EXPLORING THE INFLUENCE OF TEAM EMOTIONAL INTELLIGENCE ON HOW VIRTUAL TEAMS HANDLE DIFFERENCES

Karen L. Bicking

A DISSERTATION

in

Penn Chief Learning Officer

Presented to the Faculties of the University of Pennsylvania

in

Partial Fulfillment of the Requirements for the

Degree of Doctor of Education

2017

Supervisor of Dissertation:

___________________________
Sharon M. Ravitch, Senior Lecturer

Dean, Graduate School of Education:

___________________________
Pamela L. Grossman, Dean and Professor

Dissertation Committee:

Sharon M. Ravitch, Senior Lecturer
Dana Kaminstein, Adjunct Assistant Professor of Education
Steven Wolff, Principal, Group Emotional Intelligence Partners
Exploring the role of team emotional intelligence on the handling of differences in virtual teams

COPYRIGHT

2017

Karen L. Bicking

This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License

To view a copy of this license, visit

http://creativecommons.org/licenses/by-nc-sa/3.0/
ACKNOWLEDGMENT

I want to express my appreciation and thanks to my committee chair, Dr. Sharon Ravitch, for your guidance, encouragement, and helping me grow as a researcher.

I am grateful to my committee member, Dr. Dana Kaminstein, for your interest in my research, constructive feedback, and many motivating discussions.

I am grateful to my committee member, Dr. Steven Wolff, for being so gracious with your time, support, and insightful suggestions.

I am grateful to Dr. Annie McKee and the PennCLO faculty, staff, and students for a fantastic development experience and learning community. I also want to acknowledge the support of my colleague Patti Adelman, for our weekly calls and texts throughout the dissertation process.

I am grateful to my statistics coach Dr. Amy Danley. Having been away from statistics for so many years, you made approaching a mixed methods data analysis so much easier.

I am grateful to my writing coach, Dr. Karen Hoffman for helping me shape and refine my ability to tell the story of the research.

A very special thanks to my family. To my husband, George, for your love and amazing support; my sons, Brendan and Tyler, who inspire me every day; and my parents, Dennis and Barbara, who always instilled in me the value of education.

Lastly, I am grateful to the 234 virtual team members who participated in this study.
ABSTRACT

EXPLORING THE INFLUENCE OF TEAM EMOTIONAL INTELLIGENCE ON HOW VIRTUAL TEAMS HANDLE DIFFERENCES

Karen L. Bicking
Sharon M. Ravitch

Advancement in technologies, including communications, makes virtual work a possibility for many. Although abundant research on team dynamics exists and research on virtual teams is growing, a considerable volume of existing empirical data on virtual teams is conducted in laboratory settings using temporary teams, often at MBA or undergraduate levels. In addition, very few of these studies discuss how conflict is handled in a virtual team. Discovering how virtual teams deal with differences and conflicts will advance our understanding of these crucial issues. This mixed-methods study included surveys, semi-structured interviews, and ethnographic observation and field notes. Data was collected from 31 virtual teams. This study discovered that teams with higher team emotional intelligence approach differences by perspective taking, information sharing, and monitoring and adjusting of team behaviors. Virtual teams with lower team emotional intelligence are more likely to view each other as competitors and have a tendency to avoid conflict and vent without resolution. In addition, teams who meet regularly have more open communications, which enables a collaborative approach to conflict management.

Keywords: virtual teams, team emotional intelligence, conflict management, difference
TABLE OF CONTENTS

ACKNOWLEDGMENT ........................................................................................................ III

ABSTRACT ................................................................................................................ IV

LIST OF TABLES ........................................................................................................... VIII

CHAPTER 1: INTRODUCTION ..................................................................................... 1

Problem Statement .................................................................................................... 2

Complexity of Managing Conflicts in Virtual Teams ................................................. 4

Challenge of Interpreting Emotions in Virtual Teams ................................................ 5

Importance of Team Emotional Intelligence for Handling Conflicts in Virtual Teams ... 6

Research Question .................................................................................................... 8

Goals and Purpose of the Study ................................................................................ 8

Research Design Overview ....................................................................................... 10

CHAPTER 2: THEORETICAL FRAMEWORK .................................................................. 13

Definition of Terms .................................................................................................. 13

Virtual teams. ......................................................................................................... 13

Climate .................................................................................................................... 14

Team Emotional Intelligence .................................................................................. 14

Conflict .................................................................................................................... 14

Differences and conflicts ......................................................................................... 14

Virtual Teams ......................................................................................................... 16

Similarities and differences between virtual and face-to-face teams ...................... 17

Climate in Virtual Teams. ....................................................................................... 21
Emotional Intelligence ................................................................. 22
Emotional Intelligence in Work Teams ............................................ 24
Trust in Virtual Teams ................................................................. 27
Conflict and Emotional Intelligence ........................................... 28
Problems with Conducting Team-Based Research in Laboratory Settings ................................................. 31
Individual versus Team Level Analysis ....................................... 32
Conclusion .................................................................................. 33

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY .................. 35
Overview of Research Methodology .............................................. 35
Data Collection Methods ............................................................... 38
Participants ............................................................................... 45
Participant Demographics ............................................................ 47
Data Analysis Plan ..................................................................... 50
Validity ...................................................................................... 54
Ethics ......................................................................................... 56
Conclusion .................................................................................. 57

CHAPTER 4: RESULTS .................................................................. 59
Team Emotional Intelligence Survey Results ................................ 60
Participant Perspectives of Differences ....................................... 68
Results on the Handling of Differences Between High and Low Scoring Teams ........................................... 74
Finding 1 .................................................................................... 78
Finding 2 .................................................................................... 91
Additional Analysis ..................................................................... 116
Chapter Summary ........................................................................ 117

CHAPTER 5: DISCUSSION AND IMPLICATIONS .............................. 119
Finding 1: Virtual teams with higher TEI demonstrate team empathy, meaning that the team demonstrates cognitive empathy through perspective-taking and emotional empathy through recognizing feelings and emotions.

Finding 2: Virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management.
LIST OF TABLES

| Table 1. | ESCI The emotional and social intelligence competency model | 23 |
| Table 2. | Participation Rates for TEI Surveys | 48 |
| Table 3. | Means, Standard Deviations, and Cronbach Alphas for Emotional Intelligence Variables | 62 |
| Table 5. | Means and Standard Deviations for Emotional Intelligence Team Scores | 63 |
| Table 6. | T-Tests for Creating Affirmative Environment, Creating Debate, Team Self-Evaluation, Creating Emotion Response by High/Low Teams | 64 |
| Table 7. | T-Tests for variable in TEI survey by High/Low Teams | 66 |
| Table 8. | How participants characterized Understanding of Differences | 67 |
| Table 9. | Inductive Thematic Analysis | 70 |
| Table 10. | Chi-Square for Inductive codes by High/Low Teams | 70 |
| Table 11. | Technologies Described for Team Communications by Study Participants | 77 |
| Table 14. | Shapiro-Wilk Test for Creating Affirmative Environment, Creating Debate, Team Self-Evaluation, and Creating Emotion Response by Remote Team Meetings | 95 |
| Table 16. | Spearman Correlation: TEI and Remote Team Meetings | 96 |
| Table 17. | Illustration of Group Text | 100 |
CHAPTER 1: INTRODUCTION

This research study explores how team culture influences the strategies and behaviors virtual teams implement when facing differences, conflicts, and challenges. With the increase in technology and globalization, more employees are working remotely and virtually, and many organizational teams are now virtual (de Guinea, Webster, & Staples, 2012; O’Leary, Wilson & Miteau, 2014). Team members working virtually use technologies such as computers and mobile devices to communicate, share information, and accomplish objectives. Studies have shown that use of technology changes the nature of the work itself (Orlikowski, 2000; Maynard & Gilson, 2013) as well as changes organizational relations (Walsham, 1993). However, it is unclear how relationships built and sustained through technology influence important factors of team effectiveness such as trust, communication, and conflict management. Would one expect a virtual team to have more inherent challenges in building and sustaining relationships with team members? Does interacting through technology, time, and distance make conflict management more challenging than for those who can resolve issues in a hallway discussion?

Research on team effectiveness has shown that emotions play a large role in how a group functions (Forgas & George, 2001) as well as on the perception of climate in the workplace (Ashkanasy & Humphrey, 2011). A positive climate can create an environment where people feel engaged and committed to their work and their organization (Gagné & Deci, 2005). In contrast, when the climate is negative and
emotions are charged, employees disengage from work, morale suffers, and performance drops (Frost, 2003). In addition, team climate may be quite important for how teams handle the differences they encounter, whether small misunderstandings or larger issues they face in their work. How these situations are handled is often considered more important to team success than the issue itself (Paul, Seetharaman, Samarah, & Mykytyn, 2004). Consequently, exploring how team climate influences how teams handle differences in a virtual team environment may add to our understanding of one of the most prevailing and growing work units today.

**Problem Statement**

Technology, innovation, mergers, alliances, and globalization are dynamics in the current environment facing many businesses and organizations. Organizations must keep pace with external dynamics to remain competitive. Dynamics facing many businesses and organizations in the current environment include technology, innovation, mergers, alliances, and globalization. In response to these dynamics, many businesses assemble teams with members distributed in many locations (Hinds and Bailey, 2003). This global distribution of team members is necessary for the company to leverage their internal talent on important projects to take advantage of their knowledge and abilities. These teams are called virtual teams. The most notable aspects of virtual teams in the workplace are team members working in separate locations and using technology to facilitate interactions. It is not surprising then that Deloitte’s Global Human Capital Trends Report (2016) identifies the rise of teams as a key issue companies are facing. Implications of these work arrangements on teams in the workplace should be on the minds of business,
HR, and academic leaders interested in organizational dynamics as a strategic competitive advantage. Indeed, ever since organizations began organizing work efforts through teams, research has tried to understand how to make them successful (Salas, Cooke, & Rosen, 2008).

Team performance is typically a success factor for virtual teams. Previous research at a group level shows that characteristics enabling high team performance include a high level of cohesiveness (Chesin, Rafaeli, & Bos, 2011), collaboration, commitment, and communication (Ehlen, 1994). Another factor that shapes high performance at both the individual (Jordan & Troth, 2004; McKee, 2014) and group levels (Druskat & Wolff, 2001) is emotional intelligence. Emotional intelligence is the concept of purposefully using emotions to monitor thoughts and action. Individuals must be aware of their own emotions and the emotions of their team members as a moderator for communications, information sharing, and resolution of conflicts. Research shows a link between emotional intelligence and team performance. At the group level, emotional intelligence is about creating a team culture that affects the experience and expression of emotion. It is not about individual-level skills at the group level. High emotional intelligence allows team members to be mindful of their own emotions and the emotions of other team members (Jordan & Troth, 2004) and therefore be able to better manage relationships among members. Research shows that emotions, if not managed, are likely to influence work effectiveness (Vijayalakshmi & Bhattacharyya, 2012). Yet research is also nascent in addressing the role of emotional intelligence in virtual teams (Pitts, Wright & Harkabus, 2012). As advances in computer-aided technology change how work teams members engage with each other, examining how team emotion can influence
outcomes is both timely and relevant (Barsade & Gibson, 2012). New findings that emerge in understanding the role of emotion and culture of virtual teams in a workplace setting will enable businesses to examine or modify strategies that support virtual team performance. This study adopts the team emotional intelligence view at the group level which will be discussed in further detail in Chapters 2 and 3.

**Complexity of Managing Conflicts in Virtual Teams**

Some researchers argue that conflict is necessary to become an effective team (Tuckman, 1965; Wheelan, 1994; Katzenbach & Smith, 1999). Conflict is a process that may surface from the tensions between team members because of real or perceived differences (De Dreu, Harnick, Van Vianen, 1999). Sources of conflict in the workplace may be related to function or job differences, cultural differences, personalities, or mixed expectations (Jehn, Northcraft, & Neale, 1999). However, not all conflict is bad. Productive conflict results in higher creativity and responsiveness to clients as well as better performance and better decisions, because multiple and different ideas are expressed and resolved openly (Moore & Mamiseishvili, 2012). A similar explanation by Walton (1987) provides that a moderate level of conflict may increase motivation, promote innovation by inviting diversity of thought, and allow colleagues higher understanding of their points of view because they need to articulate their view to others. A moderate level of conflict is key for achieving and maintaining peak levels of effectiveness (Rahim & Bonoma, 1979).

How conflict is handled is often considered more important to team success than the conflict itself (Paul, Seetharaman, Samarah, & Mykytyn, 2004). Teams typically manage
conflict by approaches that may include avoidance, accommodation, competition, collaboration, or compromise (Rahim, 1992). However, Montoya-Weiss et al. (2001) consider that conflict theory that has evolved in face-to-face settings may not apply to virtual teams due to differences in communication rules, reduced social presence, and media richness. For example, face-to-face teams experiencing unclear expectations may clarify these in a casual hallway conversation, but virtual teams do not have this available to them in the same way (Berry, 2003).

Physical proximity of co-located teams allows for more frequent interactions that may enable conflicts to be voiced, acknowledged, and handled more quickly than in dispersed teams (Thompson & Nadler, 2002). The face-to-face advantage is illustrated in findings from a research study by Morris, Nadler, Kurtzberg & Thompson (2000). This study involved a buying-selling task, and the face-to-face dyads exchanged three times more information than dyads communicating using only email. When considering the complexities of distance, time, and technology, understanding how a virtual team can turn potential conflict into a constructive debate is important. One approach is applying emotional intelligence constructs to be aware and regulate their interactions in order to make the best decisions and have the best outcomes. One gap in the literature is an understanding of how virtual teams experience and handle conflicts. Is it the same as in face-to-face teams or are there nuances that need attention?

**Challenge of Interpreting Emotions in Virtual Teams**

Emotions and emotional contagion are important variables influencing individual behavior and organization dynamics (Vijayalakshmi & Bhattacharyya, 2012). Research
has shown that the spread of emotions influences work effectiveness. For example, Glickson and Erez (2013) explored unique challenges faced by multicultural virtual teams in building a shared meaning system, because diverse values, norms, and codes of behavior can lead to challenges in interpretation of emotional information. They offered empirical evidence that individuals are more likely to regard positive emotions, such as joy and contentment, as appropriate and negative emotions, such as anxiety and anger, as inappropriate. To add complexity, one of the challenges of virtual teams that only communicate via text is that sometimes emotions are not transferred correctly. For example, sarcasm is not often clear via text, or something that can read like a harsh statement was not intended to be harsh. Much of the emotional connotation depends not only on the emotions of the writer but also the emotions of the receiver (Belkin, 2009).

Therefore, one question this study will seek to answer is how does communicating through technology influence team emotions when dealing with differences and conflicts?

**Importance of Team Emotional Intelligence for Handling Conflicts in Virtual Teams**

The ability to be aware of one’s own emotions and the emotions of others may be a key conduit in successful conflict management in teams. Jordan and Troth (2002) argue that effective conflict management relies heavily on an individual’s skills in self-management and the ability to find constructive solutions. Interestingly, self-management is one of four components in Goleman’s (1995) emotional intelligence construct. Emotional intelligence may facilitate collaborative and problem-solving behaviors in which emotions are controlled and generated to develop solutions that satisfy multiple
parties’ needs. Team emotional intelligence is one way to take a pulse of the team’s emotional climate. Some theorists have considered a group’s emotional intelligence as taking the average of the individual emotional intelligence of the team members (Elfenbein, 2006). Another theory for team emotional intelligence focuses on the team culture or climate (Elfenbein, 2006). In the latter approach emotional intelligence is conceptualized as how the team culture shapes the norms and patterns about how team members behave with each other.

Troth, Jordan, Lawrence, and Tse (2012) examined how team members' use of emotion-related skills affected team task performance and communication performance within the team. They looked at self-reported skills and measured skills before and after the team was established. Team-level emotional skills were operationalized as an average of individual measures, positively projected team task performance ratings. In addition, team-level emotional skills predicted individual-level communication performance. These findings show the value of team emotional skills in shaping team and individual team member performance. The limitation noted in this research was the use of students as a population and the use of a self-report instrument. The gap is in understanding how awareness and control of emotions in real-life virtual teams may influence task and team member performance.

Research on group dynamics has indicated that emotions play a large role in how a group operates, whether it accomplishes its goals, and if group members are satisfied (Ashkanasy & Humphrey, 2011; Barsade & Gibson, 2012; Brief & Weiss, 2002). Because virtual teams, especially those without access to video capability, lack the ability to see non-verbal cues and behavior, expression and interpretation of emotions may be
more difficult than in face-to-face teams. Therefore, exploring how team emotional intelligence contributes to the effectiveness of virtual teams in handling differences will add to our understanding of how virtual teams operate.

**Research Question**

This study explores how team culture influences the strategies and behaviors virtual teams implement when facing differences and conflicts. Differences are just that – differences. People have different cultures, different ideas, different attitudes, and different job descriptions. Often, this is a good thing and makes teams work well. However, differences can also be a starting point for conflict. It’s not the differences themselves that cause conflict. It is how team members respond to those differences. This is where team emotional intelligence comes in. How can a team make differences an asset for their team rather than allowing it to escalate to destructive conflict?

The research question is informed by the theoretical framework, including current theory, study goals, and aims to close gaps in the existing literature. This study was designed to collect data from virtual teams in the workplace to answer the primary research question: How does team-level emotional intelligence influence the handling of differences in virtual teams?

**Goals and Purpose of the Study**

Maxwell (2013) identified three broad categories of goals in qualitative research: personal goals, practical goals, and intellectual goals. My interest in this topic stems from my membership in and coaching of teams and groups over the years and my intuition about how team climate shapes its ability to work effectively together. I was curious
about the range of team dynamics and how as a Human Resources leader I could establish programs and practices to set up new teams for success in the beginning or coach existing teams on their dynamics. My intellectual goal was to understand ‘why and how’ team culture influences group dynamics in virtual teams. This intellectual goal crystalized during didactic dialogues with peers and advisors in the dissertation program. My personal goal in exploring this topic is to develop as an academic-practitioner who enables organizations to build better teams that are effective in working with each other to accomplish their objectives. My practical goal is simply achieving the objective of conducting and successfully defending a dissertation in order to complete requirements for graduating from the Penn CLO program. This practical goal relates to my professional career in my personal development as a scholar-practitioner.

This study is important and relevant due to the increasingly global structure of many work-based teams, and the opportunity cost when teams fail is huge. Therefore, this study may add evidence about virtual team participants in organizational settings. The audience for this research includes both the academic community and business community, including virtual team members, virtual team leaders, business leaders, and human resources practitioners.

My exploration of the literature spanning several fields, including organization psychology, organization management, emotion, conflict management, and information technology, shows that most research on virtual teams has been conducted within laboratory settings, often with students as participants. Evidence from a workplace environment is generally lacking from the literature, and it will be beneficial for academics and practitioners to have this knowledge about how emotions affect the
performance of virtual teams. Virtual team research by Salas, Cook, and Gorman (2008) highlighted the growth in team and group performance research over the past 50 years. They found that although researchers study virtual teams more now than ever, there remains a call to action for continued research in light of technological interventions and study in naturalistic settings as two of several identified recommendations. Similarly, de Guinea, Webster, and Staples (2012) performed a meta-analysis of the consequences of virtualness on team functioning and found that literature on this topic is lacking. When joining the literature on virtual teams to the literature on emotions in the workplace, there is a similar gap in empirical evidence in organizational settings. Likewise, there is little focus on conflict resolution on work-based virtual teams. For this reason, there lies an opportunity to conduct new research to address these gaps.

Research Design Overview

The literature review and ongoing reflection have influenced the research design. This global overview will highlight the main gaps in the research, research questions that will address the gaps, and brief overview on the methods. Additional detail is provided in chapters 2 and 3.

I identified two organizations that expressed willingness to participate in the study. The first company is a public global life sciences organization. The second company is in the insurance industry. The exploration into the experiences of virtual team members will use a mixed methods approach with three components. First, I requested virtual teams across two industries to complete the Team Emotional Intelligence (TEI) survey (Druskat & Wolff, 2001). I ranked the survey results to
identify which teams have the highest and lowest group emotional intelligence scores. Second, I invited members of the higher and lower scoring teams to participate in individual semi-structured interviews to collect narrative data to explore how the team climate influences how the team handles differences and conflicts within the team. The semi-structured interviews were coded using both a priori and emergent codes (Miles, Huberman, & Saldaña, 2014). Third, I observed a sample of the top and bottom scoring teams in their meetings and group texts using an ethnographic approach with field notes. Team members participating in the interviews did not know the results of the TEI survey results. I decided on these methods because I believe they provided complementary sources of data to help answer the research question: How does team-level emotional intelligence influence the handling of differences in virtual teams?

Gully (2000) noted that “to conduct research on work teams in the organizational context, the team has to be treated as the primary level of analysis” (p.27). In order to understand the context these teams are operating in, the TEI survey was administered to 34 virtual teams to provide a generalizable sample for a team unit level of analysis. The sequencing enabled a selection of interview participants from teams with a range in team emotional intelligence.

Practices that were incorporated for an effective research study included precoding memos, immersive engagement, multiple data readings, coding, peer data analysis review sections, and ongoing reflection (Ravitch & Carl, 2016). These practices are described in greater detail in Chapter 3. This approach yielded insights that are based on ongoing workplace teams who leverage technologies to perform
their work. Conducting research on this topic will fill a gap in the existing literatures on emotional intelligence and managing conflict in virtual teams. Academics, virtual team leaders, virtual team members, IT, and HR will also benefit from the study findings.

This introduction has established the problem statement, significance of the study, and research question. It also framed related studies in the organizational literature. I described the goals and purpose of the study and outlined the research design. In summary, emotions shape team climate. Team climate is an important factor when managing conflicts. The influence of team climate when working in a virtual team is not known because most empirical research has been conducted in laboratory settings. Studying this topic in a natural setting using a mixed methods approach will add new and relevant insights to our understanding.
CHAPTER 2: THEORETICAL FRAMEWORK

The research question for this study is: How does team emotional intelligence influence the handling of differences in virtual teams? This chapter provides the theoretical framework justifying the investigation and positioning the current study amongst relevant existing literature. This chapter integrates literature in the fields of organization management, psychology, sociology, and information technology. Within these broad literatures are sub-literatures on group dynamics, team performance, virtual teams, emotions, trust, and conflict. The purpose in looking at these specific topics to show how this research question is worthy of study by integrating existing empirical evidence on the topic as well as highlighting current gaps in the literature.

