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CORRELATION BETWEEN CULTURAL DIVERSITY AND TEAM CONFLICT
LEVEL IN PARTIALLY DISTRIBUTED TEAMS

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ABSTRACT

Globally distributed teams are a prevalent means of accomplishing work. A common global team configuration is the partially distributed team (PDT). In this hybrid structure, a global team is composed of multiple subteams, with each subteam located in a different country while members within a given subteam are co-located. One commonly occurring factor that affects the performance of PDTs is conflict management. This thesis considers the role of cultural diversity in conflict management in PDTs and explores the question, “How does cultural diversity affect team conflict in partially distributed teams?” Cultural diversity is measured from three aspects: ethnicity, language, and home country. This thesis reviews the literature on PDTs and conflict, and covers the research method, data collection and analysis procedure. Findings and conclusions are presented as well as limitations and possible areas for future research.

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Chapter 1 Introduction

In the past decade, growth in the U.S. gross domestic product (GDP) averaged 2.4%, lower than the world average 3.4%. This means that the global market is increasing. To make companies more profitable, CEOs are establishing connections with foreign organizations. According to Slaughter's report (Slaughter, 2012), the cumulative share of foreign value has doubled from 13 percent to about 27 percent while the foreign content of the U.S. has grown from about 7% to 22% in thirty years (Slaughter, 2012). Moreover, 95% of the world's consumers are living in foreign countries (Slaughter, 2012; Cristina, 1999). As a result, companies and organizations are using Partially Distributed Teams (PDTs) to handle multi-national business. Due to the prevalence of PDTs, it is important to study them in order to make teamwork more effective and efficient to benefit the companies.

PDTs are teams of people that span multiple geographic, organizational, and cultural boundaries to work together to achieve the same goal (Connaughton, 2007). PDTs are composed of at least two subteams; while each subteam is located in a different place, members within a given subteam are located at the same place (i.e., co-located). Even though members within a subteam are co-located, they may not share the same country of origin, ethnicity, or language. These differences can exacerbate levels of conflict within PDTs, making them difficult to manage (Johnston, 2011).

This thesis considers the role of cultural diversity in conflict management in PDTs and explores the question, "Does cultural diversity affect team conflict in partially distributed teams?" Data from participant surveys were collected during a five-week

global team class project. Cultural diversity was considered from three aspects: ethnicity, language, and home country.

Chapter 2 Culture

Culture was first defined by English Anthropologist Edward B. Tylor (1980) as "a complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society" (p. 1). According to the Merriam-Webster dictionary (2005), culture refers to the beliefs, customs, and arts of a particular society, group, place, or time. Culture can also refer to a way of thinking, behaving, or working that exists in a place or organization (Merriam-Webster, 2005). Some researchers think that culture is actually variation in a systematic component, which reflects past interactions of preferences, beliefs, markets, and institutions (Fernández& Fogli, 2009).

In fact, the definition of culture has changed over time. In the field of sociology, most sociologists used to think culture was unitary and internally coherent across groups and situations (Fernández& Fogli, 2009; Kroeber, 1958). Nowadays, scholars depict culture more as fragmented across groups and inconsistent across its manifestations (DiMaggio, 1997). Culture has become a complex rule-like structure that constitutes other aspects of belief, intention, and collective life (DiMaggio, 1997). Moreover, culture has different meanings in different fields. For example, sociologists consider cultural systems as components of social systems while anthropologists treat culture as a total, holistic system with social structure merely a part of it (Kroeber, 1958).

Culture can be shaped and affected by different factors, including but not limited to race, race dichotomy, national origin, mother tongue, ethnic background, birth region, industry, and occupation (Blau, 1982). In some research, culture is simplified to several

components or dimensions. For instance, Geert Hofstede (1984) claimed that culture, specifically national culture, can be described using six dimensions: power distance, individualism, masculinity, uncertainty avoidance and long-term orientation. However, Hofstede's practice of equating nation states with cultures has been criticized (Baskerville, 2003).

As a system of shared values and norms, corporations have their own cultures. During the 1980s, the 'culture' of corporations emerged as a central theme in the field of management and organizational studies. Research has shown that strong corporate cultures enhance organizational performance and thus provide corporations with a competitive advantage, especially when the culture fits the corporate strategy (Chatman, 2003; O'Reilly, 1989; Willmott, 1993). Corporations can mold and influence their cultures by employing strategies such as constructing social realities, employing mechanisms for developing culture and linking culture to business activities (O'Reilly, 1989).

