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Cultural Backgrounds Influencing Virtual Team Performance

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Abstract

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Dissertation Submitted in Partial Fulfillment

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Abstract

Virtual teams improve organizational performance and competitiveness because they reduce business travel and allow team members to work from anywhere, anytime, using the Internet to complete projects. Although researchers have identified benefits of using virtual teams, knowledge about how cultural backgrounds influence virtual team performance is limited. Illuminating this relationship may help leadership improve team performance. The purpose of this phenomenological study was to explore the lived experiences of team members with different cultural backgrounds to understand their effect on team performance. The research questions were based on the conceptual framework of organizational cultural theories developed by Schein and Trompenaars and Hampden-Turner. Interview questions were electronically distributed to a purposeful sample of 20 participants who worked on virtual teams and could describe their lived experiences. Data were collected, coded using open and axial techniques, and analyzed for themes and patterns. Key themes emerged such as cultural backgrounds, language barriers, communication, conflict, and use of information technology. Findings included techniques for improving communications, understanding different cultural backgrounds, and the satisfaction of team members. Implications for positive social change include an improved understanding among virtual team leaders regarding how different cultural backgrounds influence team performance. Results of this study may benefit organizations by helping them better manage the performance of multicultural virtual teams, thereby leading to improved product development and reduced costs associated with activities such as business travel and remote work.

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Dedication

I would like to dedicate my dissertation to my family and friends who encourage me in my learning journey. Without your understanding and patience I would not be able to complete this study.

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I would like to thank my committee members for their support and time they spent helping me with my dissertation. Special thanks go to committee members Dr. David Gould, Dr. Robert Kilmer, and Dr. Jim Bowman for their dedication, encouragement, and patience with me, and their outstanding support and leadership in the learning process. Additionally, I would like to thank my friend and coworker Peter Frost for supporting and motivating me through my journey and learning process. I would like to thank my parents (Susan and Semen), brother (Yevgeniy), wife (Marina), and daughter (Sofia) for their continuous patience and understanding. I would like to thank Dr. Samantha Kanta for help with NVivo analysis and Chapter 4.

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Chapter 1: Introduction to the Study

In this study, I explored cultural backgrounds of team members to identify those that influenced virtual team performance. For organizations competing in the modern, globalized economy, virtual teams, made possible by computer technology, are an important strategy for reducing costs and increasing performance. Virtual teams can save time and money by reducing travel requirements to support face-to-face meetings among members of a geographically dispersed group working on the same project. One threat to virtual team performance is conflict between team members' cultural backgrounds. On the other hand, cultural diversity can enhance a virtual team by introducing alternative points of view and different methods of problem solving.

The effect of cultural backgrounds on virtual team performance has been insufficiently studied. To address that gap in literature, I explored the cultural backgrounds of team members to identify influences on virtual team performance. I used a qualitative phenomenological study design to explore and describe the lived experiences of virtual team members and the relationship between cultural backgrounds and virtual team performance. In the remainder of this chapter, I present the background of the study, problem and purpose statements, research questions, nature of the study, operational definitions assumptions, and scope.

Background of the Study

Many U.S. organizations in different industries have outsourced a portion of their businesses to organizations in other countries or have created new branches inside the United States to make their business models more efficient and productive. This development has increased virtual teams. These teams allow otherwise dispersed

individuals to work together without meeting face to face (Berry, 2011; Morris, 2008).

Virtual teams can be contained within a city, state, or country—or span international

boundaries. As virtual teams proliferate, geography is less of a constraint.

Typically, virtual teams are constructed similar to traditional teams, with a focus

on assembling a collection of individuals to accomplish a particular purpose (Berry,

2011). Virtual teams enable modern organizations to change tactics in response to

shifting market conditions (Lu, Watson-Manheim, Chudoba, & Wynn, 2006). Since their

introduction approximately 15 years ago, they have gone from novelty to necessity. Berry

noted "organizations that are unwilling or unable to use virtual teams may find

themselves losing out in an increasingly competitive and rapidly changing global

economic and social environment" (p. 202).

Virtual teams enable work to be done around the clock, thereby removing barriers

due to different time zones, holidays, and schedules. Virtual teams are effective in the

modern global economy because "they can be staffed based on members' expertise

instead of their local availability" (Drouim, Bourgault, & Gervais, 2009, p. 626). Most of

the technological tools these teams use (e.g., WebEx communications, telephone

conferences, instant messaging, video chatting) are synchronous and require people to be

available at the same time, independent of geographical location (Bergiel, Bergiel, &

Balsmeier, 2008).

According to Fan, Chen, Wang, and Chen (2014), the lack of social interaction

among the members of virtual teams may affect the trust building process among them,

which might eventually lead to misunderstanding among the team members. Because

they can be composed of geographically dispersed members, virtual teams are more

likely than their traditional place-bound counterparts to reflect cultural diversity. Also, because communication among team members is electronic rather than face-to-face, negotiating cultural factors can be especially problematic (Au & Marks, 2012; Hunsaker & Hunsaker, 2008). As Staples and Zuo (2006) noted; however, cultural diversity can be a strength. Staples and Zuo compared virtual and face-to-face heterogeneous teams and found the former performed better on a desert survival task. Further, Pangil and Chan (2014) identified three reasons leading modern organizations to adopt the concept of virtual teams:

1. The concept of virtual teams allows organizations to hire the best, most talented employees who might be located anywhere in the world.

2. The concept of virtual teams allows the global workday of the team to increase from 8 to 24 hours.

3. The concept of virtual teams allows organizations to provide flexibility to support globalization of trade corporate activity to be more competitive and responsive to the marketplace.

Bergiel et al. (2008), on the other hand, found both advantages and disadvantages in using virtual teams. The members of virtual teams communicate mainly by using modern electronic technology such as emails telephones, WebEx, and teleconferences. Using these modern tools makes communication among the members of virtual teams even more critical compared with communication among members of traditional teams (Pangil & Chan, 2014). Further, Pangil and Chan noted virtual teams present other disadvantages such as time zone differences, difficulties to get in agreement at a distance, different cultural backgrounds, different work processes and procedures, and reduction in

opportunities to build good friendships. Shahzad (2014) argued strong culture in organization raises the employees' commitment toward achieving the goals of the organization. In investigating employees' performance, Shahzad further found employees' commitment and participation at work are the most important contributors to increased organizational performance.

According to Dauber (2014), culture in modern organizations has become a critical factor playing an important role in organizational success in today's international environment. Further, Dauber stated a cultural difference between the organizations is a key factor for failures in mergers and acquisitions. Organizational culture plays a significant role in achieving organizational goals and missions. Finally, organizational culture can significantly affect performance of organizations, teams, and individuals.

Although cultural differences play an important role in organization, leadership contributes to organizational culture. Shahzad (2014) noted leader's communication with employees affects members' creativity and idea generation performance. The virtual teams are facing many challenges, but they still allow modern organizations to reduce cost compared with costs associated with traditional teams. The concept of virtual teams was adopted mainly to cut the cost and minimize the cost of bringing a talented work force into a single location (Pangil & Chan, 2014). It is important to understand how insights of virtual teams improve performance of virtual teams and to understand how cultural backgrounds affect the performance of virtual teams.

The focus of this study was how the performance of virtual teams located in major U.S. cities is affected by cultural backgrounds among team members. Culture includes three main components: artifacts, exposed values, and assumptions (Schein, 2004). I

explored how these components differ in virtual teams. Findings may help leaders improve their understanding of how cultural issues, such as trust, influence virtual team performance. By improving virtual team performance,, leaders may be able to make modern organizations more productive in achieving their goals and fulfilling their missions.

Problem Statement

Virtual teams, a relatively new phenomenon in the global economy, are often assigned important tasks in an organization (Gaan, 2012). Because these teams may reflect considerable cultural diversity, it is important to consider the effect of that diversity on their performance (Richards & Bilgin, 2012). Cultural diversity can have both positive and negative effects on team performance (Boerner, Linkohr, & Kiefer, 2011; Staples & Zhao, 2006).

Staple and Zhao (2006) compared how virtual and face-to-face teams handled an assigned task, but because those teams were created for the purpose of an experiment, there was no opportunity to study the long-term dynamics of group interaction and performance. Au and Marks (2012) studied how cultural diversities affect identity formation in virtual teams, but they did not consider the effects of identity formation on team performance. Castle (2009) surveyed virtual team members regarding their perceptions of cultural differences relating to communication, identity and trust, social processes, training, and project management. However, these perceptions of cultural differences were not related to a virtual team's performance. The problem was the lack of information available about how different cultural backgrounds of virtual team members influence team performance. A variety of researchers have called for additional research

exploring how cultural differences in virtual teams influence performance (Brahm & Kunze, 2012; Chang, Chuang, & Chao, 2011; Daniel, 2010; Ebrahim, Ahmed, & Zahari, 2009; Revilla & Knoppen, 2012; Taormina, 2010; Williams & Castro, 2010).

Purpose of the Study

The purpose of this qualitative phenomenological study was to explore and describe the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. A further goal was to help organizational leaders determine how to improve efficiency and productivity by more effectively managing virtual teams. Improving workplace culture can lead to improved performance, which can benefit the global economy.

The participants for this study had experience working on virtual teams. I selected a population with experience working on virtual teams to understand virtual teams from within and to make sense of the team members' lived experiences. Studying and understanding effects of cultural backgrounds on virtual team performance might help organizations and leaders improve performance and communication within virtual teams and to improve the cultural relationships among virtual team members.

Research Questions

The research consists of the following steps: (a) outlining preliminary considerations and performing a literature review, (b) developing a purpose statement based on the literature review, (c) selecting and defining appropriate methodology, (d) conducting research, (e) analyzing collected data, (f) explaining the researched phenomenon based on the study findings, and (g) providing suggestions for future research and adding to knowledge in the field (Creswell, 2008). The research questions

for this study have been developed to assist in answering how different cultural backgrounds affect team performance in organizations. The results of this study can be used to understand the influence of culture on virtual team performance. Three overarching research questions form the basis of the online questions, which were the primary instrument of data collection. Online or electronic interviews are one of four types of interviews as described by Creswell (2008); other types of interviews are one-on-one or face-to-face, focus groups, and telephone interviews.

Research Question 1

How do the different cultural backgrounds of virtual team members influence team satisfaction? This question gave rise to the following interview questions.

- In your own words, define *cultural background*.

- In your own words, define *personal preferences*.

- Based on your experience, how do language barriers influence the performance of virtual teams?

- Based on your experience, how do cultural differences among virtual team members influence the performance of their virtual team?

- Based on your experience, how do cultural differences among virtual team members heighten or reduce technical project risks?

- Based on your experience, how do personal preferences among virtual team members influence the performance of their virtual team?

- Based on your experience, how do personal preferences among virtual team members heighten or reduce technical project risks?

- Based on your experience, what three communication methods have been the most effective for working in virtual teams?

Research Question 2

How do the different cultural backgrounds of virtual team members affect their ability to work together? This question gave rise to the following interview questions.

- Based on your experience, how important is it to have face-to-face interaction with other team members? Why?

- Based on your experience, how does conflict based on cultural differences affect team performance?

- Based on your experience, how does misunderstanding based on cultural differences affect team performance?

- Based on your experience, how do cultural values affect team performance?

- Based on your experience, how important is active participation among virtual team members for team performance?

Research Question 3

How do the different cultural backgrounds of virtual team members influence decision making? This question gave rise to the following interview questions.

- Based on your experience, what can be done to improve the decision making of virtual teams?

- Based on your experience, what can be done to improve the decision quality of virtual teams?

- Based on your experience, how do cultural backgrounds of virtual team members influence organizational strategies?

- Based on your experience, how do cultural backgrounds of virtual team members influence business goals?

- What suggestions do you have to improve working relationships among virtual team members?

- What type of training would you recommend to increase the performance of virtual teams? Please explain.

- Do you have any other thoughts about virtual teams that you would like to share?

Nature of the Study

This is an exploratory phenomenological study, a design selected because its main focus is on in-depth understanding the essence of lived experiences of team members (Creswell, 2008). Data collection consisted of an online interview administered to a purposive sample of 20 employees of U.S. companies who have experience working in virtual teams. The questionnaire consisted of two sets of questions. The first set of questions consisted of demographic items. The second set comprised open-ended questions designed to address the study's three research questions. The questions were posted online through the electronic survey website. The advantage of using an electronic survey tool was ease of distribution and transcription. The questionnaire pilot tested to improve the instructions and questions. The population for this study is anyone who has worked on a virtual team or has virtual team experience. I solicited participants with

virtual team experience from the Walden University participant pool and by email by using a snowball sampling technique. A snowball sampling technique was used to locate participants with virtual team experience. The population was undetermined. Data were coded using both open and axial techniques and analyzed with NVivo software. The methodology is detailed in Chapter 3.

Conceptual Framework

In qualitative phenomenological studies, the conceptual framework serves as the basis for the study and helps in the development of the research questions. This research was based on Schein's (2004) and Trompenaars and Hampden-Turner's (1998) cultural theories. Schein's theory was selected for this research because it explains the basic elements of organizational culture. It has three components: artifacts, exposed values, and basic underlying assumptions. Artifacts are the basis for an organization's structure, procedures, and processes. Exposed values relates to organizational strategies, business goals, and philosophies. Underlying assumptions are unconscious, taken-for-granted beliefs and feelings. They reflect how an organization operationalizes its goals and values.

Trompenaars and Hampden-Turner's (1998) cultural model was selected for this research because it focuses and explains corporate and national culture and the relationship between culture and organizational effectiveness. Trompenaars and Hampden-Turner (1998) differentiated among four types of culture: fulfillment oriented, project oriented, power oriented, and role oriented. They described these as *ideal types* or "metaphors that illustrate the relationship of employees to their notion of the organization" (p. 162). In actual practice, these types are mixed and overlaid with the

dominant culture. Trompenaars and Hampden-Turner (1998) developed a 2x2 cultural

model to explain how employees in different cultures interact and solve problems.

Definitions of Terms

This section was developed based on review of the literature and findings of this

study. Definitions of terms provided below were used throughout the current study and

were added to clarify terminology.

Communication quality: The degree to which the content of the communication is

transferred among virtual teams (Chang, Chuang, & Chao, 2011).

Culture: A combination of values, beliefs, common understandings, and norms

that are accepted and adopted by members of a community (Erkutlu, 2011).

Cultural adaptation: A dynamic process among members of virtual teams where

changes can be predicted in norms, practices, and behavior (Chang et al., 2011).

Cultural diversity: Differences based on language, traditions, and religion (Au &

Marks, 2012).

Knowledge sharing: A mechanism of transferring knowledge from one individual

to another (Pangil & Chan, 2014).

Organizational culture: The environment in which employees work.

Organizational culture provides both explicit and implicit guidance on how to

communicate within the organization (Tseng, 2010).

Performance: The extent to which a group's output meets the standards and

processes accepted by the organization (Chang et al., 2011; Lauring & Selmer, 2009).

Productivity: The ratio that represents the amount of work done within the certain

time period (Shahzad, 2014).

Team: A group of individuals organized together to work on the same project or accomplish a certain task over a period of time (Berry, 2011).

Trust: Decision to depend on other team members (Chang et al., 2011).

Virtual team: A work group comprising members in different locations who communicate primarily through information technology (Gressgard et al., 2010). A virtual team "can operate remotely without regard to geographical boundaries and traditional reliance on face-to-face meetings" (Gapp & Fisher, 2011, p. 170).

Virtual team performance: The degree of satisfaction among members with the decision-making process, decision quality, participation, and member agreement (Chang et al., 2011).

WebEx: An Internet application widely used by virtual teams for communication, meetings, online presentations, and training.

Assumptions, Limitations, Scope, and Delimitations

Assumptions

The following assumptions were identified for this study:

1.   The questions were written in English. I assumed that all participants, including those who speak English as a second language, would be able to understand the questions, given that participants work in the United States.

2.   I assumed that participants answered the questions truthfully, given that responses as well as identity will be confidential

Limitations

The limitations are used in the study to establish the boundaries, exceptions, and reservations (Creswell, 2008). Further, Creswell stated that limitations present potential

weaknesses for the study. The following limitations were identified for this qualitative

phenomenological study.

1. The study was limited to those participants with experience on virtual

    teams.

2. The study was limited to small sample size. The sample size for this study

    was 20 participants.

3. Being aware of it and following the evidence addressed potential bias.

4. The population or this study was limited to participants working on virtual

    teams.

Scope and Delimitations

As previously stated, the goal of this study was to understand how the culture

influences performance of virtual teams. The purpose of this qualitative

phenomenological study was to explore and describe the lived experiences of virtual team

members with different cultural backgrounds to understand the effects on team

performance and use this knowledge to help organizational leaders determine how to

improve efficiency and productivity by more effectively managing virtual teams. The

duration of this study was 12 weeks.

The research was confined to virtual teams located in the United States. Because

by definition a virtual team can consist of geographically dispersed members, there was

no theoretical need to limit the study to the United States. Results of this research did not

reflect members of virtual teams outside the United States. As a practical matter;

however, recruiting participants was easier to accomplish domestically than if the

potential sample were to include residents of other countries. The exploration was

confined to the influence of cultural backgrounds on virtual team performance. Personal feelings that team members have about each other were not considered except as they affect the team's performance.

Significance of the Study

For the transition from traditional to virtual teams to be successful the research should continue to investigate issues in the teams to improve their performance. By using a qualitative approach, this phenomenological study focused on individuals with virtual team experience. The significance of this study was to provide insights on virtual teams and how different cultural backgrounds affect performance of virtual teams.

Virtual teams have become a ubiquitous feature of the global business environment. Given their prevalence in a variety of organizations, it is important to understand how these teams can operate with desired performance. Cultural diversity is a fact of life in the United States.

Significance for Management

The findings of this research will help leaders in modern organizations understand how cultural backgrounds influence performance of virtual teams and will help improve the working culture of virtual teams. By improving performance of virtual teams, managers will be able to make organizations more effective in achieving organizational goals and missions. Improving performance will help organizations become more competitive in the modern business environment. Discovering how cultural backgrounds affect business productivity can help inform training programs and employee supervision.

Significance for Practice

The results of this qualitative phenomenological study provided insights on how the culture influences performance of virtual teams. Understanding how critical backgrounds are influencing performance of virtual teams provided basis for improving issues associated with cultural differences, communication, cultural adaptation, and create a better working environment. Process improvement in turn may lead to improved organizations.

Significance for Social Change

The significance of this qualitative phenomenological study was to provide meaningful insight to understanding on how different cultural backgrounds affect team performance. Results of the research effected social change by creating a better working place for members of virtual teams and improving their job satisfaction. The findings filled a gap in the literature regarding how cultural backgrounds influence the performance of virtual teams. Improved performance benefits team stakeholders.

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Summary and Transition

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In this chapter, I described a phenomenological approach designed to explore the effect of cultural background on the performance of virtual teams. The study was conducted using Schein's (2004) and Trompenaars and Hampden-Turner's (1998) cultural theories. This qualitative phenomenological study was based on questionnaire completed by participants with experience working on virtual teams. Each participant completed one questionnaire.

Data collection was based on questions, which were delivered via SurveyMonkey to a purposive sample of 20 U.S. employees who have experience working on virtual

teams. The participants with virtual team experience were solicited from the Walden

University participant pool and by email by using a snowball sampling technique. The

pilot test was performed to improve the instructions and questionnaire. Collected research

data was coded using open and axial coding techniques. Results were analyzed with

NVivo software.

In Chapter 2, I review the literature on virtual teams and organizational culture.

Chapter 3 consists of a description of the method, design, population and sample,

instrumentation, data collection and analysis, trustworthiness, and ethical protections.

Chapter 2: Literature Review

In this chapter, I review the relevant literature on teams, virtual teams, cultural backgrounds, virtual team productivity, and phenomenological studies. The review begins with a description of the theoretical foundations. I summarize specific types of virtual teams and their advantages and disadvantages. I consider organizational culture and its influence on how virtual teams function. I conclude by discussing challenges facing virtual teams.

Literature Search Strategy

My review began by searching the following electronic databases: ProQuest Dissertations, EBSCOhost, Academic Search Premier, and Business Source Premier. The search terms were *virtual teams*, *organizational culture*, *performance in virtual teams*, *team effectiveness*, *team productivity*, and *cultural diversity in virtual teams.* The search yielded approximately100 relevant articles and five books.

Theoretical Foundation/Conceptual Framework

My study is based on theories developed by Schein and Trompenaars and Hampden-Turner. Schein's (2004) cultural theory explored the relationship between organizational culture and organizational performance by describing elements of the culture and how they influence organizational effectiveness. Another theory that focuses on cultural characteristics is the 2x2 cultural model developed by Tromopenaars and Hampden-Turner (1998). These theories help explain how organizational culture influences organizational goals and values.