This chapter begins with definitions of terms to initially orient the reader. This chapter continues with a focus on differences and conflicts in virtual teams. Next is a section on emotional intelligence in teams and how this relates to differences and conflicts in virtual teams. This is followed by a section on trust. The chapter concludes with a discussion of the gaps in the literature with respect to conflicts and differences in virtual teams, individual versus group level analysis and problems with studying teams in laboratory settings.

Definition of Terms

Virtual teams. Virtual teams are uniquely characterized by some or all members working at a distance. Communications typically occur through the use of technologies such as e-mail, telephone, instant messaging, videoconferencing, and shared applications,
such as cloud storage file sharing (Aubert & Kelsey, 2003; Bell & Kozlowski, 2002; Duarte, 2006).

**Climate.** Climate is a set of measurable properties of the work environment, based on the shared perceptions of the people working in the environment that influences behavior (Litwin & Stringer, 1968). Climate in teams allows members to have a shared meaning of events and actions (Parker et al., 2003). Employees seek cues from their environment to interpret events, develop suitable attitudes, and understand expectations concerning their behavior (Salancik & Pfeffer, 1978).

**Team Emotional Intelligence.** Team emotional intelligence represents the climate that influences team members’ understanding of and responses to emotional issues (Ayoko, Callan & Hartel, 2008; Elfenbein, 2006). Research has shown that team emotional intelligence is essential to high-performing teams (Druskat & Wolff, 2001).

**Conflict.** Conflict is the occurrence of an incompatible activity, idea, or goal blocking another activity, idea, or goal (Deutsch, 1973). A related explanation is that conflict represents disagreement through which those involved perceive a threat to their needs, interests, or concerns. This may manifest in many ways, including disagreements about resources, roles, and expectations. Conflicts are frequently classified as task or relationship based (Jehn, 1995).

**Differences and conflicts.** Differences and conflicts tend to come up in every team. Understanding the topic from the point of view of virtual team members is both meaningful and important to understand the experiences, thoughts, and feelings of individuals within the context of their natural environment. I decided to focus my research question on the term difference rather than conflict for two reasons. First,
underlying many conflicts is often some form of miscommunication or misunderstanding, or difference in perspective, which often emerges from issues in communications and relationships. Second, I felt that using the word difference in my interview protocol would encourage participants to share a wide range of experiences, whereas focusing on conflict might have focused on more extreme examples and smaller, more mundane conflicts might not surface in the interviews. I use the terms conflict and differences interchangeably throughout this document.

Team culture shapes how team members interact in a variety of ways and influences how teams handle many team processes (Goleman, Boyatzis, & McKee, 2002; Forgas & George, 2001). Research has shown mixed results on the role team conflicts plays in interactions, problem solving and handling conflicts within virtual teams (Belkin, 2009; de Jong, Schalk, & Curseu, 2008 Gibson & Gibbs, 2006). For example, a positive perspective considers that the conflict will lead to the sharing of different viewpoints that will ultimately yield greater innovation and outcomes (Jehn, 1995). A negative view is that the conflict creates a toxic environment that damages relationships and becomes ultimately unproductive (Jehn, 1995). Additionally, whether the conflict is task or relationship based matters for team culture and trust. Edmonson (2012) summarizes management research that shows that conflict is productive when it is task based and counterproductive when it is relationship and emotion based.

Having set the foundation of some key terms and explained my rational for choosing to focus the research question on differences, I next discuss virtual teams.
Virtual Teams

At its core, this study is about work-based teams and how these teams handle differences. Katzenbach and Smith (1999) sought to discover what differentiates various levels of team performance, where and how teams work best, and what top management can do to enhance team effectiveness. They interviewed hundreds of people on more than 50 different teams in 30 companies and beyond, from Motorola and Hewlett-Packard to Operation Desert Storm and the Girl Scouts. They offer the following six criteria to define a successful team: 1) small enough number between two and twenty-five to interact constructively, 2) adequate number of complementary skills, 3) meaningful purpose, 4) specific goal or goals, 5) clear working approach, and 6) sense of mutual accountability (Katzenbach & Smith, 1999). Katzenbach and Smith (1999) define a team as “a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable” (p. 45).

Virtual teams are spread out geographically and communicate through the use of technology to accomplish team goals (Aubert & Kelsey, 2003; Bell & Kozlowski, 2002; Duarte, 2006). According to Schweitzer and Duxbury (2010):

A virtual team is first and foremost a team, which means that it is made up of individuals working together interdependently with mutual accountability for a common goal. In addition, in order to be considered virtual, a team must have members who do not work in either the same place and/or at the same time, and therefore cannot collaborate face-to-face all of the time. (p. 20)

This definition succinctly summarizes many similar variations. It was selected because today, almost all work contains virtual work elements. For example, even though I go to an office every day, I may check email from home or I may participate in a call with
colleagues in a different time zone while taking an early morning walk. Alternatively, my colleague may use her home as her office because much of her work week is spent travelling to customer meetings. A sales team whose individual members spend most of their time with customers may come together as a team virtually in order to share insights and challenges. The team coming together while dispersed across time zones and distance make each of these teams virtual in nature. Many more arrangements exist, and to be a virtual team, the team must be enabled by communication technologies, geographically dispersed, and asynchronous (Schwietzer & Duxbury, 2010). Communication technologies might include computers, video, and mobile devices. Geographically dispersed refers to a group of individuals who work together from different locations and rely on communication technology in order to collaborate. Asynchronous means at different times, meaning that the exchange of messages on a device occurs as time permits rather than in real time for both sender and receiver. These concepts are fundamental for how virtual teams interact.

**Similarities and differences between virtual and face-to-face teams.** Virtual teams are similar to face-to-face teams in that they are a group of individuals who collaborate on work projects, establish shared goals, coordinate tasks, manage work processes and outcomes, and build effective relationships and team norms (McKee, 2014).

Lack of proximity to team members and the high usage of interaction through technologies are key differences that separate virtual teams from traditional teams. For example, virtual teams have the same responsibilities as traditional teams with the added
complexity of handling the tasks, dynamics, and processes in a team that may only connect remotely (Aubert & Kelsey, 2003). As highlighted earlier, research on group processes states that traditional teams working through early stages build trust and build an environment that supports a willingness to raise different perspectives (Tuckman, 1965; Wheelan, 1993). The literature has yet to examine how virtual teams build trust and team climate when communicating with technology.

Challenges with communicating through technology include the lack of nonverbal cues such as facial expressions, tone of voice, or body language that are present in face-to-face interactions. This nuance may hinder the understanding of emotions that often surface in team communications. Although strategies to offset these challenges such as using emojis, smiley faces, and acronyms, like LOL, help add meaning to technology-aided communications, there may still be times of misinterpretation or confusion over technology-based communications.

An additional challenge with studying virtual teams is that some would argue that technology is so prevalent that it does not matter if a team is together or apart. In fact, O’Leary, Wilson, and Metiu (2015) found that people working 800+ miles away communicated no less frequently than those in the same office, and they had almost identical levels of shared identity and perceived proximity. Furthermore, their contribution shows how perceived proximity is a function of communication frequency, shared identity, and symbolic content in a way that creates a shared context without sharing physical space. However, this finding is in conflict with research by Hanebuth (2015), who conducted comparative research that found that geographic distance is still an influencing factor when it comes to managing dispersed teams even though
technologies are available. These two studies indicate that the literature provides mixed findings regarding the matter of distance and teams.

**Lack of Non-Verbal Cues in Virtual Teams.** Non-verbal emotional cues are often used to transmit an individual’s emotional state to others, who then interpret those cues and respond by changing their own mood or emotional state. These non-verbal cues convey messages that can help or hinder a heated situation. Therefore, the ability to interpret non-verbal cues is important during times of conflict. Researchers have explored if emotions are also contagious in virtual teams even the absence of non-verbal cues. As it pertains to conflict, non-verbal communication conveys messages that can help or hinder a heated situation. Therefore, the ability to interpret non-verbal cues may help. Researchers have explored if emotions are also contagious in virtual teams even in the absence of non-verbal cues. Applying the concept of emotional contagion to virtual teams, research by Chesin, Rafaeli, and Bos (2011) investigated whether anger and happiness could be transferred to virtual team members through text-based communications. Within the limits of non-verbal cues, their research found that people can detect emotion from computer-aided communication and that the emotion can be transmissible. In virtual teams, the decoding part interpreting messages may be challenged because of the lack of virtual cues. When non-verbal cues are lacking, people tend to look for other cues to the emotional state of the sender (Chesin, Rafaeli, & Bos, 2011). One strategy that has surfaced in emails and texting is the use of emoticons, capital letters, or explanation points to express meaning and emotion into the text. Non-verbal cues are important, but it is not known if the strategies developed for decoding messages sent through technology, e.g., emoticons, are equally effective as messages sent
with non-verbal cues. Only one article shows evidence from fMRI brain activity scans that emoticons and non-verbal communication activate the same brain pathways (Yuasa et al., 2011). This means that emoticons could be considered quasi non-verbal cues to assist teams in interpreting messages (Derk, Bos, & von Grumbkow, 2008).

**Text-Based Communications.** Working virtually may affect emotion at work given the lack of visual cues for emotional display and perception (Sieben, 2007). Email, mobile phones, videoconferencing, communication applications, and instant messaging are some ways people can communicate with speed and efficiency (Fineman, Maitlis, & Panteli, 2007). A challenge when communicating by text or email is that emotions in text are more likely to be misinterpreted between people who don’t know each other well. If the two parties know each other well, they are both likely to “get” the implied emotion based on their shared history, whereas if the two parties don’t know each other well, that emotion won’t be portrayed or interpreted the same way. Much of the emotional connotation depends not only on the emotions of the writer but also the emotions of the receiver (Elfenbein, 2014). This can be further complicated by differences in cultural and geographical norms of communication (Tannen, 1984).

In 2014, an experiment that took place on Facebook found that emotional moods can be transferred to others via emotional contagion. In this experiment, the Facebook users were manipulated in the content they received to show more or less emotion in the news feed posted within their network. The results show emotional contagion can occur without direct interaction. For example, people who had positive content reduced in their news feed used a larger percentage of negative words in status updates and a smaller
percentage of positive words. When negativity was reduced, the opposite pattern occurred (Kramer, Guillory, & Hancock, 2014).

**Climate in Virtual Teams.** Lewin, Lippitt, and White (1939) introduced the construct of climate to describe attitudes, feelings, and social practices in organizations. This theory emerged from Lewin’s earlier work in field theory that sought out patterns of interaction between the individual and the environment. Schneider, Bowen, Ehrhart and Holcombe (2000) found that climate manifests through shared subjective experiences that influence behavior and organizational functioning. Emotions influence team climate, and climate influences member engagement, group dynamics, and performance outcomes. Therefore, having positive emotions that help develop a positive climate is essential for virtual teams. A positive climate has been described with characteristics of caring for colleagues; providing support to each other; inspiring each other; focusing on the meaning of the work; treating each other with respect, and demonstrating trust and integrity (Ayoko, 2009). In contrast, when the climate is negative and emotions are charged, employees disengage from work, morale suffers, and performance drops (Frost, 2003). Emotions that employees feel and transfer to each other will influence perceptions that employees have about the organization (James et al., 2008). This is important because emotions can influence how team members approach a challenge or threat, pursue goals, and collaborate with and support each other (Frederickson, 2001). Teams in general need a positive climate to perform successfully, but it is not known if or how virtual teams create this climate. Creating a positive climate may be more difficult for virtual teams because distance may delay trust building, bonding, and formation of team
processes. Understanding how virtual teams create a climate is important. Exploring the role of climate in virtual teams will add to our understanding.

**Emotional Intelligence**

Theoretical models of emotional intelligence include those developed by Salovey and Mayer, (1990); Bar-On (1997); and Goleman, (1995). Salovey and Mayer reasoned that emotional intelligence is different than other forms of intelligence. They define emotional intelligence as “the ability to monitor one’s own and others emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). A different concept of Emotional Intelligence is offered by Bar-On (1997), who incorporates the five sub-constructs of 1) interpersonal skills, 2) intrapersonal skills, 3) adaptability, 4) stress management, and 5) general mood (Bar-On, 1997). Bar-on also introduced a measurement tool known as the Emotional Quotient (EQ). Both of these models are the subject of many research studies. Goleman’s model of Emotional Intelligence (1995) focuses on both personal competence and social competence. Personal competencies reflect competencies that determine how we manage ourselves, whereas social competencies determine how we handle relationships. Initially, Goleman focused on five emotional and social competencies, including self-awareness, self-regulation, motivation, empathy, and social skills. Over time and examination of new data, the model evolved to four dimensions: self-awareness, self-management, social awareness, and relationship management. Although empathy was not one of the four dimensions, it remains an important associated competency with regard to social awareness. Self-awareness is the ability to notice and comprehend your own feelings in
the moment and use these insights to guide decision making. In order to make good
decisions, you need to have feelings about your thoughts. Self-management is about using
the awareness of your emotions to guide your behavior. Competencies such as managing
emotions, focus, adaptability and initiative are based on self-management. Social
awareness is the ability to notice the emotions of others. Relationship management is
about being able to apply the awareness of emotions of others to how you behave with
others. Within each dimension, there are specific associated competencies; Table 1
outlines the associated competencies for each domain.

Table 1. ESCI The emotional and social intelligence competency model

<table>
<thead>
<tr>
<th>Domain</th>
<th>Associated Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>Emotional self-awareness</td>
</tr>
<tr>
<td>Self-Management</td>
<td>Emotional self-control</td>
</tr>
<tr>
<td></td>
<td>Achievement orientation</td>
</tr>
<tr>
<td></td>
<td>Positive outlook</td>
</tr>
<tr>
<td></td>
<td>Adaptability</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>Empathy</td>
</tr>
<tr>
<td></td>
<td>Organization awareness</td>
</tr>
<tr>
<td>Relationship</td>
<td>Influence</td>
</tr>
<tr>
<td>Management</td>
<td>Coach and mentor</td>
</tr>
<tr>
<td></td>
<td>Conflict management</td>
</tr>
<tr>
<td></td>
<td>Inspirational leadership</td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
</tr>
</tbody>
</table>

To summarize, an individual with emotional intelligence is able to manage self and
relationships. Research has found a positive relationship between performance and
Emotional Intelligence at the individual, team, and organization level (McKee, 2014).
The next section will focus on emotional intelligence at the team level. The study of EI
must progress further at the group level which is a focus of this study.
**Emotional Intelligence in Work Teams**

Prior research has considered team emotional intelligence in two ways. Some scholars have viewed team emotional intelligence as the climate that influences team members’ understanding of and responses to emotional issues (Ayoko, Callan & Hartel, 2008; Druskat & Wolff, 2001; Elfenbein, 2006). In contrast, other researchers regard team emotional intelligence as an individual trait that acts as an input to team processes and outcomes (Jordan & Troth, 2004; Wang 2015). In this view, team emotional intelligence is the average of team member’s EI. In the former, team emotional intelligence reflects the shared perceptions of the team culture.

Druskat and Wolff (2001) described group emotional intelligence as the ability to create norms and be aware of and regulate emotion at an individual, group, or intergroup level. Additionally, they explained a cycle of emotion-behavior-emotion where emotion leads to behavior, which leads to changes in the relationships between the group and its members, which leads to emotion. This cycle can set off either positive or negative emotions that over time form perceptions of trust, safety, and efficacy, which are elements of social capital. Social capital refers to the organization and quality of relationships held by an individual or group which can lead to effectiveness (Nahapiet & Ghoshal, 1998; Druskat & Wolff, 2001). Social capital therefore becomes an outcome of operating with Team emotional intelligence (TEI) norms. They concluded that team norms are an indication of how strong team emotional intelligence is within the team. Behaviors that build team emotional intelligence norms leads to team emotional intelligence.
Empirical evidence presented by Moore and Mamiseishvili (2012) demonstrated a relationship between emotional intelligence at the individual level and group cohesion. Their study investigated 157 undergraduate students participating in a non-introductory business course working in collaborative teams during the semester. The study focused on understanding why some teams are cohesive and others are not. Students participated in the Workshop Emotional Intelligence Profile—short version (WEIP-S; Jordan & Lawrence, 2009) to assess their emotional intelligence, and they were also scored based on the Group Cohesiveness Scale developed by Dobbins and Zaccaro (1986). The assessments were collected toward the end of the semester. Evidence from the survey analysis provided insight that EI is related to group cohesion, with group cohesion increasing as the groups’ awareness of their own emotions and management of others’ emotions increased (Moore & Mamiseishvili, 2012).

Teams with high emotional intelligence monitor and regulate emotions and are more tolerant of divergent viewpoints (Barczak, 2010). Teams with lower trust and lower emotional intelligence may experience negative political behavior, including sabotage or undermining the efforts of others. Barczak’s (2010) study with college students as subjects found that emotionally intelligent teams have more trust, which builds a collaborative culture and team creativity. However, they were unable to demonstrate a direct relationship between team emotional intelligence and a collaborative culture. Although emotional intelligence is important, trust seems to be the leading factor for collaboration and creativity. At the same time, emotional intelligence is a predictor of trust, so the implication suggested by the authors was
that team leaders should assess team members’ Emotional Intelligence and undertake team activities to build Emotional Intelligence as needed (Barczak, 2010).

Frye, Bennett, and Caldwell (2006) conducted an exploratory study between the emotional intelligence of self-directed teams and the team’s task orientation and team maintenance functions. Findings from this study support interpersonal and general mood dimensions of Bar-On’s (1997) concept of emotional intelligence that predicts the team task orientation and team maintenance functions, which are components affecting team performance. The study was conducted in the context of an actual organization with an existing team, so it merits particular attention. Limitations are that the measures were collected via self-report, and a team average of emotional intelligence was used vs. a team-level unit of analysis.

At the team level, social awareness with a focus on empathy allows a team to build and sustain effective relationships. Goleman (1998) defines empathy as “sensing others’ feelings, perspectives, and taking an active interest in their concerns” (p. 318). Teams that demonstrate empathy are able to recognize their own emotions, and others’ emotions that stem from conflicts (Ayoko, Callan, & Hartel, 2008). To be socially aware, team members must be mindful of the group mood as a whole as well as the individual moods within the group. When team members collectively notice the group’s moods, they respond with empathy, for example, through listening or helping behavior, which leads to positive norms in how members relate to each other.
Trust in Virtual Teams

Trust is important at the team level because people must work closely together to accomplish goals. Many researchers have identified trust as an important factor in team dynamics (Tuckman, 1964; Wheelan, 1994). Trust is conceptualized at the team level as a positive expectation of other team members’ intentions and actions (Shaw, 1997). Several researchers agree that trust is a potential issue that will get in the way of a virtual team’s effectiveness due to the limited interactions (Bhat, Alavi and Ahuja, 2011; Aubert & Kelsey, 2003).

Druskat and Wolff (2001) explain that even the best teams will have situations in which a team member’s behavior is not acceptable, and the team needs to be comfortable addressing the issue. They explain that when conflict resolution is done right, it can reinforce caring and build a sense of trust, which reinforces participation and cooperation in order to ultimately achieve better decisions, solutions, and productivity. One way many teams establish trust is to establish and honor team norms. The norms the team established are critical to the formation of trust (Wolff, personal communication, 2016). The crucial role of trust on conflict management revealed in this study suggests that it is imperative for virtual team facilitators to take measures to cultivate trust and collaborative conflict-management skills in virtual teams, and encourage teams to strive for integrated solutions in teamwork. Explicit considerations of conflict management, trust, and communication processes should be addressed from the start of virtual team design and planning. Rules for communicative behavior and conflict management should be developed and made clear to facilitate virtual teaming (Griffith, Mannix, & Neale, 2003).
Conflict and Emotional Intelligence

Research on intragroup conflict suggests that conflict can be categorized as either task, relationship, or process (Jehn & Mannix, 2001). Task conflict tends to focus on how things get done by procedure, process, policy, and resources (De Dreu & Weingart, 2003). Relationship conflict typically centers on group members and differences in style, preferences, attitudes, and personality (Yang & Mossholder, 2004; Jehn, 1997). Process conflict is about how the work will be accomplished and achieved (Hopkins & Yonker, 2015). Virtual teams using virtual communication tools have a low capacity to transfer non-verbal cues and may experience more challenges in managing relationship conflicts (de Jong, Schalk, & Curseu, 2008). The ability to be self-aware, manage one’s own emotions, and demonstrate empathy toward others will help during times of task or relationship conflict (Jehn, 1995). Groups that have members with high emotional intelligence are capable of recognizing tensions and acting to avoid significant damage (Goleman, 1995). Better awareness of one’s own and others’ emotions helps members keep task conflicts from becoming relationship conflicts.

Intragroup conflict is a part of the development of a group (Tuckman, 1965; Jehn, 1995). Even when the group agrees on goals, they often find themselves in conflict. How the team handles conflict is an important component of developing trust, especially in the context of a virtual team. Common triggers for conflict in the workplace include 1) condescension and lack of respect, 2) being treated unfairly, 3) being unappreciated, 4) feeling one is not being listened to or heard, and 5) being held to unrealistic deadlines (Goleman, 2011, p. 12). The role of emotion in work conflict situations is germane, as conflicts are emotionally charged (Jones, 2000). Awareness of one’s emotions and the
emotions of others can minimize the impact of common triggers and the subsequent negative reactions that may manifest among team members.

Teams that have high levels of emotional intelligence are more likely to have collaborative work environments with better communication and reduced conflict. When discussing the importance of constructive debate in a team when attempting to reach decisions, Goleman (1998) described that:

Debate free of bad feelings – carried out in a positive spirit of mutual inquiry, with everyone feeling the process is fair and open, and holding a shared concern for the organization other than their narrow self-interest – led to the best decision. (p. 221)

In other words, it is not that teams with high emotional intelligence (EI) won’t have disagreements or conflicts, but it is how they approach the conversation by allowing open sharing that makes a difference.

Not only has emotional intelligence been found to make a difference with decision-making, it has also been associated with conflict management. For example, Hopkins and Yonker (2015) identified specific EI abilities that are associated with different styles of conflict management. Their study investigated which facets of EI contribute to collaborative styles of conflict management and which are linked to less collaborative conflict management styles. The approach included 126 participants completing a measure of EI and an assessment of conflict management styles. Using regression analysis, they found problem-solving, social responsibility, and impulse controls were most directly related to collaborative conflict management. Their discussion focused on results that showed when an
individual demonstrates problem solving they are both exploring their own concerns and the concerns of others in the conflict. Ayoko, Collan, and Hartel (2008) explored the influence of team emotional intelligence on conflict and the team members’ reaction to the conflict. This study, which collected data from 97 organizational teams, showed that teams with lower emotional intelligence climates had higher levels of task- and relationship-based conflict and higher intensity of the conflict. Productive conflict in teams provided value because it allowed a robust exchange of ideas that improved the understanding of important perspectives and issues as well as a better understanding of the positions of others (Ayoko, Callan, & Hartel, 2008; Tjosvold, 1998). In contrast, teams that react destructively to conflict closed their minds, avoided conflict, and rejected opposing ideas, which led to low productivity and strained relationships (Ayoko, Callan, & Hartel, 2008; Tjosvold, 1998).

