Topic Effects on Process Gains and Losses in Electronic Meetings

Linwu Gu, Indiana University of Pennsylvania, USA
Milam Aiken, University of Mississippi, USA
Jianfeng Wang, Indiana University of Pennsylvania, USA

ABSTRACT

In the literature of electronic meetings, few studies have investigated the effects of topic-related variables on group processes. This article explores the effects of an individual’s perception of topics on process gains or process losses using a sample of 110 students in 14 electronic meetings. The results of the study showed that topic characteristics variables, individual knowledge, and individual self-efficacy had a significant influence on the number of relevant comments generated in an electronic meeting.

Keywords: ambiguity; electronic meeting; interest; knowledge; self-efficacy; topic effects; task

INTRODUCTION

The choice of discussion topic can be a major influence on meeting process gains (e.g., more information, synergy, and learning) and process losses (e.g., free riding, evaluation apprehension, information overload, and conformance pressure) (Nunamaker, Dennis, Valacich, Vogel, & George, 1991), but few studies have investigated topic effects. In one such study (Tyran, Dennis, & Nunamaker, 1992), results showed that 95% of relevant comments generated were related to the topics of the meetings, while another study (Reinig, Briggs, & Nunamaker, 1997) showed that uninteresting topics brought more “flaming” (i.e., hostile, obscene, or inappropriate comments). In addition, group member participation can vary with the meeting topic (Cornelius & Boos, 2003; Pinsonneault, Barki, Gallupe, & Hoppen, 1999). Finally, group members’ knowledge of the topic and judgments of the importance of the problem and their influence over the final decision can affect the number of comments in a discussion (Aiken, 2002). Thus, inappropriate topic selection has the potential to produce flaming and fewer useful comments in a meeting. The purpose of
this article is to investigate the relationship of multiple meeting topic characteristics including ambiguity, difficulty, and self-efficacy on outcomes such as group cohesion, effectiveness, participation, and number of comments.

**RESEARCH MODEL**

The research model (shown in Figure 1) includes many variables not used in prior studies of topic effects, and these variables are described along with associated hypotheses.

**Difficulty**

Topic difficulty is defined as “the amount of effort required to complete the task. For example, time to solve, number of errors, or failures to complete, etc. would be measures of difficulty” (Shaw, 1976). Shaw found that the more difficult the task was, the more time the group required for the solution. Previous studies indicate the degree of task difficulty was related to the amount of effort required to complete the task, to the degree of group member involvement and presentation, and to the speed of group member’s reaction (Hackman, 1968). The task difficulty also limits group members’ abilities to solve the problem when it is difficult to determine the best solution. Task demands, self-esteem, and conformity are all related to task difficulty. Griffin, Neale, and Neale (2000) found that task difficulty moderated group effectiveness and performance. A task is difficult not because it is always complex, but because it may require a large amount of effort. As discussed earlier, difficult topics are problematic to reach high involvement and perceived effectiveness during a meeting process, and thus generate fewer comments.

Based on the previous studies, we have the following hypotheses:

\( H_{1a} \): Topic difficulty decreases the number of relevant comments.

\( H_{1b} \): Topic difficulty decreases the number of unique comments.

\( H_{1c} \): Topic difficulty decreases group cohesiveness.

\( H_{1d} \): Topic difficulty decreases perceived effectiveness.

\( H_{1e} \): Topic difficulty decreases equality of participation.

**Intrinsic Interest**

Intrinsic interest is defined as “the degree to which the task in and of itself is interesting, motivating, or attractive to the group members” (Shaw, 1976). One study (Aiken, 2002) showed that more relevant comments were generated if group members thought that topic was more important. Group members in a meeting are more motivated when the topic that they discuss is interesting, involving, and challenging.

Thus, we have hypotheses as following:

\( H_{2a} \): Topic intrinsic interest increases the number of relevant comments.

\( H_{2b} \): Topic intrinsic interest increases the number of unique comments.

\( H_{2c} \): Topic intrinsic interest increases influences perceived effectiveness.

\( H_{2d} \): Topic intrinsic interest increases group cohesiveness.

\( H_{2e} \): Topic intrinsic interest positively increases equality of participation.

**Solution Multiplicity**

Solution multiplicity is defined as more than one correct solution to the task (Shaw, 1976) or more than one possible course of action to attain a goal (Campbell & Gingrich, 1986). Solution multiplicity increases information overload, and the number of desired outcomes of a task is related to the degree of complexity. One of the independent variables in the study of Aiken (2002) was topic controversy, and a controversial topic was found to have a significant effect on the number of relevant comments. Commonly, if one topic has multiple solutions but no solutions can be proved to be the only correct answer, the topic is controversial. We have the hypotheses concerning topic solution multiplicity:

\( H_{3a} \): Topic solution multiplicity decreases the number of relevant comments.
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