Schein's Culture Theory

Schein's (2004) cultural theory is relevant because it provides the foundation for analyzing organizational culture and determining organizational performance. The theory consists of three components: artifacts, exposed values, and basic underlying assumptions. Artifacts are the basis for organizational structure, procedures, and process. Specific examples include policy manuals, office furniture, and dress codes. Exposed values are organizational strategies, business goals, and philosophies. Underlying assumptions are unconscious, taken-for-granted beliefs and feelings. These are based on shared values. Schein's model is illustrated in Figure 1.

```
┌───────────┐        ┌────────────────────────────────────┐
│ Artifacts │◄───────│ Artifacts are defined as elements of│
└───────────┘        │ the culture that can be recognized  │
                     │ by the people personal references.  │
                     └────────────────────────────────────┘

┌───────────┐        ┌────────────────────────────────────┐
│ Espoused  │◄───────│ Espoused values are defined as      │
│ values    │        │ values adapted and used by the      │
└───────────┘        │ leadership of the organization on   │
                     │ everyday basis.                     │
                     └────────────────────────────────────┘

┌─────────────┐      ┌────────────────────────────────────┐
│ Assumptions │◄─────│ An assumption is a characteristic of│
└─────────────┘      │ the model that is based on the      │
                     │ shared values in the organization.  │
                     └────────────────────────────────────┘
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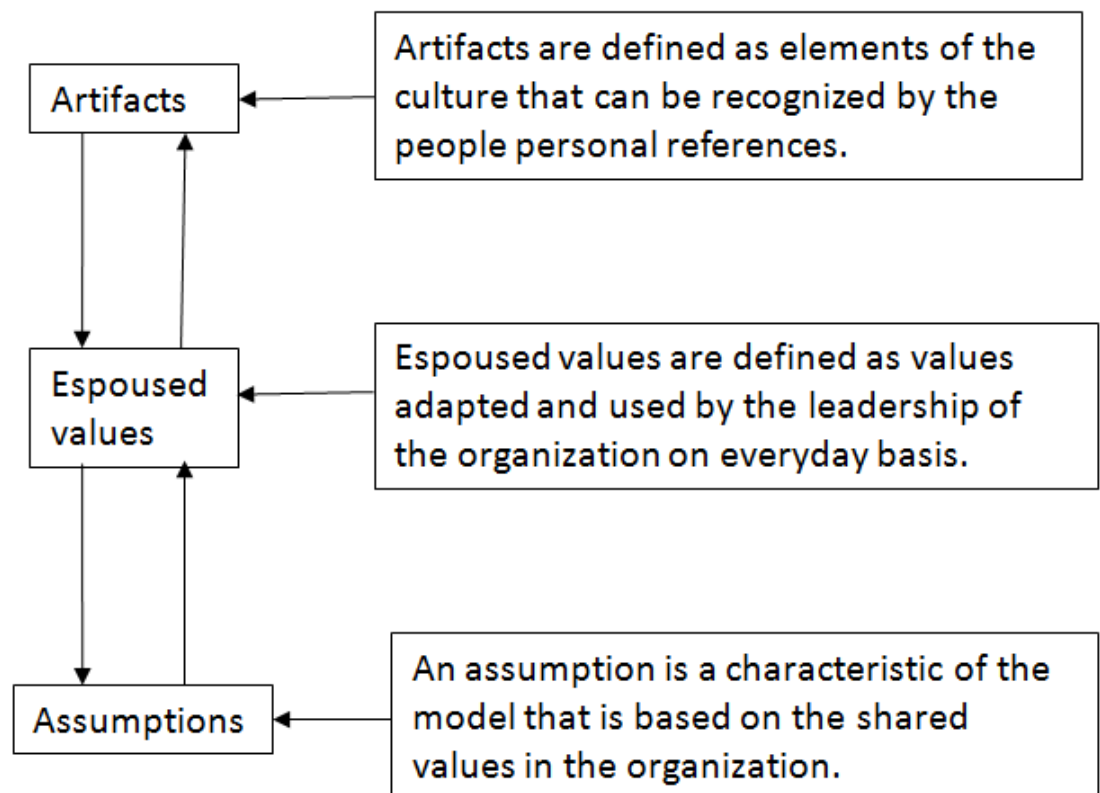
Figure 1. Schein's organizational culture model.

Kong (2003) used Schein's cultural model to investigate cultural patterns and dynamics in Chinese corporations. Williams, Moeller, and Harvey (2010) used it to study cultural standards in an organization's home country. Williams et al. found the employees of a multicultural company from a foreign origin "play a significant part in determining the difficulty of adjusting to the headquarter culture as well as to the general culture of the new home country" (p. 71). Bowden and Smits (2012), in analyzing the gap between existing and emerging cultures in the health care industry, relied on Schein's definitions of organizational culture and cultural attributes. The researchers concluded, "System change will continue to be problematic until leaders and change agents find ways to operate effectively in the gap between the existing cultural tenets and those emerging as the result of scientific and technological advancements" (Bowden & Smits, 2012, p. 149).

Trompenaars and Hampden-Turner 2x2 model

Trompenaars and Hampden-Turner (1998) developed a 2x2 model to explain how employees in different cultures interact and solve problems. As summarized by Pyszka and Pilat (2011), it has four components:

1. *Incubator* (fulfillment oriented): characterized by cultural attributes and relationships among individuals. Its focus is on how people interact when managing conflicts, adapting to changes, and so on.

2. *Guided missile* (project oriented): characterized by a focus on tasks and equity among group members. In guided missile culture, power is derived from experience rather than formal hierarchy.

3.   *Family oriented* (power oriented): characterized by a focus on hierarchy. In family-oriented culture, employees not only defer to managers but also seek guidance and approval.

4.   *Eiffel Tower* (role oriented): characterized by a conception of authority as based on one's role and position in the organization.

Trompenaars and Hampden-Turner referred to these four varieties of organizational culture as *ideal types*, which in real life are mixed and overlaid with the dominating culture. The model is illustrated in Figure 2.
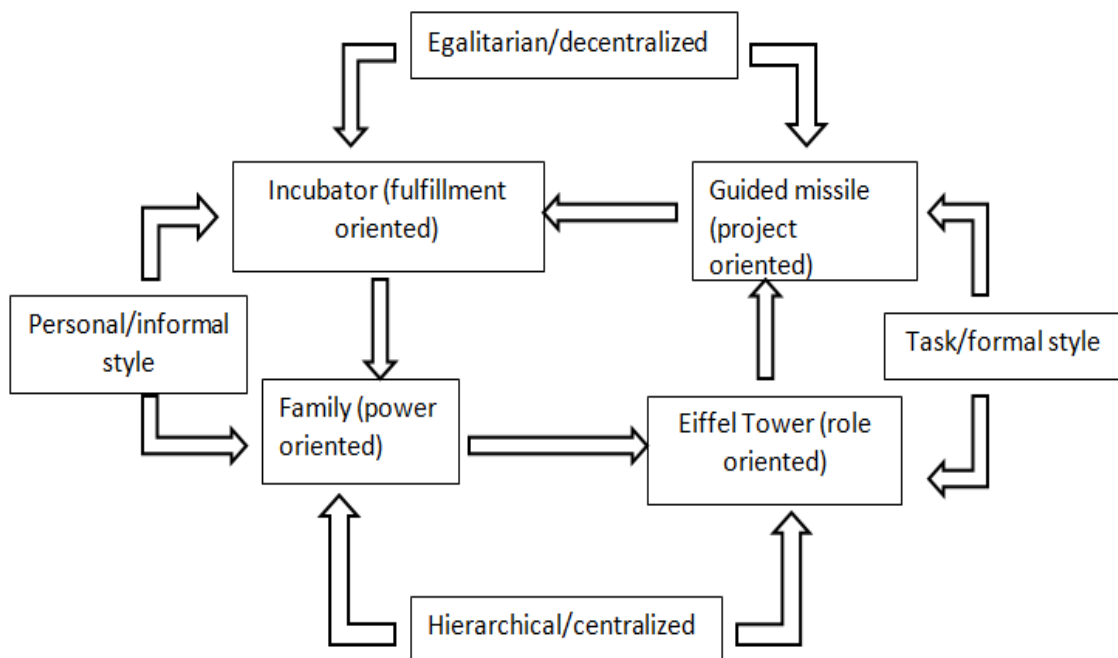
Figure 2. The Trompenaars and Hampden-Turner cultural model.

As Figure 2 illustrates, incubator and family cultural styles are considered personal or informal, whereas guided missile and Eiffel Tower styles are formal or task oriented. The Trompenaars and Hampden-Turner model was designed to investigate how

employees' national culture affects business values and organizational culture. The theorists described the four cultural characteristics as "metaphors that illustrate the relationship of employees to their notion of the organization" (Trompenaars & Hampden-Turner, 1998, p. 162).

Pyszka and Pilat (2011) used the Trompenaars and Hampden-Turner cultural model to investigate the relationship between organizational culture and corporate social responsibility in modern organizations and found this cultural model useful in analysis of relationship between organizational culture and organization. Pyszka and Pilat concluded connections exist between organizational culture types and cultural social responsibility. Their conclusion explains involvement of different cultures and organizations in social life. As a result of the research, Pyszka and Pilat (2011) stated corporate social responsibility should be consistent with the organizational pattern of strategy and organizational culture. Wei and Gao (2012) used the Trompenaars and Hampden-Turner cultural model to study how a country's national culture and institutional framework influence employees' reactions to changes in the organization. In comparing China and Estonia, Wei and Gao found that the two countries have many similarities that stem from their socialist roots. That conclusion explained the good working relationship between virtual teams located in these two countries. In a similar investigation, Müller, Spang, and Ozcan (2009) studied cultural differences in decision making in project teams. The researchers compared German and Swedish teams and found differences in decision-making style, processes, and team member involvement. The researchers found significant differences in the decision-making process and style between the two teams. On Swedish teams the decision-making process is less formal. At the same time on

German teams the decision-making process is more dominated by the subject matter expert in the field. Findings of this research suggest such a different behavior in teams is driven by the organizational culture, which is influenced by the national culture.

Literature Review

Concept of the Team

Using teams to work on complex projects is not a new phenomenon. Berry (2011) defined a *team* as "a group of individuals who interact interdependently and who are brought together or come together voluntarily to achieve certain outcomes or accomplish particular tasks" (p. 186). Berry noted that using teams in a business environment increases capability, responsiveness, and flexibility. A team consists of several employees with their own unique skills and responsibilities. According to Cacioppe and Stace (2009) and Badrinarayanan and Arnett (2008), teams have become an important part of most organizations. Technological developments in the last 15 years have enabled modern organizations to create teams of employees working on the same project from remote locations (Lu et al., 2008). According to Bergiel et al. (2008), the emergence of virtual teams did not reflect a methodical plan but rather resulted from ad hoc developments enabling members of a team to communicate and work on the same project from different geographical locations. Working from different geographic locations then allows organizations to adapt the concept of using virtual teams.

Virtual Teams and Traditional Teams

Hunsaker and Hunsaker (2008) defined *virtual teams* as geographically dispersed coworkers who are assembled in groups by using advanced communication and information technologies. Virtual teams help accomplish organizational tasks through

using modern technology. Ebrahim et al. (2009) defined a *virtual team* as a small group of employees who coordinate their work by using electronic technology such as the Internet, web communication, e-mail, and conference calls. Such tools reduce business travel and its associated cost. For Schenkel and Garrison (2009), a virtual team is "a group of two or more individuals who, in the absence of face-to-face contact, engage collaboratively in innovative activities intended to create new ventures or enhance organizational mission as a common goal" (p. 526). The absence of face-to-face meetings makes communication among virtual team members more complex compared with communication in traditional teams

The tasks that virtual teams are designed to accomplish do not necessarily differ from those undertaken by a traditional team. Ferreira, Penheiro de Limo, and Gouvea da Costa (2012) noted that virtual teams are similar to traditional teams in that both "engage a group of individuals to work independently toward a common goal" (p. 714). Both types of team are characterized by cooperative goals, interdependent tasks, and concrete results.

According to Hunsaker and Hunsaker (2008), the difference between the two types is the way they accomplish their tasks. In virtual teams tasks are accomplished through modern technology such as email, Internet, and telecommunications, in traditional teams tasks are accomplished, by face-to-face communication. Olson and Olson (2012) noted virtual teams are characterized by agility and speed. Virtual teams are readily available to support organizational needs as required. Akoumianakis (2009) stated, "Virtual partnerships formed on the basis of complementary competencies constitute a powerful mechanism for appropriating the benefits of virtual networking" (p.

318). Although it has become common to think of virtual teams as consisting of widely displaced individuals, a group can be considered a virtual team even when employees are working in the same building, if all their communication takes place electronically rather than face to face.

Williams and Castro (2010) studied the effect of setting (face-to-face or online) on the interactions of team cohesiveness and performance. The researchers surveyed graduate students who were members of 21 face-to-face teams ($n = 79$) and 26 online teams ($n = 79$). Williams and Castro found relationships were stronger in virtual teams. That finding suggests that interaction between the members in virtual teams is stronger than integration in traditional teams.

Types and Characteristics of Virtual Teams

Virtual teams share the following characteristics:

1. Members occupy different geographical locations.

2. Teams use a range of modern technologies to communicate.

3. Members work together on the same project.

4. Teams have traditional hierarchy: regular employees, team leaders, and supervisors.

5. Teams use standard processes and procedures developed by the organization to facilitate workflow. (Prasad & Akhilesh, 2006)

Ebrahim et al. (2009) distinguished among virtual groups, virtual teams, and virtual communities. A virtual group exists when several virtual employees report to the same manager. Virtual teams exist when members of a team communicate with each other and work on the same project. A virtual community consists of several virtual groups or

teams that communicate with each other; work on similar projects; and use common norms, rules, and procedures. Table 1 summarizes several types of virtual teams.

Table 1

Types of Virtual Teams

Virtual team type	Definition
Executive virtual team	Managers responsible for high-level issues of the organization.
Project virtual teams	Teams created to work on specific projects.
Community or practice teams	Teams that share experience and help each other. Members are usually volunteers who do not have deliverables, schedules, or due dates for completing projects.
Tele workers	A team with one manager in one location.
Remote team	A virtual team with one manager and a team spread over multiple locations.
Matrices team	A virtual team with multiple managers in multiple locations supervising team members in one location.
Matrices remote team	A virtual team with multiple managers in multiple locations supervising team members in multiple locations.

Advantages and Disadvantages of Virtual Teams

Bergiel et al. (2008) in investigating performance of virtual teams listed several advantages of virtual teams: (a) virtual teams reduce travel time and cost, (b) reduction in face-to-face reduces destructions of every day office life, (c) virtual teams allow organizations to recruit the most knowledgeable and talented employees in the field, (d)

virtual teams help organizations become more nimble and adaptive, (e) enabling them respond more quickly to changing market conditions, and (f) an individual of a virtual team can serve on several virtual teams simultaneously.

Although virtual teams have many advantages, they are not a panacea. One potential disadvantage is the lack of technical expertise among some mature senior managers. According to Bergiel et al. (2009), younger employees are more likely to have knowledge and experience using modern technological applications for communication than are their older leaders. Another problem is that cultural diversity can threaten trust and communication (Gresgard, 2011; Hunsaker et al., 2008). Drouin, Bourgault, and Garvais (2009) noted that communication problems can be caused by inadequate information flow, misinterpretation or unawareness of the importance of the information received, different rates of message sending and checking, and misinterpretation of silence (p. 629). Issues related to communication between virtual teams are one of the major contributors to team effectiveness.

Russo (2012) found that differences in gender, age, education, ethnicity, personal values, and personal goals could affect decision making, group dynamics, and communication in virtual teams. According to Sakuda (2009), diversity plays an important role in a team's culture and can limit identification and commitment among members, with concomitant negative effects on performance in virtual teams. Communication in virtual teams and the performance of modern organizations reflect diversity and a team's culture. Martinez-Moreno, Gonzalez-Navarro, Zornoza, and Ripoll (2008) claimed that members of virtual teams have "more difficulty engaging in collaborative interactions, are more inclined toward development of damaged and harsh

attributions, and take more time to resolve confusions" (p. 253) compared to members of conventional teams. In investigating employee relations, Au and Marks (2012) reported that problems in virtual teams were related to negative stereotypes about a particular race or nationality.

Organizational Culture

To understand how national culture influences organizational culture, it is important to understand the concept of nationhood. According to Jung, Su, Baeza, and Hong (2008), the notion of *nation* has been used as a synonym for *culture* such that "national distinctiveness has been invariably equated with cultural differences" (p. 624). Jung et al. decried this tendency, noting that different nations might have common languages and traditions but still have different norms, preferences, and goals. The classic example of this phenomenon is the 15 republics of the former Soviet Union.

Erkutlu (2011) described culture as a combination of values, beliefs, common understandings, and norms that are accepted and adopted by community members. For Anantatmula (2010), culture is "the behaviors and beliefs characteristic of a particular social, ethnic, or age group" (p. 242). Based on these definitions, culture is the basis for behavior, communication with others, and representation of oneself in society. Hofstede's dimensional model of national culture has five components: power/distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, and long-term/short-term orientation (as cited in Jung et al., 2008). Hofstede's model is a tool, which describes relationships and the effect of the national culture on the values and beliefs of society. The five components are as follows.

1. *Power/Distance.* Power/distance defines and measures the degree to which a less powerful employee accepts inequality of the power and agrees with that acceptance. Inequality among members is not a phenomenon unique to modern organizations' it exists in all societies, teams and organizations. However, the degree of inequality among employees can be different depending on different cultures. In high power/distance organizations, employees seek more guidance and direction from their leads and managers.

2. *Individualism/Collectivism.* Individualism is the extent to which employees primarily look out for their own interests, as opposed to the interests of the organization (collectivism).

3. *Masculinity/Femininity.* Women tend to be more interested in nonmaterial needs, whereas men are more interested more in material needs.

4. *Uncertainty avoidance.* Uncertainty/avoidance is the extent to which people feel uncomfortable with an unclear or unpredictable situation.

5. *Long-term/short-term orientation.* A long-term orientation characterizes an emphasis on planning for and investing in the future. In organizations with clear long-term goals, traditions are valued and making changes can be difficult (Jung et al., 2008).

Jun and Lee (2007) defined organizational culture as a microsystem that uses certain rules and procedures and has its own preferences, which distinguishes a particular organization from others. For Pragogo and McDermott (2005), it is "the general pattern of mindsets, beliefs and values that members of the organization share in common" (p. 1103). Based on definitions of organizational culture developed by Jun and Lee (2007)

and Pragogo and McDermott (2005), organizational culture consists of unique rules and

values adapted by the members of an organization. These values and rules are developed

by the leadership of organizations and represent organizational goals and mission.

Organizational culture represents a shared way of thinking and behaving (Appelbaum,

Zinati, MacDonald, & Amiri, 2010). This definition of organizational culture is also

applicable to military or government organizations where discipline, roles, and

procedures define organizational strategy, vision, and mission. According to Erkutlu and

Turkey (2012), organizational culture is a combination of the shared values in an

organization that help employees better understand and follow organizational principals

and procedures. Organizational culture also provides the basis for movement in an

organization (Wang, Su, & Yang, 2011). Based on these definitions of organizational

culture, it can be considered a tool developed and used by leaders to communicate

organizational principals, processes, and procedures to employees. Organizational culture

plays an important role in modern organizations, because it provides a basis for defining

the strategy of the organization, decision-making processes, and business goals. Several

types represent organizational culture in modern organizations.

Tharp (2009) distinguished among the following four types of organizational

culture in modern organizations: collaborative (clan), creative (adhocracy), control

(hierarchy), and complete (market). These types are described as follows.

1. Collaborative (clan) culture is marked by an emphasis on the long-term benefits

   of human resource development, and great importance is given to group cohesion.

   An organization with a collaborative culture pays close attention to teamwork and

   consensus building.

2. Creative (adhocracy) cultures privilege flexibility and discretion. Creative culture allows an organization to adopt new business models and strategies to survive the competition.

3. Control (hierarchy) culture exists in autocratic organizations where everything is governed by rules, regulations, and procedures. There is an emphasis on control, standardization, and well-defined lines of authority.

4. Complete (market) cultures have an external orientation and value differentiation over integration.

A similar typology was developed by Handy (1993), who distinguished among four types of organizational cultural: those based on power, tasks, personalities, and roles. In power cultures, authority is vested in a small group of people who are authorized to make all-important decisions and distribute assignments. In such an organization, regular employees are not entitled to their own opinions nor can they make decisions without guidance from those who have the power and privileges. Task culture is based on teams formed around common interests or specializations. In a personal culture, employees believe they are more important than the organization. In such organizations, employees are interested in personal development and goals rather than organizational development and effectiveness. Role culture characterizes organizations where every employee is responsible for certain tasks based on knowledge and specialization. In such organizations, employees decide what they are best qualified to do and then act accordingly.

Researchers have established a strong relationship between organizational culture and the performance of an organization (Lunenburg, 2009). Organizational culture helps

members navigate the work environment and helps establish rules and procedures. It is a

key factor in stimulating innovation, but it can also inhibit innovation depending on the

values that a particular culture fosters (Naranjo et al., 2010). Innovation and productivity

are dependent on workplace culture. By influencing employees, organizational culture

can either increase or decrease productivity and innovation. Hanlon, Kedia, and

Srivastava (2012) stated that organizational culture plays an important role in influencing

employees and "can be an important component of competitive advantage" (p. 530). In

influencing employees organizational culture improves job satisfaction and effectiveness

at the work place. Anantantula (2010) implicated organizational culture as "a main cause

for project failure in global teams" (p. 242) due largely to the fact that words take on

different connotations depending on one's cultural background, leading to

miscommunication and conflict. In this regard, Holtbrügge, Schillo, Rogers, and

Friedmann (2011) observed, "Communication between members of different cultures is

likely to involve at least one partner not using his or her mother tongue" (p. 209).

Misunderstanding among the members of virtual teams can affect project schedules and

deliverables. Communication between the team members is an important element of

organizational culture and organizational success.

An important component of organizational culture is what Van Maanen (cited in

Taormina, 2009) called *organizational socialization*, which Erkutlu (2011) defined as the

process of helping employees successfully adjust to the organizational culture and

become part of it by accepting cultural values that are "reflected in actual behavioral

patterns" (p. 535). The process of helping employees successfully adjust to the

organizational culture and become part of the culture allows organizations to build a

better working environment and relationships between organizations and employees. Taormina studied the relationship between organizational socialization and employee needs, and between organizational socialization and organizational culture. Taormina identified four motivational needs (autonomy, affiliation, power, and achievement), four dimensions of organizational socialization (understanding, coworker support, training, and future prospects), and three types of organizational culture (supportive, innovative, and bureaucratic). Taormina administered a questionnaire to 156 employees representing a variety of businesses and found that "employee motivational needs explain significant variance for all socialization domains, whereas socialization explains significant variance for all organizational cultures" and also that "organizational socialization links employee needs to organizational culture" (p. 650). Taormina called for additional research on the relationship of socialization to variables such as political behavior and leadership style.

Organizational Culture and Virtual Team Performance

Organizational culture is an important component of virtual team performance (Tseng, 2009) as it helps to define processes and procedures necessary to successfully complete work projects. Projogo and McDermott (2010) argued organizational culture is best assessed by considering content (values and behavior) and the strength of those values and behaviors. The researchers found a relationship between organizational cultural and a variety of performance measures: product quality, product innovation, and process innovation. Erkutlu (2012) found a positive relationship between shared leadership and team productivity. When an organization adopted a supportive culture, proactive behavior increased, whereas bureaucratic cultures had the opposite effect.

Schenkel and Garrison (2009), on the other hand, suggested that the relationship between "entrepreneurial team social capital and venture performance remains less than fully understood" (p. 526). Germain et al. (2001) (as cited in Tseng, 2010) distinguished between two types of organizational performance: (a) internal performance, which is associated with costs and product quality, and (b) benchmarked performance, which involves comparing cost, quality, and customer satisfaction to industry standards. Hauschild and Konradt (2012) stressed the importance of adaptive behavior, which enables members of virtual teams to respond to changing market conditions. Staples and Zhao (2006), in emphasizing the importance of cultural background for virtual team performance, distinguished between surface differences (e.g., race, ethnicity, native language) and deep differences (e.g., beliefs, attitudes, values).

Chang, Chuang, and Chao (2011) noted that performance in virtual teams depends on cultural adaptation, communication quality, and trust. In examining the performance of virtual teams, Chang et al. (2011) defined *cultural adaptation* as a process that facilitates compliance with the norms and practices of another culture. Cultural adaptation helps improve communication among team members with different cultural backgrounds and helps improve performance by minimizing the negative effects of cultural diversity.

