Sharing Knowledge in Global Virtual Teams: How do Chinese Team Members Perceive the Impact of National Cultural Differences on Knowledge Sharing?

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SHARING KNOWLEDGE IN GLOBAL VIRTUAL TEAMS: HOW DO CHINESE TEAM MEMBERS PERCEIVE THE IMPACT OF NATIONAL CULTURAL DIFFERENCES ON KNOWLEDGE SHARING?

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Abstract

I propose to study the impact of national cultural differences on knowledge sharing activities in global virtual teams. Specially, I will put the research in a specific context of Chinese culture and the U.S. culture. Only Chinese perceptions of the impact of cultural differences between China and the U.S. will be studied. I propose to use a two-phase study. In phase one, an exploratory case study approach will be used to explore how cultural differences impact knowledge sharing activities in global virtual teams and what kind of other factors that may moderate the impacts. The purpose of the case study is to understand the phenomenon under investigation and generate a set of hypotheses. In phase two, a survey will be used to test the hypotheses generated from phase one.

Introduction

Issues concerning virtual teams have received considerable attention in both academic and practical world because of the increase use of virtual teams in today’s organizations (Townsend et al. 1998; Chudoba et al. 2005). However, there has been relatively little empirical research on knowledge sharing activities in virtual teams, especially in global virtual teams, which is the interest of this research.

One of the major barriers to knowledge sharing is cultural differences (Long and Fahey 2000; Jashapara 2005; Gemino et al. 2005-6). This problem is even more prominent in global virtual teams since the team members may come from different departments, organizations and/or different countries, thus different levels of culture (e.g., national, organizational, sub-organizational) may shape members’ knowledge sharing behavior (Evaristo 2003). But little research has explored the effect of cultural differences on knowledge sharing activities in global virtual teams. To fill this gap, I propose to study the impact of national cultural differences on knowledge sharing activities in global virtual teams. Specifically, I am interested in the following three questions.

1. Do team members think national cultural differences have an impact on their knowledge sharing activities in virtual teams? If so, how?
2. How do knowledge sharing activities between people with different cultural backgrounds differ from those within the same culture?
3. How do individuals’ perceptions of the impact of national culture change over time?

The above question will be addressed within the context of two national cultures: China (mainland) and the U.S. The reasons to select these two cultures are from both theoretical and practical considerations. Theoretically, two cultures which have big differences are preferred because it is easy to detect the differences, which leads the researcher to consider eastern culture and western culture. The reason for choosing China and the U.S. per se is mainly for convenience because the researcher is of
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Chinese nationality and she is a Ph.D. student in a U.S. university. Specifically, the Chinese team members’ perceptions of the impact of cultural differences between China and the U.S. on their knowledge sharing activities when they virtually work with the U.S. colleagues located in the U.S are studied. The research questions have been modified to fit into this specific context.

1. Do Chinese team members think differences between Chinese culture and the U.S. culture have an impact on their knowledge sharing activities when they virtually work with the U.S. colleagues? If so, how?
2. How do knowledge sharing activities between Chinese and Americans differ from those between Chinese only in virtual team setting?
3. Do Chinese members perceive the impact of the national cultural differences on their knowledge sharing with Americans change over time?

Brief Literature Review

Definition of Knowledge and Knowledge Sharing. The perspective of knowledge that one holds underlies the conceptualization of knowledge sharing activities (Boer et al. 2002). This paper adopts Alavi and Leidner’s (2001) definition of knowledge as “personalized information (which may or may not be new, unique, useful, or accurate) related to facts, procedures, concepts, interpretations, ideas, observations, and judgments” (p.109). Knowledge sharing is defined as the exchange of task-related information, know how, and feedback regarding a product or procedure (Cummings 2004).

Definition of Culture and National Culture. There is no unifying definition of the concept of culture and it is described differently in the literature. This paper adopts Terpstra and Sarathy’s (2000) definition of culture as the “integrated sum total of learned behavioral traits that are shared by members of a society.” (p.90)

The dimensions of national culture identified by Terpstra and Sarathy (2000) are used as the basis forming the cultural frame of reference in this paper. Eight dimensions were identified from their research: technology and material culture, language, aesthetics, education, religion, attitudes and values, social organization, and political life.