Many conflicts pertaining to differences in values between team members occur when people are polarized in their positions (Hultman, 2002). For example, in the book *Balancing Individual and Organizational Values*, Hultman (2002) shared an experience of a team in which members were fixed in their positions. The team was asked, “How do you think your clients perceive you as a team?” After sharing responses ranging from “seen as stubborn kids” to a group recognition that they were at risk of “losing credibility,” they found a shared value to be seen in a positive light by their clients and were able to move from conflict to creation. This example also illustrates the idea of collective emotional behavior in that the team became aware of its values and was able to manage their behaviors with this gained insight.
The current study will further explore the role of team emotional intelligence on virtual teams thus contributing to the literature.

**Problems with Conducting Team-Based Research in Laboratory Settings**

Many research studies in social science, as well as consumer research, are conducted in laboratory settings with students as participants. A laboratory setting is one created for research purposes, as compared to a field setting, which is a natural setting not created for research purposes (Tunnell, 1977). Empirical evidence from a field setting, which for this study is a virtual workplace environment, is generally lacking from the literature in relevant studies to this topic. Some advantages of using a student population are that they are often a convenience sample, as they tend to be an easy to reach population, and they are willing to participate with researchers who often also work in an academic setting (Podsakoff & Dalton, 1987).

The criticism with laboratory research is that the external validity is questionable (Dipboye & Flanagan, 1979). For example, there are concerns about generalizing the results to populations other than students. Some critics have also argued that because students are typically in early adulthood, their thoughts and behaviors might be less developed than older adults. Other critics indicate that students represent a homogenous group in factors such as age and education, which also weakens the generalizability of study results. A meta-analysis on the issue of students as research participants conducted by Peterson (2001) concluded that social science researchers should be careful when conducting studies with student populations and that these studies should be repeated.
with nonstudent subjects prior to generating universal principles. The current study setting is in a field setting, which will be discussed more in Chapter 3.

**Individual versus Team Level Analysis**

In addition to the issue of laboratory vs. field as the setting for research, another component is individual vs. team level analysis. Unit of analysis “refers to the primary focus of the research study and is most reflected in the core constructs of your research questions” (Carl & Ravitch, 2016, p. 138). Based on the goal of this study to explore the role of team culture in virtual teams and how they handle conflict, it was clear to me that my unit of analysis needed to be at the team level. I believed it was important to focus on the team rather than individuals because the team is the unit of execution within the business. This is relevant when collecting data and conducting analysis. Weber (1990) discussed how the unit of analysis helps the researcher as they make sense of the data.

Social science research frequently focuses on the individual. Benefits exist for focusing on the individual; however, like any decision, there are implications. For example, individual unit of analysis may look more towards psychology whereas team level unit of analysis may connect with socio-psychological sciences. It also influences the sample size of the study and the participant population.

There are instances where groups are purposely selected as the unit of analysis. When this is the case, the design, sample size, and analysis need to consider the unit of analysis. My review of existing literature found minimal empirical evidence on virtual teams in the workplace and relatively few studies on emotional intelligence in organizational settings conducted at a team level of analysis. Likewise, many studies on
emotional intelligence are conducted at an individual unit of analysis, which may be difficult to generalize to a team level. Kozlowski (2013) stated that one challenge is that there are multiple levels associated with groups, including but not limited to the person in the group, between group members, and over time. I will describe the team analyses parameters for this study in Chapter 3.

Conclusion

The primary goal of this chapter was to highlight major contributions as well as gaps in relevant literature. I established that virtual team members regularly use technologies such as mobile devices to communicate, share information, and accomplish objectives. However, an implication of communicating through technology is the lack of non-verbal cues which has been shown to create difficulty in intragroup communications. A similar challenge for virtual teams is the potential for misunderstandings when interpreting text-based communications. This is complicated further when virtual teams span cultures and geographies. Challenges in intragroup communications may lead to conflict if not handled well. Intragroup conflicts are often classified as task, relationship, and process conflicts. Whether the conflict is task or relationship based matters for team culture and trust. Chapter 2 also reviewed prior research on emotional intelligence and the construct of emotional intelligence in work teams. This study is operationalizing team emotional intelligence as the climate that influences team members’ understanding of and responses to emotional issues. Research is also nascent in addressing the role of emotional intelligence in virtual teams. These chapters also showed that many research studies on virtual teams and across social sciences are often conducted in laboratory
settings with students as participants. Additionally, there are very few empirical studies on virtual teams in the workplace and relatively few studies on emotional intelligence in organizational settings conducted at a team level of analysis. Group level research and research on organizational teams will benefit when conducted with work-based teams, not teams in the laboratory. Teams and technology continue to evolve, and the literature needs to keep pace with market dynamics to guide practitioners, team leaders, and team members. Therefore, this study will add evidence, especially as the research is conducted with virtual teams in organizational settings.
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

Chapter 3 discusses this study’s research design and methodology and describes how the theoretical framework established in Chapter 2 influenced the research design and guided the research. The purpose of this study was to explore how team emotional intelligence influences how teams handle differences in a virtual team environment. The present study was designed to collect data from virtual teams in the workplace to answer the research question: How does team-level emotional intelligence influence the handling of differences in virtual teams?

As an academic-practitioner, I am interested in related questions such as: what types of differences do virtual team members perceive exist? What role does communicating over conference calls or through group texts have on the ability to pick up on non-verbal cues? How do virtual teams establish and maintain norms that promote a healthy environment to raise different perspectives? To organize this chapter, I begin with an overview of the research methodology. Second, I discuss the methodological approach that includes methods, data collection, and data analysis. I also describe how I iterated the plan based on early insights in the data collection. I provide detail on the participant selection and sampling, sequencing, triangulation, study limitations, and issues of validity.

**Overview of Research Methodology**

This study examines virtual teams in the workplace, specifically exploring how team emotional intelligence influences how virtual teams handle differences. I chose to conduct a mixed methods research study on the experiences of virtual team members in
the workplace. Mixed methods research is a “methodology for conducting research that involves collecting, analysing, and integrating (or mixing) quantitative and qualitative research (and data) in a single study or a longitudinal program of inquiry” (Creswell, 2003, p. 1). All methods have inherent advantages and disadvantages. One of the primary reasons I chose a mixed methods study is that the approach yields complementary data, meaning that by using more than one method, the researcher can clarify and elaborate the results from one method with the results from the other method (Greene, Caracelli, & Graham, 1989). Researchers often use the word “triangulation” to describe this process. This complementary nature of a mixed methods approach increases the meaningfulness and validity of the study results because the inherent strengths and biases of each method are intentionally counteracted (Greene, Caracelli, & Graham, 1989). Breaking down the research question into pieces will help articulate the decisions related to method choice, as I selected different methods to assess different levels of the research question.

First, I sought an instrument to quantify the team’s emotional intelligence. There are currently two perspectives on how to measure team emotional intelligence. One approach is to measure the emotional intelligence of individual team members and then determine the average for the team, as well as to consider the range of individual emotional intelligence scores, including the minimum, maximum, and diversity in the values of individual scores (Elfenbein, 2006). Another approach is to examine how much emotional intelligence team members show in their interactions (Elfenbein, 2006). This perspective considers team emotional intelligence as a process that can fluctuate and explores the emotional quality of interactions in the team context. I chose the latter approach and utilized the Team Emotional Intelligence (TEI) Survey (Druskat & Wolff,
which is a recognized team assessment instrument that measures how effectively a team's culture is in producing the emotional experience that team members need to collaborate and perform at a high level. Additional details on the instrument will be provided in the methods section.

To research the handling of differences in virtual teams, this study used two qualitative methods, including semi-structured interviews and ethnographic observation with field notes that would allow me to observe teams in action as well as to speak to a sample of team members to collect their perspectives. Semi-structured interviews are a type of in-depth qualitative interview that are scheduled in advance. They consist of a limited number of pre-planned questions with follow-up probes (Rubin & Rubin, 2012). Ethnographic observation with field notes is a qualitative method that is often used when the researcher has an interest in cultures with an emphasis on the insider view. Ethnographic research often includes observation of the population being studied coupled with interpretation, understanding, and representation, which is achieved through documenting field notes (Eriksson & Kavalainen, 2008). Additional information on the qualitative methods will be provided later in the chapter.

**Rationale for mixed methods.** I conducted this as a mixed methods study for three reasons. First, qualitative research helps to understand people's lived experience; “Broadly defined, qualitative research attempts to understand individuals, groups, and phenomena in their natural settings in ways which are contextualized and reflect the meaning that people make out of their own experience” (Ravitch & Carl, 2016, p. 2). The utilization of ethnography coupled with semi-structured interviews provided flexibility for me to ask a core set of questions but also room to follow the story of the
teams. For example, when I was observing a team meeting in preparation for a group face-to-face meeting, I heard the team discuss a situation in which they were having disagreements with another team that they would be interacting with at an upcoming meeting. When I later interviewed one of the participants about this team, I was able to ask her about the outcome of that meeting.

Second, I wanted a validated instrument to identify teams with higher or lower team emotional intelligence as a basis for selecting teams to interview. This was important so that I would be able to collect data and analyze data from teams with higher team emotional intelligence as compared to teams with lower team emotional intelligence. The instrument I chose to assess team-level norms offered a recognized approach to measure team level emotional intelligence by focusing on TEI norms in a team. Third, the inclusion of multiple methods exhibits triangulation, defined as processes to search for and explore multiple perspectives to answer the research questions (Ravitch & Carl, 2016). Triangulation is therefore an important approach to establishing validity in research, because it helps explain a finding by using multiple methods and analyses (Patton, 2015). Triangulation applied to this proposed study will be explored further in the validity section. The following section outlines details for each method.

**Data Collection Methods**

Study data collected in this mixed methods study included one quantitative method and two qualitative methods. Each method is discussed in detail, including the rationale for selecting the method, scope, structure, process, nature of information sought,
goals, and procedures. The unit of analysis for this research is the team level within an organization.

**Team Emotional Intelligence (TEI) Survey.** The first method in my data collection included collecting quantitative data. The quantitative aspects of the research include a survey, the Team Emotional Intelligence (TEI) Survey (Druskat & Wolff, 2001). The TEI Survey is a recognized team assessment instrument that measures how effectively a team's culture produces the emotional experience that team members need to collaborate and perform at a high level. The survey includes norms that guide the group’s interaction at an individual-level, at the group-level, and at the cross-boundary level (e.g., others outside the group). At each of these levels, norms create awareness of emotion in the group and regulate group behavior. Some of the norms measured include:

- Interpersonal Understanding
- Addressing Counterproductive Behavior
- Caring Behavior
- Team Self-Evaluation
- Creating Emotional Resources
- Creating an Affirmative Environment
- Proactive Problem Solving
- Organizational Understanding
- Building External Relationships

This survey collects participants’ perspectives about their experience as a member on their team. The instrument includes over 60 statements that describe teams in general. Participants were instructed to think specifically about their team and to indicate how much they believe the statement is true for their team by marking an answer ranging from completely disagree to completely agree. Some illustrative statements are: *We let*
members know if they are not meeting the needs of the team or We encourage each other to be optimistic when facing challenges.

There are no right or wrong answers on the questionnaire. The survey measures the way team members believe their team operates and is aimed at measuring the strength of the TEI norms as indicated by the strength of the behaviors identified by the questions. Peterson’s (2001) research on an early version of the instrument provides support for its reliability and validity. I chose to focus on the results of norms that I felt were most closely linked to the theoretical framework of this study. The norms included were team self-evaluation, creating emotional resources, creating an affirmative environment, and on the social capital outcome of creating debate. Other relevant norms might have included counter-productive behavior or proactive problem-solving. It is worth noting that the same teams were landing in the top and bottom, respectively, with other variations of norms as well.

In general, critics of research on team emotional intelligence raise issues about the differing constructs to define emotional intelligence, concerning that self-report measures are prone to faking, and commercializing the concept has accelerated claims that the results are difficult to replicate and validate (Landy, 2005). As I mentioned, I wanted to conduct my research at a team level unit of analysis, and there are limited validated instruments that measure group-level emotional competencies. Therefore I chose this survey as best available team EI instrument.

Semi-structured Interviews. The first qualitative data collected in the study included semi-structured interviews with the virtual team members. This style of interview is scheduled between researcher and interviewee, and it focuses on a specific
topic with a limited number of questions that are prepared in advance. This approach encourages rich detail in the interviewee’s responses (Rubin & Rubin, 2012). I created an interview protocol of questions organized around the research questions. The interview protocol included follow-up probes. My committee shared their thought leadership in the creation of the interview protocol. In addition, I conducted a pilot interview with two friends to help me refine the order of the questions and practice asking the questions and the probes. Some of the questions included asking about the team makeup, how the team communicates with each other, perceptions of team climate, and examples of differences the team encountered and how the situations were handled. The interview protocol is in Appendix B.

I selected teams to interview based on the results from the TEI survey. As the team results were stripped of any identifying features other than a coding scheme, I was able to provide the coding scheme and key to a third party, who pulled teams from the bottom and top scoring teams. Once I had the list of teams, I was blind to how each team scored while I was conducting the interviews. Likewise, the participants interviewed did not know the results of their teams’ TEI results. In selecting team members to interview, I knew I wanted some managers, and I also wanted a mix of gender diversity. Therefore, I selected managers from every other team on the list. Then, I selected the rest of the participants randomly and was satisfied with the gender balance because it was balanced between men and women. In total, I interviewed five managers and 17 team members for a total of 22 interviews. Distribution between high and low teams was 12 high interviews and 10 low interviews. This provided a perspectival view of the teams. I contacted each person by telephone and asked if they would be willing to participate in an interview. All
requests received an affirmative response. The interviews were scheduled for one hour and were conducted in person if possible. I had the good timing that this phase of data collection took place during a company face-to-face meeting that occurs once a year, so I was able to conduct about half the interviews in person. Due to time constraints, the remaining interviews were conducted over the telephone. Confidentiality safeguards were explained to study participant at the start of the interview. For example, the use of pseudonyms and disguising any noticeable factors such as brands, products, or names was explained. I also asked the participants for permission to record the interviews, and all agreed to this request. The recordings were transcribed verbatim by a professional transcription service.

**Ethnographic observation.** The second qualitative research method included an ethnographic approach that included observation of team meetings and interactions, field notes, and memos. I began data collection through ethnographic observation of four of the lowest and highest scoring teams on the TEI for one month. For a sample of virtual teams, ethnographic observation included participating on virtual team meetings and participation in group chats over text. Ethnography is the study of groups and people as they go about their daily lives (Hammersley & Atkinson, 2007). Conducting ethnographic research includes the researcher getting into the setting and writing in a systematic way what is observed and experienced (Emerson, Fretz, & Shaw, 2011). Through observation, an ethnographer comes to know a culture, and the field notes in written text portray the culture (Schwandt, 2015). This is not a passive observation, and I needed to establish rapport so that the participants would conduct business as usual during the observation (Bernard & Ryan, 2010). The rationale for this approach was to
observe and interpret what happens during virtual team interactions. Schein (1996) emphasized that understanding grows when concepts are explored through concrete observations of real behavior in real organizations. Due to the nature of the study on their virtualness, observations consisted of participating on group phone calls and group texts across four of the virtual teams.

As I mentioned, I learned that the team meetings were not happening as frequently as the study timeline allowed. However, I also learned that there were daily interactions through a group text. For this reason, I modified my ethnographic observation from team meetings to observing and saving copies of the group chats. The teams provided me access to their group chats for a period ranging from two days to two weeks, allowing me to interact and observe with team members in their regular interactions. I examined chat sequences from four teams. I was blind to the teams’ scores on the TEI survey during this phase of data collection.

The intent of field notes is to represent the social world of the study participants. Without recording observations, there is no data, so field notes are the notes taken during the observation or shortly thereafter. The process of writing field notes helps the researcher make sense of and understand what has been observed. Strategies adopted to build my ability to write detailed notes and depictions of scenes included reading ethnographic studies to see what actual field notes should look like. Olivos and Kaminstein (2016) stated that “observing is a deliberate act, it involves concentration, attention, focus, and categorization” (p1). To understand the art of observing, Olivos and Kaminstein (2016) recommend that graduate students need to 1) adopt a position as a
learner, 2) recognize the importance of observational skills, and 3) practice the art of observation.

A common critique of this method is that observation as a data gathering technique is subjective and unreliable due to the nature of human perception. The analogy about the fault in this technique is that witnesses of the same traffic accident have different accounts of the situation. However, a counter-argument made by Merrimack (2009) is that the traffic accident observers were not planning to systematically observe the accident and neither were they trained in observational techniques. Training and mental preparation are important in becoming a good observer, as they are in becoming a good interviewer (Wolcott 1992).

**Iteration of method choices.** During my early interviews, participants spoke about utilizing web-based group chat applications as a frequent way they interact with each other. I was surprised in these interviews by their frequent descriptions of sharing and communicating through group apps, because this is not a technology that is widely used by those who work “at headquarters.” Although I personally use group texts for some interactions with family members or sports teams scheduling, I have not used this in the workplace. It was also not a topic I found frequently covered in the literature on virtual teams in the framework of how it helps or hinders team culture and the handling of differences. It was with this early insight from the emerging data collection and analysis that I modified my research design to include data collection of some of the interactions over group texts. This decision was made in consultation with my chair and committee. I also learned that some of the teams were not having regular team meetings
due to focused efforts on an internal priority during the data collection phase that was having team members dedicate more time to non-team related projects.

Due to the sporadic scheduling of team meetings and learning about the group chat interactions, I iterated the research design to observe fewer team meetings to capture ethnographic observations with field notes and added some group chat observation into the data collection and analysis plan. In total, I observed four virtual teams’ meetings and took part in three teams’ group chats.

**Participants**

In this section, I describe my participant selection strategy, sample size, criteria for selecting participants, and participant recruitment approach. I conclude with a description of the personal characteristics of the final participant pool.

**Participant Selection Strategy.** Previously, I described my intent to conduct the research with virtual teams in organization settings. I chose a convenience sample, which is a nonprobability sample used for convenience or proximity (Patton, 2015). One benefit of convenience sampling includes availability of participants, whereas the challenges include potential for sampling error and difficulty in generalizing conclusions (Patton, 2015). For this study, I used my personal and professional network to contact organizations about possible participation. I discussed participation with five different organizations, and ultimately two agreed to participate in the study with the appropriate safeguards, including IRB approval, notice to employees, informed consent, and ability to opt out. These organizations were contacted primarily for ease of access to a convenience sample, and sites are frequently chosen for this practical reason (Rubin & Rubin, 2012).
The organizations were asked to identify their virtual teams to participate in this research.

Teams participating in the study met the following criteria:

1. Work Based Team
2. Between 5 and 10 members preferred
3. Team has regular interactions and communications with each other (e.g., 2x per month)
4. At least 1/3 of the team members work virtually, using technology to interact with each other on a regular basis
5. Members agree to participate in the study
6. Nice to have: global representation

The above criteria enabled me to conduct the research on work-based teams who work virtually and interact with each other through technologies on a regular basis. The criteria ensured that my research participants reflect the intended population for the study.

The first organization that agreed to participate is also where I work. It is a global enterprise with core competencies in the life science fields of health care and agriculture. As an innovation company, it sets trends in research-intensive areas, and its products and services are designed to benefit people and improve their quality of life. There were three divisions within this organization that agreed to participate. I attended leadership team meetings for each of the divisions to explain the purpose of the research and request access to their teams. Thirty two of the 34 participating teams came from this organization.

The second organization is a member-owned insurance program that provides coverage and claims support. I was introduced to this organization from a colleague in the PennCLO program. I was introduced to some team leaders over email and exchanged study recruitment information, and they identified two teams to participate. Both the first
and second organizations agreed to participate in the study, and their virtual teams met
the criteria outlined above. The remaining three organizations that had indicated interest
in participating represented the consumer goods, insurance, and engineering industries.
However, due to low levels of willingness during the team level recruitment efforts, these
three organizations ultimately did not participate in the study. As participation was
voluntary, I simply thanked my contacts at these organizations for their consideration.

**Participant Recruitment.** Participant teams from the sponsoring organizations
were provided a study information sheet. Informed consent was communicated and
verified during all data collection periods. I also received permission from the head of
Human Resources and a Compliance officer from one organization and from a Chief
Organization officer at the second organization. Copies of the request to participate in the
survey, the request to participate in the interview, the request to observe the team
meeting(s), the study information sheet, and the informed consent form were provided in
the IRB submission for this study. Copies are included in the appendix.