Communication quality is another important characteristic of organizational performance. It reflects the relationship between an organization's actual performance and performance as perceived by customers (Chang et al., 2011). Lu, Watson-Manheim, Chudoba, and Wynn (2006), in studying virtual team performance, found that coordination among members affected work outcomes. Communication quality shows

how accurately information is received and how well understood that information is among members of virtual teams.

Trust is a third characteristic of team performance. McLain and Hackman (2013) defined trust as "belief that a specific other will be able and willing, in a discretionary situation, to act in the tractor's best interest" (p. 155). Trust among members of a team helps improve communication and performance. There are two types of trust: trust among team members and trust between team members and management. To cooperate and perform everyday tasks, "team members don't need to be best friends but to trust, respect and be confident of each other's competency" (Chang et al., 2011, p. 310). Lu, Watson-Manheim, Chudoba, and Wynn (2006) stated that developing trustworthy relationships in a virtual team can affect team performance; therefore, management should pay attention to improving trust. Because virtual teams are often temporary, developing trust between the members can be challenging (Lu et al., 2006). Figure 3 illustrates characteristics of organizational performance.
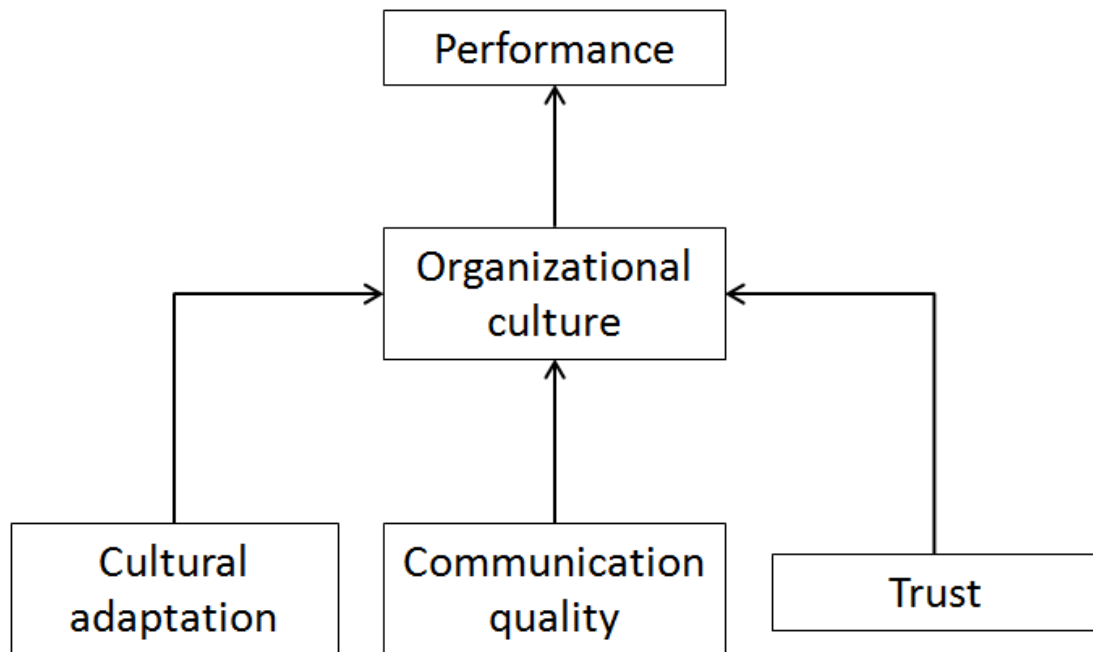
Figure 3. Characteristics of organizational performance.

In exploring organizational culture, Schein (1997) identified three main types: operator culture, engineering culture, and executive culture. Every organization develops internal strategies to meet organizational goals Schein (1997) called this practice a reflection of operator culture. It is based on interactions among team members where performance dependent on communication, trust, and teamwork.

Many organizations have a group of technical designers or engineers who are responsible for creating and implementation new technologies and who design new products. Schein (1997) called this group the engineering culture. In designing complex products, engineers stress safety and how to make systems more automatic without people's direct involvement In Schein's words, "One of the key themes in the culture of engineering is the pre-occupation with designing humans out of the systems rather than into them" (p. 14). The main reason for this approach is to provide safety and reduce

potential injuries due to the human factor. Organizational culture is focusing more on the final product rather than on effectiveness and performance of the team, that allows organizations to achieve success by creating the best products on the market.

Every large organization has executive responsible for developing and implementing organizational strategies, focus, and vision. Schein (1997) called this group the executive culture. The chief executive officer, together with subordinates, defines strategy and business goals for an organization. Like the engineering culture, executive culture reflects a "predilection to see people as impersonal resources that generate problems rather than solutions" (Schein, 1997, p. 16). In other words, executive and engineering cultures value people based on their performance and productivity and not on their personal characteristics (Schein, 1997). Performance and productivity are the two driving factors of organizational effectiveness. Employees' personal characteristics are not always aligned with organizational culture and goals. Schein's model of organizational cultural is illustrated in Figure 4.

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                        Organizational
                           Culture
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Operator Culture	Engineering Culture	Executive Culture
• The action of any organization is ultimately the action of people. • The success of the enterprise therefore depends on people's knowledge, skill, Learning ability and commitment • The knowledge and skill required are "local" and are based on the Organization's core technology • No matter how carefully engineered the production process is or how carefully Rules and routines are specified, operators will have to deal with Unpredictable contingencies • Therefore operators have to have the capacity to learn and to deal with Surprises • Most operations involve inter-dependencies between separate elements of the Process hence operators must be able to work as a collaborative team in which Communication, openness, mutual trust and commitment are highly valued.	• Pro-actively optimistic, nature can and should be mastered: "that which is Possible should be done" • Based on science and available technology • Stimulated by puzzles and problems to be overcome • Pragmatic, oriented toward useful products and outcomes • Perfectionistic, oriented toward elegance, simplicity, precision: "keep it Neat and simple" • Preference for "people free" solutions, for working with "things" • The ideal world is one of elegant machines and processes working in perfect Precision and harmony without human intervention • Safety oriented, overdesign for safety: "u.S. Built planes have three Back-up systems" • Preference for linear, simple cause and effect, quantitative thinking • Absolutist view of reality • Attractive to people whose careers are oriented in "technical/functional Competence," and "pure challenge"	•Functional factors •Self image •Hierarchical and individualistic focus •Task and control focus

Figure 4. Schein's organizational culture model.

Schein (1997) noted that there is often a lack of alignment among the operator, engineering, and executive cultures, which creates communication problems and compromises organizational learning.

Importance of Virtual Teams

Virtual teams are an important mechanism for organizations attempting to reduce spending for personnel to travel to different geographical locations (Ebrahim et al., 2009). Reduction in spending will allow organization to invest in new projects, new

technology, and employee development. The performance of a virtual team depends on

effective communication and a supportive environment inside the team and the larger

organization (Berry, 2011; Daniel, 2010). At their best, team-oriented organizational

cultures "foster interdependence among members and endorse members making

sacrifices for the team" (Erkutlu, 2011, p. 537). Team success can be achieved by setting

clear goals during team planning (Brahm & Kunze, 2012). Clarity in communication and

knowledge transfer between virtual teams can reduce frustration and time required to

complete a project.

Knowledge creation is one of the most important attributes for modern

organizations because knowledge is a critical foundation of competitive advantage

(Wang, Su, & Yang, 2011). Creating and retaining knowledge allows organizations to

compete with other companies in modern business environment. In exploring the

performance and effectiveness of virtual teams, Savelsberg, van der Heijden, and Poell

(2010) highlighted leadership behavior, goal clarity, and team learning behavior.

Effectiveness is enhanced by clear goals, competent and knowledgeable team members, a

results-oriented structure, regular recognition, external management support, high

motivation and commitment, principle-centered leadership, and a collaborative climate

(Sudhakar, Faroog, & Patnaik, 2011). Sudhakar et al. studied the performance of software

development teams and isolated four components of their success: technical factors,

nontechnical factors, organization factor, and environmental actors. The technical factors

include subfactors such as project size and complexity, team composition, team

processes, management support, user support, technology currency, and collective

expertise. The nontechnical (soft) factors include team diversity, team member

capabilities, and team leader behavior. The organizational factors: culture, climate, structure, values, vision, and mission. The environmental factors include design factors, group psychological traits, and internal and external processes. Sudhakar et al. (2011) found that mutual trust and communication effectiveness are major factors that can have an effect on performance of software development teams. In addition, they stated that team performance could be improved by using a management style, which is in line with the national cultural values and beliefs of the employees.

Challenges for Virtual Teams

Virtual teams face many of the same challenges as traditional teams. As Daniel (2010) noted, in any team, conflicts can arise due to differences in opinions over certain tasks. Indeed, argued Cottrell (2011), "conflict is an unavoidable part of the team environment" (p. 223). Conflicts in modern organizations sometimes result from interaction among employees with different cultural backgrounds, opinions, preferences, or views. Such conflicts can affect organizational performance, both positively and negatively. In investigating the performance of Fortune 500 companies regarding the importance of creativity in the workplace, Daniel concluded, "It was necessary that team members have some kind of disagreement towards a specific project so that they could come up with different solutions" (p. 449). Jong, Schalk, and Curseu (2008) delineated four types of conflict that teams must negotiate:

1. Personal (based on personality differences).

2. Process (based on differences of opinion regarding work flow).

3. Relationship (based on differences between managers and subordinates).

4.   Task (based on differences of opinion regarding the execution of particular

tasks).

In studying the demographic characteristics of virtual teams, Gaan (2012) distinguished between in-group and out-group members, concluding that teams comprising primarily in-group members will have less conflict. Brahm and Kunze (2012) noted the importance of mutual confidence for team performance. Closely related to confidence is mutual accountability. Ebrahim et al. (2009) called for further research on multinational companies and small and medium enterprises to explore the effect of organizational structure, processes, and technology support. In investigating challenges for virtual teams Kirkman et al. (2002), interviewed over 75 executives, team members, and team leaders, discovered the following five challenges of managing virtual teams.

Challenge 1: Building trust within virtual teams. Kirkman et al. (2002) stated building trust is the greatest challenge in creating a successful virtual team.

Challenge 2: Maximizing process gains and minimizing process losses on virtual teams. Group processes developed in face-to-face teams are much more difficult to achieve in virtual teams.

Challenge 3: Overcoming feeling of isolation and detachment associated with virtual teamwork. This challenge is characterized by the lack of physical interaction among members of virtual teams. Kirkman et al. (2002), stated without interaction with coworkers or managers the employees feel isolated and out of the loop. That situation greatly affects communication between members and effectiveness of virtual teams.

Challenge 4: Balancing technical and interpersonal skills among virtual team members. As members of virtual teams have little face-to-face interaction, some

managers believe that interaction skills for members of virtual teams are less important compared to members of traditional teams.

Challenge 5: Assessment and recognition of virtual teams performance. This is one of the major challenges for managers who are managing virtual teams because managers cannot physically observe the performance of their employees who are working in different geographic locations.

Cultural Diversity in Virtual Teams

According to Piccolli and Ives (2000), "Previous studies seem to implicitly assume that virtual teams will be self-directed" (p. 575). In other words, managerial control is not required for virtual teams. That assumption no longer governs approaches to the maximization of virtual team productivity. One example is a study by Pattni and Soutar (2008) in which they examined the effect of training and self-management skills on employees' beliefs and skills. The researchers found evidence that "self-management programs can be useful training intervention for employees from culturally different countries" (p. 642).

Another assumption that underlies much recent research on virtual teams is that their performance is influenced by the cultural backgrounds of members. Staples and Zhao (2006) studied the effects of cultural diversity on team performance and if those effects changed depending on whether the team worked face to face. The researchers called for further research on how culturally diverse team members interact in a virtual environment and whether cultural diversity is related to team performance. One such study was conducted by Bergiel et al. (2008), who considered the effects of geography, national culture, language, and time zone differences on the performance of virtual teams.

The authors noted that cultural background could predispose some team members to employ a reserved communication style, which could be at odds with that of members from different backgrounds.

Gressgård (2010) concluded that trust among members of virtual teams is an important component of team bonds. Although longevity and trust are usually positively correlated, Gressgård found that for some teams that have been intact for a long time, trust begins to diminish. A similar investigation was conducted by Brahm and Kunze (2012) who found an "indirect relationship between team goal setting and performance transmitted through task cohesion, which is dependent on the level of trust climate" (p. 595). Brahm and Kunze recommended that supervisors stress developing trust in the beginning stages of virtual team collaboration to maximize performance. Developing trust between virtual teams in the beginning stages of collaboration will benefit virtual teams by improving communication and effectiveness. Another study on the importance of trust was conducted by Revilla and Knoppen (2012). They looked at 80 product development projects in Spanish companies and found that "team vision in combination with an organizational context, built upon a learning culture and trust, has a positive effect on product development performance" (p. 911). The effect was greater for process outcomes than for product outcomes, and organizational culture was more influential than was trust.

Chang et al. (2011) studied how cultural adaptation, communication, and trust affected virtual team interaction and performance. The researchers interviewed four members of culturally diverse teams and found that all three of these variables were positively correlated with performance. Chang et al. concluded, "For virtual teams,

research findings imply that team leaders should be aware of cultural differences as well as project issues within teams" (p. 305). The team leaders awareness of cultural differences among employees and use of appropriate management strategy will allow them to increase effectiveness in communication and performance of virtual teams. Lu, Watson-Manheim, Chudoba, and Wynn (2006) investigated the performance of virtual teams and found that "understanding the specific effects on team performance, positive or negative, has remained difficult to ascertain" (p. 19). Therefore, additional investigation could be necessary between organizational culture and team performance.

Projogo and McDermott (2010) studied the relationship between four cultural dimensions and four types of performance. The researchers suggested additional research exploring if the relationship between the culture and organizational performance depends on organizational practices. Tseng (2009) found that organizational culture and knowledge conversion positively affected corporate performance. Tend called for additional research to investigate how cultural aspects interact with organizational performance. Understanding the relationship between the cultural aspects and organizational performance may allow leadership of the organizations to build effective teams. Garibaldi de Hilal, Wetsel, and Ferrera (2009) studied the relationship between organizational culture and team performance in Brazil. They surveyed 1,628 participants and found that there was a need to improve the relationship between organizational culture dimensions and organizational performance.

A review of the literature indicates that there are mixed findings regarding how cultural factors affect the performance of virtual teams in United States. Results of these

studies suggest a need to better understand how cultural backgrounds affect the

performance of virtual teams. Next, the research design is covered.

Phenomenological Study

A phenomenological design was selected for the proposed study because its main

focus is on in-depth understanding the essence of the experience (Creswell, 2008).

Creswell stated that a phenomenological study "describes the common meaning of

several individuals of their lived experience of a concept or a phenomenon" (p. 57). A

phenomenological approach will facilitate an understanding of what members of virtual

teams have in common how their similarities and differences affect team performance.

Summary and Conclusion

I summarized the literature on traditional and virtual teams, including the

moderating effects of organizational culture and cultural diversity on team performance

in this chapter. The literature review revealed that although some studies have been

conducted on how culture affects the performance of virtual teams, there is insufficient

research on both the advantages and disadvantages of cultural diversity on virtual team

performance. I describe the methods, including design, conceptual framework,

instrumentation, population and sample, data collection and analysis, and ethical

protections in Chapter 3.

Chapter 3: Research Method

The purpose of this qualitative, phenomenological study was to explore how cultural backgrounds influence the performance of virtual teams. The focus of this chapter is on the research method and design. Specifically, I describe the research design and rationale, conceptual framework, role of the researcher, population and sample, instrumentation, data analysis, trustworthiness and confirmability, and ethical protections.

Research Design and Rationale

I considered a purely quantitative approach because it provides explanations and understanding of complex situations (Leedy & Ormrod, 2013), but I rejected that option because I anticipated it would yield data less rich than would a design based on open-ended survey questions. Another choice would have been a mixed-methods approach, which draws on both quantitative and qualitative approaches. Although the questions I employed contain some close-ended demographic items, that feature does not, strictly speaking, make this a mixed-methods approach (Creswell, 2012). Qualitative research, as Leedy and Ormrod noted, explores topics that cannot be readily investigated or described by numerical data. Therefore, I used a qualitative approach because my interests were exploratory.

I considered different qualitative designs for this research. First, I considered grounded theory but rejected it because my purpose is not to develop a new theory but rather to explore participants' experiences about a cultural influence on performance of virtual team. An ethnography design would perhaps have been appropriate if I were interested in exploring the relational dynamics of a single virtual team. Typically, ethnographies are based on extensive sessions with selected informants who share the

same subculture (Creswell, 2009). Although that approach yields rich data, it sacrifices some of the breadth that can be achieved with the larger sample.

Also, I wanted to look at teams characterized by cultural diversity rather than homogeneity. I considered narrative research, which focuses on individual experience (Creswell, 2009), for this investigation, but I rejected that approach because my focus was the team rather than the individual. Similarly, I rejected a case study approach because the main goal of a case study is to understand how the individual or a program changes during a certain period (Leedy, 2013).

I selected phenomenology, in which a phenomenon is described through the meaning for several individuals through their lived experiences (Creswell, 2012). Specifically, the research was based on a phenomenological design, which I used to explore what all members of virtual teams have in common as they experience the phenomenon of virtual teams (Creswell, 2012). This is a qualitative study with a predetermined set of questions (see Appendix A). I collected information from individuals with experience working on virtual teams.

The study based on three research questions that were developed in light of the literature review and my personal experience working with virtual teams:

1. How do the different cultural backgrounds of virtual team members influence team satisfaction?

2. How do the different cultural backgrounds of virtual team members affect their ability to work together?

3. How do the different cultural backgrounds of virtual team members influence decision making?

Each research question gave rise to several interview questions (see Appendix A).

Role of the Researcher

This study is based on a set of online interview questions I designed (see Appendix A). I am solely responsible for interpreting results. My interest in the topic of this study was sparked by my own experience working in and coordinating virtual teams. This experience has been an advantage in formulating the questions. However, I bracketed my personal experience in analyzing the interview questions results. I was careful not to allow my own bias to affect my analysis.

Methodology

Population and Sample

The population for my study consisted of those who worked on a virtual team. I solicited participants with virtual team experience from the Walden University participant pool and by email using a snowball sampling technique. A snowball sampling technique was used to locate participants with virtual team experience. The population was undetermined. From those individuals who indicated interest in participating, I used purposive sampling to select 21 participants or until saturation occurred. Moustakas (1994) suggested a small sample size of five or 10. In selecting the sample, I attempted to achieve diversity in cultural backgrounds to obtain some insight into this factor affecting team performance. Inclusion criteria were as follows: (a) experience working on (a) culturally diverse virtual team(s); and (b) willingness to complete the online questions.

Instrumentation

I collected data using online interview questions primarily of my design (see Appendix A). The credibility of the online questions was established by a pilot test, and I asked additional questions such as:

1. Are the instructions clear and understandable?

2. Are the questions clear and understandable?

3. Are there any suggested changes to the questions?

4. Should any be deleted, and should any be added?

The online questions consisted of five demographic items and 14 items based on my research questions. Some items were adapted from a questionnaire used by Castle (2009), who gave permission for me to adapt her instrument (see Appendix B). The online questions took approximately 30 minutes to complete. These questions were distributed in electronic form using the SurveyMonkey website. Internet surveys—compared with face-to-face, telephone, and mail surveys—have the advantage of being cheaper, faster, and independent of time and space (Blasius & Brandt, 2010). Table 2 illustrates the relationship between the research questions and interview questions.

Table 2

Relationship Between Research Questions and Online Questions

Research questions	Online questions
How do the different cultural backgrounds of virtual team members influence team satisfaction?	• In your own words, define *cultural background.* • In your own words define *personal preferences.* • Based on your experience, how do language barriers influence the performance of virtual teams? Based on your experience, how do cultural differences among virtual team members influence the performance of their virtual team? Based on your experience, how do cultural differences among virtual team members heighten or reduce technical project risks? Based on your experience, how do personal preferences among virtual team members influence the performances of virtual teams? Based on your experience, how do personal preferences among virtual team members heighten or reduce technical project risks? Based on your experience, what three communication methods have been the most effective for working in virtual teams?
How do the different cultural backgrounds of virtual team members affect their ability to work together?	Based on your experience, how important is it to have face-to-face interaction with other team members? Why? Based on your experience, how does conflict based on cultural differences affect team performance? Based on your experience, how does misunderstanding based on cultural differences affect team performance?

	Based on your experience how do cultural values affect team performance? Based on your experience, how important is active participation among virtual team members for team performance?
How do the different cultural backgrounds of virtual team members influence decision making?	Based on your experience, what can be done to improve the decision making of virtual teams? Based on your experience, what can be done to improve the decision quality of virtual teams? Based on our experience, how do cultural backgrounds of virtual team members influence organizational strategies? Based on your experience, how do cultural backgrounds of virtual team members influence business goals? What suggestions do you have to improve working relationships among virtual team members? What type of training would you recommend to increase the performance of virtual teams? Please explain. Do you have any other thoughts about virtual teams that you would like to share?

Pilot Test

The online questions were pilot tested to refine the data collection plan (Yin, 2003). The purpose of this test was to improve the instructions and questions. Two people who meet the inclusion criteria but are not part of the final sample were selected to participate in the test. The test online questions were distributed via e-mail. In this test I asked the online questions and additional questions such as:

