ABSTRACT

The purpose of this project is to investigate the feasibility of using a Group Decision Support System to enhance group communications and to develop an appreciation of the potential of information technology in decision making in an undergraduate environment.

INTRODUCTION

For researchers intent on identifying consumer preferences, focus groups have been a prime vehicle for identifying the needs, wants and level of consumer satisfaction. Focus groups traditionally involve a focus group leader or facilitator who guides a group of individuals through a series of pre-planned questions and/or exercises about a particular issue. While the focus group leader is trained to elicit responses from all individuals in the group, group processes are time consuming and slow and are subject to substantial social pressures. The focus of this research is to explore the efficacy of utilizing a Group Decision Support System to support a process of individual discovery and creativity in college undergraduates.

For the purpose of this study, a Group Decision Support System (GDSS) is an interactive computer based system that facilitates the solution of unstructured problems by decision makers working together as a group (DeSanctis and Gallupe, 1987). It is a system specially designed to support groups of decision-makers. In addition, it should be easy to learn and should discourage negative group behavior.

The goal of a GDSS is to improve the productivity of group meetings either by speeding up the decision making process or by improving the quality or creativity of the resulting group output. The increased productivity and quality are accomplished by providing support to the exchange of ideas, opinions and preferences within the group (Finholt and Sproull 1990). The impact on the work of quality teams as reported by participants in the IRS-Minnesota GDSS project (DeSanctis et al 1991) indicate a high level of satisfaction with a GDSS. More structure is provided when teams confront complex, unstructured decision tasks. When progress stagnates, a GDSS helps move the group forward. It also enhances meeting efficiency by reducing the time to address issues and/or to solicit responses. Moreover, it facilitates full participation and conflict management. Finally, a GDSS permits a substantial amount of flexibility. It can be used differently by different groups addressing the same or similar issue.

RESEARCH METHODOLOGY

The purpose of this research is to assess the creativity, quality and productivity of a focus group in a DSS environment. Each participant is expected to learn the basic concepts of group decision making, to develop a scenario for group decision making and to utilize a GDSS to complete the scenario.

The scenarios, the groups and facilitators will be allowed about one hour to complete the assigned tasks. Each facilitator will be responsible for guiding his/her group through a series of questions. The quality and productivity of each group will be measured both quantitatively and qualitatively. The facilitators will utilize VisionQuest, a personal computer based GDSS developed by Collaborative Technologies. The facilitators will be trained how to use this system. They will subsequently be responsible for training the focus group participants. The facilitator’s responsibility will be not only to make the participants comfortable in the use of a GDSS but also to assist the group in completing its agenda.

Task and human will be the control variables in the experiment. Since the purpose of the research is to evaluate creativity and productivity of novices using a GDSS, user performance both, as a facilitator and participant will be measured using different scenarios or agendas. The scenarios will be of sufficient robustness to include reasonable complexities encountered in focus group exercises. The main performance variables, (Quality and Productivity) are the degree to which the focus group approach provides responses in terms of perceived quality. Objective comparison of the analyses presented by participants in the human control groups will focus on comparing the focus group’s performance and
measuring each participant’s level of satisfaction with a questionnaire.

The focus of this proposed research can be broadly stated as follows: “The use of a GDSS approach for will provide better results than traditional methods when conducting market research using focus groups”. This statement implies a comparative analysis of products generated by the two methodologies. The principle areas of investigation in this research are quality of output, productivity of the group and level of satisfaction. Does a GDSS approach enable a focus group to provide better responses, both qualitatively and quantitatively? Do participants and facilitators perceive it easier to use and assimilate ideas? Rogers (1979) states that ease-of-use is a primary factor utilized by individuals in determining whether or not to adopt a nontraditional or new approach or product.

**RESEARCH STRATEGY**

A laboratory study will be utilized to address the research question in order to control internal validity (Stone 1978), definition and manipulation of independent variables (Fronkin 1976), extraneous variables (McGrath 1979), and resistance to innovation (Zaltman 1973). The task requires each facilitator to guide a focus group of undergraduate students through an agenda. The following agendas were utilized:

- Stock Selection -Student Investment Fund
- Legalization of Drugs
- Aid to Indigenous Peoples
- Admissions Video Review
- Grading Systems
- Musical Selections
- Trial by Jury.

The GDSS facilitators utilize VISIONQUEST from Collaborative Technologies. The agenda that these groups utilize and the group’s responses to each agenda item will be recorded on a database. Undergraduate students in an honors class will be the test subjects. The participants will be seated in a U-shaped electronic meeting room that has networked computers. A large screen projection system is connected to the network to display the work of aggregated information from the total group. It is the responsibility of each facilitator to manage the flow of the group by managing the agenda electronically.

The quality and productivity of each facilitator and the group in total is evaluated. Finally, level of satisfaction by the participants and facilitators will be measured.

Initial findings indicate that, while the participants explicitly stated a high degree of resistance to computers at the onset, this resistance disappeared over a period of five weeks, as the students became aware of VISIONQUEST’s ease of use. The number of responses to questions posed in a GDSS setting exceeded the responses in a traditional setting by a factor of ten to one. Moreover, the time taken to elicit the GDSS group’s responses was lower by a factor of three. The quality of GDSS output also appeared to be higher because substantially different alternatives were presented. Initially, the participants were looking toward the facilitator for guidance but became self-motivated quickly. In the traditional environment, less than twenty five percent of the participants actually talked while all members in the GDSS actively participated in the exercises.

**REFERENCES**


Rogers, E. Innovation Management, 1979