Within corporations, work is accomplished via teams. While teams have been used in corporations for many years, teaming across distances is relatively new. Global teams are comprised of diverse members from multiple countries and ethnicities. Distance coupled with increased diversity raises the likelihood of conflict (Dahlin, Weingart, Hinds, 2005). The ability to communicate and problem-solve effectively across cultures are important aspects in managing cultural differences (Jairrels, 1999).

Chapter 3 Cultural Diversity

Diversity typically refers to demographic differences such as age, sex, race, ethnicity and education (Ely & Thomas, 2001). Research outcomes on diversity are driven by which aspects of diversity are being studied and the context being studied (Harrison & Sin, 2006). Some people argue that diversity does not exist without some sort of cultural context in which to place it (Jour, 2012). Jour claims that many cross-cultural differences directly affect who is considered diverse and how that affects important outcomes across contexts, including race, gender, and class. Therefore, according to Jour (2012), the definition of diversity is fluid and dynamic, rather than static. Without taking culture into consideration, we lose the ability to view diversity as a moving target and as a result stand to lose significant interpretive power in research findings (Jour, 2012).

One of the most famous definitions of culture is given by Blau (1977), who distinguished “diversity” from “heterogeneity”. According to him, diversity reflects vertical or hierarchical differences and refers to the great number of different statuses within a population. Blau claims that diversity can be measured as the distribution of population across groups, defined by the probability that two randomly chosen persons do not belong to the same group (Blau, 1977).

Cultural diversity can be found in many different aspects of life, such as language, worldview, religion, philosophy, science, technology, aesthetics and customs (Wiredu, 2005). Moreover, cultural diversity has a strong influence on not only our daily life, but also organizations’ business processes. Managing cultural diversity benefits an

organization across different aspects such as cost, resource acquisition, marketing, creativity, problem-solving and organizational flexibility (Cox, 1991). Cox proposed a model of cultural diversity in organizations that ties together learning from theory, research, and anecdotal information on gender, racial ethnicity, nationality, age and other dimensions of diversity, to create a generic model of the impact of cultural heterogeneity on work behavior and outcomes (Cox, 1991). Some researchers have found a positive effect of diversity on productivity: a more multicultural environment makes people more productive (Ottaviano, 2006). Cultural diversity is a potentially valuable resource that the organization can use to rethink and reconfigure its primary tasks because the cultural differences provide the diversity of life experiences, knowledge, and insights, which can offer alternative views and enable the teams to find the best way to accomplish work (Ely & Thomas, 2001).

According to previous research, cultural diversity can be measured using different methods such as the Gini index, standard deviation, Blau's index, Teachman index and Euclidean distance (Harrison & Sin, 2006). Blau's (1977) framework was proposed to determine inequality and heterogeneity. Blau suggested that groups with no significant cultural barriers tend to have more positive feedback on social associations and in-group social contacts. Even though some people criticized Blau's index, arguing that it is not always the best choice of measuring inequality (Wendell, 1978), many researchers still consider it to be an appropriate approach to measure diversity. For instance, Richard applied Blau's framework to further study cultural diversity in management where Blau's index was used to measure the diversity within the management group. He found that a

relationship exists between management group diversity and firm performance (Richard, 2004).

3.1 Cultural Diversity in Globally Distributed Teams

Globally distributed teams include teams of people that span multiple geographic, organizational, and cultural boundaries who work together to achieve the same goal (Connaughton, 2007). Thus, members encompass a range of diversities including cultural backgrounds and different native languages (Wise, 2012).

Different cultural perceptions on collaboration and imbalanced power within a team may influence many aspects including information sharing and decision-making (Stier, 2006). Gibson and Zellmer-Bruhn's (2001) study shows that people from different cultural backgrounds have different definitions of teamwork that affects their collaboration. For example, team members from individualistic cultures reported higher self-efficacy beliefs than team members from collectivist cultures (Hardin, 2007).

There is no doubt that diversity affects conflict and, therefore, impacts performance (Pelled, 1999). Research on cultural diversity in globally distributed teams will contribute to the literature in several ways. First, research will help people develop a better understanding of globally distributed teams as well as to be a great opportunity for students to participate in global collaboration. Second, the influence of cultural diversity in globally distributed teams is likely to be a significant factor in team effectiveness, although it is understudied. This research will have implications for corporations as well.