- Are the instructions clear and understandable?

- Are the questions clear and understandable?

- Are there any suggested changes to the questions?

- Should any questions be deleted?

- Should any questions be added?

Based on results of the questionnaire and feedback from participants, the online questions were not revised. Pilot test participants received a copy of the executive summary of the findings.

Data Collection

All individuals selected to participate in both the pilot and primary study, were provided with a consent form that described the study's purpose and procedures (see Appendix C). Personal information was not collected, thus there was no risk associated with participating in the study. The consent form made it clear that participation in the project was voluntary and could be terminated at any time without consequence. Participants completed the interview questions distributed through electronic survey tool. This vehicle for distribution assured participants of anonymity and it facilitated data tabulation. Collected data will be saved in a secured fashion for 5 years, as required by Walden. After 5 years, collected data and all reference materials will be destroyed.

Data Analysis

The interview sessions were conducted electronically, wherein a set of online or electronic questions was distributed to each participant to read each question and type in responses. SurveyMonkey recorded responses to questions electronically. Data were downloaded in several formats, which were entered into NVivo for analysis. Data analysis was based on the hermeneutic method, which Patterson and Williams (2002)

described as being organized according to an organizing system, the purpose of which is "to identify predominant themes through which narrative accounts can be meaningfully organized, interpreted, and presented" (p. 45). They added that hermeneutic analysis "seeks to understand how an individual experiences and constructs the world regardless of whether or not similar themes/organizing systems can be found for other individuals" (p. 49).

The questionnaire for this qualitative phenomenological study consisted of two sets—demographic data collected in the first set was evaluated statistically. Data collected in the qualitative set of the questionnaire was analyzed with NVivo. The first step was to code the data, a process described by Creswell (2012) as "dividing the data into small units (phrases, sentences, paragraphs)" (p. 131). I used open coding to determine themes and categories in the data, followed by axial coding to organize and rank these themes (Neuman, 2003). The final step in data analysis is presenting the data by "conveying subthemes, or subcategories, citing specific quotes, using different sources of data to site multiple items, and providing multiple perspectives from individuals in the study to show the divergent views" (Creswell, 2012, p. 133). Per open coding methodology I reviewed collected data and located themes/categories and assign initial codes or labels (Newman, 2003). Axial coding was used to identify the relationship between the open codes, and relate and connect categories to subcategories. Tables and figures were used to present the results of data analysis. In analyzing the data, I strived for maximum confirmability, credibility, transferability, and dependability.

Issues of Trustworthiness

Confirmability

To achieve confirmability in this phenomenological study, steps were taken to demonstrate that the findings are based on the collected data and not my own preferences. Confirmability is the relationship between the quality of a study's results and collected data, and the extent to which this relationship can be confirmed by other researchers. The confirmability of this phenomenological study was enhanced by the use of purposeful sampling, which ensured that participants have experience working with virtual teams. As Moustakas (1994) noted regarding phenomenological research, check and double-check the data. Thus, a rechecking of the results of data analysis and comparing them with previous research enhanced confirmability.

Credibility

Leedy and Ormrod (2013) defined *credibility* as the extent to which other researchers can take the findings of a given study seriously and convincingly. In other words, credibility is related to the validity and reliability of the results. Credibility is based on sound data collection techniques, the use of appropriate statistical tools for analysis, and appropriate coding of the collected data. In the proposed study, credibility was achieved by using purposeful sampling, statistical analysis of quantitative data, and open and axial coding of qualitative data. Specifically, I used NVivo software, which is designed to analyze qualitative data and responses to open-ended questions. Trochim and Donnelly (2006) noted that the credibility also has to do with whether a study's results are believable from the perspective of participants in the research. To that end, results will be shared with participants.

Transferability

According to Trochim and Donnelly (2006), transferability is the degree to which the results of a project can be generalized or transferred to other contexts or settings. In this study, purposeful sampling enhanced transferability in obtaining a group of participants representative of virtual team members. Transferability was also improved by a clear description of the study's methods and the assumptions that informed data collection and analysis. Although the investigation itself may be replicated elsewhere, the findings may not be transferable because of the small sample size.

Dependability

Dependability, defined by Trochim and Donnelly (2006), is a measure of reliability and replicability or repeatability. In qualitative research it is impossible to measure the same event twice or obtain the same results twice by examining the same thing twice. To establish dependability in this study, I reported methodology and finding in details to enable future researcher to repeat the same work (Shenton, 2004). I used the following strategies developed by Shelton, 2004):

1. I described what was planned and executed on a strategic level (p. 71).

2. I addressed the minutiae of what was done in the field (p. 72).

3. I evaluated the effectiveness of the process of inquiry undertaking (p. 72).

4. I also subjected my methods to review by qualified peers.

Ethical Procedures

This proposal was submitted to Walden University's Institutional Review Board (IRB) to obtain permission for conducting the study. All participants signed an informed consent form (see Appendix C). This form explains the purpose of the study, makes it

clear that participation is voluntary and can be terminated at any time without consequence, and assures participants that there are no risks associated with the study.

Participants' responses were anonymous and confidential. Participants were not required to provide their names and they were not published in the dissertation. Upon completion of this study, a summary of its results was provided to those participants who requested one. All associated files, including signed consent forms and electronic data, will be stored in a secure location for 5 years and then destroyed.

Summary

I described the methods for phenomenological study design to explore the effects of cultural diversity on the performance of virtual teams in this chapter. The pilot test was conducted to ensure that questionnaire instructions and open-ended questions were clear and easy to understand. Participants were regular employees who have experience working on virtual teams. They completed researcher-designed online questions with two parts: demographic items and a series of open-ended questions. Quantitative data were analyzed with descriptive statistics. Qualitative data were analyzed using open and axial coding and NVivo software.

Chapter 4: Results

The purpose of this study was to explore and describe the lived experiences of

virtual team members with different cultural backgrounds to understand their effects on

virtual team performance. The data gathering process consisted of posting a notice on the

Walden University participant pool portal and using a snowball technique to collect data

from qualified individuals. This chapter provides detailed results of the collected data and

data analysis. This chapter consists of the following main sections: (a) pilot study, (b)

study participants, (c) data collection review, (d) data analysis process, and (e) findings.

The chapter ends with a summary of the themes that emerged from the data.

Pilot Study

I used a pilot test to refine the data collection plan (Yin, 2003). The purpose of this

test was to improve the instructions and questions. Two people who met the inclusion

criteria, but were not part of the final sample, were selected. The test online questions

were distributed via e-mail. The pilot test participants were asked questions online. They

answered 25 questions focusing on how different cultural backgrounds affect

performance of virtual teams. In addition, participants were asked to answer the

following questions to evaluate the questionnaire:

- Are the instructions clear and understandable?

- Are the questions clear and understandable?

- Are there any suggested changes to the questions?

- Should any questions be deleted?

- Should any questions be added?

The first person indicated the instructions and questions of the questionnaire were clear and understandable and did not suggest any changes should be made. The second individual suggested the instructions and questions of the questionnaire were clear and understandable. However, the second individual suggested more explanation, or examples, of differences or conflicts explored by the questions may elicit better responses. In addition, the second individual stated that it took much longer than 30 minutes to respond to the questionnaire and suggested shortening it.

Two more participants were invited to take the test. They indicated the instructions and questions of the questionnaire were clear and understandable, and they did not suggest that any to the survey questionnaire. Based on these pilot participants' feedback, I did not make any changes to the questionnaire.

Research Setting

The questionnaire was published on the Walden University participant pool portal, and the questionnaire was distributed to several potential participants using a snowball approach. No personal information was collected from participants. The process of collecting data took place between September 2014 and November 2014. All participants from the Walden Participants participant pool were directed to the https://www.surveymonkey.com. I posted instructions for the study on a virtual bulletin board requesting the participants to visit http://www.surveymonkey.com to complete the questionnaire. In addition to using a purposeful technique, I used snowball sampling to obtain contact information for potential participants. I selected the first five persons in the snowball chain from my coworkers. They were contacted outside of work using their personal contact information. I asked them to provide contact information for other

potential participants who met the inclusion criteria ($n = 5$). Eligible participants received

an e-mail letter of invitation (Appendix F) briefly explaining the study and a hyperlink to

complete the questionnaire. All subjects had experience working in virtual teams. To

protect individuals, privacy signatures were not collected and their completion of the

questionnaire indicated their consent. Participation in the study was voluntary. The data

were collected from 21 people; a response from one of the participants was disqualified

due to the lack of experience working in virtual teams.

Demographics

This section contains a discussion of the results of this study wherein 20

participants with virtual teams experience participated in electronic interviews. I analyzed

the data immediately after I completed the data collection process. This section consists

of subsections, which were generated based on the stages of analysis: (a) data collections,

(b) data analysis, (c) open coding, (d) axial coding, and (e) NVivo analysis.

This subsection provides participant demographic data. Individuals were asked to

provide their gender. Responses indicated 12 participants (60%) were women and eight

participants (40%) were men. Subjects were asked to provide their education levels.

Collected responses indicated two individuals (10.53%) had a bachelor's degree, 14

responders (73.68%) had a master's degree, and three responders (15.79%) had a doctoral

degree.

Participants were asked to provide their ages. Figure 5 shows age data for 20

individuals.
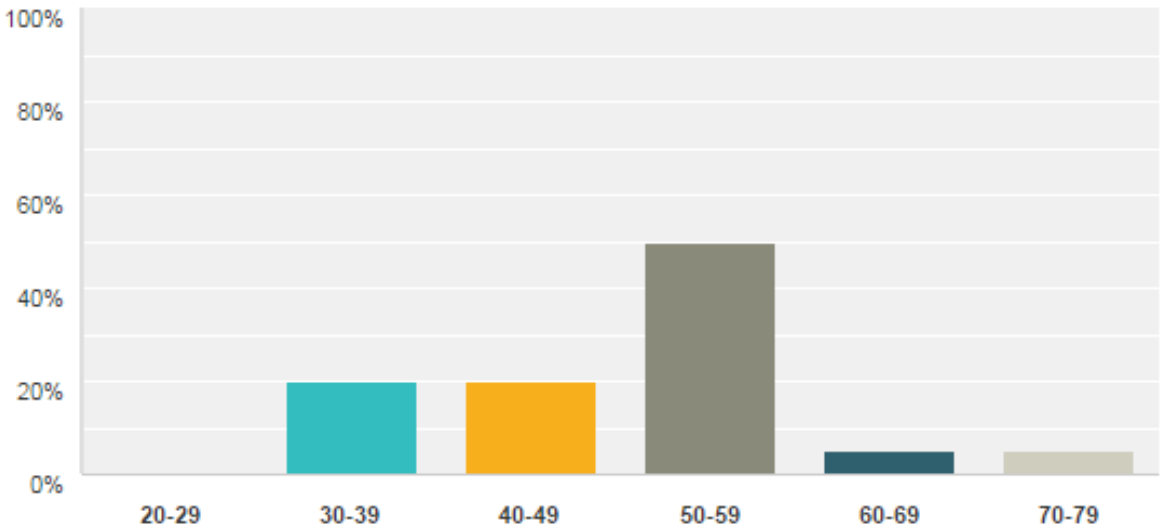
Figure 5. Participants' ages.

Participants were asked to provide their position. Figure 6 shows work position data for

the 20 participants who participated in that survey.
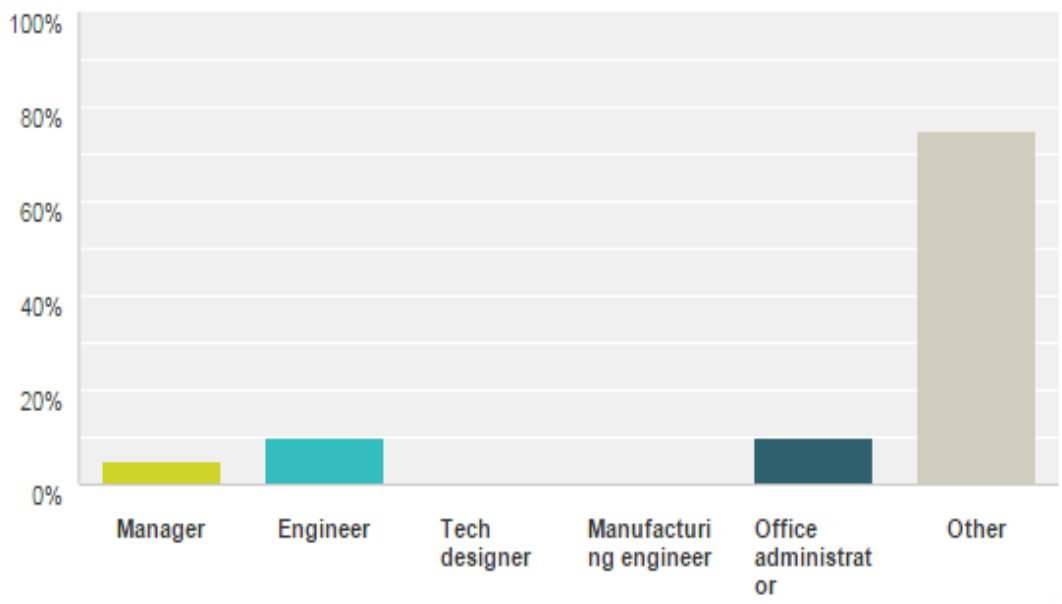
Figure 6. Work position data.

Participants were asked to provide years of experience they had working in virtual teams. Each was assigned an identification number from 1 to 20. Figure 7 shows years of experience working with virtual teams for the 20 participants. One of the individuals did not provide years of experience working in virtual teams and was disqualified. I added an additional participant from the participant pool. The vertical axis shows years of experience working on virtual teams, and the horizontal axis shows the assigned label for each participant.
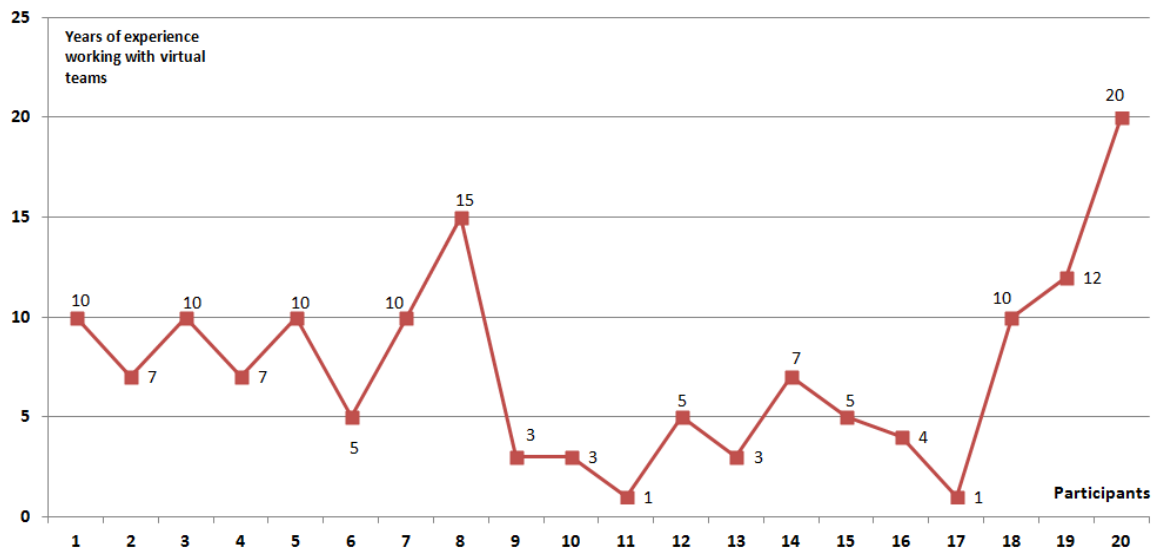
Figure 7. Years of experience working in virtual teams.

Data Collection

The goal was to determine responses to the interview questions, which were then aggregated to a collective response to the research questions.

Research Question 1: How do the different cultural backgrounds of virtual team members influence team satisfaction?

Research Question 2: How do the different cultural backgrounds of virtual team members affect their ability to work together?

Research Question 3: How do the different cultural backgrounds of virtual team members influence decision making?

The questions served as a base for the formation of 20 interview questions. The responses from the participants to the questions served to generate sufficient data to address the research questions. The interview questions served to assess experience working with virtual teams, experience working with face-to-face teams, personal values, and experience in making decisions.

The purpose of this study was to explore and describe the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. A further goal of this qualitative phenomenological study was to help organizational leaders determine how to improve efficiency and productivity by more effectively managing virtual teams. Improving workplace culture can lead to improved performance, which could benefit the global economy.

The information received from the participants' responses provided an understanding of the effects of cultural differences on team performance. The data collection process consisted of the following steps: (a) developing pilot test questions, (b) selecting the participants for the pilot test, (c) identifying participants for the study using purposeful and snowball techniques, and (d) collecting research data until saturation occurs. The research data were collected from 20 participants. The data saturation occurred when I approached 21 participants. This sample size is consistent with Walden University sample size requirements for qualitative studies.

Data Analysis

The process of analyzing data involved making sense out of text data (Creswell, 2009). In addition, Creswell stated that this process consists of the following steps: (a) preparing the data for analysis, (b) conducting different analysis, (c) moving deeper and deeper into understanding of the data, (d) representing the data, and (e) making an interpretation of the larger meaning of the data. Each qualified participant was assigned a sequential note earlier number as a code used to distinguish responses.

Data analysis was based on the hermeneutic method, which Patterson and Williams (2002) described as being organized according to an organizing system tautological, the purpose of which is "to identify predominant themes through which narrative accounts can be meaningfully organized, interpreted, and presented" (p. 45). In addition, they added that hermeneutic analysis "seeks to understand how an individual experiences and constructs the world regardless of whether or not similar themes/organizing systems can be found for other individuals" (p. 49).

Demographic data were analyzed with descriptive statistics and provided the researcher a better understanding of the participants. The analysis of the open-ended question data followed a procedure of grouping codes. Based on Creswell's (2012) notes, collected data were coded, and divided into small units (phrases, sentences, paragraphs). Open coding was used to determine themes and categories in the data, followed by axial coding to organize and rank these themes (Neuman, 2003). The final step in the analysis was to present the data by "conveying subthemes, or subcategories, citing specific quotes, using different sources of data to site multiple items, and providing multiple perspectives from individuals in the study to show the divergent views" (Creswell, 2012, p. 133). Per

open coding techniques, the data were reviewed and identified themes/categories were assigned initial codes (Newman, 2003). Axial coding was used to identify the relationship between the open codes and relate and connect categories to subcategories.

Open ended questions. A total of 21 participants participated in this qualitative study. The 20 participants successfully completed an electronic questionnaire. The response of one of the participants was disqualified based on the lack of experience working with virtual teams. The following data represents specific codes, categories, and themes that emerged from the data using participant quotations. NVivo software was used to help in the defining themes and patterns, and completing coding in the data. NVivo was used specifically to manage the open-ended portion of the data, by classifying, categorizing and organizing the information and noting the frequency and location of occurrence across the data.

NVivo was selected for this research mainly for the ease of management of complex qualitative data and the ability to track the coded data in terms of the frequency of occurrences. Through the process of the qualitative data review common phrases and statements in responses were coded and recorded to determine the frequency of occurrences. Participants were asked about these topics:

- The participants were asked to define their cultural backgrounds in their own words.

- The participants were asked to provide the definition of personal preferences in their own words.

- The participants were asked to explain how language barriers influence the performance of virtual teams in their own words.

- The participants were asked to explain how cultural differences among virtual teams members influence the performance of virtual teams in their own words.

- The participants were asked to explain how do cultural differences among virtual teams members heighten or reduce technical project risks in their own words.

- The participants were asked to explain how personal preferences among virtual team members influence the performance of their virtual teams in their own words.

- The participants were asked to explain how personal preferences among virtual team members heighten or reduce technical project risks in their own words.

- The participants were asked to provide three communication methods that have been the most effective for working with virtual teams in their own words.

- The participants were asked to explain how important is it to have face-to-face interaction with other team members and why in their own words.

- The participants were asked to explain how conflict based on cultural differences affects team performance in their own words.

- The participants were asked to explain how misunderstanding based on cultural differences affects team performance in their own words.

- The participants were asked to explain how cultural values affect team performance in their own words.

- The participants were asked to explain how important is active participation among virtual team members in their own words.

- The participants were asked to explain what could be done to improve the decision making of virtual teams in their own words.

- The participants were asked to explain what could be done to improve the decision quality of virtual teams in their own words.

- The participants were asked to explain how cultural backgrounds of virtual team members influence organizational strategies in their own words.

- The participants were asked to explain how cultural backgrounds of virtual team members influence business goals in their own words.

- The participants were asked to provide suggestions to improve working relationship among virtual team members in their own words.

- The participants were asked to suggest training that can increase the performance of virtual teams in their own words.

- The participants were asked to share any other thoughts about virtual teams in their own words.

The examination of responses was iterative. Descriptive labeling of data according to participant and questionnaire items facilitated inductive analysis. The arrangement of data into identifiable chunks resulted in collective, common responses to emerge as abstractions that pertained to, ultimately, themes of cultural distance as impediment to

successful team performance, along racial, social, and gender dimensions of participant experiences. The approach towards understanding the effect of cultural diversity on virtual teams was to compare and contrast the participant definitions of cultural background and personal preference.

Codes. Code development occurred over a 12-week period in 2014. The process of coding was a means to questioning the data in relation to the research questions and establishing the framework through which themes developed as my understanding evolved through inductive analysis. I extracted text from the Portable Document Format (PDF) output, generated by the Survey Monkey website, and grouped that data as internal (an Internal is the NVivo location and term for primary data sources, where a researcher could create the content or import data directly from another source). The coding process occurred in three broad phases; each phase built upon the preceding codes in terms of interpretation of data in relation to organizational theories discussed in Chapter 2 and, ultimately, themes emerged from critical investigation.

Functional codes. Examination started with data collection and continued through the activities associated with the nature of Computer Assisted Qualitative Data Analysis (CAQDAS), that is, the importing or creation of source artifacts electronically. I copied the interview responses and pasted from the PDF output file generated by the SurveyMonkey system into separate text documents, one for each participant. The preparation of participant sources was the first part of the analysis, followed by functional coding (defined functional coding as a preliminary exercise to open coding).

A code is a labeling strategy within a document whereby the codes facilitated future searches and review of large volumes of textual data. There were 50 functional codes arranged into five main classes, as follows:

- online or interview questions (20)

- research questions (3)

- participants (20)

- gender (2)

- age group (5)

Each code instance throughout the text functioned as an indexical point of reference. The process was labor-intensive, but necessary for me to commence open coding efficiently; Bazeley (2013), a noted CAQDAS scholar and authority on NVivo use for qualitative research, will help researchers to achieve the best results. Sinkovics and Alfodi's (2012) use of CAQDAS for the purpose of progressive focusing informed the decision to code at a foundational level. The creation of functional codes marked the beginning of the focusing progress.

Open and axial codes. The functional codes served as primary categories of data. The process of open coding required more than descriptive labels. The word frequency analysis feature within NVivo identified commonly used words by participants (Appendix G, H, and I). Axial coding was used to identify categories and themes.

Inductive analytic framework. Further examination of the relationship between the responses revealed several patterns. Participants expressed themselves in three distinct ways:

1. The concrete, material description of artifacts as the interaction;

2. The social practices; and

3. The behavior of individuals within virtual team meetings.

For example, the material artifact evidenced through the listing and prioritizing of digital tool efficiency. By contrast, social references were identified through specific, culture-centric expressions. The narrative of groups and individual behavioral dynamics described the individual qualities of team members—either positively or negatively related to virtual team performances.

Analytic induction took the form of composite description, that is, the most essential elements present throughout all participant narratives. The potential limitation of this approach is a reductionist view of cultural backgrounds of virtual team members. The realities of virtual teamwork were complex and compounded by a lack of context from participant responses. Personal experiences were not polarized as exclusively positive or negative, successful or unsuccessful. Rather, the composite description highlights social complexity within virtual teamwork.

Thematic induction. Tables 3 and 4 show comparison between the themes developed in this study and cultural models developed by Schein (1998) and Trompenaars and Hampden-Turner's (1998).

Table 3

Thematic Induction Related Successful Virtual Team Performance.

Experiential themes	Theme	Organizational culture (Schein, 1998)	Culture interaction types (Trompenaars & Hampden-Turner, 1998)
Culture	Theme 1	Operator	Decentralized
Cultural Differences-Performance	Theme 4	Engineering	Project oriented
Personal Preferences-Performance	Theme 6	Engineering	Project oriented
Personal Preferences-Risks	Theme 7	Engineering	Engineering
Communication Methods	Theme 8	Operator	Egalitarian, Informal
Face-to-Face Interaction	Theme 9	Engineering	Decentralized, project oriented
