

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 1997 Proceedings

Americas Conference on Information Systems
(AMCIS)

8-15-1997

Perceptions Over Time Related to Meeting Procedures in Partially Distributed Groups

Kregg Aytes
Idaho State University

Kelly Burke
Idaho State University

Jeff Johnson
Utah State University

Follow this and additional works at: <http://aisel.aisnet.org/amcis1997>

Recommended Citation

Aytes, Kregg; Burke, Kelly; and Johnson, Jeff, "Perceptions Over Time Related to Meeting Procedures in Partially Distributed Groups" (1997). *AMCIS 1997 Proceedings*. 214.
<http://aisel.aisnet.org/amcis1997/214>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 1997 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Perceptions Over Time Related to Meeting Procedures in Partially Distributed Groups

Kregg Aytes, Kelly Burke

CIS Department

Idaho State University

Jeff Johnson

College of Business

Utah State University

Abstract

Groups use different procedural structures to organize their efforts in group meetings. These structures are affected by the group members' preferences for the degree of procedural order they want in a meeting, as well as by the communication media available in the meeting environment. Analysis of thirty partially distributed experimental groups that met over a period of time indicates that members' preferences for procedural order affect their perceptions of outcome satisfaction and participation. Further analysis of video tapes of the sessions should indicate how media and other factors affect the members' actual attempts at providing structure to the meetings.

Introduction

Practical guidelines for conducting effective meetings usually include suggestions for structuring meetings through such methods as setting agendas and using prescribed discussion and decision-making methodologies. The functional designs of many group support technologies has been based on providing procedural structures for the group. However, the effective use of such procedures often depends on the use of a human meeting facilitator, which is not always practical. In many organizational meetings, a designated, impartial facilitator is not used at all. Often, the group must determine how best to structure its activities. To further complicate matters, although some research points to the effectiveness of providing procedural structures to meetings (Burgoon, et. al. 1974), results from other studies suggest that less structured approaches can also result in effective group decision-making (Hirokawa & Pace, 1983, Mintzberg, et al., 1976).

Some researchers have suggested that individual preferences for procedural order mediate the relationship between decision procedures and outcomes (Hirokawa, et al., 1988). Other theoretical perspectives, such as Adaptive Structuration Theory (AST) view a wide variety of factors, such as the sequence of activities, the pace of the communication and the communication mode, as potential sources of structures (Wheeler & Valacich, 1996). While factors like individual preferences, technologies, and group norms may impact the creation of meeting structures, we know little about how groups structure their activities.

In addition, the ways in which groups meet are changing rapidly as they learn to use computer and video technologies. These various meeting environments provide new challenges to understanding how groups structure their activities. This paper describes an attempt to examine the effects of communication media and individual preferences on groups' attempts at the procedural structuring of meetings by self-directed work groups.

Background

Several earlier studies have looked at the mediating effects of both individuals' preferences for procedural order and technological structures on the performance of groups. In two studies, (Hirokawa, et al., 1988; Wheeler, et al., 1993) preference for procedural order was determined using a measure developed by Putnam (1979). The instrument, the Group Procedural Order Questionnaire (GPOQ), assesses the degree to which an individual prefers procedural structuring in group activities. Procedural structures include such things as the use of planned, sequential patterns for organizing activities (e.g., agenda setting), concern for time management, and an emphasis on clarifying group procedures and adhering to the task (Putnam, 1979). The results of these studies indicate that preference for degree of procedural order has an impact on solution quality, process satisfaction, and participation. With regards to decision quality, it appears that those groups comprised of members who have a low preference for procedural order (LPO) are able to perform well given a meeting environment with either a high or low degree of structure. Groups comprised of members with a high preference for procedural order (HPO), on the other hand, seem to need a more structured environment than LPO groups (Hirokawa, et al., 1988). Further, all types of groups, including LPO groups, seem to prefer the guidance offered in a structured environment (establishing an order of tasks to be done, etc.) when working on a complex task (Wheeler, et al., 1993). However, HPO groups reported more participation than did LPO groups, regardless of the level of structure in the meeting environment (Wheeler, et al., 1993).

Research Questions

Because relatively little research has been done in this area, this study takes an exploratory rather than theory-testing approach. The general questions posed here include the following:

Do media affect people's perceptions of meeting structures?

Does a group's preference for procedural order affect how it structures meetings?

Does the amount of procedural structure members impose in a meeting affect a person's satisfaction with the outcomes of the meeting?

Does the amount of procedural structure members impose in a meeting affect a person's satisfaction with participation?

While the results of earlier studies indicate that groups comprised of all HPO members may be somewhat less flexible in their ability to work in different meeting environments than all-LPO groups, the limitations of these studies must be kept in mind. Groups of all HPO or LPO members were explicitly formed by selecting only those subjects whose score on the GPOQ was one standard deviation either above or below the mean for their entire sample. This, by definition, does not reflect the makeup of the typical group. Therefore, these studies tell us little about how typical groups, comprised of HPO, LPO, and "non-extreme" members may, if so inclined, work together to provide their own structure to the meeting environment. Nor do we know much about how meetings are structured when at least one group member must participate from a remote location.