**Participant Demographics**

In total, 34 teams ranging in size from 4 to 11 virtual team members were invited
to participate in the survey. Two teams came from the insurance industry. Thirty-two
teams work in the healthcare industry. Of the 34 teams invited to participate, 31 of the
teams had greater than 50% participation for the survey. These 31 teams were included in
the analysis of the results. The three teams with less than 50% member participation in
the survey were discarded from the study due to lack of sufficient data. Table 1 illustrates
the team participation rates as well as which teams had at least 50% or more participation
in the TEI. Thirty-one teams were included in quantitative data analysis. Teams with fewer than 50% participation were removed from the analysis.
Table 2. *Participation rates for TEI surveys*

<table>
<thead>
<tr>
<th>Team Code</th>
<th>Organization</th>
<th>Surveys Completed</th>
<th>Team Participation</th>
<th>Greater than 50% Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>6</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>2</td>
<td>50.00%</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>2</td>
<td>25.00%</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>B</td>
<td>3</td>
<td>66.67%</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
<td>6</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
<td>11</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
<td>7</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
<td>9</td>
<td>75.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
<td>11</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>B</td>
<td>5</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>11</td>
<td>B</td>
<td>3</td>
<td>75.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td>B</td>
<td>10</td>
<td>90.91%</td>
<td>Yes</td>
</tr>
<tr>
<td>13</td>
<td>B</td>
<td>9</td>
<td>81.82%</td>
<td>Yes</td>
</tr>
<tr>
<td>14</td>
<td>B</td>
<td>8</td>
<td>88.89%</td>
<td>Yes</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
<td>6</td>
<td>75.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>16</td>
<td>B</td>
<td>5</td>
<td>50.00%</td>
<td>No</td>
</tr>
<tr>
<td>17</td>
<td>B</td>
<td>10</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>18</td>
<td>B</td>
<td>6</td>
<td>66.67%</td>
<td>Yes</td>
</tr>
<tr>
<td>19</td>
<td>B</td>
<td>7</td>
<td>70.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>20</td>
<td>B</td>
<td>6</td>
<td>66.67%</td>
<td>Yes</td>
</tr>
<tr>
<td>21</td>
<td>B</td>
<td>8</td>
<td>80.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>22</td>
<td>B</td>
<td>6</td>
<td>60.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>23</td>
<td>B</td>
<td>6</td>
<td>75.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>24</td>
<td>B</td>
<td>6</td>
<td>66.67%</td>
<td>Yes</td>
</tr>
<tr>
<td>25</td>
<td>B</td>
<td>8</td>
<td>80.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>26</td>
<td>B</td>
<td>7</td>
<td>77.78%</td>
<td>Yes</td>
</tr>
<tr>
<td>27</td>
<td>B</td>
<td>5</td>
<td>55.56%</td>
<td>Yes</td>
</tr>
<tr>
<td>28</td>
<td>B</td>
<td>9</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>29</td>
<td>B</td>
<td>8</td>
<td>88.89%</td>
<td>Yes</td>
</tr>
<tr>
<td>30</td>
<td>B</td>
<td>9</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>31</td>
<td>B</td>
<td>7</td>
<td>77.78%</td>
<td>Yes</td>
</tr>
<tr>
<td>32</td>
<td>B</td>
<td>8</td>
<td>88.89%</td>
<td>Yes</td>
</tr>
<tr>
<td>33</td>
<td>B</td>
<td>9</td>
<td>100.00%</td>
<td>Yes</td>
</tr>
<tr>
<td>34</td>
<td>B</td>
<td>7</td>
<td>70.00%</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Semi-structured interview participants. Twenty-two participants across 10 teams were interviewed. Demographics of participants interviewed were 54% female and 45% male. Also, five of the 22 interviewed were team managers, and 17 participants were individual contributors.

Ethnographic observations participants. Four teams participated in ethnographic observation and field notes in which I observed virtual team meetings and group chats of four participating teams.

Data Collection Sequencing. I chose to administer the TEI survey first so that I could leverage the results to determine which teams to include in the semi-structured interviews and ethnographic observation samples. After recruiting teams, I provided the emails of members of each of the 34 teams to Dr. Steven Wolff, who distributed the surveys through an email link. Participants completed the survey online. Participants received two email reminders to complete the survey. Additionally, sponsors from the respective divisions send communications to their teams endorsing participation and reiterating the voluntary nature of participation.

Data Analysis Plan

Data analysis takes the raw data from field notes summaries, interviews, and survey instruments gathered during data collection to identify clear and convincing answers to the research questions (Rubin & Rubin, 2012). Next, I will share the analysis I conducted to make sense out of the data collected.

Quantitative data analysis. The primary method of analysis for this study was designed to focus on a deep understanding of the qualitative data. However, I also
analyzed quantitative data to aid in the selection of teams to interview and observe, as well as to add further depth to my understanding of the qualitative data to answer the study’s research questions. I wanted to understand the teams’ perceptions of their team climate.

The quantitative data analysis consisted of analyzing means, standard deviations, and Cronbach alphas for the Team Emotional Intelligence variables that were assessed for the various teams. A Pearson correlation was run to test for a relationship between creating an affirmative environment, creating debate, team self-evaluation, and creating emotion resources. Additionally, T-Tests for Creating Affirmative Environment, Creating Debate, Team Self-Evaluation, and Creating Emotion Response were run to compare high and low scoring teams. A Spearman correlation was run to test whether there was a relationship between creating an affirmative environment, creating debate, team self-evaluation, and creating emotion resources as it pertains to frequency of team meetings. Chi squares were run to test for significance between the higher and lower scoring teams with regards to the number of times I coded variables in their interview transcripts.

**Qualitative Interviews Data Analysis.** First, the interviews were recorded, transcribed verbatim, and summarized using contact summary sheets (Ravitch & Carl, 2016). Second, I read through the interview transcripts at least three times, taking notes of ideas that resonated with me. Third, I created a code book using some established codes guided by EI competencies and the literature, as well as looked for codes that emerge from the review of the data. Scholars describe these two concepts as inductive and deductive reasoning, respectively. Fourth, I coded the transcripts in Dedoose software, which allowed me to mark the transcribed interviews for excerpts that contain
relevant examples, concepts, themes, and information to answer the research question. By coding in Dedoose software, I created data files of excerpts marked with the same code. For example, I looked for times the participant described “trust.” I also reviewed concepts that surfaced through the use of metaphors. This process was iterative, as I conducted multiple analysis sessions. On my first pass, I identified approximately 70 codes, as I was staying very true to the language used by the participants. As I immersed further in the data through multiple readings, coding sessions, writing analytical memos, and dialogic engagement, I continuously refined the codes by linking similar thoughts and terms together to arrive at 10 codes and about 40 sub-codes. This experience was captured by writing analytic memos, which also served as a useful exercise in thematic analysis of the interviews. I remained blind to the teams’ results from the survey until I completed the coding. Once I was satisfied with the coding, I continued to analyze the data by looking for patterns and categories to create a complete picture of themes and findings from the interviews.

**Ethnographic observation field notes data analysis.** Miles, Huberman, and Saldana (2014) described the ongoing nature of analysis using an ethnographic method:

> Ethnographic methods tend toward the descriptive. The analysis task is to reach across data sources and condense them. Of course, in deciding what to leave in, what to highlight, what to report first and last, what to interconnect, and what main ideas are important, analytic choices are being made constantly. (p. 8)

To prepare myself to analyze ethnographic data, I read Hammersley and Atkinson's (2007) book, Ethnography, and *The Journal of Organizational Ethnography*, which were important sources to inform my understanding of the method and analytics. Additionally,
I prepared summary memos after each observation and reviewed them critically to see what types of information I focused on and what types of information I might be leaving out of my narrative. Most importantly, I practiced taking ethnographic field notes during casual observations at a Starbucks and also in a virtual team meeting. My committee member, Dana Kaminstein, reviewed and provided constructive feedback on my practice efforts.

As my ethnographic analysis for this study included text-based analysis, I converted the texts to a word file and noted the times, participants, and comments. This data was coded to describe communications such as “friendly banter” or “information sharing.”

**Use of self.** Use of self as an instrument in organizational diagnosis is relevant to the data analysis for this study. McCormick and White (2000) define use of self as the “emotional, perceptual, and cognitive processes that make up a person, and using the self as an instrument means becoming aware of using the emotional, perceptual, and cognitive processes” (p.50). I used analytical notes and dialogic engagement to become aware of my own feelings and thoughts throughout the data collection and data analysis process. This impacted my analysis, because by writing out my interpretations, questions, and ideas, I began to make sense of the data and identify what might be going on beneath the surface. This use of self relates to the concept of positionality, which refers to my role as a researcher and my identity in the context and setting of the research (Ravitch & Carl, 2016). In this study, I knew 32 of the teams due to the convenience sampling. As it relates to my analysis, I had perspective about the business conditions and staffing decisions that I may not have known if this study were conducted with another
population. With this awareness, I had to be careful to remain focused on the data collected rather than my own assumptions and perspectives about situations described by the participants. Another way this aided my analysis is that I reflected on the choices I made in the study design, data collection, and analytical strategies. For example, by reflecting on these components, I paid attention to issues of interpretive authority in an effort to minimize its imposition to the extent possible (Carl & Ravitch, 2016). The concept of interpretive authority is about how the researcher interprets and translates people’s lived experiences and perspectives. My attempts to overcome this issue involved including raw data in the results chapter while contextualizing the data for the reader, engaging in reflexivity exercises such as dialogic engagement, and recognizing that my interpretations are my interpretations with evidence-based support in how I arrived at the primary findings.

**Iterative nature of data analysis.** The data collection and data analysis phase happened, in parts, concurrently. An accurate and detailed description is a sufficient goal for analysis (Rubin & Rubin, 2012). To support my efforts to understand what the data means, I implemented several practices for effective data analysis, including pre-coding memos, immersive engagement, multiple data readings, coding, peer data analysis review, and ongoing reflection (Ravitch & Carl, 2016). These practices also supported validity and rigor, which are explained in additional detail in the following section.

**Validity**

Validity is about the ways researchers demonstrate that their findings are rigorous and show fidelity to the participants’ experience (Ravitch & Carl, 2017). Maxwell (1992)
identified five categories for qualitative validity. These include descriptive validity, meaning that the data is accurate; interpretive validity, defined as accurate meaning attributed to the data; theoretical validity, which is about explaining the concepts studied and existing relationships between the concepts; evaluative ability, which considers if the research describes the data without judgment; and generalizability, described as answering the question if the findings would exist with different data.

To demonstrate the rigor needed to answer yes to all these issues, I implemented several practices. First, I engaged in dialogic engagement. I am grateful to Patti Adelman for support and thought-partnership. Patti was writing her dissertation as well, and we established a weekly phone call to discuss progress, challenges, opportunities, and related questions. Additionally, I spoke to my committee members during my review, as well as with some of the study participants. Second, I identified a professional resource to transcribe the data. Following her transcription, I read the transcript while listening to the audiotape carefully to check for accuracy. This also was one of the first readings of the transcripts. Additionally, I worked with a person with a doctorate in statistics to support my quantitative analysis efforts. Third, I maintained a researcher journal. During times of reflection, I thought about the themes, consistencies, inconsistencies, and areas of uncertainty. I also reflected on what I saw across the data, what stood out to me and why, how the data mapped onto the conceptual and theoretical frameworks, and additional literature that should be reviewed. During subsequent data readings, I looked for notable quotes that indicated concepts I wanted to explore more systematically or suggested themes I wanted to test (Rubin & Rubin, 2012). These quotes were kept in a journal. I also read the data by interview, by team, as a collective, and in chronological order.
Fourth, I applied immersive engagement to intentionally and critically engage with the data (Ravitch & Carl, 2016). For example, I conducted multiple readings of the data, including a first unstructured reading and then subsequent readings with analytic goals. Finally, I generated and validated emerging themes with advisors, peer reviewers, and study participants who offered to stay involved in the process.

One way to enhance the validity of a study is to incorporate triangulation. Triangulation requires strategically collecting different sources of data and perspectives in order to look for themes or categories (Patton, 2001). Jick (1979) stated that triangulation provides a complete and holistic view to the study by collecting data and drawing conclusions that may be missed if only using a single method. This study included three methods in data collection:

1) Team Emotional Intelligence (TEI) Survey (Druskat & Wolff, 2001)
2) Interviews with team members and team management
3) Ethnographic observation of in-tact virtual teams with extensive field notes. Originally this was planned to focus on virtual team meetings, but it evolved to focusing on group chat interactions.

The interviews added qualitative data to the observation and explored team members’ perceptions on differences. The team composite of TEI provided data on a team level of emotional intelligence that was compared to how EI was observed and perceived over the course of several weeks.

Ethics

As a researcher, I am grateful to the participants for their trust and commitment to this process. Before addressing limitations with the study, the role of ethics throughout this process is worthy of discussion. Appropriate participation in IRB approval has been
followed. I also discussed the research with the Chief Compliance Officer at one of the larger research sites to ensure there was no conflict of interest or issues with the study from the organization’s point of view, as this site is also my employer. Informed consent forms were provided to participants that outlined the study and the nature of volunteering as well as the opportunity to withdraw from the study. I also reiterrated this information at the start of the interview and asked if participants had any questions about the process. Additionally, I incorporated several tactics to ensure an ethical and valid study. The practice of reflexivity is an important component for validity in qualitative research (Maxwell, 2013). Reflexivity is an active and continuous assessment of identity, positionality, and partialities as way to surface potential blind spots and preferences (Ravitch & Carl, 2016). I included several techniques for reflexivity, which were weekly dialogic engagements with my peer also conducting a dissertation study and keeping a researcher journal to capture researcher reflexivity. Reflexivity is an essential factor in all stages of the study as a strategy to ensure ethical research.

Conclusion

In summary, this chapter has discussed the study’s research methodology. A mixed methods research approach was chosen to examine the role of team emotional intelligence on how virtual teams handle differences. The study included 294 research participants across 31 virtual teams representing two industries. The data were collected using the Team Emotional Intelligence Instrument (Druskat & Wolff, 2001), 22 semi-structured qualitative interviews that were recorded and transcribed, and ethnographic observation of four virtual teams’ meetings and group chat interactions. Both statistical
and thematic analysis was used to identify patterns, trends, and findings across the research data. Chapter 4 provides the results and findings from this study.
CHAPTER 4: RESULTS

The previous chapter described the research methodology for this study. This chapter examines the results of this study which was designed to answer the research question: How does team emotional intelligence influence how virtual teams handle differences? This chapter is organized into four main sections. First, I provide the results of the team emotional intelligence survey. In this section, I show results of the TEI instrument including statistical analysis on the teams overall and between higher and lower scoring teams. Second, I set the context for the major findings by framing the types of differences virtual teams in this study described during the semi-structured interviews including individual, group, and environmental differences. Next, I present two major finding separately by showing the results and exploring the key themes I have integrated through careful analysis of the quantitative and qualitative data. The first finding contrasts the strategies employed by teams with higher team emotional intelligence to those virtual teams with lower team emotional intelligence. The second finding focuses on the factors that lead to a collaborative and solutions focused approach to conflict management. Lastly, I present additional insights that emerged from the data collection on matters that influence the handling of differences in virtual teams that are unrelated to team emotional intelligence but are relevant to the central research goal of this study.

Throughout the sections in this chapter, I provide results from the statistical analysis, participant quotes captured from the interviews, and ethnographic field notes to provide fuller insights into the findings. As mentioned previously, the terms differences and conflicts are used interchangeably throughout this chapter.
This chapter does not include interpretation of the data. In this chapter, data are summarized, and I report the data that emerged as a result of the qualitative and quantitative data collection methods. Chapter 5 provides my researcher perspective on the results and includes my formal interpretation of the meaning of these results in relation to the study’s research questions and primary goals.

**Team Emotional Intelligence Survey Results**

This mixed-methods study was designed to investigate how team emotional intelligence influences how teams handle differences in a virtual work environment. As described in the previous chapters, data was collected from 234 participants representing 34 virtual teams who were invited to take the Team Emotional Intelligence Survey (Druskat & Wolff, 2001). This sample provided a range of team emotional intelligence scores across the thirty four teams. However, three teams were removed from the data set because fewer than 50% of the members completed the survey, which made the results for their teams less reliable. Ten of the remaining thirty one teams were used in the qualitative phase of data collection. The teams that were selected for this phase of data collection were either higher or lower scoring teams on the survey in comparison to the others based on four of the measured variables related to the research question. I was blind to which team fell into which category until late in the data analysis phase to minimize researcher bias in the data collection and data analysis phase. For the ten teams that moved into qualitative data collection, I conducted 22 semi-structured interviews with at least two members from each team. I also took ethnographic field notes during
team meetings and obtained access to team group chats on web-supported applications. These data were also coded.

As part of my analysis, the following statistics were run to further analyze the quantitative data: means and standard deviations for team emotional intelligence variables; Pearson Correlation for measure for a relationship between creating affirmative environment, creating debate, team self-evaluation, and creating emotional resources; and T-Tests for creating affirmative environment, creating debate, team self-evaluation, and creating emotional resources by High/Low Teams.

Table 3 identifies the means, standard deviations, and Cronbach alphas for the Emotional Intelligence variables that were assessed for the various teams. The responses were measured on a five point Likert scale, and the results are below. The highest scores were realized for Team Identity, Roles and Responsibilities, and Caring Behavior, with means of 4.32, 4.29, and 4.27, respectively. The variables with the lowest means were Meeting Procedures (3.62), Creating Emotional Resources (3.54), and Addressing Counterproductive Behavior (3.25). The variables that will be used for additional analysis are Creating Affirmative Environment (CE), Creating Debate (CD), Team Self-Evaluation (TS), and Creating Emotion Resources (CR). These variables are denoted with an asterisk. The four variables had mean scores of 4.10 (CE), 3.87 (CD), 3.78 (TS), and 3.54 (CR). I selected these four variables due to relevance to the study, as they pertain to the research question, and these were used in all further analyses. The variables were assessed for reliability, and all of the variables, with the exception of meeting procedures (0.62), were found to have a Cronbach Alpha of 0.70 or higher. According to Tavakol and Dennick (2011), Cronbach’s alpha is the most widely used
objective measure of reliability. Though the number of test items, item interrelatedness, and dimensionality affect the value of alpha, an acceptable Cronbach alpha coefficient range is between 0.70 and 0.95.

Table 3. *Means, Standard Deviations, and Cronbach Alphas for EI Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Identity</td>
<td>4.32</td>
<td>0.67</td>
<td>0.82</td>
</tr>
<tr>
<td>Roles and Responsibilities</td>
<td>4.29</td>
<td>0.63</td>
<td>0.79</td>
</tr>
<tr>
<td>Caring Behavior</td>
<td>4.27</td>
<td>0.63</td>
<td>0.87</td>
</tr>
<tr>
<td>Building External Relationships</td>
<td>4.20</td>
<td>0.57</td>
<td>0.84</td>
</tr>
<tr>
<td>Innovation</td>
<td>4.19</td>
<td>0.69</td>
<td>0.89</td>
</tr>
<tr>
<td>Goals and Objectives</td>
<td>4.13</td>
<td>0.59</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Creating Affirmative Environment</strong>*</td>
<td>4.10</td>
<td>0.62</td>
<td>0.82</td>
</tr>
<tr>
<td>Proactive Problem Solving</td>
<td>4.03</td>
<td>0.66</td>
<td>0.87</td>
</tr>
<tr>
<td>Interpersonal Understanding</td>
<td>4.03</td>
<td>0.61</td>
<td>0.82</td>
</tr>
<tr>
<td>Safety and Risk Taking</td>
<td>3.94</td>
<td>0.76</td>
<td>0.84</td>
</tr>
<tr>
<td>Organizational Understanding</td>
<td>3.88</td>
<td>0.59</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Creating Debate</strong>*</td>
<td>3.87</td>
<td>0.66</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Team Self-Evaluation</strong>*</td>
<td>3.78</td>
<td>0.62</td>
<td>0.75</td>
</tr>
<tr>
<td>Meeting Procedures</td>
<td>3.62</td>
<td>0.70</td>
<td>0.62</td>
</tr>
<tr>
<td><strong>Creating Emotion Resources</strong>*</td>
<td>3.54</td>
<td>0.70</td>
<td>0.80</td>
</tr>
<tr>
<td>Addressing Counterproductive Behavior</td>
<td>3.25</td>
<td>0.75</td>
<td>0.81</td>
</tr>
</tbody>
</table>

* Denotes chosen variables for analysis
Table 4 shows a Pearson correlation was run to test for a relationship between creating affirmative environment, creating debate, team self-evaluation, and creating emotion resources. All of the variables correlated at p is less than or equal to 0.01. The correlations were all moderate, with the strongest relationship (0.684) between team self-evaluation and creating emotional resources. The weakest correlation was between creating emotional resources and creating affirmative environment at 0.500.

Table 4. *Pearson Correlation: Creating Affirmative Environment, Creating Debate, Team Self-Evaluation, Creating Emotional Resources*

<table>
<thead>
<tr>
<th></th>
<th>CE</th>
<th>CD</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Debate</td>
<td>0.569**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Self-Evaluation</td>
<td>0.602**</td>
<td>0.613**</td>
<td></td>
</tr>
<tr>
<td>Creating Emotion Response</td>
<td>0.500**</td>
<td>0.633**</td>
<td>0.684**</td>
</tr>
</tbody>
</table>

CA-Creating Affirmative Environment, CD-Creating Debate, TSE-Team Self-Evaluation

* Correlation is significant at the 0.05 level (1-tailed).
**Correlation is significant at the 0.01 level (2-tailed)

Table 5 displays each team and their overall score based on the selected four variables. The team means ranged from a high score of 4.72 to a low score of 3.41. Of the 31 teams, 21 teams scored in the four range, or agree, and only nine teams that had scores in the three range or neutral. I chose a sample of five teams from the top of the agree range and five teams from the bottom of the neutral range to interview. The five teams chosen from the four category (agree) were given the designation of high scoring teams, and the five teams selected from the neutral category were given the designation of a low scoring team. To protect the anonymity of the teams that were chosen to participate in interviews,
they will not be identified individually in future analyses but will be designated in two
groups as high teams and low teams.