Misunderstanding	Theme 11	Operator	Egalitarian, fulfillment oriented
Cultural Values	Theme 12	Operator	Egalitarian, fulfillment oriented
Working Relationship	Theme 18	Operator	
Training	Theme 19	Operator	Egalitarian, fulfillment oriented
			Egalitarian, fulfillment oriented

Table 4

Thematic Induction Related Unsuccessful Virtual Team Performance.

Experiential themes	Theme	Organizational culture (Schein, 1998)	Culture interaction types (Trompenaars & Hampden-Turner, 1998)
Personal preferences	Theme 2	Executive	Hierarchical, power-oriented
Language Barriers	Theme 3	Engineering	Task/Formality, project oriented
Cultural differences-risk	Theme 5	Engineering	Task/Formality, project oriented
Conflict	Theme 10	Engineering, Executive	Hierarchical, power-oriented
Participation	Theme 13	Operator	Task/Formality, project-oriented
Decision Making	Theme 14	Engineering, Executive	Hierarchical, role-oriented
Decision Quality	Theme 15	Engineering, Executive	Formal, power-oriented, centralized
Organizational Strategies	Theme 16	Engineering, Executive	Hierarchical, role-oriented
Business Goal	Theme 17	Engineering, Executive	Centralized, project, and role-oriented.

Evidence of Trustworthiness

The evaluation of qualitative studies, despite the diversity of methods for data collection and analysis is similar to quantitative; therefore there must be rigor in the methods, techniques, and analysis of data to inform the research questions. Lincoln and Guba (1985) noted that the term *trustworthiness* can be compared to the idea of value in qualitative inquiry. The evaluation criteria used to determine the rigor and academic merit of this study were confirmability, credibility, dependability, and transferability.

Credibility

The credibility in this study is established through participant control over questionnaire responses, which were identified as the primary source data and reflective memos I included in the analysis of secondary codes. The participants accessed their entries with the option to decline participation as described in the ethics protocols (Appendix C). The online questions presented data input fields for responses; the mandatory setting for fields was disabled for this study, as was the minimum or maximum character limit. The fields were data elements within a hypertext markup language (HTML) page viewed via a web browser. A script from an HTML page indicates content required. In addition, the entire content of the questionnaire will fail the submission process, which means the data would not be able to load into a database for subsequent retrieval (Reips, 2010).

Credibility comes from the user experience of completing the form as an act of ongoing informed consent. Each response provided by participants was not limited by time restrictions, the number of questions to answer, and the amount of information to provide. Instead, the participants offered their responses freely, according to their personal choice and experience, and with the absence of synchronous interaction with the researcher, which possibly injects response bias all but inadvertently.

From an ethical perspective, making a response mandatory raised the potential likelihood of psychological harm to a participant. Rather than risk possible harm, and questionnaire abandonment, I placed no restrictions on data entry or null entries. The questionnaire was designed from a user-centric perspective. No item was indicated as

required; such a directive towards participants controlled data entry or the right to not

respond to items.

Transferability

Transferability is the degree to which the results of a project can be generalized or

transferred to other contexts or settings (Trochim & Donnelly, 2006). In this study,

transferability was enhanced by purposeful and snowball sampling designed to achieve a

group of participants who are representative of virtual team members. The participants

were required to confirm that they have experience working with virtual teams. In

addition, it was achieved by a clear description of the study's methods and the

assumptions that informed data collection and analysis.

Transferability conveys how findings from this study may apply to other studies

beyond the scope of the original study. The approximate equivalent in quantitative

research is generalizability, that is, the ability to apply findings from a (random) sample

to the greater population. A frequently provided criticism of qualitative research is related

to the inability to generalize to a general population (Maxwell, 2010). Although

phenomenological findings cannot be applied to a random sample, the essence of

experiences can be distilled and applied to very similar experiences and settings. Despite

the ubiquity of Information and Communication Technology (ITC) in knowledge work,

the experiences in virtual teams are specific to a nonrandom sample and a select

population. Lincoln and Guba (1985) stated that the reader of a qualitative study

ultimately determines the transferability of the researcher's findings. Each interpretation

of the study made by a reader will inevitably make associations of the findings to their

own context. In particular, those scholars and practitioners in the fields of management,

especially those focused on virtual teamwork, will possess similar attributes to the

purposeful sample of participants. The attributes, in summary, include the following:

- Gender, and working experiences associated with gender differences, in the
  workplace;

- The technology used by the teams for daily communication, such as emails,
  Instant Messenger, and WebEx;

- The experiences of virtual team participation and/or studies of virtual teams; and

- The communication skills, different cultural backgrounds, and language barriers
  in virtual teams.

The findings here were provided in a way that any scholar or practitioner can apply them

to their own world view. The design and methodology of this investigation can be

replicated and applied to a similar study. The results of a similar examination possibly

likely could lead to the same conclusion found in this examination.

Dependability

Dependability was defined by Trochim and Donnelly (2006) as a measure of

reliability and replicability or repeatability. In qualitative research, it is impossible to

measure the same event twice or obtain the same results twice by examining the same

thing twice. To establish dependability, I discussed the methodology and findings in

detail to enable future researchers to repeat this study (Shenton, 2004).

The dependability of a qualitative study was the degree of replicating the method,

but not the findings. Phenomenological research relates to the lived experiences of an

individual. The individual responses through a single lens of participant experience were

summarized in this study (Moustakas, 1994).

I created a cross-referenced list of research questions to the interview or online

questions to ensure adequate coverage from participant data. Table 5 presents the cross-

reference list between the research questions and the online questions.

Table 5

Research Questions and Questionnaire Item Matrix

Research questions	Interview questions
RQ1	6-13
RQ2	14-18
RQ3	19-25

Note. Survey items 1–5 were for participant demographics only and were not included in this table.

Confirmability

The confirmability of qualitative research relates to the degree a researcher

demonstrates the authenticity of data sources as well as the setting for data collection

(Guba & Lincoln, 1989). The advent of digital technologies in qualitative research

enabled participants of the study to interact via a user interface, removing the presence of

the researcher, yet also presented challenges to the researcher in the process of

demonstrating the authenticity of their data.

Web technologies, including SurveyMonkey, record the Internet Protocol (IP)

address acting as a unique signature to denote the location of participants' computers.

The use of IP addresses to identify digital devices and geographical location of the

individuals who participated in this investigation; however, is imprecise by design

(Kreuter, Couper, & Lyberg, 2010). Enabling the IP tracking feature meant that should

any question be raised as to the uniqueness of participants and their responses, a

comparison of the IP and other metadata generated at the time of submitting the survey

could be done. I set a rule that participants could enter the questionnaire only one time from their computer, which meant that participants of this investigation could save their responses but could not modify them later.

A unique feature of CAQDAS was data logging. Any activity on my part that modified content with the NVivo file was recorded electronically within the file itself as a log event, a metadata tied to the analytic process. The log data from NVivo provided independent confirmation of my activity with participant data and the coding process. The time-date stamp was recorded electronically within the collated responses for each participant; however, this had limitations in that a timestamp occurred only at the start, but not at the completion, of the questionnaire for participants.

Study Results

The findings are arranged in order of research questions. The findings from the data analysis include the following information:

Research Question 1

Research Question 1**:** How do the different cultural backgrounds of virtual team members influence team satisfaction?

Key findings. Appendix G shows a Cloud generated by NVivo. This Cloud is a visualization of the 100 words most commonly used; it helps to visualize word frequency used for Research Question 1. The following are the most frequent words in: *cultural*, *face*, *team*, *important*, *differences*, *performance*, *participation*, *communication*, and *conflict*.

The levels of satisfaction working with virtual teams with different cultural backgrounds varied from very dissatisfied to very satisfied. The participants of this examination expressed satisfaction about their work in terms of task or project completion.

The examination of the data reveled negative or lower degrees of satisfaction working with virtual team members and teams with different cultural backgrounds. In addition, poor team performance was established and reinforced by organizational culture. Further examination of responses revealed the following two patterns:

1. Participants who experienced working with virtual team within a single culture or a single region, (9 of 20) for example, virtual teams located throughout the U.S., expressed more satisfaction through the positive responses

2. Participants (11 of 20) who experienced virtual team work with teams distributed globally and culturally diverse expressed less satisfaction through the negative responses.

In addition, the participants identified the importance of communication in virtual teams and its affect on the performance. Among the important factors were: (a) language barriers, (b) use of modern technology, (c) not sufficient training about different cultural backgrounds. When a language barrier exists in the team, it cannot operate on the same level simply because team members would not be able to understand each other correctly. Misunderstanding between the team members will result in not being able to complete tasks/projects on time.

For example, Participant 1 offered an extensive explanation on issues in communication in virtual teams:

In cultures where pontificating is seen as scholarly or wise, team members

will steal the floor of a virtual call and just never shut up. In cultures

where teams are appreciated and there is less of a caste system, members

recognize the difficulties of ensuring everyone has a say – \and therefore

work hard to give everyone a chance to talk...in cultures where fudging

numbers to save face is ok, this has created problems in virtual teams I've

been on until we figured out that a particular person(s) on the team was

doing that.

Further, Participant 3 noted, "Some races view teamwork as important while other races view the individual as important. This leads to a clash and unshared information." This statement suggests that differences in cultural backgrounds might significantly affect performance of virtual teams.

Gender differences/hierarchical practices. Participant 6 stated: "In cultures where men are 'kings'—it is harder for women to be heard." Some x participants worked in virtual teams that were culturally homogenous, that is, shared values, language, and social traditions. These participants with similar cultural backgrounds did not influence satisfaction in the team. Dissatisfaction in the team, by contrast, was partly attributed to the challenge of working across multiple languages, but not the social practices associated with the cultures themselves. Further, some participants indicated that cultural differences between the members of virtual teams benefit organizations.

Cognitive load increased with virtual teams by the nature of disembodied settings, that is, the absence of face-to-face interaction. Cognitive load refers to the relative extent of demands of an activity upon an individual's working memory. Additional load occurs

when assumed practices are absent or replaced by a different set of practices used by the team members with different cultural backgrounds—it is not the culture itself that influences team satisfaction. Physical separation of members prevents face-to-face communications. Time delays inherent to email and instant messaging adds additional hurdles to effective communication between the members of virtual teams. Based on the replies by the participants, team satisfaction is influenced by the effort needed to communicate across language barriers to better understand other members of the teams with limited English language skills.

Gender inequality resulted from cultural difference. Participants perceived ethnic and gender differences as negative influences on team performance and ultimately group satisfaction. Some participants indicated that gender inequality in virtual teams greatly affects team performance (2 of 20). Further, all these participants, as derived from Research Question 1 data, were members of culturally diverse teams and were not satisfied with their team performance. In such instances, the individual and collective goals aligned with organizational goals to improve satisfaction and succeed in competitive environment. In effect, the vision of organizational success established team practices conducive to their own practices. For example, Participant 20 indicated that "regular predetermined communication times established up front, and an understanding of why and how people think based on the different cultures represented in your team."

Organizational identity unified teams where participants and their team members shared artifacts and processes. For example, Participant 16 stated "Be sure this is a cohesive group before implementing objectives…." In addition, Participant 15 indicated "This (group dynamic) will ensure that the group members have the same purpose and

goals in mind." The nature of virtual teamwork evolved through the use of information and communications technologies (ICTs) to the point of empowering team members with effective communication channels. Recent innovations in webcam and webinar tools minimized the challenges virtual teams faced, despite on different cultural backgrounds of team members.

Theme 1 (Culture) was identified from the coding as follows: In your own words, define *cultural background*. Participants were asked to provide their definition to steer them towards the topic of this study. Invariant constituents applied to this theme included: educational learning, traditions and behaviors, family, community, society, ethical standards, religious foundation, orientation, experience in life, and race. Some participants (5 of 20) stated that culture is based on ethical standards and religious foundation. Table 6 presents results for Theme 1. In addition, participants (4 of 20) noted culture is based on family, community, and society standards. Participant 3 stated that cultural background could be defined as "customs, traditions and learned behavior from the society in which you live." Participant 4 defined cultural background as "…society the believes of the family, community and society in general that shape the beliefs of individuals in certain ways." Participant 9 noted that cultural background could be defined as "the religious foundation, ethical standards that are developed within a particular group of people."

Table 6

Cultural Background (Q6)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Differences in educational learning	1	5%
Custom Traditions and behaviors	1	5%
Family community and society	4	20%
Ethical standards and religious	5	25%
foundation	2	10%
Orientation and experiences	3	15%
Differences in race	2	10%

Theme 2 (preferences) was identified from the coding as follows: In your own words, define *personal preferences*. Participants were asked to provide their definition to steer them towards the topic of this study. Invariant constituents applied to this theme included: what I want, references, instant messaging and Skype, alternatives, priorities, personal choices, paradigm, and aspects custom to group people. Table 7 presents results of analysis for Theme 2. Some participants (6 of 20) stated that personal preferences are based on what people are familiar with and personal choices. For example Participant 4 noted: "Sometimes it is difficult for individuals to understand the actual meaning and purpose of individuals communicating with each other. Therefore, it is pertinent that cultural differences should be put aside and team members can cooperate and collaborate." Further, Participant 13 stated:

> Personal preferences would be choices one makes when options are available, such as what to wear, what to eat, what to work at, how to spend free time, etc. Behavior or choices dictated by law or physics or company rules are not personal preference.

Participant 14 defined personal preferences as "decisions based on what the

person prefers when given a choice."

Table 7

Personal Preferences (Q7)

Responses	No. of participants to offer this experience	% of participants to offer this experience
What I want	3	15%
What I prefer	4	20%
Instant messaging and Skype	1	5%
Alternatives	1	5%
Personal priorities	2	10%
Familiar and personal choices	6	30%
Paradigm	1	5%
Aspects custom to group or people	1	5%

Theme 3 (language barriers) was identified from the coding as follows: Based on

your experience, define how language barriers influence the performance of virtual

teams. The participants were asked (in their own words) to explain relationship between

cultural differences and performance. Invariant constituents applied to this theme

included: harder to understand, causing frustration, create communicational gap, do not

affect performance, affect communication, and negatively affect performance. Table 8

presents results of analysis for Theme 3. Most participants (12 of 20) noted that language

barriers among virtual team members significantly affect performance. However, four

participants noted that language barriers do not affect performance of virtual teams.

Participant 14 stated language barriers "can negatively impact performance," whereas

Participant 16 noted: "language barriers hinder performances." The language barriers

negatively impact communications between the members of the teams and performance

of virtual teams.

Table 8

Language Barriers (Q8)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Hard to understand	5	25%
Creates communication gap	4	20%
Does not affect performance	4	20%
Negatively affects communication	5	25%
Negatively affects performance	2	10%

Theme 4 (performance) was identified from the coding: Based on your experience, define how cultural differences among virtual team members influence the performance of their virtual team. Participants were asked (in their own words) to explain how cultural differences influenced the performance of virtual teams. Invariant constituents applied to this theme included: negatively affect performance, improve team dynamics, positively affect performance, and helps teams to succeed. Table 9 presents results of analysis for Theme 4. Some participants (8 of 20) noted cultural differences among virtual team members significantly affect the performance of virtual teams, although four participants noted they do not affect performance.

Table 9

Cultural Differences (Q9)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Negatively affects performance	8	40%
Improve team dynamic	2	10%
Positively affects performance	4	20%
Helps teams to succeed	1	5%
No affect on performance	4	20%

Theme 5 (cultural differences-risks) was identified from the coding as follows: Based on your experience, define how cultural differences among virtual team members

heighten or reduce technical project risks. The participants were asked (in their own words) to explain relationship between cultural differences among virtual team and technical project risks. Invariant constituents applied to this theme included: negatively affect performance, heighten performance, no affect to performance, and both negatively and positively affect performance. Table 10 presents results of analysis for Theme 5. Some participants (9 of 20) noted that cultural differences among virtual team members heighten performance of virtual teams. However, three participants noted that cultural differences reduce the performance of virtual teams.

Table 10

Cultural Differences-Project Risks (Q10)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Negatively affect performance	3	15%
Heighten performance	9	45%
No affect on performance	4	20%
Both negatively and positively	2	10%

Theme 6 (personal preferences-performance) was identified from the coding as follows: Based on your experience, define how personal preferences of virtual team members influence the performance of their virtual team. The participants were asked (in their own words) to explain relationship between the personal preferences among and performance of their virtual teams. Invariant constituents applied to this theme included: negatively affect performance, positively affect performance, no affect to performance, and I cannot recall. Table 11 presents results of analysis for Theme 6. Some participants (8 of 20) noted that personal preferences of virtual team members positively affected the

performance of virtual teams, although seven participants noted that cultural differences

reduced performance.

Table 11

Personal Preferences (Q11).

Responses	No. of participants to offer this experience	% of participants to offer this experience
Negatively affect performance	7	35%
Positively affect performance	8	40%
No affect on performance	2	10%
I can't recall	1	5%

Theme 7 (personal preferences-risks) was identified from the coding: Based on

your experience, define how personal preferences of virtual team members heighten or

reduce technical project risks. The participants were asked (in their own words) to

explain the relationship between the personal preferences and technical project risks.

Invariant constituents applied to this theme included: negatively affect performance,

positively affect performance, no affect to performance, and I cannot recall. Table 12

presents results of analysis for Theme 7. Some participants (7 of 20) noted that personal

preferences of virtual team members heighten technical risks of virtual team, while five

participants noted that personal preferences of virtual team members reduced

performance of virtual teams.

Table 12

Preferences-Technical Project Risks (Q12)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Heighten technical risks	7	35%
Reduces technical risks	5	25%
Both negatively and positively	3	15%
I don't know	1	5%

Theme 8 (communication methods) was identified from the coding as follows: Based on your experience, define three communication methods have been the most effective for working in virtual teams. The participants were asked (in their own words) to provide three effective communication methods.

Invariant constituents applied to this theme included: (a) being on the top of things, (b) teleconference, Skype, instant messaging, (c) written skills, communication skills, (d) email, phone, WebEx, (e) Cooperation, open communication, open minded, (f) active listening, reflective listening, and passive listening. Table 13 presents results of analysis for Theme 8. Most participants (4 of 20) noted that most effective for working in virtual teams were god communication and written skills.

Table 13

Three Communication Methods (Q13)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Being on the top of things	2	10%
Tele-conference Skype, Instant	3	15%
messaging	4	20%
Written skills, communication skills	3	15%
Email, phone, WebEx	2	10%
Cooperation, open communication, open minded	1	5%
Active listening, reflective listening, and passive listening	2	10%
Open, clear, consistent	1	5%
Written, face to face, feedback		

Summary for Research Question 1

Some participants indicated that they are not satisfied with virtual team performance and prefer to work with traditional teams. The team's satisfaction is

influenced by the effort needed by teams to communicate across language barriers. The language barriers present a significant challenge to the performance of virtual teams. Individuals who experienced working with virtual teams with the multiple cultures located in different regions experienced issues in communication between the team members, and as result were not able to complete their projects on time. Further, participants indicated that different cultures do not present great challenges in affecting performance. It was noted that differences in gender in virtual teams presented difficulties in communication between the members of virtual teams and had a negative influence on team performance.

Research Question 2

Research Question 2: How do the different cultural backgrounds of virtual team members affect their ability to work together?

Key findings. Appendix H shows a Cloud generated by NVivo. This Tag Cloud is a visualization of the 100 words most commonly used by participants it helps to visualize word frequency used in responses for the Research Question 2. The following are the most frequently used words in responses: *team, personal*, *preferences*, *work*, *cultural*, *differences*, *communication*, and *language*.