Chapter 4 Partially Distributed Teams

Distributed teams are defined as groups of people with a common purpose who carry out interdependent tasks across locations and time and using technology to communicate much more than they use face-to-face meetings (Saunders & Manju, 2006). The common characteristic of distributed teams is their reliance on communication technologies, enabling them to transcend spatial and temporal boundaries (Saunders & Manju, 2006). Partially distributed teams (PDTs) are distributed teams that consist of two or more subteams that are separated geographically but collaborate remotely with other subteams (Ocker, Rosson, Kracaw, & Hiltz, 2009). Since PDTs have part of their members situated in one location (i.e., co-located) and other members working from a distance, they share some characteristics of co-located teams, some of distributed teams, and some that are unique (Bos, 2005). For instance, some researchers suggest that co-located PDT members tend to treat one another as a preferential “Us” while treating distant members as the outsiders, or “Them” (Ocker, Huang, Benbunan-Fich & Hiltz, 2011; Privman and Hiltz, 2009).

According to Burke, Chidambaram and Johnson (1999), partially distributed teams can differ from other distributed teams in at least two ways. First, as a consequence of isolation, the remote subteam may have different feelings about the team which may affect its process, and its products compared to the other subteam(s). Second, within the same team, both face-to-face interaction as well as mediated interaction occurs. This dynamic enables for the co-located members to form a cohesive subteam, with the

potential of making the remote participant or group a marginal member of the team (Burke, 1999).

Previous research on partially distributed teams has discussed different problems, including difficulty coordinating, 'ingroup' formation among members in different locations, and trust in teammates across distance. Bos, Vuyuktur, Olson, Olson and Volda (2010) pointed out that teams with pre-existing shared identity coordinated work better, cooperated more, and were more willing and able to take on larger scale projects. However, with these high-performing shared identity groups, the differences between collocated and remote members in performance, group efficacy, and sense of group identity still greatly influenced team performance (Bos, 2010). Bos, Olson, Kim, Nan and Shmi (2005) also suggest that relocation affected the collaboration patterns of partially distributed teams. This research indicates that people who changed from being an isolated team member to the main subteam form new collaborative relationships very quickly. People who were moved out of a co-located team had more trouble adjusting, and failed to maintain previous ties. The researchers concluded collocation was a more powerful determinant of collaboration patterns than previous relationships (Bos et al., 2005).

Other studies have also showed additional issues in partially distributed teams. For instance, the Burke et al. (1999) study set out to determine how media effects the performance and perceptions of partially distributed teams over time. Results indicate that when faced with increased communication demands, as that which typically occur midway through the group's life cycle when groups tend to regroup and undergo structural adjustments, remote participants become less satisfied when using the leaner

medium (Burke et al., 1999). Results of this study also suggested that although people may feel more efficient with rich media, teams using lean media performed just as well (Burke et al., 1999). Research by Ocker, Huang, Benbunan-Fich and Hiltz, (2011) indicated that differences in leadership dynamics impact team performance.

Furthermore, in addition to the geographic faultline that exists between subteams, these researchers identified the power faultline, the information faultline, differences in work ethic as well as the media mix as key contributors to the “us vs. them” split in PDTs (Huang & Ocker, 2006; Ocker, Huang, Benbunan-Fich & Hiltz, 2011).

Chapter 5 Conflict

As Boulding (1963) stated, conflict is the awareness on the part of the parties involved of discrepancies in opinions, incompatible wishes, or irreconcilable desires. O'Connor and her peers hold the opinion that conflict is the gap between what people should do and what they want to do (O'Connor, De Dreu, Schroth, Barry, Lituchy & Bazerman, 2002). Most scholars agree that there are two types of conflict, task conflict and relationship conflict (Jehn, 1995). Jehn (1995) defined task conflict based on the disagreements among group members about the substance of the task while relationship conflict is based on interpersonal incompatibilities within the group. There is a well-established relationship between conflict and performance (Hinds & Mortensen, 2005; Mohammed & Angell, 2004; de Wit, Greer & Jehn, 2012). Some studies, for instance Pelled (1999) and Jehn (1995), find a positive relationship between task conflict and performance, as the proper amount of task conflict increases the number of ideas and opinions shared within a group. Relationship conflict has a negative impact on team performance because it causes distress and animosity among members, (Jehn, 1995; Mohammed & Angell, 2004). de Wit, Greer and Jehn (2012) found that while task conflict and relationship conflict are weakly correlated, under certain situation task conflict is more positive related to team performance.