Table 5. Means and Standard Deviations for Overall Team Scores

<table>
<thead>
<tr>
<th>Team Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>4.72</td>
<td>0.42</td>
</tr>
<tr>
<td>H2</td>
<td>4.68</td>
<td>0.37</td>
</tr>
<tr>
<td>H3</td>
<td>4.47</td>
<td>0.34</td>
</tr>
<tr>
<td>H4</td>
<td>4.44</td>
<td>0.42</td>
</tr>
<tr>
<td>H5</td>
<td>4.40</td>
<td>0.50</td>
</tr>
<tr>
<td>H6</td>
<td>4.30</td>
<td>0.45</td>
</tr>
<tr>
<td>H7</td>
<td>4.30</td>
<td>0.65</td>
</tr>
<tr>
<td>H8</td>
<td>4.21</td>
<td>0.44</td>
</tr>
<tr>
<td>H9</td>
<td>4.21</td>
<td>0.62</td>
</tr>
<tr>
<td>H10</td>
<td>4.21</td>
<td>0.40</td>
</tr>
<tr>
<td>H11</td>
<td>4.21</td>
<td>0.29</td>
</tr>
<tr>
<td>H12</td>
<td>4.21</td>
<td>0.10</td>
</tr>
<tr>
<td>H13</td>
<td>4.19</td>
<td>0.43</td>
</tr>
<tr>
<td>H14</td>
<td>4.15</td>
<td>0.45</td>
</tr>
<tr>
<td>H15</td>
<td>4.13</td>
<td>0.33</td>
</tr>
<tr>
<td>H16</td>
<td>4.09</td>
<td>0.50</td>
</tr>
<tr>
<td>H17</td>
<td>4.07</td>
<td>0.19</td>
</tr>
<tr>
<td>Team Number</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>-------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>H18</td>
<td>4.04</td>
<td>0.74</td>
</tr>
<tr>
<td>H19</td>
<td>4.03</td>
<td>0.56</td>
</tr>
<tr>
<td>H20</td>
<td>4.00</td>
<td>0.96</td>
</tr>
<tr>
<td>H21</td>
<td>4.00</td>
<td>1.06</td>
</tr>
<tr>
<td>L1</td>
<td>3.92</td>
<td>0.26</td>
</tr>
<tr>
<td>L2</td>
<td>3.92</td>
<td>0.75</td>
</tr>
<tr>
<td>L3</td>
<td>3.88</td>
<td>0.96</td>
</tr>
<tr>
<td>L4</td>
<td>3.82</td>
<td>0.35</td>
</tr>
<tr>
<td>L5</td>
<td>3.79</td>
<td>0.40</td>
</tr>
<tr>
<td>L6</td>
<td>3.68</td>
<td>0.61</td>
</tr>
<tr>
<td>L7</td>
<td>3.61</td>
<td>0.91</td>
</tr>
<tr>
<td>L8</td>
<td>3.58</td>
<td>0.52</td>
</tr>
<tr>
<td>L9</td>
<td>3.50</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Next, Table 6 shows results from a t-test that was run to test for significant differences for the four EI scores among those who were designated as a high scoring team and those designated as a low scoring team. Five teams from each grouping were chosen for interviews and subsequent analysis. The means of the four EI variables demonstrated varied responses amongst the groups. The high teams ranged from a 4.58 for creating debate to a low of 3.98 for creating affirmative environment. The low teams had a high
of 3.71 for creating debate and a low of 3.27 for creating affirmative environment. T-tests revealed that there was a significant difference amongst the groups for all four variables analyzed. Essentially this means that if I repeated the surveys with another population of participants I would have a good chance of repeating the results. Creating debate was the top variable for each group and included questions from the TEI Survey Instrument such as “We encourage members to speak up when they disagree with one another” and “We encourage members to share their point of view” (Druskat & Wolff, 2001). Conversely, creating an affirmative environment included “we encourage each other to be optimistic when facing challenges” and “when a setback disrupts our progress, we express optimism about overcoming it” (Druskat & Wolff, 2001).


<table>
<thead>
<tr>
<th>Variable</th>
<th>High Teams</th>
<th>Low Teams</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Debate</td>
<td>4.58</td>
<td>0.43</td>
<td>3.71</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>5.622</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Emotion Response*</td>
<td>4.33</td>
<td>0.56</td>
<td>3.46</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>4.367</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Self-Evaluation*</td>
<td>4.21</td>
<td>0.60</td>
<td>3.56</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>4.631</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Affirmative Envir*</td>
<td>3.98</td>
<td>0.68</td>
<td>3.27</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>6.709</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*T-test showed significance with a p value at .05*

Table 7 reflects the t-tests that were run to identify if significant differences exist between the high/low teams amongst all of the EI variables that the survey evaluated. All of the variables analyzed showed significance, as evidenced by the chart below. The means for the high teams have a high score of 4.72 for team identity, with only two variables, meeting procedures (3.94) and address counterproductive behavior (3.81)
scoring below four. The low teams had scores between 3.94 for roles and responsibility and 3.01 for address counterproductive behavior.

Table 7. *T*-Tests for Variables in TEI survey by High/Low Teams

<table>
<thead>
<tr>
<th>Variable</th>
<th>High Teams</th>
<th>Low Teams</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Team Identity*</td>
<td>4.72</td>
<td>0.40</td>
<td>3.89</td>
</tr>
<tr>
<td>Caring*</td>
<td>4.64</td>
<td>0.44</td>
<td>3.69</td>
</tr>
<tr>
<td>Roles and Responsibility*</td>
<td>4.62</td>
<td>0.57</td>
<td>3.94</td>
</tr>
<tr>
<td>Innovations*</td>
<td>4.54</td>
<td>0.50</td>
<td>3.87</td>
</tr>
<tr>
<td>Proactive Problem Solving*</td>
<td>4.49</td>
<td>0.51</td>
<td>3.63</td>
</tr>
<tr>
<td>Build External Relationships*</td>
<td>4.48</td>
<td>0.51</td>
<td>3.96</td>
</tr>
<tr>
<td>Goals and Objectives*</td>
<td>4.43</td>
<td>0.58</td>
<td>3.93</td>
</tr>
<tr>
<td>Safety and Risk*</td>
<td>4.40</td>
<td>0.57</td>
<td>3.41</td>
</tr>
<tr>
<td>Interpersonal Understanding*</td>
<td>4.30</td>
<td>0.56</td>
<td>3.56</td>
</tr>
<tr>
<td>Organizational Understanding*</td>
<td>4.24</td>
<td>0.49</td>
<td>3.68</td>
</tr>
<tr>
<td>Meeting Procedures*</td>
<td>3.94</td>
<td>0.65</td>
<td>3.33</td>
</tr>
<tr>
<td>Address Counterproductive Beh*</td>
<td>3.81</td>
<td>0.64</td>
<td>3.01</td>
</tr>
</tbody>
</table>

*T-test showed significance with a p value at .05

Several key results emerged as a result of the statistical analyses performed on the Team Emotional Intelligence Data. The following briefly summarizes these results. First, means and standard deviations provided information on the average and range of scores of variables that were assessed in the instrument. In selecting the teams to participate, I ranked the teams based on their average scores for the variables of Creating Affirmative Environment (CE), Creating Debate (CD), Team Self-Evaluation (TS), and Creating
Emotion Resources (CR). I focused the analysis on these variables. Second, Pearson correlation testing showed the strength of a linear association between two variables. This analysis illustrated moderate relationships between all four variables tested, with the strongest association between team self-evaluation and creating emotional response. Third, a t-test was run to test for significant differences for the TEI variables between those who were designated as a high scoring team and those designated as a low scoring team. The survey results show variance in team emotional intelligence between the higher and lower teams. It is useful to have variance because from a given smaller sample set, more generalized conclusions need to be drawn, so it supports the findings that the virtual teams with higher or lower emotional intelligence scores may contrast in how they handle conflict. The qualitative results that follow further demonstrate the influence of team culture on how the virtual teams in the study handle conflicts and differences.

**Participant Perspectives of Differences**

To set the context for the results about how virtual teams handle differences, I first highlight how the study participants interpreted the concept of differences. During the interviews, I asked participants to describe what differences their team faced and what the word differences meant to them in the workplace. Examination of their responses led to four groupings, including individual differences, intra-group differences, inter-group differences, and environmental differences. I coded data as individual differences when participants interpreted the concept as characteristics that vary by person, such as personality, work style, and religious or cultural beliefs. I coded data as group differences when participants shared comments related to role clarity, expectations, or priorities
within their own team. Similarly, data was coded as group difference when participants shared comments related to the same items of role clarity, expectations, or priorities across different teams. I coded environmental differences when participants described nuances in local marketplaces, such as regulations, laws, and policies. It is worth noting that many participants in this study are in customer-facing roles, so they also frequently referenced different types of customers and customer needs. I grouped these differences with environmental differences, because often the customer interests were driven by economic and geographic factors.

Table 8 shows how participants described their interpretation of differences, as grouped into the four categories described above. I also indicate the percentage of participants who discussed each category. The types of differences were consistent between the high and low scoring teams, so the results combine input from the high and low scoring teams. Each person was counted if they mentioned it at least once.
Table 8: *How Participants Characterized their Understanding of Differences:*  

<table>
<thead>
<tr>
<th>Categories of differences</th>
<th>N=22</th>
<th>% participants references</th>
<th>Category examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual differences</td>
<td>20</td>
<td>91%</td>
<td>Approaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Communication frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Communication style</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Personality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Perspectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Previous experiences and roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Responsiveness</td>
</tr>
<tr>
<td>Group differences</td>
<td>18</td>
<td>82%</td>
<td>Role confusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lack of clarity with others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Disagree with management direction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Expectations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Responsibilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Priorities</td>
</tr>
<tr>
<td>Environmental differences</td>
<td>7</td>
<td>31%</td>
<td>Local marketplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Local regulations and laws</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Types of customers and customer needs</td>
</tr>
</tbody>
</table>

**Individual differences.** Twenty of the 22 (91%) participants described individual differences of the team members such as personality, work style, and demographic factors such as age, gender, and religion in their explanation of differences. Mannix and Neale (2005) described underlying attributes as factors that may typically include categories such as “education, skills and abilities, values and attitudes, tenure in the organization, functional background, personality differences, and sexual orientation” (p. 36), which aligns with the interpretation from team members. Some participants perceived differences as the unique personalities or the role that geographic culture has on their experience working on the team. In the following example, a participant from a lower scoring team described how the very different personalities coupled with regional
differences were influencing how the team was working together. In her discussion with me, she stated that the team had a lot of misunderstandings, and team members made snippy remarks to each other, due to their range of personalities. This situation escalated to a point that the manager brought in an outside consultant to conduct a workshop to help the team better understands their different styles and how to communicate effectively with each other.

Because the personalities and strengths are very different, so I think we definitely...each one of us brings a lot of value to the table in a very different way, that we have a very, you know...we have a couple realists. We have a couple optimists. We have a straight to the point type of personality, but then we have that type of personality that's a positive, and everything's [positive] and you know, people are from different states. Their mentalities are different and cultures are different. Even though we're all in the U.S., it's still very diverse and different in other states. So bringing all that to the table and figuring it out has been kind of interesting. (Participant #0524, personal communication, 2017)

Other participants described mix of company tenure and experience on the team and their perception of not tapping into the range of experiences. For example, one participant from a lower scoring team talked about the knowledge and insights of working in the organization for many years in contrast with the knowledge and insights a newer employee brings from another industry.

We have people that have been with the company for 20 plus years, and then we have people that have just started with the company months ago, and then I kind of fall in the middle, so I think we all have different areas of experience, different areas of context of how the company works as a whole, and I would say that I wouldn’t think we really use that to the best of our ability though at this point. (Participant #1217, personal communication, 2017)

**Group Differences.** Many participants also discussed examples of group and environmental differences, which will be discussed next. Eighteen of 22 (82%) participants made references to intra-group differences as part of their interpretation of
what differences meant to them. Intra-group differences refers to interpretations of different goals, objectives, priorities, and expectations within a team.

In the instance that follows, the participant was describing working with her team member to prepare a proposal for a customer. The early versions of the proposal she received from her co-worker “missed the mark,” and she believes it was because the co-worker approached the work with a different priority and understanding of who it was for as well as the ultimate objective. Participant #0725 stated, “So I mean, sometimes there's a difference in what they prioritize versus what we prioritize and what the true needs are for our customers and helping them understand what our customer needs are” (personal communication, 2017).

Some participants described two team members having different objectives and their experience that this leads to a feeling of working against each other.

And that is what I notice especially last year and this year as well is that with having such different objectives. We’re not trying… They’re trying to focus more on (X) and we're trying to focus on (Y) so it's drawing a lot of hostility at times. And that's something where (name), who I've been working with who's been doing a thing out here in the field, he's noticed the same things, he's like, "Wow, you know, it's not benefiting anyone because you could actually see people almost working against one another”. (Participant #1537, personal communication, 2017)

On the other hand, a team that demonstrated a higher team emotional intelligence score also experienced a situation with conflicting objectives. However, the respondent described an approach that was solutions focused, such as creating forums to work it out in tandem with the other team. Essentially, surfacing the feelings so they could take
action but taking action rather than get stuck. The results between high and low scoring teams will be more fully covered in the findings section that comes later.

One more category of differences was identified from the data. The last category of differences identified by participants is about environmental differences.

**Environmental Differences.** Seven of 22 (32%) participants referenced environmental differences as part of their description about what differences meant to them. I categorized topics related to the context of system in which work is being done. For example, different types of customers, state laws, and regulations may be considered environmental factors. Participants described the unique challenges that they faced when covering a large area of the country:

I think because we're regionally focused and it's a broad...we have half the United States from [reference to states], you know [industry] themes change around the country. So, what's an issue...[state 1] is, you know, has very different issues than [state 2], or [state 3] from [state 4] or [state 5] even from [state 6]. So you know, different parts of the country, different [team members] dealing with those challenges, you know, and they have to be creative on how to deal with this to make things happen.  (Participant #0729, personal communication, 2017)

Other participants highlighted the same issue of statewide distinctions and described its influence on team calls.

I guess because we are so spread out, there's so many different situations with [economic factor]. Especially with me being in [state], my [local regulation] is completely different from everybody in [state 2], so when we get on our conference calls and things like that, it makes it difficult because they have completely separate issues that I'm not having or vice versa. (Participant #3028, 2017, personal communication)

In this section, I introduced the types of differences study participant’s face in the context of their work. I categorized examples of personalities, working styles,
experiences, and communications frequency as individual differences. Instances of goal, role, expectation, and priority were categorized as group differences. Environmental differences captured the examples about local, regional, legal, and regulatory factors. In summary, data showed participants’ interpretations of differences were wide-ranging and are useful to establish the context for their work environment and as a setting for the findings on how the teams’ handled the differences. My formal discussion on the category will follow in Chapter 5.

The next sections will share results from the quantitative and qualitative analysis. This will be followed by the findings that emerged from the analysis.

**Results on the Handling of Differences Between High and Low Scoring Teams**

As a brief reminder, data analysis for this study included statistical analysis of quantitative data and pre-coding, coding, and thematic analysis of qualitative data, as described in Chapter 3. The process I used to conduct the coding was to apply inductive codes from the literature and deductive codes that emerged directly from the interviews. On my first pass, I identified approximately 70 codes, as I was working to stay true to the language used by the participants. As I immersed myself further in the data through multiple readings, coding sessions, writing analytical memos, and dialogic engagement, I continuously refined the codes by linking similar thoughts and terms together to arrive at 10 codes and about 40 sub-codes. The codes and sub-codes were examined by a process of thematic analysis (Miles, Huberman, & Saldaña, 2014). From this, patterns emerged, and I grouped the data into six primary categories. The first category concentrated on the participants’ own interpretation of differences which was discussed above. The second
through fifth categories focused on factors for handling the differences, including relationships, technology, team culture, and team behaviors. These factors are connected to team emotional intelligence in that they reflect the habits and norms across the groups. The last category includes interesting data that emerged that is less relevant to answering the research question but may offer useful insights. Table 9 displays the results of the qualitative analysis. It shows total number and percentage of participants who spoke of the sub-theme. For example, 19 participants (86% of all participants) spoke of the sub-theme *talk it out/perspective taking* as a behavior among team members for handling differences.
Table 9. Inductive Thematic Analysis

<table>
<thead>
<tr>
<th><strong>Primary Category and Themes</strong></th>
<th><strong>Participants</strong></th>
<th><strong>%</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N = 22</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Category 2: Relationship factors in the handling of differences**

- **Theme 1: Actions taken at team formation** 18 82%
- **Theme 2: Social networks**
  - 2.1: Go-to person 14 64%
  - 2.2: Virtual team (at large): Advice, friendship, and socializing 13 59%
  - 2.3: Role of manager 14 64%

**Category 3: Text/App factors in the handling of differences**

- **Theme 3: Perceptions about communicating with technology** 22 100%
- **Theme 4: Technology enabling relationship building through friendly banter, information sharing, and asking questions.** 22 100%

**Category 4: Team culture factors in the handling of differences**

- **Theme 5: Multidimensionality of team culture (pos/neg)** 22 100%
  - 5.1 Collaborators and competitors 13 59%
- **Theme 6: Manifestations of emotional intelligence**
  - 6.1 Noticing and understanding own and others’ emotions and reactions 13 59%
  - 6.2 Monitoring and adjusting behavior 10 46%
- **Theme 7: Psychological safety**
  - 7.1 Mutual trust (or lack of) 15 68%
  - 7.2 Mutual respect (or lack of) 11 50%

**Category 5: Team behavior factors in handling of differences**

- **Theme 8: Talking it out and perspective taking** 19 86%
- **Theme 9: Information sharing** 5 23%
- **Theme 10: Learning from each other** 5 23%
- **Theme 11: Humor** 6 27%
- **Theme 12: Venting** 10 45%
- **Theme 13: Silence** 11 50%
- **Theme 14: Solutions-focused conflict management** 13 59%

**Category 6: Other insights**

- **Theme 15: Access to data** 5 23%
- **Theme 16: Compensation/rewards system factors** 8 36%
- **Theme 17: Senior leadership influence** 5 23%

In Appendix G, I provide a detailed description of each category, theme and sub-theme grouping. Chi square tests were also run to test for significant differences between high
and low teams based on the number of times they identified specific variables during the interviews.

Table 10 shows the Chi-Square tests that were run to test for significant differences between high and low teams based on the number of times they identified specific variables during the interviews. The Chi-square tests were run against the coding results and a complete list of the codes is in the appendix F. The results in table 10 are for the significant results of the Chi-square tests only. The inductive codes that were not significant are not listed in the table.

Table 10. Chi-Square for Inductive Codes by High/Low Teams

<table>
<thead>
<tr>
<th>High/Low Teams</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration*</td>
<td>0.045</td>
</tr>
<tr>
<td>Self-Regulation*</td>
<td>0.009</td>
</tr>
<tr>
<td>Talk About It*</td>
<td>0.041</td>
</tr>
<tr>
<td>Neutral*</td>
<td>0.041</td>
</tr>
<tr>
<td>Group Differences*</td>
<td>0.015</td>
</tr>
</tbody>
</table>

Chi-Square is significant at p=.05

The high teams scored higher for each variable with the exception of Neutral Description of Team Culture. Significance occurred at p = 0.05 for the following variables: collaboration, self-regulation, talk about it, and group differences. These results suggest that team’s with higher team emotional intelligence is associated with the strategies and behaviors including self-regulation, perspective-taking/taking about it, and collaboration.
To further make sense of the data, I compared the data from higher and lower scoring teams to reach two overarching findings resulting from this study.

**Finding 1**

The first finding contrasts the strategies employed by teams with higher team emotional intelligence to those virtual teams with lower team emotional intelligence. I begin this section with results that show the strategies and behaviors of virtual teams with higher team emotional intelligence. This is followed by the results of behaviors of virtual teams with lower team emotional intelligence.

**Strategies and behaviors of virtual teams with higher team emotional intelligence**

Three notable behaviors emerged for the virtual teams with higher team emotional intelligence. These strategies and behaviors include perspective taking, information sharing, and recognizing own and others’ emotions and reactions and adapting their approach accordingly.

**Perspective Taking.** As teams with higher team emotional intelligence seek to resolve differences, the data showed perspective taking is an important strategy, as it allows the exchange of viewpoints that contribute to understanding and solutions. The research participants described behaviors such as asking clarifying questions, sharing points of view, and talking through a particular situation in order to resolve a difference or conflict. I categorized these responses as perspective-taking because Scholars have argued that diverse groups are expected to have a broader range of knowledge, expertise and perspectives that can enhance solutions and decision-making (Hoffman, 1959; Damon 1991; Ancona & Caldwell, 1992). This strategy relates because it demonstrates
how the teams can take advantage of the skills, knowledge, and experiences each member brings. As I reviewed the data, about 86% of participants referenced the notion of asking clarifying questions, asking for and sharing perspectives, as well as talking it out in order to get others’ views as an important approach to handling differences. This behavior often led to a quicker outcome that the situation did not linger or escalate. For example, this participant from a higher scoring team describes how seeking clarity helps to uncover an issue.

A lot of times I feel like I’m saying 'okay, can you clarify that for me 'or ‘let me make sure I understand exactly what you’re saying here.’ So it’s a great question because there’s so many different personalities and different I guess levels of transparency and how to communicate, so I guess clarification is my biggest thing and that I’m learning. Over the years, I have definitely gotten better with ‘tell me more of what you meant by that,’ but trying to really clarify because sometimes I think I understand what they’re asking me and I’m way off, so getting that clarification, definitely. (Participant #1720, personal communication, 2017)

Other participants described how the team asks questions to understand each other’s perspectives when disagreements arise. When members ask questions such as “can you clarify” it leads to much greater sharing, understanding, and exchange of viewpoints.

Also, the conversation remains task focused rather than relationship focused, which has been shown in conflict management literature to be important for successfully handling conflict management and team relationships (Jehn, 1995).

I mean I think there’s oftentimes where we may disagree with each other, and usually we’ll have a conversation and say, "I don't understand your point of view and I need to better understand it. So can you maybe clarify? Like, what am I missing?" (Participant #0725, personal communication, 2017)

One participant described the team behavior of sending their questions not to only the manager but to the entire team. This allows 11 people to see the question and provide their input. Data collected in this study demonstrates that the action of perspective taking
leads to talking it out until agreement is reached. This allows the team to move onto the work that needs to be done. One participant, #3022, described a situation when the team strongly disagreed with management’s direction with regard to the implementation of a change. It was not the change itself that was the concern but the timing due to feelings of credibility with the teams’ customers. The participant described that there were many group discussions about the issues and concerns. The participant also explained that outcome was not what she wanted, but she recognized that the team was able to talk about it freely and have their voices heard.

So there was conflict, not so much amongst each other, And so we had to...it would get heated, so it was more of a conflict with kind of the direction and the changes and how immediate they expected the changes to occur. We agreed with it, but it was more of the timeframe and that kind of thing. And...and we would explain our situation, and [name] would explain the reasons why, and we would talk it out till we kind of came to an agreement that everybody felt comfortable with. (Participant #3022, personal communication, 2017).

Lastly, perspective taking brings out the diversity in opinions and thoughts that are often needed to reach a solution. The example above recognizes that sometimes perspective sharing takes time. By taking the time to share perspectives, the members involved were able to see beyond their piece of the work.

So I think, like, a great thing about difference is that it provides different perspectives. I think all of us get into the situation where we think about our own world and it's hard to think outside your vision, your perspective. So having the opportunity to think differently is of real value. And so the differences are great because they do give you a different perspective, but you also have to know that the opposite is that sometimes it leads you off track. I think, like, diversity in opinions and thoughts and ideas is fantastic and it helps build better solutions. (Participant #0725, Personal Communication, 2017)

Closely related to the strategy of perspective-taking is the strategy of information sharing in the way that knowledge and thinking is shared to help toward resolving the difference.
Information Sharing

About 5 of 12, or 42%, of the higher scoring team participants mentioned sharing information as an effective tactic in handling differences. Information sharing refers to sharing or gaining access to information or data. Sometimes differences manifest themselves through uncertainty, misunderstandings, and confusion. Aside from sharing information over group texts, data collected from participants in this study show focusing time during conference calls for information sharing is an effective approach to handling differences. Participants describe a practice of sharing best practices with each other so that individuals could share and hear about other approaches to environmental differences. By sharing best practices, team members became aware of either issues or approaches to running the business that they could adopt and apply to their own situations, which might not have been considered without this type of information sharing.

