown the relevance and positive impact of group support systems on group work, more research is needed in understanding how to increase the rate of diffusion and adoption of the technology (Nunamaker, 1997).

Behavioral-related elements, recognized by many, are the primary cause of resistance of users toward a newly implemented system or technology. Information technology (IT) research, however, tends to under-utilize existing knowledge in the behavioral science (Turner, 1982; Robey, 1979). Expectancy theory has been recognized as one of the most promising conceptualizations of individual motivation (Ferris, 1977). Many researchers have proposed that expectancy theory

can provide an appropriate theoretical framework for research that examines a user's acceptance of and intent to use a system (DeSanctis, 1983). This study uses expectancy theory as part of a student-based experiment to examine users' behavioral intention (motivation) to utilize a groupware application.

THEORETICAL BACKGROUND AND SUPPORTING LITERATURE

Groupware Acceptance and the Critical Mass Effect

Groupware refers to a class of computer technologies designed to support communication, collaboration, and cooperation among a group of knowledge workers. It covers a variety of technologies, ranging from simple e-mail systems to complex workflow applications. Although the use of some groupware technologies, such as e-mail, has become ubiquitous, organizations have encountered many difficulties in adopting and utilizing more sophisticated groupware applications, such as group support systems and Lotus Notes (Nunamaker, 1997; Orlikowski, 1993).

Prior Implementation Research

Prior implementation research indicates that user attitude toward the changes introduced by a system are thought to be especially important to the successful implementation of MIS applications (Barki and Huff, 1985; Ginzberg, 1980; Maish, 1979; Robey, 1979). This would indicate that measuring user attitude toward a system is essential for assessing system implementation success. Turner (1982) stressed that a continuing gap exists between the capabilities provided by new information systems and the extent to which these systems are accepted and used by individuals. This gap can be better explained by behavior-related elements than by elements strictly related to technical system attributes. Although behavioral-related elements are seen as the primary cause of resistance of users toward implementation of systems, implementation research has made little use of behavioral theory. Robey (1979) argued that "research in this area tends to underutilize existing knowledge in the behavioral science and typically fails to tie implementation research to more general models of work behavioral" (p. 528).

Expectancy Theory

Expectancy theory is considered one of the most promising conceptualizations of individual motivation. It was originally developed by Vroom (1964) and has served as a theoretical foundation for a large body of studies in psychology, organizational behavior, and management accounting (Harrell et al., 1985; Brownell and McInnes, 1986; Snead and Harrell, 1995; Geiger and Cooper, 1996). Expectancy models are cognitive explanations of human behavior that cast a person

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