This study differs from previous studies in four important ways. This study used groups composed of a random mix of preferences for procedural order, rather than creating groups of only HPO or LPO members. Second, this study investigates the actual structuring behaviors of group members, absent highly structured technological support (i.e., an electronic meeting system) or a human facilitator. Third, this study looked at partially distributed groups (groups where three members were colocated and one was remote), which allowed an investigation of media affects, including audio, video, and computer support, on groups' structuring activities. Fourth, the earlier studies looked at procedural order in the context of only one meeting, while this study assumes that many groups collaborate over a series of meetings. Hence, we examined procedural structuring factors over time.

Specifically, this research studied thirty groups of four people who met to perform a policy development and writing task over a period of four one-and-a-quarter hour meetings. All groups used a collaborative writing tool, which allowed all group members to simultaneously edit a common document. The collaborative writing tool did not impose any process structure on the group, but instead worked only as a shared workspace. One of the members was remote from the others, which simulated conditions where one person was not able to participate face-to-face with the rest of the group. All of the remote participants had access to the shared group document through the same writing tool. In ten of the groups, the remote participant also used video conferencing technology to communicate with the other group members. In a second treatment, ten groups had access to only audio communications with the remote member. In the third treatment, remote participants used audio technology for all but the last session, in which they were given access to video conferencing technology.

Results

To answer the above questions, data were gathered in two different ways from the 120 subjects. First, questionnaire data was used to measure subjects' preference for procedural order (the degree to which they preferred structured meetings) before any meetings were conducted. Then, after each of the four sessions, questionnaire data was collected on subjects' satisfaction with meeting outcomes, participation, and perceptions of the amount of procedural order in each of the four meetings. In addition, all meetings were

videotaped to allow for the observation of actual behavior. However, the videotapes have not yet been analyzed.

While the research questions are aimed primarily at the procedural structuring behaviors of groups, the questionnaires assessed subjects' perceptions of procedural related issues, thus giving us an indication of what may have actually occurred. We realize that there is a difference between subjects' perceptions of meeting structures and the actual degree of meeting structure present. However, the perceptual data gives us some indication of how meetings are structured. Specifically, the analysis of the questionnaire data indicates the following:

Communication media do not affect the group's perception of the amount of procedural order present in a given session. Whether groups used video or audio conferencing did not create statistically significant levels of perceived procedural order in the meetings. Interestingly, however, groups perceive significantly more procedural order in later sessions than in earlier ones, as procedural order steadily increases from session to session.

The level of preference for procedural (PPO) order in a group does not affect the group's perceptions about the level of procedural order in the meetings. Groups were analyzed by mean group score for PPO, as well as by groups that had at least one member that had a comparatively high or low PPO score. No matter how groups were compared, groups that had particularly high needs for procedural order did not perceive that they imposed more procedural order on the meetings than did groups with lower needs for procedural order.

Individuals with high needs for procedural order (HPO) were significantly more satisfied with the outcome of the meetings than those individuals with low needs for procedural order (LPO) ($p < .05$).

HPO individuals perceived participation to be more equal than did LPO individuals ($p < .05$).

Preliminary Conclusions and Continuing Research

These results indicate that preference for procedural order leads to different perceptions about satisfaction with outcomes and the level of participation in meetings. At this time, however, we don't know why HPO individuals perceive things differently than LPO people - it may be that they behave differently. For example, HPO members, in their efforts to impose structure on the meeting, may participate disproportionately, causing LPO members to perceive inequity in participation. Studying the videotapes should shed more light on this subject. In addition, it is certainly plausible that groups that have visual contact with all members (video conferencing) may use different mechanisms to provide procedural order to the group process than those groups having only audio communication with the remote member. Once again, study of the videotapes is necessary to determine actual group members' behaviors. Finally, we realize that the meeting environment set up for this study probably affected the groups' structuring

behaviors. For example, we suggested (but did not enforce) the use of milestones for the individual meetings. Also, the collaborative writing tool, while not prescribing any particular sequence of activities, may have affected the way in which groups divided up the task (a form of procedural order)

We are beginning the process of developing a coding scheme to measure the degree of procedural ordering groups attempt to use in their meetings. This scheme is focused on specific attempts to structure the meetings through verbal means, but will also take into account use of the collaborative writing tool to provide structure to the meetings. When this coding effort is completed, we will have a much richer understanding of how groups structure their activities.

References

Burgoon, M., Heston, J., & McCreosky, J. *Small Group Communication: A functional approach*. Holt, Reinhart, & Winston, New York, 1974.

Hirokawa, R. Y. & Pace, R. A descriptive investigation of the possible communication-based reasons for effective and ineffective group decision-making. *Communication Monographs*, 1983, (50), pp. 363-379.

Hirokawa, R.Y., Ice, R., & Cook, J. Preference for Procedural Order, Discussion Structure, and Group Decision Performance. *Communication Quarterly*, 1988. 36 (3), pp. 217-226.

Mintzberg, H. Raisinghani, D., & Theoret, A. The structure of "unstructured" decision processes. *Administrative Science Quarterly*, 1976. 21, pp. 246-275.

Putnam, L. Preference for procedural order in task-oriented small groups. *Communication Monographs*, 1979, 46, pp. 193-218,

Wheeler, B.C., Mennecke, B., and Scudder, J. N. Restrictive group support systems as a source of process structure for high and low procedural order for groups. *Small Group Research*, 1993, 24 (4) pp. 504-522.

Wheeler, B.C. & Valacich, J. S., Facilitation, GSS, and training as sources of process restrictiveness and guidance for structured group decision making: An empirical assessment. *Information Systems Research*, 1996, 7 (4) pp. 429-450.