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The Role of Affiliation Motivation on the Use of Groupware in a MBA Program: A Pilot Study

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ABSTRACT

This study examines the role of affiliation motivation on groupware use. Based on Technology Acceptance Model, one research model was developed to explore groupware use at the initial stage. A pilot study using MBA students that were just beginning to use groupware was conducted to determine if affiliation motivation influences perceived usefulness and perceived ease of use. Preliminary results indicated that affiliation motivation has a significant effect on perceived ease of use but not perceived usefulness. Implications for researchers as well as practitioners are discussed.

INTRODUCTION

Groupware is a set of programs that help to improve the communication and collaboration among a group of members. Unlike simple group communication systems, such as email, groupware provides some unique functions for group members to share and exchange information. While the influences of groupware on group performance and decision making have been studied extensively, little is known about the extent to which groupware may help group members to develop and maintain interpersonal relationships.

Relationships with other people are the foundation of social activities and human behavior. People have the need to associate with other people and to be affiliated with a group. In the context of groupware use, if a group member has strong motivation to work with other people, the motivation may influence his perceptions of the usefulness and ease-of-use of the groupware, which further affect his intention and actual behavior to accept and use the groupware system. After a period of groupware use, if a group member has developed a relationship with other group members, the commitment level to maintain this relationship will influence the continuous use of the groupware. In an ongoing research project which started with the present study, we have developed two research models for both initial use and continuous use. We limit our discussion to initial groupware use.

In the present study, we explore the effects of relationship variables on groupware use. Specifically, we are interested in the effect of affiliation motivation. Our research question is, "Does affiliation motivation help explain the intention and behavior of groupware use?" We incorporate affiliation motivation as an external variable into the Technology Acceptance Model (TAM) (Davis et al. 1989). Based on TAM, one research model is developed for the initial use stage. A pilot study has shown partial support for the research model.

THEORETICAL BACKGROUND

Social psychologists have found that relationships with other people are at the very heart of human existence and are the foundations of social behaviors. A relationship refers to how one person thinks, feels, perceives, expects, and reacts to the actions of another person. Recent researchers agree that a relationship is a series of interactions between two related people, extending over a period of time (Hinde 1997).

In order to investigate the effect of relationship factors on groupware use, one critical factor must be considered—affiliation motivation (Hill 1987). Affiliation motivation or the need to belong (Baumeister and Leary 1995) is a personality attribute that reflects an individual's desire for social interaction. Affiliation to objects is a prerequisite for relationship formation. According to attachment theory (Bowlby 1969), the child's attachment to his mother will be carried on to the adult's attachment to organizations, groups, leaders, and supervisors. In general, people have the need to belong to other people and objects. They also have the motivation to form interpersonal attachments. Affiliation motivation indicates an individual's desire and tendency to receive social rewards and develop a sense of communion with others.

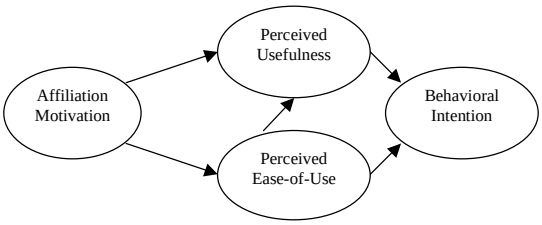
In the context of groupware use, group members need frequent contacts with each other. They need to build interpersonal relationships reflected through stable, affective, and consistent contributions from each other. The degree of a group member's participation in a groupware discussion and extent to which they use the groupware discussion are major manifestations of their contribution to the group. Hence, a group member's affiliation motivation may influence his acceptance and use of the groupware.

RESEARCH MODEL AND HYPOTHESES

In the initial stage, we incorporate affiliation motivation as an external variable into the Technology Acceptance Model (TAM) (Davis et al. 1989). The effect of affiliation motivation on groupware use intention and behavior is mediated by perceived usefulness and perceived ease-of-use. Based on the hypotheses of TAM and previous empirical studies that extend TAM, we hypothesize:

H1: Perceived usefulness is positively associated with behavioral intention.
H2: Perceived ease-of-use is positively associated with behavioral intention.
H3: Perceived ease-of-use is positively associated with perceived usefulness.
H4: An individual's affiliation motivation is positively associated with his perception of the usefulness of groupware technology.
H5: An individual's affiliation motivation is positively associated with his perception of the ease-of-use of groupware technology.