Cross Cultural Research. Kim’s theory of cross cultural adaptation process describes how strangers adapt to a new and unfamiliar cultural environment and how their communication activities influence their adaptation (Gudykunst and Kim 2003) (Figure 1).

![Figure 1. Cross Cultural Adaptation Process](Gudykunst and Kim 2003)  

Enculturation takes place in early childhood in which the forms for expressing and comprehending basic social behaviors are internalized by socialization with others. When strangers interact with a new culture, the process of resocializaton, or acculturation occurs. Strangers begin to detect similarity and difference between the two cultures and make necessary changes to adapt to it. Sometimes they need to unlearn some of the old cultural habits, which is called deculturation. Through the interaction of acculturation and deculturation, strangers reach assimilation, which is a state of high degree of acculturation into the new culture and a high degree of deculturation of the original culture (Gudykunst and Kim 2003).
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Though the theory of cross cultural adaptation is usually used in traditional communication settings, it can be extended to virtual team settings. Communication is important in this study because it entails knowledge sharing activities between team members among cultures. In global virtual team settings, team members are from different cultural backgrounds. When they work together, their diverse cultural backgrounds may affect their understanding of others’ behavior, which in turn will influence the overall team performance. So it is not surprising to know that team members need to understand other’s culture, realize the differences between the cultures, and make changes if necessary to work effectively.

But not all people from same culture understand the values and behave in the same way. So it is important to understand the individual’s perceptions of certain cultures and how their perceptions of the differences between different cultures influence their behavior. The aggregation of individual’s perceptions reveals a pattern which shows the impact of national culture in general.

Research Design

A two-phase study is proposed for this research. In phase one, an exploratory case study approach will be used to explore how cultural differences impact knowledge sharing activities in global virtual teams. The purpose of the case study is to understand the phenomenon and generate a set of hypotheses. A survey will be used in phase two to test the hypotheses.

Phase 1: Case Study

A two-case study approach will be used to examine individuals’ perceptions of national cultural differences on knowledge sharing activities in global virtual teams (Yin 1984). The case study will be conducted in a Chinese site of a knowledge-intensive global organization. A survey conducted in this organization revealed that employees are generally dissatisfied with cross cultural collaboration. With the help of a senior manager from the site, two engineer working team located in the site were selected for the study. These two teams are in the same organization but with different professions. By focusing on a single organization and a single profession for each case, organizational culture and professional culture variations are controlled, allowing a focus on national cultural differences.

Multiple methods will be used to collect data from multiple sources at different levels. Semi-structured interviews will be taken as the primary data collection technique. The interviews will be used to collect data on team members’ perceptions of the impact of national cultural differences on their knowledge sharing activities with the U.S. colleagues. Beyond interview techniques, some secondary methods will also be applied to collect supplementary data. First, data about the organization and the team will be mainly collected by interviewing the team leaders, attending new employee orientation, and documentation review. The purpose is to understand the organizational culture and team environment in general. On-site observation (chatting with the team members, attending their meetings, and email list observation) will also be used to understand the team working style and to develop the interview protocol. The triangulation of various data collection techniques provides richness and depth on the investigated issue (Yin 1984). Content analysis (Krippendorff 2004) will be used to analyze the interview data. A coding scheme will be developed deductively (from literature review) and inductively (from interview data) to capture the dimensions of national culture and knowledge sharing activities in virtual teams. Then the data can be coded to seek patterns. Both within case analysis and across case analysis will be performed. Finally, a set of hypothesis regarding how national culture differences impact knowledge sharing activities in global virtual teams and how other factors may moderate the relationships will be generated.