Another participant described a willingness to share information to help each other without the feeling of trying to hide knowledge to better oneself.

It's just an environment of, "Hey, you know, I got information, and this is what I see." We all are seeing really similar stuff, so it really helps out. I don't think anybody's trying to hide anything. Let's put it that way. I don't think anyone's trying to hide anything from anybody to try and better themselves. I think everyone feels like everyone's really honest and open within our team, for sure. (Participant #3028, personal communication, 2017)

This statement is illustrative of how higher scoring teams are able to handle conflicts successfully because needed information is willingly shared and openly communicated. This instills a sense of trust among team members; the issue of trust will be addressed in
the second finding. In summary, the strategy of information sharing seems to help higher scoring teams to provide knowledge and information. The literature explains that there are two types of knowledge to be shared, that is knowledge about the task and knowledge about how to do things (Cummings, 2004; Ancona & Bresnan, 2007). Research also shows a positive relationship between social networks, meaning the relationships across the team, and knowledge sharing within work teams (Henttonen, Janhonen, and Janhonen, 2013). Sometimes differences manifest themselves through uncertainty, misunderstandings, and confusion. One way many higher scoring teams approach early indicators of these feelings is to share information. This behavior seems to go hand-in-hand with the act of perspective-taking as described above. The third strategy or behavior of higher scoring teams is related to noticing and regulating one’s own and others’ emotions and reactions.

*Noticing and regulating team emotions.* Social awareness and relationship management are important bases for relationships (Goleman, 1995). Social responsibility is a key factor in effectively handling conflicts in the workplace (Hopkins & Yonker, 2014). Eleven of 12, or 91%, of participants from higher scoring teams spoke about noticing and regulating their own and others’ emotions and reactions when dealing with differences. In comparison, six of 10, or 60% of participants from lower scoring teams spoke about it. Participants from higher scoring teams described how this awareness supported their behaviors in interacting with their team members. For example, participants mentioned feeling empathy and fostering an environment of caring. One participant described the need to let the team members know that they care and have each
other’s back. They foster this by joking with each other, by recognizing birthdays, and by showing empathy.

You get to know people. I know when they're quiet, I know when they're frustrated, I mean I...you know, I think that there's two ways you can lead. Sometimes you can say, "You've got to do it, tough shit, this is it" and they feel frustrated by that. Or you have to say, "You know what, maybe this isn't something that is perfect, but it's something we're charged with doing." They feel a little empathy to understand that it's a challenging thing, and I think that makes people connect more. And sometimes you know, it isn't great but we've got to do it, and other times, you know, give them more when you can. (Participant #0729, Personal Communication, 2017)

Research participants described using thought processes that considered how they would speak to diffuse a situation or to clarify and elaborate. The story shared by Participant #0632 in the next paragraph referenced a situation where they were aware of how their response could derail a conversation, so they framed the response by saying things like, “I understand where you are coming from” or by asking “what are your thoughts?” By asking questions and treading softly into the conversations, he described how the team handled a conflict in a way that was conversational rather than defensive.

I think there's a way to handle things. You may hear something that just doesn't sit well with you, and you can fly off the handle and say, "You're wrong, that'll never work," or "You’re crazy," you know? You're just as crazy as you could possibly be. You gotta soften that a bit and I think you learn that with age. And it's like, "Well, I kinda understand where you're coming from,” or "If I hear you correctly, this is what you're saying, but have you really thought this through? Because if we do that and this happens, what becomes of that now? I mean, what are your thoughts?" So I really think it's just really about not diffusing the situation as much as trying to clarify and try and elaborate. (Participant #0632, personal communication, 2017)

Participants of this research study described what they do to adjust their own communications over the phone when they are aware of their own frustrations.
Like we all understand the challenges in our current environment, but I think it's me being cautious of tone and inflection over the phone. Because that's actually much more important than even the words we use. So it's more just being respectful of each other and being cautious of how we show frustration, even when we're frustrated with others, you know, in our team. You have to recognize that no one can see you to your face. So you have to be very cautious about it. (Participant #0725, personal communication, 2017)

Likewise, other participants described when they noticed other team members who seemed to not monitor their own behavior and the detrimental impact that non-censored comments could have on the team’s spirits. Emotions that employees feel and transfer to each other will influence perceptions employees have about the organization (James et al., 2008). This is important because emotions can influence how team members approach a challenge or threat, pursue goals, and collaborate and support each other (Frederickson, 2001).

In summary, virtual teams with higher team emotional intelligence demonstrate behaviors of perspective-taking, information sharing, and monitoring and regulating their words and actions when facing differences and conflicts. When team members seek to understand the frame of references of another, a fuller picture of the situation will emerge as they better articulate their own viewpoint and hear the viewpoint of others. When team members readily share information with each other, reciprocal sharing occurs across the team. When team members are attentive about their words and actions they are demonstrating a key element of emotional intelligence. These three strategies were identified across the higher scoring virtual teams in how they would handle differences. The following section provides results from the teams with lower team emotional intelligence scores.
Virtual teams with lower team emotional intelligence

About 45% of participants from teams with lower emotional intelligence provided more negative descriptions of the team culture. For example, some participants described underlying tension and lack of teamwork. To provide some context, one participant had been describing some examples of favoritism and situations where certain team members were singled out and getting different attention from others (Participant #1217). This behavior was noticed, and then there was reluctance for the team to open up with each other. Participant #1217 explained the impact of this perception, “I feel like there’s a lot of underlying tension and nobody’s really working together at all” (personal communication, 2017).

Study participants described that communications over group texts tend to be related to both business and personal information. One participant described a situation in which they sent a picture of their new pet around to the team. She explained, that a colleague responded the picture by commenting, don’t ever send me a picture of your cat ever again! Another team member remarked it was said very harshly. The interview participant shared her reaction to that exchange and similar interactions over text, phone, and in-person meetings:

They were just rude. And why, I don't know, because we don't know each other, you know? I mean, there was stupid stuff. I think it's just stupid little things, but it's just rude and it wasn't just once or twice it was many times. (Participant #0524, personal communication, 2017)

As opposed to the higher scoring teams in the previous section, participants from the lower scoring teams described a reluctance to share information because there was a concern that sharing information would allow others to perform better than the one who
shared the information. In this study, many participants are in customer facing roles. Often companies who depend on sales use reward systems to rank sales people against each other for incentives and prizes. Participants from the higher TEI scoring teams described that by helping each other, they will ultimately all “win,” understanding that the competition are external companies. However, participants from lower TEI scoring teams expressed a perception of internal competition and not wanting others to “beat them” using the information they shared.

If they share information like ‘hey, this is really working for me,’ then that other person receiving that information is going to take that on and almost do better than where they received the information from, so I think nobody wants to share information at the chance that someone else is going to take a step up with them. Does that make sense? (Participant #1217, personal communication, 2017)

Another distinction between the higher and lower scoring teams is reflected in their descriptions of sharing information through text messages. Whereas members of higher scoring teams described a genuine interest to share information over texts, a participant from a lower scoring team described a middle or high school mentality of trying to be the first one to respond or post to “look better than the other team members.”

I don't know how to describe it, but you could definitely sense when there's like a little bit more of a competition. Sometimes we may have...you know, maybe not for me as an individual but for other people like you feel you've been struggling. I know like that will kinda drive you a little bit harder because you see that you could do better, so you wanna make sure that you're maybe more vocal on via text or email, whatever, showing that you're sharing kind of a thing. So like kinda trying to be the first to kind of...I hate to say it, sometimes it could be a little bit like a middle school, high school kind of thing. (Participant #1537, personal communication, 2017)

In summary, although all participants from the lower scoring teams had a blend of positive and negative experiences when working with their team. There was a higher tendency for teams with lower team emotional intelligence to have more negative
descriptors, as illustrated in the examples above, and view each other as competitors. Behaviors including venting, silence, and silence with each other were more prevalent with teams with lower team emotional intelligence scores when describing how differences or conflicts were handled.

**Venting.** Participants from the lower scoring teams in this study shared stories about being frustrated with a person, team, or situation and referenced venting as a cathartic release. Venting can have positive and negative outcomes. It was not a unique behavior to the lower scoring teams. In fact, venting was coded more often for higher scoring teams than lower scoring teams, however the distinction I found between higher and lower scoring teams is that the higher scoring teams provided examples that demonstrated venting followed by a solutions focus. Whereas the lower scoring teams tended to vent without action. Sometimes venting led to calming oneself down and re-focusing on the problem to solve. As described by the next paragraph, a participant referenced how venting leads to seeking advice and generally helps the situation.

I think that everybody seems to have their go-to person on the team that they will seek advice from, that’s who they’ll vent to, so I think that that helps people on the team. (Participant #1217, personal communication, 2017)

In other situations, the venting spiraled, and the behavior was viewed as creating a lower morale because of the ongoing chatter without resolution. One participant shared the difficulty their team had in gaining support from another team. The individual’s perspective was that the challenge was related to misaligned expectations of their roles. The participant described unsuccessful attempts to resolve the situation, and chatter and
tensions continued to grow. Additionally, the person being “vented” about learned about the conversations, and the relationship became more strained.

Then, that conversation, it starts to bring some of the situation to light but I think what eventually happens for right or for wrong is frustration builds up because of that difference in expectation and then sometimes that frustration boils over into some chatting about that person which, again, right or wrong, I think part of that is very much part of human nature. But if that person ever finds out about it, it becomes very unproductive. (Participant #1515, personal communication, 2017)

Venting of emotions has been compared to letting the steam out of a pipe. When the steam releases from the pipe, then it will not explode. When the person releases emotion through speaking about it to another, the emotion will dissipate and the individual can return to a normal state (Parlamis, 2012). As described in Chapter 2, emotion influences judgments, decisions, and behaviors in organizations (Jordan & Troth, 2004; Metiu & Rothbard, 2012). These emotions impact the thinking process in how to deal with a task. Venting of emotions can spread to the team through emotional contagion, which is the concept of transferring emotional states through a population by emotional and social interaction (Hazy & Boyatzis, 2015). As it relates to the team interactions in this study, another participant on a lower scoring team described that in team settings, people behaved and spoke in one way in team meetings, and when the team meetings were over, chatting and venting continued, creating feelings of tension across the team. Venting is not positive because this could be perceived as gossip, and it is almost always unproductive. This participant shared more negative descriptions for the team culture and also described lack of sharing information and lack of trust.

Silence. Panteli and Fineman (2007) describe that much research about communication in teams focuses on verbal and non-verbal communication. The role of
silence has been shown to reflect disengagement or signal something about the feelings or intentions (Panteli & Fineman, 2007). Silence, such as waiting for someone to respond, can be difficult for virtual team members to interpret and can lead to interpersonal problems among team members that are difficult to resolve (Cramton, 2001). On a team facing deadlines, silence from members can also raise anxiety of those waiting for important input (Panteli & Fineman, 2007). Some participants in this study described team members going silent when issues arise. For example, one participant described the silence that sometimes occurred in group conversations when a controversial topic was raised. He described complete silence when the subject was brought up over the phone, and later, side conversations through chat indicated that more needed to be discussed before the situation could be resolved.

When it's announced and there's dead silence...I mean, you don't have to see somebody or know what's going on. And then you can talk to them afterward and say, "Hey, yeah. I mean, are you thinking what I was thinking?" Or, "What's your take on this?" So, I mean, there's certainly some things that aren't said that are helpful in trying to understand things. (Participant #0633, personal communication, 2017)

When it comes to communications over text, another participant described their own lack of response when uncertain about the meaning.

And I also think if you're unsure...in my situation, if I'm unsure about sort of the tone, I won't respond. Like if I know it's a joke, then you joke back. But if you're not quite sure, then I will just be quiet. So silence would be the answer. (Participant #3022, personal communication, 2017)

It should be noted that the role of silence in communications will vary across culture (Tannen, 1984). All participants in this study are based in the United States, so a different finding may be discovered in future research that includes participants where silence is
interpreted in other ways. In summary, silence in this study result in a lack of information sharing and a lack of perspective-taking which were key strategies in the higher scoring teams in the handling of conflicts. As described above it may also be a cue that something is not understood, or agreed to, across the team. However the silence typically results in the presenting difference remaining unresolved. This theme also connects with venting because some of the participants did describe a next step may be venting with one or two co-workers but reluctance to raise the issue within the team or to a manager for assistance with resolution.

While this study did not compare virtual teams and face-to-face teams, it is worthwhile considering how these strategies may be unique to virtual teams. It is my observation that the behaviors are occurring through the use of text, telephone, and time lapses in responses. This mode of communication entails behaviors occurring without non-verbal cues. While a face-to-face team has the opportunity to conduct many of the actions of perspective-taking, information sharing, or venting this may occur through unplanned connections such as through a hallway conversation. I offer that the virtual team members need to be intentional about their interactions with their team members. For example, participant #x highlighted taking time to review text messages again and picking up the phone to follow-up if she thought she may have misinterpreted or needed further clarity. This action demonstrates an intentional behavior to collaborate with team members.

**Finding 1 summary**

During times of conflict, virtual teams with higher team emotional intelligence demonstrate team empathy, meaning that the team exhibits cognitive empathy through
perspective-taking and emotional empathy through recognizing feelings and emotions. When team members seek to understand the frame of references of another, a fuller picture of the situation will emerge as they better articulate their own viewpoint and hear the viewpoint of others. When team members readily share information with each other, reciprocal sharing occurs across the team. When team members are attentive about their words and actions they are demonstrating a key element of emotional intelligence. These three strategies were identified across the higher scoring virtual teams in how they would handle differences. In contrast, virtual teams with lower team emotional intelligence demonstrate behaviors of internal competition, venting without resolution, and silence. Silence can be lack of voice, withdrawal and avoidance. These strategies and habits influence judgment, decisions and behaviors through the way people process the information, that is how they think and feel about it, as well as how they behave as influenced by their thoughts and feelings (Forgas & George, 2001). A fuller discussion on this finding will follow in Chapter 5.

Finding 2

To set the context for the second finding, I begin by describing participants’ perceptions about how they handle differences when communicating with technology. This is followed by results on the frequency of team interactions and the association with team emotional intelligence scores between high and low scoring teams. The second section within this finding relates to trust and respect.

While usage of telephone and email continues, the use of group applications for texting is rapidly on the rise (Hopwood, 2016, June 16) and was referenced by 22, or
100% of the survey participants. First, I describe participants’ perceptions about communicating with technology as it relates to how they handle differences. I continue to provide primary data from participants and also include some of the text-based data collected from teams.

The explosive growth in the teams’ use of group texting as described in the data brings it to the forefront of this finding. Participants were asked about and described how they communicate with each other. Table 11 summarizes the types of communications participants referenced during the interviews. For example, references about texting, group apps, phone, email and face-to-face meetings were universally shared by participants in this study. They are using multiple technologies with multiple arrangements of participants on a regular basis.

Table 11: *Technologies Described for Team Communications by Study Participants*

<table>
<thead>
<tr>
<th>Technology</th>
<th>1:1 or Group</th>
<th>Reason for use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>1:1 and group</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quick answers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Share ideas</td>
</tr>
<tr>
<td>Group Apps</td>
<td>Group only</td>
<td>Quick</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instantaneous</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emojis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If ambiguous, call, or avoid</td>
</tr>
<tr>
<td>Phone</td>
<td>1:1 and group</td>
<td>Business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Call who I trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Call when I’m frustrated</td>
</tr>
<tr>
<td>Email</td>
<td>1:1 and group</td>
<td>Sharing large files</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not used as much</td>
</tr>
<tr>
<td>Face-to-face</td>
<td>1:1 and group</td>
<td>Meet 2-3x per year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Company or regional meetings/ training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local team members may meet more frequently</td>
</tr>
</tbody>
</table>
All 22 participants interviewed spoke about the use of text-based communications. Most of the participants spoke about texting other colleagues individually and using the technology to communicate to more than one individual, up to and including the entire team. Participants described that the purpose of these communications was often to share information or ask questions, knowing the answer could be very quick. A similar technology is the group chat application for a mobile device. Participants described a growing preference to the group apps over text because it keeps all texts in one place. Participants described using emojis or explanation points to convey meaning. Some participants described that if they were uncertain about the meaning of a message, they may not respond at all, or they would call the sender or contact their go-to person to ask for clarification. Some participants mentioned they are more likely to communicate with team members through this medium than using the telephone. Participants explained that they use the telephone for group conference calls and often for individual conversations with their manager or colleagues on their team, as well as other stakeholders. Email was described as being used primarily for the sending of large files such as Excel. All participants in this study explained that their team meets at least two times per year, often as part of a larger company meeting.

The influence of the frequency of communications is further illustrated when reviewing quantitative data collected from all 234 respondents representing 31 teams. The teams that met either face-to-face or remotely more frequently, scored higher on the TEI variables, which supports this finding.

Table 12 shows results from a Spearman correlation that was run to test whether there is a relationship between creating affirmative environment, creating debate, team.
self-evaluation, and creating emotion resources as they pertain to how frequently teams meet. Face-to-face meetings had significant, albeit weak, correlation with creating debate (0.228) and team self-evaluation (0.149). The significance was at p = 0.05 for team self-evaluation and p = 0.01 for creating debate. Testing for mean differences amongst the higher and lower scoring groups showed no significance.


<table>
<thead>
<tr>
<th></th>
<th>F2F Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Affirmative Env</td>
<td>0.081</td>
</tr>
<tr>
<td>Creating Debate</td>
<td>0.228**</td>
</tr>
<tr>
<td>Team Self-Evaluation</td>
<td>0.149*</td>
</tr>
<tr>
<td>Creating Emotion Response</td>
<td>0.129</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (1-tailed).
**Correlation is significant at the 0.01 level (2-tailed)

Similarly, Table 13 shows a Spearman correlation was run to test whether there is a relationship between creating affirmative environment, creating debate, team self-evaluation, and creating emotion resources as it pertains to remote team meetings, often set up as group conference calls. The frequency of conference calls was positively correlated to the four EI variables. The correlations range from weak to moderately weak, with creating debate having the strongest score at 0.373 and team self-evaluation being the weakest at 0.263. All of the correlations were significant at the p = 0.01 level.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig</th>
<th>Weekly</th>
<th>At Least Monthly</th>
<th>Quarterly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Affirmative Env</td>
<td>0.299**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Debate</td>
<td>0.373**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Self-Evaluation</td>
<td>0.263**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Emotion Response</td>
<td>0.271**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*, Correlation is significant at the 0.05 level (1-tailed).
**Correlation is significant at the 0.01 level (2-tailed)

Table 14 shows results of a Shapiro-Wilk test. I intended on running an ANOVA to test for significant differences amongst the groups for frequency of remote team meetings and the four identified team variables of creating debate, team self-evaluation, creating emotion response, and creating affirmative action. A Shapiro-Wilk test indicated, however, that the data was not normally distributed, so an ANOVA could not be run. A Shapiro-Wilk test assesses whether the data is normally distributed for each category. If the data is normally distributed, the significance value would be more than .05 (i.e., p>.05) and the significance level for several variables did not meet this criteria.


<table>
<thead>
<tr>
<th>Variable</th>
<th>Weekly</th>
<th>At Least Monthly</th>
<th>Quarterly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Debate</td>
<td>0.414</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Creating Emotion Response</td>
<td>0.369</td>
<td>0.507</td>
<td>0.000</td>
</tr>
<tr>
<td>Team Self-Evaluation</td>
<td>0.039</td>
<td>0.004</td>
<td>0.002</td>
</tr>
<tr>
<td>Creating Affirmative Env</td>
<td>0.074</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 15 shows a Kruskal-Wallis test with a Dunn-Bonferroni post hoc was run to determine if significant differences existed between the groups for frequency of remote team meetings and the four identified team variables of creating debate, team self-evaluation, creating emotion response, and creating affirmative environment. The Kruskal-Wallis test was chosen, as it is generally considered the nonparametric alternative to the one-way ANOVA and is used for data that is not normally distributed. The Kruskal-Wallis proved significant, indicating that at least one group was statistically different from another, so the Dunn-Bonferroni post hoc analysis was used to discover where the differences existed. The mean scores showed that the teams that meet more frequently have a higher mean for each of the four variables than those who meet less often. The teams who only meet quarterly have the lowest scores in all areas. Significant differences existed between those who meet monthly and those who meet quarterly, as denoted by the asterisks below, for creating debate and creating emotion response, and were significant at p=.05. When it comes to team self-evaluation and creating affirmative environment, significant differences occurred amongst all of the teams at p=.05.


<table>
<thead>
<tr>
<th>Variable</th>
<th>Weekly M</th>
<th>Weekly SD</th>
<th>At Least Monthly M</th>
<th>At Least Monthly SD</th>
<th>Quarterly M</th>
<th>Quarterly SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Debate</td>
<td>3.92*</td>
<td>0.65</td>
<td>3.78</td>
<td>0.51</td>
<td>3.43*</td>
<td>0.64</td>
</tr>
<tr>
<td>Creating Emotion Response</td>
<td>4.07*</td>
<td>0.69</td>
<td>3.79</td>
<td>0.59</td>
<td>3.52*</td>
<td>0.61</td>
</tr>
<tr>
<td>Team Self-Evaluation</td>
<td>3.71*</td>
<td>0.70</td>
<td>3.49*</td>
<td>0.67</td>
<td>3.21*</td>
<td>0.67</td>
</tr>
<tr>
<td>Creating Affirmative Envir</td>
<td>4.28*</td>
<td>0.53</td>
<td>4.07*</td>
<td>0.65</td>
<td>3.75*</td>
<td>0.62</td>
</tr>
</tbody>
</table>

*Kruskal-Wallis Dunn showed significance with a p value at .05
Next, Table 16 shows a Spearman’s correlation was run to test for significant relationships between the demographic variables which included items such as length of membership on team, type of team, frequency entire team meets face-to-face, frequency entire team meets remotely, and the remaining twelve EI variables evaluated by the survey but not included in the previous analysis. The only variable to show significant relationships was remote team meetings. Correlations existed for each variable and ranged from weak to moderately weak (Colton, 1974), with significance at both the p=.05 and p=.01 levels. The three strongest relationships exist for team identity (.377), caring behavior (.371), and interpersonal understanding (.350). As illustrated by the statistical analysis above, the more frequently the teams meet, the higher the team scores for emotional intelligence. This is important and shows that frequency in remote interactions is associated with higher team emotional intelligence.
<table>
<thead>
<tr>
<th>Team Identity</th>
<th>0.377**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caring Behavior</td>
<td>0.371**</td>
</tr>
<tr>
<td>Interpersonal Understanding</td>
<td>0.350**</td>
</tr>
<tr>
<td>Organizational Understanding</td>
<td>0.346**</td>
</tr>
<tr>
<td>Innovations</td>
<td>0.314**</td>
</tr>
<tr>
<td>Proactive Problem Solving</td>
<td>0.288**</td>
</tr>
<tr>
<td>Safety and Risk Taking</td>
<td>0.277**</td>
</tr>
<tr>
<td>Meeting Procedures</td>
<td>0.274**</td>
</tr>
<tr>
<td>Build External Relationships</td>
<td>0.273**</td>
</tr>
<tr>
<td>Goals and Objectives</td>
<td>0.268**</td>
</tr>
<tr>
<td>Roles and Responsibilities</td>
<td>0.231**</td>
</tr>
<tr>
<td>Addressing Counterproductive Behavior</td>
<td>0.174*</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (2-tailed)

Aside from remote and face-to-face meetings, the use of group app and texting creates a mechanism for virtual teams to be in daily contact with each other. When frequent interactions are coupled with trust and respect, the results suggest that a psychologically safe environment supports a collaborative approach to addressing differences and conflicts. I provide evidence for these claims below.

