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Leadership in Virtual Teams: An Exploratory Study

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Abstract

This paper discusses a "research in progress" study. Exploratory research is presently being conducted to learn more about the role of leadership in distributed teams. Thirteen distributed teams are being studied over a period of fifteen weeks. Each team consists of four members. The participants in the study are distance learners in an executive MBA program. The study will combine qualitative and quantitative research methods to address the following questions: Are there common characteristics associated with leadership emergence in distributed teams (e.g., trust)?; What strategies (e.g., communication behaviors) do emerging leaders use to establish leadership and lead others in a distributed environment?; and Do leadership characteristics have an impact on distributed team performance?

Introduction

"Virtual teams" of people working in a distributed setting are becoming more prevalent in organizations (Townsend, DeMarie & Hendrickson, 1998). The purpose of this "research in progress" study will be to learn more about the role of leadership in distributed teams. In traditional teams (i.e., those involving face to face interaction), leadership is one important factor shown to influence team performance and individual satisfaction within a team (Bass, 1990). Leaders often facilitate effective task distribution within a team. By assigning tasks to individuals with the skills, knowledge and abilities to perform them best, a leader can greatly increase the effectiveness and efficiency of a team (McGrath, 1984). In addition to task-focused behaviors, leaders also inspire others through communication of a vision for a team's work (Conger & Kanungo, 1998). By providing guidance and acting as a mediator, a leader can enhance the interpersonal relationships within a team for added synergy and cohesiveness. With increased reliance on dispersed teams, it is important to ask whether the presence of a leader can enhance virtual team effectiveness through better task alignment and distribution, as well as enhanced relationships among team members. Specific research questions to be addressed by this study include:

- Are there common characteristics associated with leadership in distributed teams (e.g., trust)?
- What strategies (e.g., communication behaviors) do leaders use to establish leadership and lead others in a distributed environment?
- Do leadership characteristics have an impact on distributed team performance?

Review of Literature

Self-managed teams – both geographically similar and dispersed – provide opportunities for individuals to emerge as leaders (Hollander & Julian, 1969). We know that leaders who emerge in traditional teams share some common characteristics, including effective listening skills (Johnson & Bechler, 1998), high self-monitoring (Kolb, 1998), dominance, intelligence and self-efficacy (Smith & Foti, 1998), gender role (Kent & Moss, 1994), among others. Here, we examine distributed, or virtual, teams to see whether leadership emerges in similar ways.

Virtual teams are defined as interdependent teams operating within geographically dispersed structures (DeSanctis & Jackson, 1994). Research on virtual teams has focused on how to improve team effectiveness while using information technology to facilitate coordination. For example, Jarvenpaa, Knoll & Leidner (1998) demonstrated that trust needed for coordination and communication could be enhanced through the use of trust-building intervention. Other research has demonstrated the importance of highly effective communication and coordination within virtual teams. One potential method of facilitating such interaction is the emergence of a leader who can effectively manage a team's tasks and relationship.

In our study, we integrate what is known about emerging leadership with the information we have on developing high-performing virtual teams. Our study is exploratory in nature. We plan to use grounded theory methods to develop a model of emerging leadership in virtual teams (Glaser & Strauss, 1967). Using both qualitative and

quantitative methods, we will explore the existence of emerging leadership, antecedents of emerging leadership, and qualities of effective leadership in virtual teams.

Methodology

A research study involving a case study approach is presently being conducted to address the research questions. Participants in the study include fifty-one distance-learning students in an executive MBA program operated by a university in the United States. The participants have been randomly assigned into thirteen distributed groups consisting of four members each (one team has three members). The participants are distributed throughout North America. The work experience of participants is substantial, as most have several years of managerial leadership experience.

Over the duration of the class term of fifteen weeks, each team will perform eight team assignments. Each member of a team has been randomly assigned to serve as the "team leader" for two of the assignments: one case study and one summary paper. Responsibilities of the team leader will be to coordinate all work associated with the deliverable, allocate workload across team, provide feedback to work done by others, prepare final deliverable and submit to the instructor. The team leaders will be given flexibility in using their own approach in leading the team.

Due to the relatively small sample size and the lack of controlled manipulations, this study will use a case study approach to address the research questions. The data collection will include weekly self-reported communication behavior logs, a post-study survey questionnaire, and interviews. By collecting a variety of different types of data, we hope to gain a better understanding of the factors that may be associated with leadership emergence in distributed teams. Specific information that will be collected includes the following:

- Communication behavior: To gain a sense of how team members interact with their team leader and one another, each participant will submit a weekly self-report "communication log." The "communication log" will require the participants to record the frequency and effectiveness of the different modes of communication that they have used with each of their teammates during the week (e.g., e-mail messages, telephone conversations). Additionally, each team will be provided with a WWW-based electronic "chat room" for their team. Electronic records of each team's activity on the electronic "chat room" will be analyzed to assess the "chat room" communication.

- Leadership characteristics: As noted earlier, research has indicated that there are a number of characteristics that are associated with leadership emergence and effectiveness in traditional groups. To help determine whether such leadership characteristics are also related to leadership in distributed teams, each team member will assess his or her teammates on the following measures at the end of the study:
  - Trust: An instrument developed by Bigley (1996) based on work by McAllister (1995) and Mayer, Davis & Schoorman (1995) will be used to measure perceptions regarding three types of trust (affective bond, role performance, and ethical integrity).
  - Leadership style: The MLQ instrument developed by Bass & Avolio (1990, 1995) will be used to measure leadership style.

- Leadership assessment: At the end of the study, each team member will have had the opportunity to serve as a team leader for two deliverables. To determine whether the team members consider one (or more) of their members to be an effective leader in the distributed environment, each team member will assess the other members of the team with respect to leadership effectiveness. In addition to rating the team members, each team member will rank the members of the team with regard to leadership effectiveness.

- Team performance: Two raters will evaluate each team's performance on the deliverables for the course. The performance assessments will be used to explore the relationships between leadership behavior and team performance.

- Interviews: Following the study, selected study participants will be interviewed to develop a fuller understanding of the behaviors and characteristics that may lead to effective leadership in distributed teams.

Conclusion

This study will build on previous leadership research by extending our understanding of leadership into the distributed team setting. This research has the potential to have implications for both researchers and practitioners. For instance, the study may find that specific behaviors or characteristics tend to be associated with effective leadership in the distributed environment. Such a finding may help us to extend or modify existing leadership theory to the distributed environment. Additionally, the study may help to identify fruitful areas for future research by raising new research questions. Lastly,

findings from this study may help to inform practitioners who wish to work more effectively in distributed teams.

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