Figure 1. Relational TAM: Initial Use Stage



RESEARCH DESIGN

Data Collection

The research model was tested using survey questionnaires. The unit of analysis was a groupware user's perception. The groupware system used in the study as a popular groupware product—Lotus Notes. The respondents were MBA students in the college of business at a midwestern university. These respondents used Domino discussion databases for their problem-based learning projects for the MBA program. The MBA students were surveyed early in the quarter when they finished the first team projects. At this point, all MBA students had been introduced to the use of Domino discussion databases. During the project, students had access to several central discussion databases related to the general MBA program and the current project. A separate discussion database was also available for each team of 3 to 5 students.

Measures

Perceived usefulness and perceived ease-of-use are measured using the original scales developed by Davis (1989). Behavior intention is measured by items from Taylor and Todd (1995). The items from Hill (1987) are used to measure affiliation motivation.

A PILOT STUDY AND PRELIMINARY RESULT

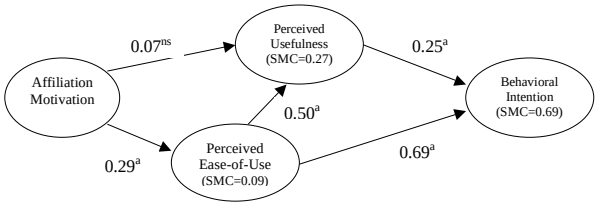
98 MBA students registered for the fall quarter successfully finished the questionnaire that measured their perceptions at the initial use stage (sample characteristics omitted). Most respondents had sufficient experience with computers (10.8 years), web sites (6.6 years), and email (6.1 years). Most were between 21 to 25 years old. 30 students were international students.

The research hypotheses were tested using LISREL 8 (Joreskog and Sorbom 1993), following a two-step approach (Anderson and Gerbing 1983). The result is shown in Figure 2. While the path from affiliation motivation to perceived usefulness was not significant, all the other proposed hypotheses were supported.

DISCUSSION

Consistent with the findings from previous studies, perceived usefulness and perceived ease-of-use were found to be significantly associated with behavioral intention to use groupware. Perceived ease-of-use was significantly associated with perceived usefulness. The percentage of variance in behavioral intention explained by perceived usefulness and perceived ease-of-use in the present study (69%) was much higher than those from previous studies (about 50%). The effect of perceived usefulness on behavioral intention (^{2} =0.25) was less than that of perceived ease-of-use (^{2} =0.69). This finding is not in agreement with previous findings.

Figure 2. Hypotheses Testing



Path significance: ^{a}p<.05, ^{ns} non-significant
Model fit: χ^2 =122.73 (d.f.=85, p<0.01), RMSEA=0.057, NFI=0.89, NNFI=0.95, GFI=0.87, CFI=0.96

We realize that the specific features of the pilot study sample may account for the conflict findings. The MBA students in the pilot study had just begun to use groupware for team-based projects when the pilot study was conducted. At the beginning of the quarter, groupware was introduced by faculty members as an alternative way to communicate with group members. However, students were not required to use the groupware system for group activities. During the first group project, students were learning how projects were structured in the program and how groupware might be useful in the process. They had not practiced the system very much when we collected the first round of data. Thus, in the following study on continuous use we may expect to see an increase in the perceived usefulness of the groupware system.

In addition, these MBA students can meet face-to-face to work on their projects every day. The face-to-face meeting may be enough to solve most of their communication needs, so that they may not find the groupware system useful in facilitating information exchange. On the other hand, they may also find that using groupware is an extra burden, which would negatively affect their work efficiency. This suggests that even though groupware systems have the potential to improve communication efficiency and effectiveness, whether an individual realize the potential benefit and use the system depends on the specific circumstances.

Attachment motivation, the new relationship variable incorporated into TAM, was found to be significantly associated with perceived ease-of-use. This suggests that people with higher intention to belong to others and to build interpersonal relationships with other group members perceive that the groupware is easy to use. However, attachment motivation was not significantly associated with perceived usefulness. This can be explained by the same reasons mentioned.

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