

Gender Differences and Cultural Orientation in E-Collaboration

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INTRODUCTION

Electronic collaboration (e-collaboration) is defined as collaboration among individuals engaged in a common task using electronic technologies (Kock & Nosek, 2005). Examples of technologies used in e-collaboration are email, groupware and chat tools, which support communication, information sharing and coordination among team members synchronously or asynchronously. Collaborative learning is regarded as an important information processing activity in e-collaboration. E-collaboration technologies enable affective learning related to interactive communication and teamwork to be achieved. Members learn from one another by actively engaging in exchanging knowledge and information based on their understanding as well as individual experiences (Harasim, Hiltz, Teles, & Turoff, 1995). New information is in this way integrated with existing cognitive structures (Leidner & Jarvenpaa, 1995). Growing interest in supporting the needs of active learning, along with concurrent improvements in e-collaboration technologies, has prompted research on computer-supported collaborative learning (CSCL).

CSCL research focuses on the interaction of computer-supported learning systems and collaborative systems by integrating collaborative learning and e-collaboration (O'Malley, 1995). Mediating through e-collaboration technologies, members' perceptions on status, roles and power repartition perceived by group members affect their participation in collaborative learning activities (Rutkowski, Vogel, van Genuchten, Bemelmans, & Favier, 2002). Gender has been considered as one of the fundamental personal

characteristics having profound influences on individual perceptions, attitudes, and performance, particularly in the collaborative learning setting (Morris, Venkatesh, & Ackerman, 2005). Morris et al. also promoted the importance of studying such influences. Gender differences are more profound in individualistic culture than in collectivistic culture. Hence, users' cultural orientation is another pertinent factor impacting jointly with gender on distributed e-collaboration teams (Rutkowski et al., 2002).

CSCL technologies make it possible for globally distributed teams to work on projects across cultures. Previous studies have highlighted the importance of individualism versus collectivism, and considered this dimension as the most distinguishing characteristic of culture¹ influencing group process (e.g., Oetzel, 2001; Triandis, 1995). People with different cultural backgrounds differ in perceptions on learning and working (Choong & Salvendy, 1999). Differences stemming from the contrasting cultural backgrounds would lead to different communication processes (Oetzel, 2001); this underscores the importance in building a set of group norms, which, if established, could potentially overcome the challenges (Levi, 2001). A set of collaborative group norms, through promoting equal participation and group wellbeing, leads to the learning achievement of every group member.

We adapt the expectation status theory in this study to investigate how and to what extent gender, cultural orientation and group norms affect users' self-perceived influential status and their participation in the context of CSCL.

BACKGROUND

The expectation states theory (Berger, Rosenholtz, & Zelditch, 1980) suggests that group members tend to evaluate other members on the basis of stereotypical performance expectation, which is influenced by status characteristics, particularly in the initial collaboration phase in CSCL activities. Status characteristic is a characteristic of a member associated with distinct performance expectation (Berger et al., 1980). For instance, gender is a diffuse status characteristic defined in the society, and it entails expectations for normatively appropriate behaviors in social contexts (Herschel, 1994). According to Augustinova, Oberlé, and Stasser (2005), it is generally recognized that people may approach impending group work quite differently depending on how they view themselves relative to other members. In this paper, we term this perceptual status as *self-perceived influential status*.

Members with collectivistic culture background value more the group needs and goals, social norms and duty, and group cooperation (Cox, Lobel, & McLeod, 1991). In contrast, members with individualistic culture background emphasize on self-interest and belief (Bontempo & Rivero, 1992). They tend to value more personal time and freedom (Massey, Montoya-Weiss, Hung, & Ramesh, 2001). Gender differences appear to be more pronounced in individualistic culture, as people in such culture are expected to act according to their own interest (Hofstede, 1991). In Mortenson's (2002) experiment, gender based behavior was only supported in subjects associated with individualistic culture. Watkins' study (1998) also showed that the notion of women valuing social relationship is more significant in countries with individualistic culture.

Group norms are expected behaviors that each group member has implicitly or explicitly accepted to follow to the best of their ability (Hare, 1976). Group norms can be defined and created explicitly in the group; moreover, they can be influenced and changed by members' past experiences (e.g., cultural orientation), initial collaboration behaviors among members, and critical events in the group history (Feldman, 1984). Group norms are considered as an effective measure in coordinating distributed teams in the use of new media (Levi, 2001). By establishing a set of group norms that promotes equal participation and group wellbeing, it can encourage all members to participate actively in CSCL activities.

MAIN THRUST OF THE ARTICLE

A Conceptual Framework

The expectation states theory highlights gender differences on members' self-perceived influential status, and in turn their participation in collaborative learning; this study expands the theory to the e-collaboration context by incorporating the analysis on technology capability. The effects of self-perceived influential status on participation are moderated by group norms; however, group norms tend to be highly influenced by members' cultural orientation, especially during initial contacts among members. Deducing from the preceding discussion, we put forth a conceptual framework that identifies the inter-relationships among technology, gender, cultural orientation, group norms and self-perceived influential status and consequently participation in e-collaboration (see Figure 1). The following deliberates on the individual components of the proposed framework.

Gender Differences on Self-Perceived Influential Status

Owing to the lower social presence in computer-mediated communication, members have relative less information and understanding about other members (Bargh & McKenna, 2004). The availability of social context cues may determine a learner's perception of other group members. Gender is one of the salient status characteristics, which influences members' own perception about their status in terms of competence in attaining group goals comparatively to other group members (Pelled, 1996).

According to the literature, men are generally task-oriented, independent, and value self-sufficiency; they prefer conflict as its outcome largely determines one's status in the interaction (Hofstede, 1991). In contrast, women are relationship-oriented, affiliative, and nurturing (Kray, Galinsky, & Thompson, 2002). At the presence of conflicts, women are likely to be accommodating with the purpose of ending the conflicts quickly to preserve the relationship. It has been found that women tend to use stricter standards on themselves and other women but employ looser standards on men in group activities, whereas males reserved more lenient standards for themselves but applied the more stringent criteria to their female members (Foschi, 1996). Con-

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