According to Hinds and Mortensen (2005), conflict is more prevalent in distributed teams. In fact, the ability of distributed teams to perform efficiently may be endangered because of inefficient communication, the lack of shared identity and the lack of shared context (Hinds & Mortensen, 2005). Some researchers have also argued that

conflict in distributed teams is not only prevalent, but also particularly difficult to isolate and manage (Hinds & Bailey, 2003). Armstrong and Cole (2002) found that conflicts are unaddressed and unidentified longer in distributed teams compared to co-located teams. One possible explanation could be the amount of informal or non-task communication may be diminished in distributed teams and therefore result in increased conflict (Bosch-Sijtsema, Ruohomaki & Vartiainen, 2009). However, Zornoza, Ripoll and Peiro's (2002) research suggests that even though communication efficiency can be improved by use of media, its impact on team conflict is moderated by other issues.

Although many researchers pointed out that conflict is an important determinant of group processes and performance, the exact nature of the relationships between social categorization, informational factors, and conflict remain vague (Montoya-Weiss, Massey & Song, 2001; Hinds & Bailey, 2003). Jehn and Mannix's (2001) research found that team conflict may be affected by factors like communication, shared identity, power and the ability to adapt new perspectives, which are also the key elements of culture. Previous researchers have found that cultural diversity increases team conflict and that by controlling the level of cultural diversity, team conflict can be managed (Lowenstein & Glanville, 1995).

Chapter 6 Hypotheses

The research reported in this study considers three aspects of cultural diversity and assesses the relationship with conflict. The research question driving this study is:

Within the context of partially distributed teams, is there a relationship between cultural diversity and conflict?

Several empirical studies have been conducted that investigated conflict and cultural diversity in distributed teams. Hinds and Mortensen (2005) conducted a survey of 43 teams from a multi-national corporation. There were 21 co-located teams and 22 distributed teams. The distributed teams had members at two or more locations. The teams ranged in size from 3 to 21 members. They found that the distributed teams reported more task and interpersonal conflict than did the co-located teams. They also found that task, but not interpersonal, conflict was associated with lower team performance.

Polzer, Crisp, Jarvenpaa, and Kim (2006) conducted a field study of 45 global teams, comprised of six students per team. Team configuration was manipulated such that teams were either fully distributed (no co-located members) or composed of either two or three subteams. Teams worked together over seven weeks. They found that conflict was highest in teams with two-subteams and when subteams were homogeneous in nationality.

Staples and Zhao (2006) conducted a 2 X 2 short-duration experimental study of the effects of cultural diversity on team effectiveness. Teams were either (1) fully distributed or face-to-face and (2) culturally homogeneous (same first language) or

heterogeneous (i.e., individualism/collectivism values, languages spoken, country of birth, or nationality). Teams consisted of four or five students. Findings indicated that overall, heterogeneous teams were less satisfied and less cohesive and had more conflict than homogeneous teams. However, no differences were found in terms of team performance. With respect to heterogeneous teams, virtual team performance was better than face-to-face team performance.

Paul and Ray (2013) conducted a series of studies on data collected from a short-duration lab experiment involving global teams interacting synchronously. In the studies, 16 culturally homogeneous teams and 11 heterogeneous teams were comprised of students located in the United State and India. Team size was three members; homogeneous teams had at least two members from the same country of origin. In their 2010 study, they found that virtual teams that were culturally heterogeneous adversely affected members' perception of the group atmosphere, which increased group conflict. Task conflict was more prevalent than relationship conflict. In their 2013 study, Paul and Ray found that group interaction was severely impaired when global teams had a moderate level of national cultural diversity. They also found that an optimum level of group interaction was necessary to reduce group conflict.

Findings from the aforementioned studies indicate that distributed teams experience more conflict than face-to-face teams. However, findings regarding the impact of cultural diversity on conflict are mixed and appear to be influenced by team configuration. Fully distributed, heterogeneous groups experienced higher levels of conflict compared to face-to-face and homogeneous teams (Paul and Ray, 2010; Staples and Zhao, 2006). However, in one study moderate levels of cultural diversity were most

detrimental to global teams that spanned two locations (Paul and Ray, 2013) while another study found that conflict was highest in teams with two homogenous subteams (Polzer, Crisp, Jarvenpaa, and Kim, 2006).

Given these mixed findings, it is difficult to formulate hypotheses based on prior research. However, it can be argued that increased cultural diversity leads to increased conflict levels. Therefore, the following hypotheses are proposed:

H1. There is a positive relationship between cultural heterogeneity and perceived conflict

in partially distributed teams. Specifically,

H1a. Partially distributed teams with a high degree of ethnic heterogeneity will perceive high levels of conflict.

