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Group norms, media preferences, and group meeting success: A longitudinal study

Zixiu Guo [a,*], Felix B. Tan [b], Tim Turner [c], Huizhong Xu [d]

[a] School of Information Systems, Technology and Management, The University of New South Wales, Sydney, 2052 NSW, Australia
[b] School of Computer and Information Sciences, Auckland University of Technology, Private Bag 92006, Auckland 1020, New Zealand
[c] School of Information Technology and Electrical Engineering, Australian Defence Force Academy, The University of New South Wales, Northcott Drive, Canberra, ACT 2600, Australia
[d] School of Management, Fudan University, No. 670, Guoshun Road, Shanghai 200433, China

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ABSTRACT

Group norms are known to have an effect on group meeting success. But to what extent do these norms affect choice of media for communication of group members, and what role does this effect play, if any, in group meeting success? This paper empirically examines these questions. It takes a novel approach in considering these questions longitudinally to investigate the importance of the formation and affect of norms over time. The study presented here showed that group norms do influence group member media preference and that, over time, these effects grow stronger. Furthermore, a strong positive association between the similarity of group media preferences and group meeting success is revealed. The paper concludes with a discussion of the importance and implications of understanding the effect of group norms on technology use and meeting success.

1. Introduction

Numerous theories and frameworks have been used to empirically examine how people choose different media for communication within groups and the effects of computer-mediated communication (CMC) on group meeting success (Lira, Ripoll, Peiro, & Gonzalez, 2007; Sivunen & Valo, 2006). The development of these theories and frameworks is driven by the notion that effective communication is one of the key factors for group success, especially when groups are facilitated by CMC technologies (Townsend, DeMarie, & Hendrickson, 1998).

One important theory in this area is The Social Influence Model of Technology Use (SIMTU) (Fulk, 1993; Fulk, Schmitz, & Steinfield, 1990; Fulk, Steinfield, Schmitz, & Power, 1987; Rice, Kraut, Cool, & Fish, 1994; Rice & Webster, 2002; Watson-Manheim & Belanger, 2007). SIMTU is grounded in the belief that social interaction and social information in the workplace shape the creation of shared meanings and that these shared meanings provide an important basis for shared patterns of media selection. It posits that social forces such as workgroup norms and co-workers' and supervisors' attitudes and behaviors about media will influence individual perceptions and choices of media. As a result, we may expect a similar pattern of media perceptions and choices within groups (even across tasks with different communication requirements) and different patterns of media perceptions and choices across groups (Fulk et al., 1987, 1990). SIMTU has found empirical support with perceptions and choice of email being influenced by co-workers' perceptions of and choice of the medium (Fulk, 1993; Kraut, Rice, Cool, & Fish, 1998; Schmitz & Fulk, 1991; Webster & Trevino, 1995); however, a few issues are noteworthy.

A first issue is that few of the empirical studies that tested the SIMTU have explicitly examined the similarity of media choice within groups. Little is known about how such patterns develop within groups. According to Deutsch and Gerard (1955), there are two ways in which groups exert influences on the perceptions and behaviors of individual group members: normative and informational social influence. Normative social influence is defined as "an influence to conform with the positive expectations of another", while informational social influence refers to "an influence to accept information obtained from another as evidence of reality" (Deutsch & Gerard, 1955, p. 303). This distinction is important. Previous investigations of social influence on media choice have concentrated on informational social influence and ignored normative social influence. Fulk (1993) and Yoo and Alavi (2001) argue that the members' attraction to the group (group cohesion) influences workgroup technology attitudes, social presence, task participation, and group consensus. But this premise, an articulation of normative social influence, has not been discussed explicitly, especially not as a mechanism to promote similar media choices within groups. This creates a void in the literature. There is, therefore, a need to examine what role normative social influence plays in group communication media choice.

The second issue with SIMTU is that although numerous studies have examined the model in a mediated communication system, most of them stop when media choices are made (Fulk & Boyd,

* Corresponding author. Tel.: +61 2 9385 7174; fax: +61 2 9662 4061.
E-mail address: z.guo@unsw.edu.au (Z. Guo).

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1991). What are the effects of media choice? In terms of the SIMTU, nothing is known about the effect of the group similarity of media choice on group meeting success. CMC technologies have played a distinctly social and interpersonal role in organizations. Numerous theories and frameworks have been introduced to enhance CMC-mediated group meeting success (e.g., Anson, Bostrom, & Wynne, 1995; Baltes, Dickson, Sherman, Bauer, & LaGanke, 2002; Lira et al., 2007; Niederman & Beise, 1996; Tan, Wei, & Lee-Partridge, 1999; Yoo & Alavi, 2001). Thus, this paper aims to examine how group norms influence group media choice patterns and how such patterns, in turn, affect group meeting success.