**Frequency of team communications.** As a reminder, participants in this study work in virtual teams and communicate with each other primarily through technologies. Many participants referenced how advances in mobile devices and group chat features
have changed their patterns of communicating with each other. In the following paragraph, a participant describes a feeling of connection with the team members because of the continuous texting back and forth and references the change in the past five to ten years.

I think it's just a constant communication with this group text. You know what I mean? So it feels like people are...even though you're not talking all the time...we're in a different age nowadays from, you know, even five years ago. Texting is such a big part of our communication these days, right? Everything is just text it. Me and my friends text. You know, my wife and I text each other. It seems easier. It doesn't feel like you're as far apart as it would've been, let's say, maybe 10 years ago. (Participant #3027, personal communication, 2017)

This participant continued to describe how texting has grown in their work life as well as personal life. Additionally, another participant, #3028, described the change from an initial reluctance to text, and how now it is the first choice for interactions.

But everything's changed. Now, I think it's a little bit more difficult to pick up the phone, to be honest with you. It's kinda sad that it's changed that way, but I'm just as much to blame as everybody else. (Participant 3028, personal communication, 2017)

In my review of the group chats, I noticed that the interactions often reflected the type of conversations one might hear in a face-to-face meeting. For example, table 17 illustrates an exchange that took place on a group text the day following a snow storm. The night before had a lot of snowfall in the area, and participants were checking in on each other and commenting about the weather.
Table 17. *Illustration of Group Text*

<table>
<thead>
<tr>
<th>Time</th>
<th>Sender</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:49 AM</td>
<td>1</td>
<td>Good morning! Has it stopped? Is everyone digging out today?</td>
</tr>
<tr>
<td>7:58 AM</td>
<td>2</td>
<td>All good here!</td>
</tr>
<tr>
<td>7:58 AM</td>
<td>3</td>
<td>What a difference a day makes. Sun is actually shining! All dug out here.</td>
</tr>
<tr>
<td>8:16 AM</td>
<td>4</td>
<td>All good here!</td>
</tr>
<tr>
<td>8:20 AM</td>
<td>5</td>
<td>Absolutely freezing in (location) but all good.</td>
</tr>
<tr>
<td>8:34 AM</td>
<td>4</td>
<td>OMG! You're in (location)?? That's up there!</td>
</tr>
<tr>
<td>8:46 AM</td>
<td>5</td>
<td>All good</td>
</tr>
<tr>
<td>8:47 AM</td>
<td>6</td>
<td>All good here</td>
</tr>
<tr>
<td>9:06 AM</td>
<td>7</td>
<td>-10 below with wind chill 🧣</td>
</tr>
<tr>
<td>9:13 AM</td>
<td>8</td>
<td>Good</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>1</td>
<td>Be safe today all, of course if the roads are unsafe use your judgment and stay in until it is clear</td>
</tr>
</tbody>
</table>

This brief exchange illustrates how almost all the members of the virtual team communicate with each other using friendly banter and display some caring behavior. Many participants described the convenience of sending a group text and the speed in which they normally receive a response.

With the group that I have now, it's just if it comes to mind, I'll just send a group text, and literally within a minute or two, if people know the answer, I'm gonna get what I need. (Participant #0632, personal communication, 2017)

Although the exchange above is about the weather, there were many exchanges that were asking about business-related issues that had rapid sharing of responses and insights. To avoid disclosing any confidential data and to protect anonymity, I only displayed this innocuous example, but there were other more business-related exchanges. The
affordances offered by group chat and text seems to enable virtual team members to get to know each other in a way that creates a sense of team, rather than a former feeling of working on an island for many of the distributed participants. This familiarity and team identity may enable the habits and norms for the virtual team to form in their interactions with each other, and in the handling of differences.

**Emojis.** There is a saying that pictures speak more than a thousand words. That is the case with emojis and emoticons in text messages. Emojis were created in Japan by a mobile phone operator, and the word emoji means "pictograph." This creation led to the formation of emoticons, which are graphical representations of facial expressions to express the sender’s feelings or tone. As mentioned previously, teams in this study spend most of their time away from each other and do not have the benefit of non-verbal cues to help them make sense of what their team members are thinking or feeling in their communications with each other. When asked about this, many of the participants spoke about emojis providing these cues for interpretation and understanding. As conveyed by one participant from a higher scoring team, emoji’s help with the interpretation of the texts. Participant #2531 described, “And, honestly, it's funny, but, like, our little emojis and those kind of things, I mean, people use them a lot, and I feel like that actually is a good way to tell how people feel” (Participant #3022, personal communication, 2017).

In a similar sentiment, other participants described how the use of emoji’s can change the tone of a message. For example, participants described that if they are aware it is a joke, they are likely to joke back. On the other hand, if they are uncertain about the tone, they may either ask or remain quiet (Participant #, personal communications, 2017).
Emojis. I think that says a lot. Pictures, I don’t know. Texting is very difficult, but I feel like you can say something, and depending on what emoji you put to it can change the whole vibe of the text message. (Participant #3022, personal communication, 2017)

Some participants expressed light annoyance with the multiple texts and emojis, although they recognized the effort to communicate is overall positive. Participant #1734 represents a higher scoring team and recognizes the value of sharing across the team.

To some extent, it's kind of annoying because you get, you know, 25 texts back and forth about...with emojis and all that crazy nonsense. But, you know, I think at least there’s an effort to get the information out there. I think that's a good thing. (Participant #1734, personal communication, 2017)

Portrayals like the ones above were consistent across all 22 participants interviewed for this study. Overall, the data show frequent use of group texts. Data showed it is used for friendly banter, such as checking on the weather, sharing personal information or news, and joking about topics. It is also used to share business-relevant content such as asking questions, sharing information, and recognizing successes. The important aspect by using a group text is that all members of the team are interacting with each other.

In summary, team members communicate frequently by phone, email, and texting. Group texting happens daily across the participants teams. Participants described that the use of group text has created daily communications with team members, which continues to build relationships, trust, and respect. Use of emoji’s helps the sender and receiver to convey additional meaning to the text. Participants also described staying silent if they are uncertain or picking up the phone and calling the individual or their go-to person to interpret communications that might be confusing, controversial, or concerning.
Like most technologies, it is not the technology itself but rather how it is used that makes a difference. As described above, the growth in mobile device technology is creating new ways for teams to interact. These group texts are perceived as helpful and educational, and they foster a closer connection between participants who are widely distributed. On the other hand, they can also be too social, and important information can get lost. The likeability factor toward group texts varied from “love it” to “annoying,” and generally teams are still figuring out how to best use the technology to communicate. The technology does seem to be a point of escalation or de-escalation as differences may surface through this mode of communications. It is here that one might see a higher scoring team pick up the phone and ask clarifying questions and focus on solutions, whereas the lower scoring teams might avoid the conversation or vent with other colleagues independently. Frequency of communications may also be associated with presence of trust and respect across team members, which is explored in the next section.

**Mutual Trust and Respect.** In Chapter 2, I framed the concepts of trust and respect as factors within team development research that play an important role in conflict management in virtual teams (Duarte, 2006; Haines 2014). This theme emerged from data when participants described the concepts of trust and respect; however, there was a range in how they experienced these concepts. For example, some participants from both higher and lower scoring teams talked about trust in that the *team trusts each other*, whereas participants from the lower scoring teams also described a *lack of trust*. The contrast seems connected to their perception of the team culture, and this section will provide evidence of this using the TEI results and qualitative interviews. After I completed coding, I was able to see that nine of 12, or 75% quotes that described trust
came from participants in the higher scoring teams, compared to six of 10, or 60% of the lower scoring teams. Also, none of the participants from higher scoring teams were coded lack of trust, whereas 3 of 10, or 30%, of lower scoring team members interviewed described lack of trust.

Participant #1720 represents a higher scoring team, and spoke about a safe environment as the biggest thing that the team does that helps them deal with challenges and difference. The participant recounted a number of stories reflecting group and environmental differences the team faced, and it kept coming back to an environment in which people would raise concerns, talk about them, share information openly, clarify when uncertain, and keep working at it until resolved.

I think that the biggest thing is feeling like they have a safe environment to be open and honest, whether it’s a conference call or at a meeting or a rep helping another rep one-on-one on a team and not feeling threatened at all. I don’t know if that makes sense. So having an environment where it’s comfortable to share information and whether I’m involved or not, but feeling comfortable and not threatened to share information back and forth so that it’s leading to positive outcomes. (Participant #1720, personal communication, 2017)

In a similar way, participant #1230 described the willingness to text any member or the entire group about any topic without apprehension.

It feels like it’s pretty open. I feel like I could either text the whole group on WhatsApp, or I could individually text anybody, including my manager, for just about anything that comes up. I don't feel any apprehension about, you know, connecting with somebody or the team if I need it. (Participant #1230, personal communication, 2017)

The same participant emphasized the culture of respect and explained team members feel comfortable asking the “dumb” question or asking for help.

I'd say the culture is one of respect. We don't have to worry that if we ask something that we feel is, you know, maybe a dumb question or whatever...she makes us feel very open, and so do all the members of the team, to be able to ask
anything and to ask for help if we need it. (Participant #1230, personal communication, 2017)

Lastly, participant #3022 described the safe environment and ability to voice a different opinion to senior management. Although they were ultimately unable to influence the decision, there was an awareness of being able to talk about the issue.

But we were allowed to sort of voice our opinions, but they didn't necessarily listen to our opinions or, you know, change anything because of it, but it wasn't like they wouldn't hear us out type of thing. But it all worked out because everybody's more or less doing well. (Participant #3022, Personal Communication, 2017)

The above examples illustrate psychological safety at play in virtual teams. Perceived psychological safety within their team helps or hinders the willingness to share information and discuss issues. Group level research conducted by Edmonson (1996, 2002) shows that psychological safety is a group-level occurrence. Psychological safety promotes a climate that makes it easy to say uncertain thoughts. When members of the team share ideas and respond respectfully, it creates an environment with a mutual expectation for the opinions and questions to be shared.

About 9% of participants referenced the idea of psychological safety when they spoke about a team environment that is open and honest. The percentage is very low because the participants did not use this exact term, and I only coded it if the participants used the words “safe.” However, when I considered the references of trust and respect made by participants, I understood that they were describing a psychologically safe environment. Both trust and respect are sub-themes that were referenced 68% and 50% of the time, respectively to the high and low teams. Participants remarked on mutual respect and trust, or lack of mutual respect and trust, with regards to handling of differences. The
next example shares a perspective where the team does not have a level of comfort in
being open with each other and how that climate influences feelings of higher tension and
lower morale in the team. This participant described reluctance across the team to share
information that might help someone else because they feel it will end up hurting them in
the end if someone else does better. This team viewed other team members of their team
as internal competitors. This example reflects a lack of feeling safe to share information
or discuss tough topics.

I think that people feel really frustrated and not respected to a certain extent where
not everybody wants to share information as they get information. People just
don’t want to be open with each other and I would say adjusting to—But it seems
that the tension and the morale as a team is so high right now, or the morale is
down but the tension is high, to where not everybody feels comfortable discussing
information if they get information from… People are very skeptical to discuss
anything that might help somebody else because it’s going to end up putting them
down I think they feel. (Participant #1217, personal communication, 2017)

On the other hand, some participants describe the ability to speak professionally while
not holding back on difficult conversations in their team. Participant #0518 is a member
of one of the smaller sized teams in the study and mentioned how her manager has
created an atmosphere that is open door by saying “if it’s on your mind – let me hear
about it,” and this has had a ripple on the team, as members are more willing to speak up
and share disagreements and alternative perspectives in a professional way.

I feel as though nobody is sheltered or holds anything back. None of them. Fairly
straightforward in a professional way, and I kind of like that. I mean, you know, if
someone thinks that that's not the way to go, they're gonna speak up and say,
"You know, I don't agree with that." "Well, let's talk about it. Why not?" I think
that really helps. (Participant #0518, personal communication, 2017)

An example from a team I observed had an individual say: “You know, [name], I didn’t
hear it the way you are describing. This is how I understand it…” (ethnographic
observation field note, Team #30, February 1, 2017). The conversation continued where each person explained their perspective. My observation was that the participants were being candid and were sharing opposing viewpoints, but it was a healthy and productive conversation where an agreement on next steps was achieved. This also aligns with the first major finding.

The above examples illustrate how the perceived psychological safety within their team helps the willingness to share information and discuss issues. Although psychological safety is not a term that was used by participants, when I listened to their descriptions, which resonated with the sub-themes of trust and respect, I found evidence of a culture emerging that has created a feeling of safety in some teams to conduct candid and caring conversations on potentially tough issues. This feeling of safety for talking about issues becomes part of the team’s normal interactions.

**Trust.** Underlying much of the feeling of psychological safety is trust. Empirical studies show that trust is important for teams. Research on group process states that groups working through early stages build trust and build an environment that supports a willingness to raise different perspectives (Tuckman, 1965; Wheelan, 1993). On the other hand, when people feel rejected, they perceive a feeling of negative impact on their contribution (Hultman, 2002). Remote team members must rely on trust, and the use of social management will help them do this successfully (Goleman, 1998). Trust is important in virtual teams because people must work closely together. Greenburg, Greenburg, & Antonucci, (2007) identify that virtual teams have more difficulty building trust than face-to-face teams because it’s harder to develop relationships, non-verbal cues are missed, and local difference may cause misunderstandings. Aubert and Kelsey
(2003) found that when trust exists, it has a positive influence on the efficiency and effectiveness of virtual teams. One way to build trust is by understanding the impact team members have on each other and adapting as needed. The next paragraph is a representative example from a higher scoring team member who described that the trusting relationship amongst team members supports collaboration and a solutions focus when they encounter conflicts.

And trust, there's a lot of trust there. So I think that just creates this really cohesive team environment that just...You know, there's a lot of opportunity for collaboration and there's expectation that, you know, we will be professional adults and find solutions when there's challenges. (Participant #0725, personal communication, 2017)

On the other hand, participant #1217 thoughts illustrate a representative example from a lower scoring team member who described a lack of trust for their team members. Participant 1217 described how words and actions of team members frequently do not align and specifically stated that trust is not there. The participant also implied that the lack of trust results in minimal communications amongst the team, and so the conflicts are not addressed.

I wonder if everybody trusted each other and we actually all could come together and discuss that type of a challenge. It seems like when we’re in a team environment everybody kind of puts on their professional happy face and we all just push forward and then as soon as we’re in our regions again by ourselves, that’s when the chatter and tension seems to continue. (Participant #1217, personal communication, 2017)

In a comparable example, another lower scoring interview participant discussed lower trust associated with political behavior, including sabotage or undermining the efforts of others. In the next situation without the trust, there was a lack of open conversations, and the problem lingered.
I think it spiraled out of control a bit. Because, like the level of trust that was between those two people was extremely diminished. And I don’t think it had to be. I think if they were able to have an open conversation, it probably you know, wouldn’t…(Participant #1527, personal communication, 2017).

In summary, the data shows that virtual teams who experience a feeling of trust among members will address differences they encounter in a professional way that maintains the relationship. In contrast, the data indicates that when virtual teams have a lack of trust, conflicts are not addressed or situations escalate and relationships may be damaged.

**Respect.** The following quotations reflect how participants described respect for their team members. Participant #0636 is from a higher scoring team and described mutual respect, learning from each other, caring about each other, and how these descriptors represent her perception of the team culture.

There is so much mutual respect that we’ve learned from each other, and everyone has kind of…and you care about each other and you want everyone to succeed, and there's no comment of jealousy, there's no, okay, someone's getting recognition and I'm not. I mean, it is truly a team environment for our team. That's how I feel. (Participant #0636, Personal Communication, 2017)

A second member of the team had a similar sentiment. This conversation connects back to the participant perceptions describing in category 1. As a brief reminder, participants perceived individual differences to be characteristics such as personality, experience, and tenure. Participant #0636 described the interpretation of differences and espoused how much mutual respect exists on the team for the value these characteristics bring to their interactions, decision-making, and relationships.

We got some pretty diverse personalities and everybody comes from different backgrounds as far as prior experience. But I think there's, you know, the foundation is mutual respect. (Participant #0633, personal communication, 2017)
Some participants from lower scoring teams described a lack of respect for their team members, and the influence of that lack of respect on the emotions and behaviors in the group. As highlighted in the first finding, lower scoring teams tended to withhold information and avoid or withdraw during conflict. Results from the study consider a hypotheses that lack of trust may underscore the team members’ behaviors.

It really seems to effect all of our work as a whole. I think that people feel really frustrated and not respected to a certain extent where not everybody wants to share information as they get information. People just don’t want to be open with each other. (Participant #1217, personal communication, 2017)

This section examined psychological safety factors, which are underpinned by trust and respect amongst team members, in the handling of differences as important in this study.

**Collaborating with each other.** As I reviewed the stories of the participants, it seems that frequency of communications and a psychologically safe environment are associated with a conflict management style of collaboration. I was able to reach this insight because many teams were part of the same organization and share a common situation, which requires team resolution. I was able to see patterns in the way the similar situation was handled across higher and lower scoring groups. The nature of the situation involved discussion among the team to reach a resolution. One pattern had to do with a mindset viewing team members as collaborators, whereas the other mindset is concerned with internal competition. The next two examples are both from higher scoring teams and illustrate comments from participants who view their team members as collaborators.

I don't feel like I'm competing with the person east or west of me or north or south of me. You know, my problem eventually will become their problem. So I think
there's a strong vested interest, and participating in trying to understand what people are going through with their challenges. (Participant #0632, personal communication, 2017)

I would definitely say interactive, open or transparent, tenured, passionate about what they do, women’s health, tenacious about getting the sales and collaborative. I would definitely say this team is one of the most collaborative teams I’ve been on. (Participant #1720, personal communication, 2017)

In contrast, members from the lower scoring teams were more likely to express a competition amongst members. As participant #1537 who represents a lower scoring team shared in a story about competing with team members in the achievement of goals led to perceptions of jealousy and tension amongst the team.

Sometimes there are some people who can have some jealousy, you know what I mean? Because maybe you’re getting more and they’re upset about that because everyone on the team has goals of really doing more than what they’re doing currently, so that sometimes drive tension. (Participant #1537, personal communication, 2017)

Collaboration or competition seems to be grounded in the relationships among team members in the handling of differences emerged as a result of interview questions and discussion pertaining to how participants handle differences that emerge in the team. I identified three relationships in this category including a go-to person, the team at large, and the role of the manager.

**Go-to Person.** About 64% of the participants made reference to speaking frequently with a trusted colleague or go-to person,” which I have defined as someone they speak to one-on-one regularly as a trusted confidante. Participants frequently referred to this relationship as their go-to person. Sometimes, participants described having multiple go-to persons. However, it was always a number much smaller than the entire team, and this relationship was easily identified. The following quotes illustrate
participants’ perceptions of having a person to communicate with on the team. For example, participants described how their go-to person helps individual team members process what they think they are hearing and understanding on the virtual calls.

If somebody may sound upset or there's an issue, you may talk to another person about it first and get their opinion and say, "Hey, did you notice so and so said this or didn't say that" or whatever and ask an opinion of a colleague. (Participant #2531, personal communication, 2017)

By asking and sharing information with each other, the team members are making sense of the actions, behaviors, and feelings of themselves and each other. In the literature, sense making refers to ways people structure the unknown in order to act on it. Ancona (2012) explains that sense making requires “an articulation of the unknown, because, sometimes trying to explain the unknown is the only way to know how much you understand it” (p. 4.) This understanding or making sense is needed when the environment is changing rapidly. It can help teams by allowing all team members to work from a common map of what’s going on out there so that coordinated action is facilitated (Weick, 2001; Ancona, 2011).

In summary, having a team member or members to connect with to discuss questions, concerns, and issues within the team emerged as a way the virtual team members can make sense of a situation and determine how to handle it. This was an important insight into how virtual teams use their relationships in handling differences.

The virtual team (at large). Existing literature on team relationships provide empirical evidence that relationships influence trust, communication and collaboration that are important and necessary for team effectiveness (Alderfer & Smith, 1983; Katzenbach & Smith, 1993; Moore & Mamiseishvili, 2012). Many participants described
their relationships across the entire virtual team by talking about getting to know each other and how this knowledge facilitates their interactions over the phone, through texting, and over time. These relationships were focused on the business and priorities of the group and also served as a basis for advice and socializing. They describe that by getting to know each other they learn personalities, values, and work ethics that assist them with navigating differences that are experienced remotely and without the benefit of non-verbal cues due to the nature of working virtually.

100% of the participants described meeting with their team in person at least two or three times during the year. It is at these in-person events that teams have an opportunity to receive training, company direction, as well as connect as a group for extended periods of time. In this study, extended periods of time means about two or three days. Participants talked about meeting in person and spending time to get to know each other helps with interpreting actions and behaviors of colleagues when they are dispersed and interacting remotely the majority of the time. Participants in this study are geographically dispersed often times spanning the entire US, or responsible for large geographic areas such as the Midwest or New England. The combination of role responsibilities which have participants generally working in customer facing roles coupled with the geographic distance between team members make meeting in person a rare occurrence. Every team described coming together a couple times per year for company-wide or team meetings and this participant describes how face-to-face interactions that occur a couple times during the year help to interpret situations when they are not together the majority of the time.
We genuinely like each other. Because we've spent time together outside of work, meaning...like at these meetings and stuff when we're not in a meeting, we're at dinner or something like that, where socially we can get to know each other. I think that helps because you know personalities. You can adjust for personality. Like, if you're like, "Oh, she was upset." But then you're like, "But that's just her. She'll get over it." You know. So you give them some leeway. (Participant 3022, personal communication, 2017)

However, this sentiment was not shared by all participants. Other participants described a lack of desire to spend time with team members when the team does meet face to face. This participant had previously disclosed interactions with the team virtually that were condescending and rude. This participant is from one of the lower scoring teams.