H1b. Partially distributed teams with a high degree of language diversity will perceive high levels of conflict.

H1c. Partially distributed teams with a high degree of home country diversity will perceive high levels of conflict.

Chapter 7 Methods

7.1 Subjects

Data were collected from 266 students who participated in the Partially Distributed Teams project. Students came from 15 universities across 8 different countries. The universities were located in Germany, Ireland, Lithuania, Mexico, Singapore, Spain, Switzerland, and the USA. Each PDT consisted of two subteams, with an average of four co-located members within each subteam. On a given team, each subteam was from a different country and at least one subteam was from the USA. There were a total of 32 teams in the study.

7.2 Team collaboration support

Teams used Moodle, an open-source content management system, to review project instructions, share files and submit weekly assignments. Each team had a private team discussion forum and team repository for file sharing.

7.3 Task

Over five-weeks, teams completed a stakeholder analysis and engaged in high-level design of an Emergency Management Information System (EMIS), called the Bioterrorism Management and Planning System (BTMAPS). Each week, there were intermediate tasks and activities that teams completed, which are described in greater detail in the procedure.

7.4 Procedures

In the first week, students wrote a short self-introduction and posted it on their discussion board. They completed a series of scenarios about common problems that PDT teams experience. Teams completed a team contract, where they outlined communication and collaboration procedures to be followed during the project, as well as team management procedures. They selected a team leader. In the second week, participants from different subteams interviewed each other and created a team web site. Teams began work on the BTMAPS task. Specifically, teams defined key stakeholders that would be impacted by a bio-terrorism attack. In the third week, each subteam evaluated their distant subteams' performance and devised an action plan to improve team performance for the remainder of the project. The second task of the week was to create output screens for the BTMAPS Emergency Management Information System for different stakeholders. In week four, teams continued to work on the Emergency Management Information System. They created input screens for different stakeholders. In the last week of the project, teams completed their final report, which included a stakeholder analysis and a prototype of BTMAPS user interface along with an explanation about how the system works and why they designed the user interface in this way.

7.5 Data Collection

Data for this study were collected via two surveys. The first survey was administered to participants during the first week of the project. The second survey was

administered to participants at the end of the five-week project. Participants completed the surveys for extra credit.

7.6 Measures

Diversity was examined from three aspects: ethnicity, language and home country. This information was collected using the first survey. Respondents answered a single question to determine their ethnicity (Caucasian/White, Hispanic, African American/Black, Asian/Asian American, American Indian, Other). Concerning language, respondents either selected English or entered another language. Respondents also reported their name of their “home” country, that is, the country with which they identify as their home.

Conflict was measured on the second survey using a scale adapted from Mortensen and Hinds (2001). The scale is comprised of four items pertaining to level and frequency of relational conflict and task conflict experienced between subteams within a given team. For example, one item asks respondents to rate the level of personality conflicts between subteams. A seven-point Likert response scale was used for each scale item. Higher scores indicated higher levels of perceived conflict.

Chapter 8 Analysis

To address the research question, two levels of diversity were analyzed, which will be referred to as individual diversity and team diversity.

8.1 Individual Diversity and Conflict

Individual diversity considered the diversity of a team member in relation to the other members of his or her team. Three diversity scores for each participant were calculated (i.e., ethnic diversity, language diversity or home country diversity), using a formula developed by Tsui, Egan and O'Reilly (1992) was used. The equation was $D = \sqrt{\left[\frac{1}{n} \sum (S_i - S_j)^2\right]}$, where D is the individual diversity. This measure represents the square root of the summed square differences between individual S_i 's value on a specific demographic variable (in this case, ethnicity, language and home country) and the value on the same variable for every other individual S_j , divided by the total (Tsui, Egan and O'Reilly, 1992). For example, suppose there are five students in a team, three from the US and two from Asia. The diversity level for a US student would be 0.89. The student's difference score is equal to 2 because there are two Asian students that are different from the US student. Following the same idea, Asian students' difference score equals 3 and their score would be 1.34.

Conflict was also calculated at the individual level. This was accomplished by calculating the mean score across the four conflict scale questions for each participant.

8.2 Team Diversity and Conflict Levels

Team diversity compares diversity levels across teams. It is calculated using Blau's (1977) index ($1 - \sum P_i^2$), where P_i is the fraction of team members that share a

diversity characteristic. For example, when ethnic diversity is calculated for Team A, P_i is the number of students with ethnicity i on Team A. The same calculation is applied to language and home country diversity. Thus, for a given team, three team level diversity scores were calculated. Blau's index ranges from 0 to 1.