In addition, our research addresses three criticisms of extant small group research. First, the use of ad hoc groups created specifically for laboratory experiments is criticized for biasing research findings with respect to the relationship of constructs of interest (Dennis, Nunamaker, & Vogel, 1990–91). The use of real groups faced with familiar tasks is critical in obtaining results that generalize to typical work settings (Easley, Devaraj, & Crant, 2003). Second, much existing research assumes that a group is engaged only once or only on one topic (McGrath & Hollingshead, 1994). This often leads to distortions such as activities not directly related to the measured tasks being considered by participants (Easley et al., 2003). Research based on an experimental methodology with groups being assessed in a one-off measurement ignores the effects of time and history on group social interaction and outcomes (Reinig & Shin, 2002). Previous studies have demonstrated that the results of a group effort in an initial meeting and subsequent meetings can be different (e.g., Chidambaram, 1996; Chidambaram, Bostrom, & Wynne, 1990–91; Walther, 1997). Thus, a longitudinal field study is called for in studying group social interaction and outcomes to reveal the true nature of the relationships between these constructs (Reinig & Shin, 2002; Yoo & Alavi, 2001). Third, most research on the effects of CMC media choice have been performed in controlled settings, and many use the method of comparing results when groups meet with and without the technology. This feature is different to actual work conditions, where information technology is used as a supplement to, rather than a substitute for, other modes of interaction. Straus (1997) found that interacting by CMC alone is inappropriate for both the instrumental and expressive functions of small groups, particularly when performing tasks that require consensus.

This study goes beyond prior research by incorporating all of these concerns into its research design: using established groups facing meaningful tasks, collecting data over multiple time periods, and communicating via all media available to the groups.

The next section illustrates our research framework. Then we discuss relevant theoretical perspectives and lay out our research hypotheses. This is followed by the detailed description of the research methods. Next, the data analyses and results are reported. Finally, the paper concludes with a discussion that focuses on interpreting the results and on examining the theoretical and practical implications of the study.

2. Research framework

To examine the above issues, we adopted an input-process-output model of group interaction (see Fig. 1) as the organizing framework. Pressure to conform to group norms (Input Variable; Normative Social Influence) may result in similar group media preferences (Process Variable: Group Similarity of Media Preferences). In turn, such interaction processes are expected to have positive impacts on group meeting success (Output Variable: Group Meeting Success). The research model explicitly incorporates time into the group's interaction process. Examining social interaction longitudinally (over time) will reveal whether group norms about what group members ought to perceive and prefer in various communication situations are established, as group members communicate more intensively and develop familiarity with each other and with the communication media available.

The output variable is a composite construct, reflecting various key aspects of group meeting success. Successful meetings are characterized by task effectiveness and participant satisfaction (Niederman & Beise, 1996). Task effectiveness refers to the degree to which the group meets expectations regarding the quality of the outcome (Hoegl & Gemuenden, 2001). Satisfaction with process and satisfaction with outcomes are facets of participant satisfaction (Niederman & Beise, 1996). Thus, *outcome quality* (Gouran, Brown, & Henry, 1978), *satisfaction with process* (Green & Taber, 1980), and *satisfaction with outcomes* (Green & Taber, 1980) were used to measure group meeting success. These three dependent variables are widely used in CMC-mediated group research to measure group meeting success (e.g., Fuller, Hardin, & Davison, 2006; Gopal, Bostrom, & Chin, 1993; Guo, D'Ambra, Turner, & Zhang, 2009; Reinig, 2003; Tan et al., 1999; Yoo & Alavi, 2001).

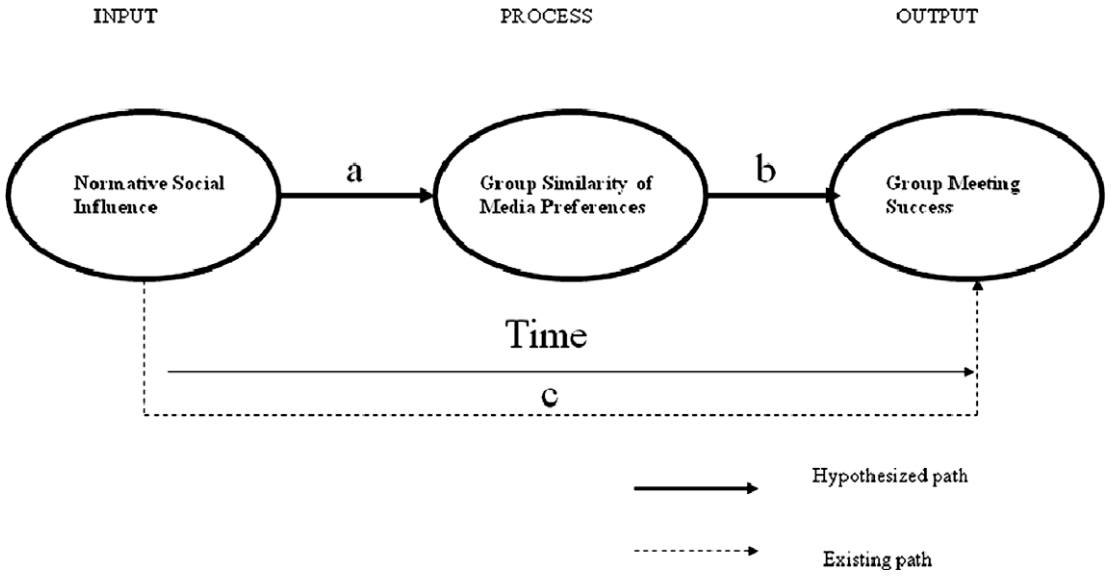

Fig. 1. Research model.