Differences in cultural backgrounds affected teamwork in less-than-productive ways. Participant 5 indicated, "Cultural differences may negatively affect team communication and how the team works to complete a task." The follow-on to that statement tied directly to Research Question 2, "They heighten it. Team members who do not work well together because of a lack of communication are less likely to complete tasks on time."

Participant 1 stated "allow for team member removal when cultural differences become unworkable." In addition, Participant 6 indicated, "cultural values greatly affect team performance because work ethic determines the performance of an individual, and if one member lacks high standards or work ethic then one person will not provide equal contribution as others." In sharing personal experience related to having face-to-face interaction with others Participant 14 noted:

Working directly is the most effective way to get work done. It allows the use of quick hand sketches to explain ideas, it allows immediate feedback for questions or misunderstandings, and is much harder to ignore than an email or text communication.

Us and them. There were several participant experiences contrasting to the majority of the sample. Provided there were a range of ICT tools available for participants, the cultural differences between the members of virtual teams were not identified as an issue. However, the distinction between us (local) and them (remote) recurred throughout responses. Some participants indicated that language barriers play an important role in communication among the members of virtual teams. For example, Participant 13 shared the following:

I don't really know how big an influence it has, as most of the virtual teaming I have been exposed to have been with U.S. engineers, or with foreign engineers who either spoke enough English that I could communicate with them, or other members of the team could communicate with them for me. It does slow down the process of

expressing design ideas or issues to other team members, and understanding their ideas.

In addition, some participants indicated that lack of training about cultural differences and norms negatively affects ability of virtual team members to work together. For example, Participant 14 indicated:

I have had no training in working with foreigners, but an understanding of what their cultural norms are would have been helpful. Some cultures have respect issues for senior members that may inhibit communication, or differences in status of men vs. women that could reduce team performance.

The idea of opposite sides in the teams prevailed, as well as perceived dominance or right to choose one side in relation to the other. Participants noted that face-to-face meetings are important and lead to improving communication among the members of the team.

Participant 4 offered an explanation on importance of face-to-face meetings:

To understand and learn from our other side we need to have face-to-face communication with them to understand them completely and appropriately we need to meet and discuss our idea to make them understand it fully.

Some participants contrasted the in-person mode of team interaction in terms of the context of the work itself, "Face to face is not important when it comes to online projects."

For example, Participant 20 provided the following statement:

Need to break the ice to discover we are all human and on the same

project. There is an unconscious thinking when one does not meet another

from a different culture that it is 'them and us'…It can drag a team's

performance down. There has been a trust factor and also a feeling that not

everyone is an equal when there is not an understanding of cultural

differences up front prior to a project's inception.

Further, Participant 1 stated:

The biggest hurdle in virtual teams that I have encountered is when you

have part of the group together in a room, and other participants singly

broken up through the world using conference calls. This is when things

really fall apart. The group together in the room has tons of aside

conversations and can see body language and those who are not there are

often left out of much of the decision-making. There is nothing worse than

coming to a virtual meeting like that as a single-call participant, and

hearing that a consensus/decision was made 10 minutes before the meeting

in the break room, and your inputs are not even going to be considered.

Some participants indicated that they have experienced conflict in the virtual teams,

which was based on misunderstanding between the members, personal preferences,

professional preferences, and attitudinal preferences of individuals. Furthermore, the

individuals indicated that active contribution in the team activities is an important factor,

which benefits team performance.

Theme 9 (face-to-face interaction) was identified from the coding as follows:

Based on your experience, define how important is it to have face-to-face interaction with

other team members. The participants were asked (in their own words) to explain

importance of face-to-face interaction. Invariant constituents applied to this theme

included: not important and important. Table 14 presents results of analysis for Theme 9.

Most participants (16 of 20) noted that the face-to-face interaction with other team

members is important.

Table 14

Importance of Face-to-Face Interactions (Q14)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Not important	3	15%
Important	16	80%

Theme 10 (conflict) was identified from the coding as follows: Based on your

experience, define how conflict based on cultural differences affect team performance.

The participants were asked (in their own words) to explain relationship between the

conflict and team performance. Invariant constituents applied to this theme included:

effect performance, misunderstanding based on cultural backgrounds effect performance,

and no effect to performance. Table 15 presents results of analysis for Theme 10.   Most

participants (15 of 20) noted that conflict based on cultural differences affect team

performance.

In sharing personal experience related to having conflict in a team Participant 13

noted:

> It can negatively affect performance when schedule problems arise or if
>
> culture inhibits the free flow of ideas or respect for another's idea. Asian
>
> cultures for example have issues with questioning authority figures, which

was implicated in a recent airplane accident when the junior pilot did not

question actions of the senior pilot. It can positively affect performance if

the other culture has a better way of doing things, and the local culture can

adopt new ideas.

Table 15

Conflict in Virtual Teams (Q15)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Affects Performance	15	80%
Misunderstanding based on cultural backgrounds affects performance	3	15%
No effect on performance	1	5%

Theme 11 (misunderstanding) was identified from the coding as follows: Based on

your experience, define how misunderstanding based on cultural differences affect team

performance. The participants were asked (in their own words) to explain relationship

between misunderstanding and team performance. Invariant constituents applied to this

theme included: creates hard feeling and distrust, affect team performance, tension within

the group, does not affect team performance, and confusion and not understanding. Table

16 presents results of analysis for Theme 11. Most participants (15 of 20) noted that

misunderstanding based on cultural differences affect team performance.

Table 16

Misunderstanding (Q16)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Creates hard feelings and distrust	1	5%
Affects team performance	15	75%
Can cause tension within the group	1	5%
Does not affect team performance	1	5%
Confusion, not understanding	1	5%

Theme 12 (cultural values) was identified from the coding as follows: Based on your experience, define how cultural values affect team performance. The participants were asked (in their own words) to explain relationship between cultural values and team performance. Invariant constituents applied to this theme included: distrust, affects team performance, different perspective, helps teams to succeed (does not affect team performance), and can be negative or positive. Table 17 presents results of analysis for Theme 12. Most participants (12 of 20) noted that cultural values affect virtual team performance.

Table 17

Cultural Values (Q17)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Distrust	1	5%
Will affect team performance	12	60%
Add different perspective	1	5%
Helps teams to succeed	4	20%
Can be negative or positive	1	5%

Theme 13 (participation) was identified from the coding as follows: Based on your experience, define how important is active participation among virtual team members for team performance. The participants were asked (in their own words) to explain the

importance of active participation. Invariant constituents applied to this theme included:

very important, active participation is essential for success, depends on team objective,

and everyone need to be active. Table 18 presents results of analysis for Theme 13. Most

participants (15 of 20) noted that active participation in a team is important.

Table 18

Participation (Q18)

	No. of participants to offer this experience	% of participants to offer this experience
Responses		
Very important	15	80%
Active participation is essential for success	2	10%
Depends on the team objective	1	5%
Everyone need to be active	2	5%

Summary for Research Question 2

The participants have indicated that it is important to have face-face meetings in

the virtual teams. The conflict between the members of virtual teams could be based on

misunderstanding between the members, cultural differences, personal preferences,

professional preferences and attitudinal preferences of individuals, and could greatly

impact performance of the team. The active participation in team activities is very

important because it leads to team success and improves performance of the team.

Research Question 3

Research Question 3**:** How do the different cultural backgrounds of virtual team

members influence decision-making?

Key findings. Appendix I includes a Cloud generated by NVivo. This Tag Cloud

is a visualization of the 100 words most commonly used by participants in provided

responses; it helps to visualize word frequency used in responses for the Research Question 3. The following are the most frequently used words in responses provided by participants: *team*, *goals*, *members*, *communication*, *virtual work*, *meeting*, and *training*.

The experiences of participants related to decision-making remained consistent from Research Question 2 to this question. Teams faced with the social challenges of diverse cultures, confirmed the inability for teams to make collective decisions due to the different cultural background of virtual team members.

Decision-making within virtual teams was also difficult with diverse cultural team members, but not necessarily leading to reduced performance within the teams. Common threads throughout participant narratives on team function were the protracted and sometimes unproductive discussion for team or project decisions. The catalyst for uncertainty, and implicitly failed team performance, was a consensus across the participants: Cultural differences between the members of virtual teams caused issues with communication, and misunderstandings, which led to project delays, poor outcomes, poor performance and effectiveness, and missed goals.

The major dimension of cultural differences was language: written and oral communication among the members of virtual team. The less familiar a foreign language was to the majority of the team, the greater amount of team focus on establishing group norms that would lead to improved outcomes. There were several opportunities identified by participants. The emphasis was on the organization's capacity to develop a unified communication culture in all forms. For individual team members, differences in language posed challenges to achieving unity, as evidenced from the following participants.

For example, Participant 5 indicated, "language barriers prevent team members from understanding each other and from developing good working relationships." Further, Participant 4 stated, "language is the basic skills and knowledge that individuals should have to proceed with learning and cooperation in virtual world of today."

At the same time Participant 18, stated that "mutual understanding and expectation at the introduction, which would provide a team-building foundation." Participant 6 noted, "Communication and writing skills must be improved as to get the intended point across. Virtual teams motivate members to improve their writing skills and communication skills." Further, in discussing how cultural diversity might cause a conflict, Participant 6, stated that "cultural differences may cause a conflict but mature educated adult with cultural sensitivity and understanding about cultural differences can minimize conflict related to cultural differences." Answering question about different backgrounds Participant 8 indicated that, "Teammates coming from different backgrounds have different values and standards that may be against the overall purpose of the project, hence decreased or nonparticipation in critical decisions."

Discussing importance of participation Participant 13 stated, "participation is important with any team, local or virtual. Members who offer ideas and are interested in the work and take ownership of jobs are much easier to work with and do a much higher quality of work."

Analysis of collected data reveled the following categories:

Articulation work. Articulation work as described by participants is the cognitive and social activities required by individuals to capture the process of the work itself, for example, the taking of meeting minutes, preparing agenda for the teleconference, taking notes during the meeting, an sharing these notes with other after the meeting. In providing suggestions on how to improve performance of virtual teams Participant 2 stated:

> Communication training—agenda setting, note taking, and idea promulgation; cultural training—Hofstede is a good start; training on the platform used for communication (i.e., Adobe Connect, GoTo Meeting, Free conference call, etc.)—make sure members know how to use the functionality; training on use of document sharing through Box.com or Google Docs.

In addition, regarding suggestions on how to improve performance of virtual teams Participant 20 stated, "Regular predetermined communication times established up front, and, an understanding of why and how people think based on the different cultures represented in your team." Participant 20 explained how presumption of cultural differences by team members might affect business goals and effectiveness of the team. If not everyone is up front about cultural differences, then the business goals will not be met in a timely manner, or, at the least, if met in a timely manner the goals may not have been met in the most efficient or productive manner. Further, Participant 20 explained that virtual teams are not only good business solutions:

Virtual teams are typically thought of as money saving techniques for producing end products, at least here at Company X, however, there is more at stake and the benefits can outweigh more than just a temporary financial picture if done properly.

In this study the evidence of articulation work centered on how virtual teams established processes needed to address language differences. Team structures in organizations expanded beyond job roles of team members, included translators, and language leaders; able to minimize the collective burden of teamwork.

Roles. The roles of other participants reduced to those of receivers in a one-to-many transmission model. Those virtual teams without the need to invest in articulation work experienced challenges in communication between the members. Despite the shift in the role expectations for multilingual team members to also act as single points of translation, the overall performance of such teams proved similar to self-perceived successful teams.

Participant 6 explained the relationship between participation in the team and success of the team. Active participation is very important because the success of a team is based on the input of all members and a positive outcome is shared by all members regardless of their contribution. In personal experience on how to improve decision-making process in virtual teams, Participant 20 noted "make team members and managers accountable for the decisions made. Too often we just go in with an attitude that we will fix whatever the team decides that may turn out to be not the best choice." Further Participant 7 advised:

Virtual teams can accomplish a lot, time restraints, work schedules all

effect the performance. The cultural aspect of the team has to be

considered at the development of the team. The leader has to survey

cultural issues that may arise and plan ways to work through conflict.

The need for leadership. Some participants noted that it is important to have

strong leadership in place to keep discipline in the work place and clearly define goals

and expectations for the employees. For example, Participant 11 offered the following

response: "there should be an able leader who carries everybody along and treats

members with respect. Senior management should continue to provide oversight and best

industry quality standards as company standards." Further, Participant 12 stated,

"Schedule meetings with main office or headquarters where team leads and managers can

regain their understanding and management support to keep virtual teams motivated."

Organizational strategy. Some participants noted that multicultural diversity in

virtual teams helps positively affect performance of an organization and strengthen

organizational strategy. Additionally, the participants noted that cultural backgrounds of

virtual team members influence business goals of the organization in accordance with

team member's work ethic, beliefs, and personal values. However, some participants

noted that cultural background could negatively affect the business goals of the

organization. The difference in opinion between the individuals can be explained by

experiences working in different industries.

Implications for virtual teams. The analysis of this study showed the challenges in

communication in virtual teams. The pivotal role of assumptions derived from Schein

(2004) was that organizational artifacts applied universally. Several participants

suggested the kinds of preparation and team support be tailored to meet the needs of

virtual teams. The absence of effective leadership was evident to several participants.

Cultural diversity present in each team. However, the cultural diversity was not identified

as the root cause of poor performance of a team or individual. The participants identified

the importance of addressing cultural difference in the workplace to improve

performance and effectiveness of the teams.

The individuals identified important requirements to improve working

relationship in virtual teams: (a) select strong leadership to communicate the clear goals

and expectations to the team, (b) when cultural differences become unworkable, the

leadership should be able to restructure the team as required to meet organizational goals,

(c) Team members should be selected based on the purpose of the project to allow team

efficiency, (d) allow more face-to-face exposure between the members of the virtual

teams and increase the comfort level of working with others to build trust in the team.

Training plays an important role in understanding of different cultural

backgrounds. The participants identified the following suggestions for the training in

virtual teams: (a) cultural diversity and sensitivity training, (b) communication training,

(c) teamwork and collaboration training, (d) technology training: request everyone in the

team to learn how to use modern technology, (e) effective writing skills class, (f) clear set

of obtainable goals, set ground rules, on how team is to function and what is expected

from each member, (g) conflict resolution skills, (h) working with foreigners, and (i)

understanding of group dynamics. Theme 14 (decision making) was identified from the

coding as follows: Based on your experience, define what can be done to improve the

decision making of virtual teams. The participants were asked (in their own words) how

to improve the decision making of virtual teams. Table 19 presents results of analysis for

Theme 14. Participants noted that (5 of 20) to improve decision-making, it is important to

work together as a team. In addition, to be proactive and on the top of things is also

important.

Table 19

Decision Making (Q19)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Be proactive and on the top of things	3	15%
Engaging, motivating, and clarifying	2	10%
Meeting face-to-face	1	5%
Set goals and expectations	1	5%
Establish a decision procedure	2	10%
Address cultural backgrounds and preferences	1	5%
Working together as a team	5	25%
Create quorum and inform these that missed meetings	1	5%

Theme 15 (decision quality) was identified from the coding as follows: Based on your

experience, define what can be done to improve the decision quality of virtual teams.

Table 20 presents results of analysis for Theme 15. Participants noted (2 of 20) that

strong leadership and good communication in the team are the important factors in

improving decision quality of virtual teams.

Table 20

Decision Quality (Q20)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Insure consensus in the team	1	5%
Make all the members feel important	1	5%
The sole purpose of the team should be the base of the team's decision making process	1	5%
Share scores, so everyone understands how each other works	1	5%
Use of evidence-based information can improve quality of decision making	1	5%
To regroup, settle conflicts, focus back on the project	1	5%
Have a standard approach to all issues	1	5%
Good communication skills	1	5%
Agreement	1	5%
Strong leadership	2	10%
Working directly	1	5%
Involvement of right people	1	5%
Clear communication and team work	2	10%
Inclusion/comprehension	1	5%
Team members and managers should be accountable for the decision made	1	5%

Theme 16 (organizational strategies) was identified from the coding as follows:

Based on your experience, define how cultural backgrounds of virtual team members

influence organizational strategies. The participants were asked (in their own words) to

explain relationship between the cultural backgrounds and organizational strategies.

Invariant constituents applied to this theme included: I have not seen that, different

cultures benefit organizations, cultural background effect organizational strategies, not at

all, and can be positive or negative. Table 21 presents results of analysis for Theme 16.

Some participants (7 of 20) noted that cultural backgrounds of virtual team members

affect organizational strategy.

Table 21

Affect of Cultural Backgrounds on Organizational Strategies (Q21)

Responses	No. of participants to offer this experience	% of participants to offer this experience
I have not seen that	2	10%
Different cultures benefit organization	4	20%
Cultural background effect organizational strategies	7	35%
Not at all	2	10%
Can be positive or negative	3	15%

Theme 17 (business goals) was identified from the coding as follows: Based on

your experience, define how cultural backgrounds of virtual team members influence

business goals. Table 22 presents results of analysis for Theme 17. The participants were

asked (in their own words) to explain relationship between cultural backgrounds and

business goals. Invariant constituents applied to this theme included: towards gender

diversity, significantly, can go both ways, bring diversity of opinions, not at all, and

increases validity of the goals. Some participants (7 of 20) noted that cultural

backgrounds of virtual team members provide significant affect on business goals.

Table 22

Business Goals (Q22)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Towards gender diversity	1	5%
Significantly	7	35%
Can go both ways	4	20%
Bring diversity of opinions	1	5%
Not at all	1	5%
Increases validity of the goals	1	5%

Theme 18 (working relationship) was identified from the coding as follows: What suggestions can be made to improve working relationships among virtual team members. Table 23 presents results of analysis for Theme 18. The participants (3 of 20) suggested that to improve working relationships among virtual team members, leadership needed to focus on team management, cultural sensitivity training, open communication, and clear goals.

Findings from responses provided by participants revealed the following: Team management and strong leadership are an important attributes of the successful team, which will set the goals and expectations for the team members, will manage work load and help team members resolve any issues in the team. In addition, team involvement and more face-to-face exposure between the members of the virtual teams will help build trust in the team and increase the comfort level of working with others. Further, cultural sensitivity training may help team members to become more familiar with other cultures and will help create effective communication among team members. Several participants noted that it is important to have an open culture in a team and discuss issues as soon as they arise. Finally, to accommodate participation in team

activities, group building exercises and flexible schedule will allow to build a strong

working relationship among the team members.

Table 23

Suggestions (Q23)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Team management	3	15%
Team involvement	1	5%
Meet face to face	2	10%
Cultural sensitivity training	3	15%
Open communication, clear goals	3	15%
Clear the air, table all issues	1	5%
Casual gathering during project	2	10%
Strong leadership	2	10%
Flexible schedule to accommodate participation	1	5%

Theme 19 (training) was identified from the coding as follows: What type of training can

be recommended to increase the performance of virtual teams. The participants were

asked (in their own words) to provide suggestions about required training. Invariant

constituents applied to this theme included: cultural diversity training, communication

training, active listening skills, collaboration training, technology training, conflict