The first case was conducted during a period of three months from June 2006 to September 2006. The cultural dimensions used in the interview questions were developed by combining previously identified cultural dimensions from the literature (Terpstra and Sarathy 2000; Yuan and Vogel 2006), results from previous internal research on distributed work in the organization, and informal interviews with the team members. As a result, four cultural dimensions were identified. The definition of each dimension is illustrated in Table 1. Concern for face emphasizes three face concerns: concerns for one’s own image, concerns for other’s image, and concerns for both parties’ images (Yuan and Vogel 2006). Concern for face is very deep rooted and influential in China, so here it was chosen as the indicator of attitudes and values. The question “Do you think there are other cultural aspects that influence your knowledge sharing?” was created to capture more cultural attitudes and values that may affect knowledge sharing activities.
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Table 1. National Cultural Dimensions Used in the Research

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Definitions</th>
<th>Indicators in this research</th>
</tr>
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<tbody>
<tr>
<td>Technology and Material culture</td>
<td>The techniques or methods of making and using technology tools and artifacts</td>
<td>Technology infrastructure and its use</td>
</tr>
<tr>
<td>Language</td>
<td>The native language one speaks</td>
<td>Chinese vs. English</td>
</tr>
<tr>
<td>Education</td>
<td>The process of transmitting skills, ideas, and attitudes, as well as training in particular disciplines</td>
<td>Technical knowledge one holds</td>
</tr>
<tr>
<td>Attitudes and Values</td>
<td>The belief one holds to help determine what is right, important, desirable, etc.</td>
<td>Concern for face</td>
</tr>
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</table>

From the previous research conducted in the organization, time zone differences were identified as an important factor that influences distributed collaborations. So it was added to the interview protocol to explore its effect on knowledge sharing activities. A total of 16 questions around these five issues were developed to guide the interviews.

Phase 2: Survey

In phase two, a survey will be conducted to test the hypotheses generated from phase one. The survey will be put online and distributed to all Chinese sites of that organization. All Chinese employees who have virtual working experiences with the U.S. colleagues will be invited to participate. A small number of incentive prizes will be provided on a draw basis to encourage participation. Regression will be used to analyze the data.

The development of the survey questionnaire will take two steps. First, items in the questionnaire will be developed based on existing work (mainly the dimensions of national culture and knowledge sharing activities). New items discovered from the results of case study will be added (mainly those factors that have moderate impacts on the relationships between national cultural differences and knowledge sharing activities). A pre-pilot study will be taken face-to-face to make sure the language and wording used in the questionnaire is easy to understand and correct.

Then around 20 employees will be recruited to take a pilot study. The purpose is to test the questionnaire before it is made final. The questions need to consider in this step are time taken to finish the survey, the procedures of completing the survey online and the content validity of the items in the questionnaire. The results will be used to guide any revisions.

Excepted Implications

This research is expected to have both theoretical and practical implications. Theoretically, this work is expected to bridge the gap between knowledge sharing, virtual teams and national culture research. Another theoretical implications expected to make is to introduce a distinction between national culture and national culture-in-practice. The distinction is inspired by the practical theory-based distinctions between technology and technology-in-practice made by Olikowski (2000) and between nominated boundary spanners and boundary spanners-in-practice made by Levina and Vaast (2005). Most research on national culture treats culture as a static construct or a stable disposition of actors. It assumes that everybody in a specific culture should behave in a same way. But in practice, national culture is not functioning alone. Preliminary data analysis of this research finds that the impact of national culture on individual’s behavior is much more dynamic. It impacts actors’ behaviors together with a variety of other factors such as other levels of cultures, organizational environments and individual characteristics. In this way, individual’s understandings of national culture, especially cultural values, are shaped by these factors and are reinforced or modified by actions as actors engage in practice.

The results are also expected to have practical implications for managers and team members. Research has found that though managers have realized the importance of culture, they find it is difficult or even impossible to “articulate the culture-knowledge relationship in ways that lead to action” (Long and Fahey 2000). One purpose of this research is to explore the relationships between national culture and knowledge sharing activities. The most prominent cultural factors that influence knowledge sharing will be identified and how they impact will be explored. The results of this study can therefore provide guidelines (such as what kind of cultural training materials should be provided and how to use leadership to change individuals’ beliefs towards desired outcomes) for managers and virtual team members to manage culture and technology to foster knowledge sharing activities in virtual settings, which in turn will improve team effectiveness.
References