A conflict score was calculated for each team. This was calculated as the average of the individual conflict scores, aggregated to the team level of analysis.

Chapter 9 Results

A correlation analysis was conducted to determine the relationship between aspects of diversity and conflict.

9.1 Individual Diversity and Conflict

Table 1 shows the descriptive statistics from the individual level of analysis for ethnicity, language, home country and conflict. The range for ethnicity was from 0.38 to 2.70; the average was 1.24 and the standard deviation was .52. The range for language was from .00 to 1.10; the average was 1.10 and the standard deviation was .70. The range for individual home country diversity was 0.00 to 2.15, with a mean of 1.19 and a standard deviation of .45.

Table 1. Descriptive Statistics for Individual Level Diversity and Conflict.

	Ethnicity	Language	Home	Conflict
Max	2.70	2.83	2.15	7.00
Min	0.38	0.00	0.01	1.00
Mean	1.24	1.11	1.20	2.37
SD	0.52	0.70	0.45	1.88

SPSS, a statistical software package, was used to conduct the correlation analysis. The individual level correlation matrix results are shown in Table 2. Results indicated that there were no significant correlations between any of the three measures of diversity and conflict. Not surprisingly, there was a moderate correlation between home country and ethnicity and home country and language.

Table 2. Individual Correlation Matrix

Variables	Ethnicity	Language	Home	Conflict
Ethnicity	1			
Language	0.11	1		
Nation	0.43**	0.40**	1	
Conflict	-0.12	0.08	0.07	1

** Correlation is significant at 0.01 level

* Correlation is significant at 0.05 level

N = 266

9.2 Team Diversity and Conflict Levels

Table 3 shows the descriptive statistics from the team level of analysis for ethnicity, language, home country and conflict. Ethnicity ranged from 0.24 to .79; the average was .57 and the standard deviation was .17. The range for language was from .00 to .78; the average was .44 and the standard deviation was .22. The range for individual home country diversity was .32 to .84, with a mean of .63 and a standard deviation of .45.

The team level correlation matrix results are shown in Table 4. Results indicate that there were no significant correlations between any of the three measures of diversity and conflict. Similar to the individual level of analysis, there was a moderate correlation between home country and ethnicity and home country and language. There was also a moderate correlation between ethnicity and language.

Table 3. Descriptive Statistics for Team Level Diversity and Conflict.

	Ethnicity	Language	Nation	Conflict
Max	0.79	0.78	0.84	4.50
Min	0.24	0.00	0.32	1.00
Mean	0.58	0.44	0.63	2.29
SD	0.17	0.22	0.18	1.05

Table 4. Team Level Correlation Matrix

Variables	Ethnicity	Language	Nation	Conflict
Ethnicity	1			
Language	0.44*	1		
Home	0.63**	0.66*	1	
Conflict	-0.01	0.14	-0.09	1

** Correlation is significant at 0.01 level

* Correlation is significant at 0.05 level

N = 32

Chapter 10 Discussion

10.1 Summary and Explanation of Findings

This study failed to find a positive relationship between cultural diversity and conflict at the individual level or team level of analysis. The hypotheses were not supported. A possible explanation for the lack of significant findings is variations in the technology that was used in the teams. Many students mentioned they were using email, Google doc, and Facebook to communicate and share information between subteams. As a result, these online chatting tools could reduce the problem with communication and contribute to more balanced perception of the power within the team. According to Levi (2001), conflict arises from competition over power, and confusion over communication. Therefore, it is possible that conflict would be reduced due to the differences with the use of technology.

10.2 Limitations

In this study, there were several problems that could affect the validity of the findings. One of the potential factors that affect the construct validity is participants' bias. Teams with more team participants may feel it is more difficult for them to communicate; therefore, these teams might have a negative attitude towards the project. Future studies should assign the same number of participants to each team in order to avoid this. The main potential threat to internal validity was that many of the participants were not native English speakers, they may have misunderstood the survey questions. In future research, care should be taken to use simple, precise language in asking survey questions. Questions should also be tested by variety non-native English speakers, to evaluate comprehension of the items.

Some potential factors that could affect the external validity of the findings is that all participants were students. Thus, results may not generalize to “real world” situations. Additionally, results may not generalize across various student populations. The reason is that study participants come from a limited number of university majors, such as business and information systems. Future research should increase the variability of the sample teams across different majors and examine them in real work environments. By doing this, we can better draw a conclusion that would generalize to the real world.

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