resolution skills, team interaction knowledge, academic and career development, group

dynamics training, and team building exercises. Table 24 presents results of analysis for

Theme 19. Some participants (6 of 20) suggested to increase the performance of virtual

teams leadership should implement cultural diversity training. Participants provided the

following suggestions.

Cultural diversity and cultural sensitivity trainings will allow team members to

become more familiar with specifics of other cultures. Communication, collaboration,

and listening skills trainings will allow team members to improve team communication. Another important training for the members of virtual team is use of modern technology such as WebEx, Skype, instant messenger, will improve quality and efficiency of communication among the virtual teams. Further, several participants noted that conflict resolution skills and group dynamic training are very useful tools to improve effectiveness of a team. Finally, academic and career development will allow team members to become more effective and improve productivity.

Table 24

Training in Virtual Teams (Q24)

Responses	No. of participants to offer this experience	% of participants to offer this experience
Cultural diversity training	6	30%
Communication training	4	20%
Active listening skills	1	5%
Collaboration training	1	5%
Technology training	1	5%
Conflict resolution skills	2	10%
Team interaction knowledge	1	5%
Academic and career development	1	5%
Group dynamics training	1	5%
Team building exercises	1	5%

Other thoughts about virtual teams.

In this question I asked participants to share other thoughts that they might have about virtual teams. The individuals shared the following thoughts:

(a) The biggest hurdle of the virtual teams is the lack of communication between the members of the teams, (b) the leader of the virtual team has to survey the cultural issues that may arise and plan ways to work through the conflict, (c) give virtual team members a sense of belonging and respect and they will put the best of their ability to work,

For example, Participant 12 indicated:

Virtual teams are powerful entities. As such, they must be nourished and

made feel as a part of the organization. Many virtual teams are abandoned

to their own performance that the lack of senior management reward and

recognition deflates the vision.

Theme 20 was defined as follows: Provide any other thoughts about virtual teams. The

participants were asked (in their own words) to share any other thoughts about virtual

teams. Invariant constituents applied to this theme included: more face-to-face meetings,

effective leadership, validating members, virtual work training, know how to use

technology, team members' commitment, provide proper guidance, provide sense of

belonging, open dialogs in the teams. Table 25 presents results of analysis for Theme 20.

The participants shared the following thoughts:

- The biggest hurdle of the virtual teams is the lack of communication between the
  members of the teams, when everyone in the team wants to talk, but no one wants
  to listen.

- The leader of the virtual team has to survey the cultural issues that may arise and
  plan ways to work through the conflict.

- Give virtual team members a sense of belonging and respect and they will put the
  best of their ability to work.

- Virtual teams are powerful entities. As such, they must be nourished and made to
  feel as a part of the organization. Many virtual teams are abandoned to their own
  performance and the lack of senior management reward and recognition deflates

the vision. The virtual teams are the good way to bring people together who

otherwise may have never come together.

Most common suggestion on other thoughts about virtual teams (3 of 20) was about

effective leadership.

Table 25

Other Thoughts about Virtual Teams (Q25).

Responses	No. of participants to offer this experience	% of participants to offer this experience
More face-to-face meetings	1	5%
Effective leadership	3	15%
Validating members	1	5%
Virtual work training	1	5%
Know how to use technology	1	5%
Team members commitment	1	5%
Provide proper guidance	1	5%
Provide sense of belonging	1	5%
Open dialogs in the teams	1	5%

Summary for Research Question 3

Teams faced with the social challenges of diverse cultures, confirmed the inability

for teams to make collective decisions due to the different cultural background of virtual

team members. The major dimension of cultural differences was language: written and

oral communication among the members of virtual team. The individuals noted that it is

important for team effectiveness to have strong leadership in place to keep discipline in

the work place and clearly define goals and expectations for the employees. Further,

cultural backgrounds of virtual team members influence business goals of the

organization in accordance with team member's work ethic, beliefs, and personal values.

However, depending on the industry, the cultural backgrounds could negatively influence

the business goals of the organization. Training plays an important role in understanding of different cultural backgrounds. The individuals identified several classes for members of virtual teams to improve effectiveness and performance of the teams.

Summary

The purpose of this study was to explore and describe the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. Twenty individuals with virtual team experiences participated. This chapter includes detailed results of the collected data and data analysis. In addition, the chapter includes the research questions presented in Chapter 1 and includes a better understanding of team satisfaction, ability of team members with different cultural backgrounds work together, and how different cultural backgrounds of virtual team members influence decision-making in virtual teams. This chapter consisted of the following main sections: (a) pilot study, (b) study participants (c) data collection review, (d) data analysis process, and (e) findings. Identification of 20 themes helped to understand the lived experiences of virtual team members with different cultural backgrounds as well as to understand the effects on team performance. Interpretation of data indicated that: (a) participants are not satisfied working with team members and teams with different cultural backgrounds, (b) differences in cultural backgrounds affected teamwork in less-than-productive ways, and (c) decision-making within virtual teams was also difficult with diverse cultural team members, but not necessarily leading to reduced performance within the teams.

Chapter 5 contains the interpretation of findings presented in Chapter 4, limitations of this study, recommendations, implications, and conclusion. In addition, the

final chapter presents the interpretation of the findings, limitations of the study,

recommendation for future research, implication for the positive social change, and

conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

In this chapter, I discuss and interpret the results of this study. The purpose of my study was to explore the lived experiences of virtual team members with different cultural backgrounds to understand the effects on virtual team performance. Data collection consisted of a researcher-designed online interview administered to a purposive and snowball sample of 21 employees of U.S. companies with experience working on virtual teams; one person dropped out, leaving 20 employees.

The interpretation of the findings shows members with different cultural backgrounds can influence the effectiveness of virtual teams. In addition, the findings indicate issues within the virtual teams that might affect performance of the organization. This chapter begins with a brief summary of the results and my interpretation. Other sections of this chapter include limitations of this study, recommendations for future research, implications, and conclusions.

This is an exploratory phenomenological study; its design was selected because the main focus was on in-depth understanding the essence of experiences of team members (Creswell, 2007). The first set of questions consisted of demographic items. The second set comprised open-ended questions designed to address three research questions. I posted the questions online through an electronic survey website. The advantage of using an electronic survey tool is ease of distribution and transcription. I coded data were using both open and axial techniques, and I analyzed the data with NVivo software.

My intent for this investigation was to help organizational leaders determine how to improve efficiency and productivity by more effectively managing virtual teams.

Improving workplace culture can lead to improved performance, which can benefit the global economy. This chapter provides a summary of the findings discussed in Chapter 4, an interpretation of the findings, limitations to trustworthiness that arose from executing the study, recommendations for further research, and the potential effects for positive social change.

Interpretation of Findings

In the rapidly changing modern business environment, virtual teams help organizations increase performance and become more competitive. Virtual teams allow organizations to reduce business travel because members of the team can communicate using the Internet. Although researchers have identified benefits of using virtual teams, not enough is known about how cultural backgrounds influence their performance.

I drew my conclusions by interpreting participants' responses. These items explored the level of satisfaction working with virtual teams, gender differences and hierarchical practices in virtual teams, gender inequality resulting from cultural dissonance, effects of cultural differences on virtual team performance, and difficulties in decision-making processes in virtual teams. The results collected from 20 individuals suggested the following themes: (a) culture, (b) preferences, (c) language barriers, (d) performance, (e) cultural differences-risks, (d) personal preferences-performance, (e) personal preferences-risks, (f) communication methods, (g) face-to-face interaction, (h) conflict, (i) misunderstanding, (j) cultural values, (k) participation, (l) decision making, (m) decision quality, (n) organizational strategies, (o) business goals, (p) working relationships, and (q) training.

RQ1: Cultural Differences

Research Question 1: How do the different cultural backgrounds of virtual team members influence team satisfaction? Some participants indicated that they are not satisfied with virtual team performance and prefer to work with traditional teams. Based on the responses (see Chapter 4), the team's satisfaction is influenced by the effort needed by teams to communicate across language barriers. Most participants (12 of 20) noted that language barriers among virtual team members significantly affect the performance of virtual teams. Employee performance can directly influence satisfaction. The individuals expressed satisfaction about their work, in terms of task completion. Successful completion of the tasks or projects depends on effective communication among the members of virtual teams. Based on responses working with virtual teams within a single culture or a single region where communication or a language barrier between the team members were not an issue (9 of 20) allowed them to complete the projects on time. Further, these participants who experienced working with virtual teams with the multiple cultures located in different regions (11 of 20) experienced issues in communication between the team members, and as result were not able to complete their projects on time. Additionally, the data indicated that virtual teams present more issues for organizations compared to traditional teams. This finding is not supported by the literature; however, virtual team phenomenon is new and is not accepted by all employees positively.

Further, participants indicated that different cultures do not present great challenges in affecting performance. While answering the question how cultural differences among virtual team members influence the performance of their team, eight

participants noted that cultural differences negatively influenced the performance; nine participants indicated that cultural differences heighten performance and reduce technical project risks. Cultural differences allow use of various approaches and various strategies that are opposite to one another to work on the projects. The different cultures illustrate diversity in a team and help in working on the project and add a positive influence on the team. This finding is supported by the literature; this study confirms what other studies have found regarding diversity in the teams (Staples, Zhao, 2006).In addition, findings about how culturally diverse team members interact in a virtual environment, and whether cultural diversity is related to team performance, help to address assumptions raised by Staples and Zhao (2006). Furthermore, in investigating diversity, Sakuda (2009) noted that diversity plays an important role in a team's culture and can limit identification and commitment of the members; with concomitant negative effects on performance in virtual teams. The findings also confirmed Sacuda's statement about importance of diversity in the team.

However, it was also noted by participants that language barriers or communication between the team members with limited English- language skills can be a great challenge for the team. Further, some participants indicated that cultural differences and communication issues might increase tension and misunderstanding between the members of the team. The findings about language barriers or influence on team performance by members with different cultural backgrounds and with limited English language skills did not align with the literature completely, but some aspects of this language barrier question were covered by investigating communication issues below.

RQ1: Communication in Virtual Teams

Overall the data revealed the importance of communication among members of virtual teams. The participants identified language barriers as one of the biggest issues in communication; most participants (15 of 20) noted that misunderstanding or lack of communications based on cultural differences between the team members affects performance. When a language barrier exists in the team, the team cannot operate on the same level simply because team members would not be able to understand each other and effectively communicate with each other; which may result in not being able to complete tasks/projects on time. This finding is aligned with the previous literature. According to Chang, Chuang, and Chao (2011), for example, the performance of virtual teams depends on communication quality and trust among the members of virtual teams.

RQ1: Gender Inequality

The purpose of this study was to explore the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. Surprisingly, several participants noted that differences in gender in virtual teams presented difficulties in communication between the members of virtual teams and had a negative influence on team performance. Further, they indicated that based on their experience men always dominated in virtual teams.

The goal of the study was not to explore how differences in gender affect the team performance, the goal of this study was to explore how different cultural backgrounds influence the performance of virtual teams, the relationship between the differences in gender and team performance needs to be investigated in future research. Further, this finding is not directly aligned with the previous literature; this study confirms what other

studies have found regarding how different demographic factors influence performance in virtual teams (Russo, 2012). However, according to Russo (2012), differences in factors such as gender, age, education, ethnicity, personal values, and personal goals can affect decision-making, group dynamics, and communication in virtual teams.

RQ1: Communication Methods

The participants' responses also identified communication method used in virtual teams and how these methods might affect team performance. Several participants indicated that setting clear expectations, preparing an agenda, taking notes and sharing them with team members after a meeting positively improves communication among the members. Further, they identified technologies such as Skype, teleconferences, and instant messaging as very effective ways to improve communication in virtual teams. This important finding is aligned with the previous literature; this study confirms what other studies have found regarding modern technology (Pangil & Chan. 2014). Previous research indicated that use of modern technology helps organizations to achieve success and improve communication and performance. However, some participants have noted that advanced written communication is the best method in achieving success in virtual teams.

Summary for Research Question 1

Some of the findings on Research Question 1 affirmed previous assumptions on the field of virtual teams, confirming how different cultural backgrounds of team members influence team satisfaction. The different cultures help virtual teams work on the projects, improve effectiveness of the team, and add positive influence in a team. However, not all the participants agreed as some participants indicated that they were not

satisfied with team performance and preferred to work with traditional teams. In addition, team members with limited English- language skills can be a great challenge for the team that might eventually lead to misunderstanding and tension between the team members. The leadership in virtual teams needs to improve communication in the team by implementing training and technology. The results suggested that having teleconferences on regular basis, setting clear expectations, preparing agendas for the meetings, taking notes during a meeting, and sharing them will greatly improve communication in virtual teams. It was also noted that inequality between genders exists in virtual teams and greatly affects performance. Further, participants noted that cultural differences between the members negatively influence team performance and group satisfaction.

RQ2: Face-to-Face Communication

Research Question 2: How do the different cultural backgrounds of virtual team members affect their ability to work together? The findings affirmed previous research on the field of virtual teams, confirming the importance of face-to-face interactions. Some participants have indicated that it is important to have face-face meetings in the virtual teams. These meetings help to improve communication and learn "…our other side…" Further, they noted that face-to-face meetings in virtual teams show human side, and body language that can give different meaning to what a team member is saying. It is important to have face-to-face meetings in virtual teams at least at the beginning of the project to introduce team members and set the rules, explain goals, processes, schedule, and expectations. This finding is aligned with the previous literature; this study confirms what other studies have found about face-to-face meetings (Schenkel & Garrison, 2009). Based on the research conducted by Schenkel and Garrison (2009) absence of face-to-

face interactions makes communication among virtual team members more complex compared to communication in traditional teams. That extra complexity in communication and coordination creates distractions and negatively affects team performance.

Most of the participants discussed the need for face-face communication in virtual teams; however, one participant expressed a negative opinion about the need for face-to-face communication. This individual noted that when it comes to online projects, face-to-face communication is not important; improving writing skills and having regular telephone conferences should improve the communication. As long as virtual team members communicate regularly by phone or Skype, that should allow team members a sufficient level of communication.

RQ2: Conflict in Virtual Teams

Participants revealed that conflict between the members of virtual teams could be based on misunderstanding between the members, cultural differences, personal preferences, professional preferences and attitudinal preferences of individuals. Further, participants noted that a conflict in virtual teams could negatively affect performance of the team.

This finding is aligned with the previous literature. Anantantula (2010) noted that due to the fact that words take on different connotations depending on one's cultural background, leading to miscommunication and conflict. The conflict at the work place can cause significant affect performance. It is an important task for leadership to educate employees about different cultures to avoid any potential conflict in the work place.

RQ2: Participation in Virtual Teams

The findings revealed that active participation in team activities is very important because team success is based on the input of all members. Further, participants noted that the members who are active and interested in the work are much easier to work with and do a much higher quality of work. This finding is aligned with the previous literature discussed in Chapter 2. Chudoba and Wynn (2006), noted that coordination among members and participation affect work outcomes. Communication quality shows how accurately information is received and how well understood that information is among members of virtual teams.

Summary for Research Question 2

The findings on Research Question 2 affirmed previous research in the field of virtual teams, confirming how the different cultural backgrounds of virtual team members affect their ability to work together. In addition, findings explain that different cultural backgrounds can lead to communication issues, misunderstanding between the members and as result of that the conflict between the members of the team.

Conflict in a team may significantly affect a team's performance. It is important for the leadership to understand that conflict in the work place will affect team performance and create a hassle environment. Further, the leadership needs to be able to address conflict in the team before it arises by educating employees about different culture and implementing training on how to manage conflict.

RQ3: Decision making of Virtual Teams

Research Question 3: How do the different cultural backgrounds of virtual team members influence decision-making? Findings indicated that teams with diverse cultures

confirmed the inability to make collective decisions. In addition, findings revealed that to improve the decision making of virtual team all team members should be engaged in the decision making process and participate in team activities, motivated by the leadership. Also, cultural differences between the members should be clarified. Further, participants indicated that it is important to provide technology for teleconferences where team members can see each other. I addition, to improve decision making employee preferences should be addressed ahead of time. This finding is partially aligned with the previous literature. Chang, Chuang, and Chao (2011) in studying performance of the team found that performance in virtual teams depends on cultural adaptation, communication quality, and trust. Further, Russo (2012) in investigating performances of virtual teams noted that demographic differences, personal values, and personal goals could affect decision-making, group dynamics, and communication in virtual teams. However, the participants noted that the leadership plays an important role in decision making process, and should be involved in motivating and engaging employees to participate in team activities.

RQ 3: Organizational Strategy

Participants revealed that multicultural diversity in virtual teams positively affect performance of an organization. Further, participants noted that team members with different cultural backgrounds can strengthen organizational strategy; also the viewpoint of team members with different backgrounds will allow thinking outside of the box. This finding is not aligned with the previous literature. However, in studying organizations, Pyszka and Pilat (2011) noted that corporate social responsibility should be consistent with the organizational pattern of strategy and organizational culture. That conclusion

indicates that organizational strategy is aligned with organizational culture and depends on diversity in organization. That conclusion does not align with the findings of this study about affects of multicultural diversity in virtual teams on the performance of an organization.

RQ 3: Business Goals

Findings revealed that cultural backgrounds influence members' development of business plans and ideas because each member's experiences is different and unique, and offers new ideas. Additionally, cultural backgrounds influence business goals in accordance with their differing work ethic, beliefs, and personal values. It was also noted that cultural background combined with language barriers could negatively affect business goals of the organization. This finding is not aligned with the previous literature discussed in Chapter 2. Cultural background plays an important role in modern organizations in defining decision-making processes, and business goals. This finding may help fill the gap in the literature related to affect of different cultural backgrounds of virtual team members on decision-making by providing a better understanding to leadership on how to improve performance of multicultural teams.

Summary for Research Question 3

The findings from Research Question 3 partially affirmed previous research, confirming how different cultural backgrounds of virtual team members influence decision-making. Improvement of decision-making process in virtual teams requires team members to be proactive, engage in decision making process and participate in activities. The participants indicated that communication among the members of virtual teams play an important role in team performance.

Further, use of technology will greatly benefit decision-making process in the teams. It was noted that team members with different cultural backgrounds would strengthen organizational strategy. Cultural background plays an important role in organizations in defining decision-making processes, and business goals.

Another point shared by participants implies that team management and strong leadership in organization help to set the goals and expectations for the team members, manage work load in the team and help team members overcome issues with cultural differences, language barriers, and communication. Further, the participants' responses indicated that team involvement and more face-to-face exposure between the members of the virtual teams will help improve communication, build trust in the team, and increase the comfort level of working with others. The individuals identified several training classes for virtual teams to increase the performance of virtual teams. The most common classes were on cultural diversity and cultural sensitivity, communication, conflict resolution, group dynamics, and modern technology.

Contrast to Findings in This Study

Not all the findings of this study were supported by the literature review or research previously completed in the field. The following statements present findings, not aligned with the literature.

1. Members of virtual teams have indicated that they are not satisfied with virtual team performance and prefer to work with traditional teams due to issues in virtual teams.

2. The members of virtual teams with different cultural backgrounds and with limited English language skills will lead to misunderstanding among the members and will affect the team performance.

3. Gender inequality in virtual teams presents difficulties in communication between the members of virtual teams and has a negative influence on team performance.

4. The lack of: leadership involvement in engaging team members in the decision making process, educating team members about cultural differences and modern technology to facilitate meetings will lead to a failure of the team.

5. The multicultural diversity in virtual teams positively affects performance of an organization.

6. The different cultural backgrounds of virtual teams members help develop the business goals and strategies in accordance with their work ethic, beliefs, and personal values.

Limitations of the Study

In addition to the limitations stated in Chapter 1 there were new limitations that arose from execution of this study. First of all the interviews were limited to participants located in North America. It would have been beneficial to collect experiences of members of virtual teams located outside of the United States.

Another limitation was unequal presence of male and female participants; 60% of participants were men and 40% of participants were women .Despite these limitations this investigation is still useful because it provided a better understanding of how cultural

backgrounds influencing the performance of virtual teams. Both these limitations did not present any issues with distributing questionnaires and collecting research data.

Recommendations

The findings from this qualitative study demonstrated that virtual team members with different cultural backgrounds could affect team performance. Recommendations for future research were developed based on the findings and the limitations of this study. The findings support Schein's (1998) and Trompenaars and Hampden-Turner's (1998) cultural theories and prior research in the field. Additionally, new unexpected findings from this study can also be further investigated. I identified the following weaknesses in this study:

1. The purposeful and snowball technique of collecting research data were used for this study.

2. The sample size for this study was limited to 21 participants.

Future research might try to eliminate some of the weaknesses identified in this study. Participant demographic data indicated that one (5%) participant was a manager, two (10%) participants were engineers, two (10%) were office administrators, and 15 (75%) participants hold other positions. The data was collected from the Walden University participants' pool and from my coworkers by using snowball sampling. The data most likely represents participants who were working in virtual teams in different industries.

Additionally, as this study was not focused on a certain industry, this implies that responses represent participants who potentially might be working in different industries where perspectives on virtual team members with different cultural backgrounds and how these team members can affect team performance might be different. For future research,

I suggest selecting a specific industry (for example medical, manufacturing, or educational industry) to conduct a similar study. The findings of these studies can be evaluated across the different industries to better understand how the same factors can affect performance of organizations in different industries.

In addition, I used a sample size of only 21 participants, this sample size is sufficient for the qualitative study. However, for future research I would suggest an increase that size at least 50 would help to explore the influence of members with different cultural backgrounds on organizational performance.

Further, I investigated how members of virtual teams with different cultural backgrounds affect performance of an organization. Future research should focus on factors (language barriers, communication, gender inequality, cultural awareness, use of modern technology, lack of training, and conflicts) identified in this study as potential issues for organizational performance and measure the effect of these factors on organizational performance. In addition, future research should focus on the size of virtual teams.

During the data analysis I noticed that several participants mentioned that differences in gender presented difficulties in communication between the members of virtual teams and had a negative influence on team performance. Further, they indicated that men always dominated in virtual teams and in some cultures women are not equally treated as men. I was not expecting to discover that in the data. I would suggest investigating gender inequality in virtual and traditional teams for future research.

Also for future research I would recommend to conduct a similar study but distribute questionnaires outside of the United States. That would allow collecting

information/opinions, related to the effect of cultural issues on performance of the organization, from the team members that reside outside of the United States. If such a study were completed I suggest comparing results of both studies to find out if there are differences in the factors that affect performance of virtual teams collected from the team members located in the United States and outside of the United States.

Implications

The findings of this study provide suggestions about how cultural backgrounds influence performance of virtual teams. The results may contribute to social change by creating a better working place for members of virtual teams and improving their job satisfaction. Also the findings of may provide the leadership of organizations insights on how cultural diversity influences performance of virtual teams, how conflict between the members of teams affects job satisfaction and performance of members of teams. Further, the findings suggest how effective use of modern technology, planning strategies, and diversity training in the work place will improve communication and working relationship between the members of virtual teams and productivity of the members of virtual teams.

Improved team performance benefits team stakeholders, secures jobs, and improves job satisfaction. By implementing the suggestions, leadership organizations may be more effective in achieving l goals and missions. Improving communications in the team, implementing new strategies, and addressing diversity issues will lead to improved performance of the organization. Further, improved performance will help organizations become more competitive in the modern business environment. In addition, the findings of this study may fill a gap in the literature, discussed in Chapter 2, in terms

of how cultural backgrounds influence the performance of virtual teams and what the leadership should implement to improve the working relationships among the members of virtual teams.

The results of this study contributed to the knowledge base of the literature, by providing in depth understanding of the effects on team performance virtual team members with different cultural backgrounds. The findings may be significant to organizations using virtual teams for everyday operations. The findings show the need for diversity training. Organizations with virtual teams will need to educate the work force about diversity of the employees in the workplace, specifics of different cultures, how to use available technology, and effective communications among the members of virtual teams. In addition, a significant part of organizational success is effective leadership. Being culturally literate is very important because it helps to improve communication and interaction among employees with different cultural backgrounds.

Another important recommendation for practice is effective leadership. The leadership is an important link in organizational chain. The leadership should be open to change and be able to adapt the change as required to achieve organizational goals. Leadership should be promoting learning and education in the work place allowing employees to grow and advance.

Conclusions

This study was an exploration of the experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. For organizations competing in the globalized economy, virtual teams are an important strategy for reducing costs and increasing performance.

At the same time, a threat to the performance of virtual teams is cultural diversity. Understanding the diversity and how the cultural diversity might influence the performance of virtual teals is an important task for the leadership. Further, it is important for leadership and organizations to educate their work force about cultural diversity and be proactive in adapting innovative strategies.

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Appendix A: Interview Questions

You are invited to take part in a research study designed to explore the cultural by

Vyasheslav Lerner, a doctoral student at Walden University. You were selected as a

possible candidate to participate in this study because you have experience working with

virtual teams and can provide valuable information by answering the survey questions.

The purpose of this qualitative phenomenological study is to explore the lived

experiences of virtual team members with different cultural backgrounds to understand

the effects on team performance. A further goal is to help organizational leaders

determine how to improve efficiency and productivity by more effectively managing

virtual teams. Improving workplace culture can lead to improved performance, which can

benefit the global economy.

Procedures

If you agree to be in this study, you will be asked to provide responses to a brief

set of questions that takes approximately 30 minutes to complete.

Here are some sample questions:

1. In your own words, define *"cultural background."*

2. In your own words define *"personal preferences."*

3. Based on your experience, how do language barriers influence the performance of
    virtual teams?

4. Based on your experience, how do cultural differences among virtual team
    members influence the performance of their virtual team? Based on your
    experience, how do cultural differences among virtual team members heighten or
    reduce technical project risks?

5. Based on your experience, how do personal preferences among virtual team members influence the performance of their virtual team?

6. Based on your experience, how do personal preferences among virtual team members heighten or reduce technical project risks?

7. Based on your experience, what three communication methods have been the most effective for working in virtual teams?

8. Based on your experience, how important is to have face-to-face interaction with other team members? Why?

Voluntary Nature of the Study

Participation in this study is voluntary. If you decide to join the study now, you can still change your mind later. You may stop at any time.

If you are pregnant or going through personal crises, it is recommended that you don't participate in this study.

Risks and Benefits

Your personal information will not be collected, so there is no risk associated with participating in the study, nor will it have any effect on your standing in your organization. This study does not involve any physical risk and it is highly unlikely that you will be psychologically affected. Potential benefits of the study include the following:

- This study will provide better understanding how culture influences the performance of virtual teams.

- Understanding the internal dynamics of virtual teams will help improve their performance. In addition, this study will help identify factors that could improve social interactions among the members of virtual teams.

Payment

For participation in this study, participants will not be offered any type of payment or compensation. For participation in this study participants will be offered an executive summary of the study results upon completion of the dissertation.

Privacy

Any information you provide will be confidential. The researcher will not use your personal information for any purposes outside this research project. Also, the researcher will not include your name or anything else that could identify you in the written study. Data will be kept on a password-protected computer. Data will be kept for at least 5 years, as required by the university and then destroyed.

Contacts and Questions

Participants filling out an online questionnaire will be able to ask questions directly to the researcher. Participants may contact the researcher via email: XXXXXXXX. If you want to talk privately about your rights as a participant, you can call XXXX XXXX, a Walden University representative. Her phone number is XXX-XXX-XXXX.

Statement of Consent

If you choose to participate in this survey, completion of the questionnaire would indicate your consent and confirmation that you have read the above information and understand the study well enough to make a decision about participation.

The participants should keep/print a copy of the consent form.

Definitions

Virtual team (also known as a geographically dispersed team): A group of individuals who work across time, space, and organizational boundaries with links strengthened by communication technology.

Team culture: How a team operates, including its selection procedures and power structure, how rewards are given, practice procedures, game protocols, acceptable behavior, and dress code. Team culture often depends on the traditions, or lack of them, of team members.

Cultural differences: Exists in the teams between the team members with different cultural backgrounds

Cultural diversity: Exists in teams between the team members with similar traits such as culture, language, and traditions.

Performance: The relationship between the extent to which the group's output meets the required standards and processes accepted by the organization and team members satisfaction with working in the team.

<div align="center">

Questionnaire

</div>

Demographic Questions

1. What is your age?

    __ 20–29

    __ 30–39

    __ 40–49

__ 50–59

__ 60–69

__ 70–79

2. What is your gender?

    __ Female

    __ Male

3. What is your highest education level?

    __ High school degree

    __ Associate degree

    __ Bachelor's degree

    __ Master's degree

    __ Doctoral degree

    __ Other

4. What is your position?

    __ Manager

    __ Engineer

    __ Tech designer

    __ Manufacturing engineer

    __ Office administrator

    __ Other _____

5. How many years experience do you have working with virtual teams? ___

Interview Questions

6. In your own words, define *"cultural background."*

7. In your own words define *"personal preferences."*

8. Based on your experience, how do language barriers influence the performance of virtual teams?

9. Based on your experience, how do cultural differences among virtual team members influence the performance of their virtual team?

10. Based on your experience, how do cultural differences among virtual team members heighten or reduce technical project risks?

11. Based on your experience, how do personal preferences among virtual team members influence the performance of their virtual team?

12. Based on your experience, how do personal preferences among virtual team members heighten or reduce technical project risks?

13. Based on your experience, what three communication methods have been the most effective for working in virtual teams?

14. Based on your experience, how important is to have face-to-face interaction with other team members? Why?

15. Based on your experience, how does conflict based on cultural differences affect team performance?

16. Based on your experience, how does misunderstanding based on cultural differences affect team performance?

17. Based on your experience, how do cultural values affect team performance?

18. Based on your experience, how important is active participation among virtual team members for team performance?

19. Based on your experience, what can be done to improve the decision making of virtual teams?

20. Based on your experience, what can be done to improve the decision quality of virtual teams?

21. Based on your experience, how do cultural backgrounds of virtual team members influence organizational strategies?

22. Based on your experience, how do cultural backgrounds of virtual team members influence business goals?

23. What suggestions do you have to improve working relationships among virtual team members?

24. What type of training would you recommend to increase the performance of virtual teams? Please explain.

25. Do you have any other thoughts about virtual teams that you would like to share?

Appendix B: Permission to Use Questionnaire

Re: Permission to use questionnaire instrument

From: _____@_____
Sent: Thu 2/28/13 8:45 PM
To: Slava Lerner _____@_____

Hello Mr. Lerner,
Yes, you have my permission to use the questionnaire used in my dissertation
thesis titled "Perceptions of Virtual Teams: A Qualitative Study". Please
credit my book appropriately. If possible, send me a copy of your completed
dissertation.

Best of Luck.

---- Slava Lerner _____ wrote:
>
> Hi Dr. Castle,
>
> My name is Slava Lerner and I am a doctoral student attending Walden
University. Currently I am working on the dissertation, focusing on
effectiveness of the virtual teams. I went across a questionnaire instrument
you used in your dissertation thesis titled "Perceptions of Virtual Teams: A
Qualitative Study", and I think it would be a good fit for my doctoral study.
I would like to ask for permission to use your questionnaire in my study.
>
>
> Thank you,
> Slava Lerner

--
Deanna M. Castle, PhD
Global Consultants Online, LLC
Organization and Management

Education:
College Professor of Business
Private Mathematics Tutor

Girl Scouts of America:
Troop 436 Treasurer
Daisy Leader
Gold Advisor

Appendix C: Consent Form

You are invited to take part in a research study designed to explore the cultural by Vyasheslav Lerner, a doctoral student at Walden University. You were selected as a possible candidate to participate in this study because you have experience working with virtual teams and can provide valuable information by answering the survey questions. The purpose of this qualitative phenomenological study is to explore the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance. A further goal is to help organizational leaders determine how to improve efficiency and productivity by more effectively managing virtual teams. Improving workplace culture can lead to improved performance, which can benefit the global economy.

Procedures

If you agree to be in this study, you will be asked to provide responses to a brief set of questions that takes approximately 30 minutes to complete.
Here are some sample questions:

5. In your own words, define *"cultural background."*

6. In your own words define *"personal preferences."*

7. Based on your experience, how do language barriers influence the performance of virtual teams?

8. Based on your experience, how do cultural differences among virtual team members influence the performance of their virtual team? Based on your experience, how do cultural differences among virtual team members heighten or reduce technical project risks?

9. Based on your experience, how do personal preferences among virtual team members influence the performance of their virtual team?

10. Based on your experience, how do personal preferences among virtual team members heighten or reduce technical project risks?

11. Based on your experience, what three communication methods have been the most effective for working in virtual teams?

12. Based on your experience, how important is to have face-to-face interaction with other team members? Why?

Voluntary Nature of the Study

Participation in this study is voluntary. If you decide to join the study now, you can still change your mind later. You may stop at any time.

If you are pregnant or going through personal crises, it is recommended that you don't participate in this study.

Risks and Benefits

Your personal information will not be collected, so there is no risk associated with participating in the study, nor will it have any effect on your standing in your organization. This study does not involve any physical risk and it is highly unlikely that you will be psychologically affected. Potential benefits of the study include the following:

- This study will provide better understanding how culture influences the performance of virtual teams.

- Understanding the internal dynamics of virtual teams will help improve their

  performance. In addition, this study will help identify factors that could

  improve social interactions among the members of virtual teams.

Payment

For participation in this study, participants will not be offered any type of

payment or compensation. For participation in this study participants will be offered an

executive summary of the study results upon completion of the dissertation.

Privacy

Any information you provide will be confidential. The researcher will not use

your personal information for any purposes outside this research project. Also, the

researcher will not include your name or anything else that could identify you in the

written study. Data will be kept on a password-protected computer. Data will be kept for

at least 5 years, as required by the university and then destroyed.

Contacts and Questions

Participants filling out an online questionnaire will be able to ask questions

directly to the researcher. Participants may contact the researcher via email: XXXX If

you want to talk privately about your rights as a participant, you can call XXXX XXXX

XXXX, a Walden University representative. Her phone number is XXX-XXX-XXXX.

Statement of Consent

If you choose to participate in this survey, completion of the questionnaire would

indicate your consent and confirmation that you have read the above information and

understand the study well enough to make a decision about participation. The participants

should keep/print a copy of the consent form.

Appendix D: Permission to Use Organizational Culture Model

Re: Permission to use Organizational Culture Model

From: **Ed Schein** (██████@████████)
Sent: Thu 3/21/13 8:24 AM
To: Slava Lerner (██████████@████████)

You have my permission if you reference it in your study. ed schein

On Mar 20, 2013, at 9:48 PM, Slava Lerner wrote:

Hi Dr. Schein,

My name is Slava Lerner, I am a doctoral student attending Walden University. Currently I am working on the dissertation, focusing on cultural factors that impact effectiveness of the virtual teams. I went across an Organizational Culture Model you developed. I would like to use this model as theoretical bases for my dissertation. I would like to ask for permission to use your modal in my study.

Thank you,

Slava Lerner

Appendix E: Additional Questions for the Pilot Test

The following questions will be added to the pilot test to gain information about clarity of the interview questions instructions and questions.

1. Are the instructions clear and understandable?

2. Are the questions clear and understandable?

3. Are there any suggested changes to the questions?

4. Should any questions be deleted?

5. Should any questions be added?

Appendix F: Letter of Invitation

Letter of Invitation

Dear_____,

You are invited to take part in research study entitled: Cultural Backgrounds Influencing the Performance of Virtual Teams.

My name is Slava Lerner and I am a doctoral student at Walden University. The purpose of this study is to explore the lived experiences of virtual team members with different cultural backgrounds to understand the effects on team performance.

If you agree to participate, your participation would involve completing questionnaire located at the following hyperlink: https://www.surveymonkey.com/s/YKT753R

I would like to take this opportunity to thank you for your consideration. Your responses will help to improve the current literature on virtual teams. In addition, your responses might be a great benefit to organizational leaders in determining how to improve efficiency and productivity by more effectively managing virtual teams. Improving workplace culture can lead to improved performance, which can benefit the global economy.

If you have any questions concerning the research study, please feel free to contact me anytime at XXX.XXX.XXXX, or by e-mail at XXXXXXXXX.

Regards,
Slava Lerner
Doctoral Student
Walden University

Appendix G: Research Question 1 NVivo Tag Cloud

Appendix H: Research Question 2 NVivo Tag Cloud

Appendix I: Research Question 3 NVivo Tag Cloud

ability able affect agree align allow allows along among answer aside background backgrounds based beginning benefits best boeing briggs business clear common communication conflict cultural cultures decision decisions depends development dialogue differences different diversity done effective ensure everybody everyone face familiar find front goals good group ideas improve issues just leader made make management manner many meeting meetings member members much must myer often open opinions organization organizational others outside overall people performance project provide purpose question recommend respect room schedules score select senior skills strategies sure team teams think time timely together training understanding understood virtual work working world