When we aren't together, when we don't have to be together, we don't hang out together. So I really don't care what they're thinking or doing when I don't have to be with them. And I'm sure it's the same way. It's definitely a different dynamic with this team than it is in past teams. (Participant #0524, Personal Communication, 2017)

To summarize, the above participant quotes illustrate the perspectives on interacting with their coworkers to conduct business virtually. Participants described that by getting to know each other they learn each other’s’ personalities and work styles. This insight showed to be especially useful for the higher scoring teams who also approached differences by regulating their words and actions, as outlined in the previous finding.

**Role of Manager.** The third key relationship that emerged from the data is the relationship with the manager. In this study, about 78% of interview participants referenced the role of their manager in dealing with differences. For example, the quote below illustrates how one participant described that the support and respect received from the manager plays an important role:

She'll respect the way that you do your business. And she's not really someone that's telling you how to get it done, but more someone who's there for support if you need additional help or wanna brainstorm on a situation. So I think it helps us
to deal with differences, knowing that we have her full support. (Participant #1230, Interview, 2017)

Other participants described how the manager creates an environment for sharing information about each other to cultivate team relationships. This connects to the theme of psychological safety, which was discussed above.

(Name removed) is good about a very comfortable, casual environment and getting to know each other sort of on a personal level, meaning sharing family information, pictures, sort of voluntary, like tell-something-about-yourself-type of thing. (Participant #3022, personal communication, 2017)

Empirical research on the role of the manager in teams and virtual teams and their influence on performance, satisfaction, team cohesion, and many other team dynamics is well documented (Sy, Côté, & Saavedra, 2005; Goleman, Boyatzis, & McKee, 2013). Therefore, the appearance of this theme in the primary data is not surprising.

In summary, participants described the role their social network plays in the handling of differences they encountered on the job. Key members of the social network include a “go-to person,” their manager, and the team at large. The role their social network consisting of their manager, the team at large, and a “go-to-person” played a role in the handling of differences they encountered on the job and within and across teams. The stories shared above illustrated data in which participants described connecting with their manager, their co-workers, and the team at large to seek understanding or clarification or simply to vent. These behaviors were outlined in the previous finding.

**Finding 2 summary**

The second overarching finding from the results is that virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a collaborative approach to conflict management.
Data from the quantitative analysis showed that teams that meet more frequently whether face-to-face or remotely had higher scores. Data also showed that the use of group app and texting creates a mechanism for virtual teams to be in daily contact with each other further increasing virtual team interactions. When frequent interactions are coupled with trust and respect, the results suggest that a psychologically safe environment supports a collaborative approach to addressing differences and conflicts.

Additional Analysis

There are three additional insights that emerged during the data analysis. This includes the teams’ access to data relevant to the issue, compensation programs, and senior leader influence. Five of 22, or 23% of participants described access to data as a factor in the resolution of conflicts. For example, participant #1720 described a dramatic shift in the fighting and tensions her team was experiencing as soon as data became available. For many years, tensions emerged when trying to assign credit to team members. However, the data was challenging to obtain, so it had become a messy process. Eventually, the team was able to obtain valid data and share it with all team members at a certain point, and with this action, almost all of the tensions and fighting went away (Participant #1720, personal communication, 2017). Participants also described how compensation and reward plans vary among some of the team members, depending on their role, and this has a perceived influence on motivation and behavior, which can lead to conflicting priorities and expectations. Participants also referenced the “tone” set by higher-level leaders in the organization as an influence on the team culture.
Much of what is known about teams in the literature was true for the virtual teams in this study. For example, the role of the manager, the role of trust and respect, and issues related to goals, roles, and expectations were very similar for the virtual teams in my study compared to face-to-face teams in the literature. In contrast, my study did not support the views in the literature that virtual team members feel isolated, have a lower sense of team identity, and feel less connected (Hinds & Bailey, 2003). My study, which included participants in virtual teams in an organization showed a mean of 4.32 for team identity across all the participating teams. Again the 4 score represented responses of agree or strongly agree with the statements. Additionally, in the following paragraph, a participant describes a feeling of connection with the team members because of the continuous texting back and forth, and references the change in the past five to ten years.

I think it's just a constant communication with this group text. You know I mean? So it feels like people are...even though you're not talking all the time...we're in a different age nowadays from, you know, even five years ago. Texting is such a big part of our communication these days, right? Everything is just text it. Me and my friends text. You know, my wife and I text each other. It seems easier. It doesn't feel like you're as far apart as it would've been, let's say, maybe 10 years ago. (Participant #3027, Personal Communication, 2017)

Chapter Summary

This chapter presented the results from quantitative and qualitative data collection and data analysis. These results were achieved by examining the scores from the team emotional intelligence survey taken by 34 virtual teams across two industries. Additionally, 22 qualitative interviews were conducted and four teams provided access to virtual team meetings and group chats for additional data collection. T-tests revealed that there was a significant difference amongst the groups for the variables analyzed, creating affirmative environment, creating debate, team self-evaluation, and creating emotional
resources. The study identified how participants perceive differences in their team, which include aspects of the individual, team, and environment. The power of mixed methods data collection and analysis at a team level unit of analysis in a field setting provided results that illustrate strategies employed by higher and lower EI teams in their strategies in handling the differences. Higher scoring teams engage in perspective taking, information sharing, and monitoring and adjusting of team behaviors. Lower scoring teams view each other as competitors and have a tendency to avoid conflict and vent without resolution. In addition, teams who meet regularly have more open communications, which enables a collaborative approach to conflict management. The Kruskal-Wallis test proved significant, indicating that at least one group was statistically different from another, so the Dunn-Bonferroni post hoc analysis was used to discover where the differences existed. The mean scores showed that the teams that meet more frequently have a higher mean for each of the four variables than those who meet less often. I will now focus on discussion of the findings and implications.
CHAPTER 5: DISCUSSION AND IMPLICATIONS

The goal of this study was to understand how team emotional intelligence of virtual teams influences how the teams handle differences. My interest in this topic emerged from twenty years of working with virtual teams in global organizations. I experienced first-hand how some teams seemingly navigate issues and challenges with ease, whereas other teams struggle and gain reputations for being difficult. I became curious to understand what was happening and how I as an HR leader could shape programs, practices, and processes to set up virtual teams for success. In Chapter 1, I discussed the complexity of managing conflicts in virtual teams, the role of emotions in shaping team climate, and the importance of team climate for handling conflicts. The theoretical framework from Chapter 2 positioned this study in the existing literature, which in summary states that virtual teams face challenges coping with emotion, difference, and conflict. Chapter 5 will now articulate how I was able answer the study’s research question and discuss the importance of the findings. This chapter also offers recommendations for virtual teams, organizations, and academics. Lastly, this chapter provides my closing researcher reflections and recommendations for future research.

Discussion

Two major findings from this study support our understanding for how team emotional intelligence influences how virtual teams handle differences. In order to answer the research question, 234 participants representing 31 virtual teams completed the team emotional intelligence survey (TEI), (Druskat & Wolff, 2001). Quantitative analysis on the survey results supported identification of teams with higher and lower
team emotional intelligence. I also interviewed 12 members across five of the top scoring teams, and 10 members across five of the lower scoring teams. Additionally, I conducted ethnographic observation with field notes of four virtual teams’ meetings and group chats. These data were transcribed, coded, and analyzed. Study participants explained that in their work environment, differences may encompass individual, group, or environmental factors. For example, differences referenced across the 22 interviews included personalities, styles, goals, roles, expectations, or local legal and regulatory requirements. It is how the differences are handled that may or may not escalate to conflict within the team. Findings from this research answered the study’s research question: How does team emotional intelligence influence the handling of difference in virtual teams? The two key findings included:

1. Virtual teams with higher TEI demonstrate team empathy, meaning that the team demonstrates cognitive empathy through perspective-taking and emotional empathy through recognizing feelings and emotions.
2. Virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management.

Each finding will now be discussed in the context of the research question and framed with my interpretation of the results presented in Chapter 4. This will be followed by a summary of how the major findings answer the research question. The balance of the chapter will include sections on study limitations, researcher bias, and suggestions for future research.
Finding 1: Virtual teams with higher TEI demonstrate team empathy, meaning that the team demonstrates cognitive empathy through perspective-taking and emotional empathy through recognizing feelings and emotions.

The team emotional intelligence survey showed significant variance between higher and lower scoring teams. A t-test was run to test for significant differences for the TEI variables between those who were designated as a high scoring team and those designated as a low scoring team. The variance in scores between the two groups of teams supports the qualitative results that higher or lower emotional intelligence scores indeed influenced how virtual teams handle conflict. As I engaged with interview and ethnographic observation data and field notes while still being blind to which teams were high and low scoring, I coded data prior to unveiling the team scores. Then, I identified strategies and practices distinctive to higher and lower scoring teams. In dealing with conflicts and differences, lower scoring TEI teams tended to avoid, vent, or compete with each other. On the other hand, higher scoring teams dealt with conflicts and differences through perspective-taking, information sharing, and team regulation. The higher scoring TEI teams’ approach was particularly useful in the virtual team, because it leveraged the knowledge and experience within the team, essentially realizing the value of being a team. While these strategies would be beneficial to face-to-face teams as well they are particularly useful to virtual teams who lack the ability to see non-verbal cues to assist with making sense of many communications. The strategies also tended to show behaviors that made it easier to resolve the conflict, because members felt safe raising issues with each other.

Festinger’s (1954) social comparison theory says that behavior is based on the interpretation of others’ actions. Social information processing theory similarly finds that
the social environment offers cues that individuals interpret to inform how attitudes should be (Salancik & Pfeffer, 1978). Emotion influences judgments, decisions, and behaviors in organizations in two ways. First, moods can impact the thinking process in how to deal with a task. Second, affect can also shape the content of thinking through attention, interpreting, recalling, and learning (Forgas & George, 2001). During a conflict, team members need to comprehend the information being presented by the members who disagree with them as well as understand the perspectives from where they came (Johnson & Johnson, 1979). In the current study, perspective-taking was one strategy for engaging in communication that allowed for explanation of each other’s cognitive, affective, and behavioral responses to the conflict. When team members attempted to understand the frame of reference of another, a fuller picture of the situation would emerge as they better articulated their own viewpoint and heard the viewpoint of others. In addition, the differences were seen as a benefit to the team.

So I think, like, a great thing about difference is that it provides different perspectives. I think all of us get into the situation where we think about our own world and it's hard to think outside your vision, your perspective. So having the opportunity to think differently is of real value. And so the differences are great because they do give you a different perspective, I think, like, diversity in opinions and thoughts and ideas is fantastic and it helps build better solutions. (Participant #0725, Personal Communication, 2017)

In this study, in higher scoring teams, this behavior promoted the action of talking it out to solve the issue. I attribute this, in part, to the role that team culture plays in contributing to their ability to feel safe with discussing difficult issues with each other, as discussed in the next finding.

Scholars have argued that diverse groups are expected to have a broader range of knowledge, expertise and perspectives that can enhance solutions and decision-making
(Hoffman, 1959; Damon, 1991; Ancona & Caldwell, 1992). As a brief reminder, the first finding outlined in the results described how study participants perceived differences that included individual, group, and environmental categories. This theme relates because it demonstrates how the teams can take advantage of the skills, knowledge, and experiences of each member brings.

Participants from lower scoring teams described competition with each other, challenging beginnings, interacting with caution, walls being built up, “crickets” (e.g., silence) on conference calls, accepting the status quo, underlying tensions, conflicts being swept under the rung, personalities not meshing, and drama. For example, a participant from a lower scoring team described a reluctance to share information with team members because they didn’t want others to perform better than themselves, representing an internal competition.

If they share information like ‘hey, this is really working for me,’ then that other person receiving that information is going to take that on and almost do better than where they received the information from, so I think nobody wants to share information at the chance that someone else is going to take a step up with them. Does that make sense? (Participant #1217, personal communication, 2017)

It is worth noting that there were also positive words and phrases throughout these interviews. However, when reviewing the transcripts together, there was a common thread of these types of examples in the lower scoring teams when compared to higher scoring teams. This indicates that the lower scoring teams are not addressing issues or challenges in the same way as the higher scoring teams, whose behaviors created an environment where talking it out and focusing on solutions is encouraged. The data
shows that lower scoring teams have a tendency to ignore conflict, accept it, or talk like nothing is wrong on group calls but then chatter with each other offline.

Data from interviews indicated that in lower scoring teams, frustrations build up, and the team establishes a pattern of responding to these issues such as competing with each other or withdrawing and avoiding the topic. A second hypothesis about what is going on is that the teams are not demonstrating caring behavior toward each other. For example, I did not have a single code for the lower performing teams that described adjusting their own behavior in response to someone else’s feelings or emotions, whereas over 50% of the survey participants of higher performing teams had this concept coded. This is interesting and the literature confirms that team emotional intelligence can help the team manage the conflict and reactions to the conflict (Ayoko, Callan, & Hartel, 2008).

At the team level, social awareness with a focus on empathy allows a team to build and sustain effective relationships. To be socially aware, team members must be mindful of the group mood as a whole as well as the individual moods within the group. When team members collectively notice the group’s moods, they respond with empathy, which leads to cues and expectations in how members relate to each other (Elfenbein, 2006). Knowing that virtual team members regularly use technologies such as mobile devices to communicate, share information, and accomplish objectives, the remoteness removes cues that tend to mediate the understanding of emotion that is key to organizing and meaning-making (Fineman, Maitlis, & Panteli, 2007). To illustrate this finding, a participant from a higher scoring team described how they are very careful about the tone
and inflection over the phone, recognizing that this will influence how the message is perceived.

Like we all understand the challenges in our current environment, but I think it's me being cautious of tone and inflection over the phone. Because that's actually much more important than even the words we use. So it's more just being respectful of each other and being cautious of how we show frustration, even when we're frustrated with others, you know, in our team. You have to recognize that no one can see you to your face. So you have to be very cautious about it. (Participant #0725, personal communication, 2017)

In summary, team emotional intelligence seems to be associated with the thoughts, feelings, and behaviors of the team as manifested through their approach to handling differences. Virtual teams with higher team emotional intelligence demonstrate team empathy, meaning that the team exhibits cognitive empathy through behaviors such as perspective-taking and emotional empathy through recognizing feelings and emotions. In contrast, virtual teams with lower team emotional intelligence are not demonstrating team empathy in the same way. Results from this study show that virtual teams with lower team emotional intelligence are more likely to avoid, withdrawal, or compete with each other when faced with differences.

Finding 2: Virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management.

The second major finding is that virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management. Research by the Gartner group (2016) shows that mobile device adoption in the workplace is not yet mature. This 2016 survey from Gartner, Inc. found that although 80
percent of workers surveyed received one or more corporate-issued devices, desktops are still the most popular corporate device among businesses, with more than half of workers receiving corporate-issued desktop PCs. Participants in my study described using their mobile phone and company computer for most interactions. My study results do not reflect the findings of the Gartner survey, so perhaps virtual teams are at the forefront of using mobile devices to interact. This study provides emerging insights into how texting and usage of newer technologies are playing a role in the virtual teams’ handling of differences. Twenty years ago, virtual team research considered technology as a way to recreate communication experiences achieved in face-to-face team meetings (Warnkentin et al, 1997). Now, however, communicating with their work colleagues through the use of technology represents a primary form of communicating. For example, my research showed group texting is used every day.

We communicate fairly frequently over text message so we’ve got a group text that goes around and that is the most open form of communication that we have because it’s probably every other day somebody has a question and then it’s sent to the entire group.

In this study, Dunn-Bonferroni post hoc analysis was used to discover where the differences existed in terms of frequency of remote or face-to-face meetings. The mean scores showed that the teams that meet more frequently have a higher mean for each of the four variables, creating affirmative environment, creating debate, team self-evaluation, and creating emotional response, than those who meet less often. As a brief reminder, I selected these four variables to identify which teams to participate in the qualitative data collection and analysis because of the relevance to the primary research question. The teams who meet only quarterly have the lowest scores in all areas.
Significant differences existed between those who meet monthly and those who meet quarterly. These results suggest the increase in team meetings and the usage of group text applications coupled with advancement in other computer-aided communication technologies have increased the frequency of whole team interactions. All teams had the same technologies available for their use. Some teams chose to use them more than others to connect with the entire team. While the technology is an effective enabler, there is also a strong team factor determining how to use the technology to interact with each other. My study shows that increased frequency in meetings and consistent interactions through group text increases the team emotional intelligence of the team as a whole. The higher frequency of interactions seems to help people become more familiar with each other and helps foster trust and respect as a foundation for a safe environment to raise opposing views, discuss challenges, engage in friendly banter, and talk about the many differences that come up.

Reflecting on the role of technology, my interpretation of the results as it relates to handling differences is that communicating with technologies can also serve as an escalation or de-escalation point in how the team handles differences. I identified this when hearing about how team members felt they may misinterpret or become confused on communications that were taking place over the phone or in a text. Participants described that communicating over text is both easy and hard. It is easy because it is convenient, fast, and affords the ability to reach many eyes, increasing the chances for a timely and accurate response. On the other hand, it is hard because sometimes responses and tone are unclear. A representative example of how participants perceive that
technology can sometimes lead to misunderstandings that contribute to conflicts provided from a higher scoring team is:

There is a challenge, I guess, with all the communication that we do through text or through email, that you could really misinterpret something someone’s saying very easily. So I tend to call people more if I need to have a conversation about something important. But the text thing, yeah, that could easily be misinterpreted for sure. (Participant #1734, personal communication, 2017)

Participants described that when they are uncertain about the meaning of a text, they have a tendency to either stay “quiet” and not respond to the message (lower scoring teams), or to call either the sender, the go-to person, or other team member to clarify meaning (higher scoring teams). However, it was not uncommon for disruptions or tensions to surface, and the way these tensions are handled matters. One participant from a lower scoring team described how the team tried to focus the call on broader issues versus minutia that may not be relevant for all, but it didn’t always work:

Sometimes people can take down a conference call. And somebody will make a comment that should kind of maybe be taken offline, you know? So I think it's dealt with where if you planned it here, that it's going that way, and someone's talking about just their own singular account or how this directive is affecting just them, that usually it’s just, you know, "Let's take this offline and continue the call" so we can continue the pace of the call and not get bogged down in that. (Participant #1230, Personal Communication, 2017)

Participant #0632, from a higher scoring team, also described the challenge of communicating over conference calls when a potentially controversial topic is shared and there is silence. In this example, the participant asked for feedback, which was then provided. He described his feelings of being judged and uncertainty of what others were thinking when he relayed his story.

Because you throw something out there that may be controversial. You throw something out there that there's really thinking outside the box and it gets quiet. So I don't know if somebody is sitting back and judging, I don't know if
somebody is sitting back digesting and thinking, or if somebody is making just a
god awful face, and they can't believe that that suggestion was made, it's really
difficult. (Participant #0632, personal communication, 2017)

As experienced by the participant above, one of the issues identified in the
literature about communicating with technology is that it minimizes non-verbal cues.
When non-verbal cues are lacking, people tend to seek other sources of information
(Chesin, Rafaeli, & Bos, 2011). One strategy participants discussed is the use of emojis,
emoticons, or using capital letters or explanation points, to express meaning and emotion
in text. Non-verbal cues are important, but it is not known if the strategies developed,
e.g., emoticons, are equally effective. Only one article shows evidence from fMRI brain
activity scans that emoticons and non-verbal communication activate the same brain
pathways (Yuasa et al., 2011).

Virtual teams using technologies to communicate have a low capacity to transfer
non-verbal cues and may experience more challenges in managing relationship conflicts
(de Jong, Schalk, and Curseu, 2008). The results of this study contradict other research
that indicates communicating primarily with technology means team members are going
to face more barriers in managing their relationship conflicts. My findings suggest that
actions taken by virtual teams at the time of formation and the connection established
through use of group text created a platform for virtual team members to establish trust
and respect, so being on a distant or remote team by itself should not be a barrier. On the
other hand, like any team, virtual teams must pay attention to how they handle
differences.

**Trust and Respect.** Trust and respect were terms participants used to describe
factors that contribute to successfully handling conflict. Trust is important at the team
level because people must work closely together. Based on the views of participants, trust and respect go hand-in-hand as foundational for team relationships to enable each other to handle differences effectively. When trust and respect are lacking, problems tend to escalate, and the team lacks cohesion and problem-solving capabilities. Several researchers agree that a lack of trust will reduce effectiveness (Bhat, Alavi & Ahuja, 2011; Aubert & Kelsey, 2003).

Because emotionally intelligent team members can regulate emotions, their ability to manage each other’s emotions can create a psychologically safe environment that builds on trust and respect (Edmonson, Wong & Law, 2002; Ghosh, Shuck & Petrosko, 2014). Data from this study shows that virtual teams with high emotional intelligence display and experience trust and respect, which fosters an environment of sharing information, perspective-taking, and constructive debate in the handling of differences. This departs from literature that explores and compares virtual teams and face-to-face teams, which frequently note the difficulty in establishing trust in virtual teams. This study showed trust and respect in the higher scoring teams. The difference in this study’s finding may be attributed to changes over time as people have become more experienced in communicating using technology. They will find it more natural to connect over technology and develop trust and respect because it’s just so much a part of everyday life, which it didn’t used to be. This suggests that more research is needed in this area.

Research within the past ten years often compares face-to-face teams and virtual teams. As the research was often conducted in laboratory settings, this study offers data within organizations and challenges these assertions and indicates that trust, cohesion, and psychological safety are present in virtual teams that have high team emotional
intelligence. In the current study, strategies that virtual teams use to establish trust began in the first team meeting. For example, in this study, 92% of participants described what happened when their teams formed. Many of the participants described face-to-face meetings conducted very early on during their team formation. Participants spoke about getting to know each other and focusing on the team objectives during these sessions. Many teams described discussion at early team formation meetings to agree on how the team would communicate with each other. Participants also described actions taken by the manager during the team formation that included joining a group text chat app, making introductions with team members during a team call, and assigning a team mentor to guide the new member in how the team works together. While I found that virtual teams were able to build trust, perhaps as much as face-to-face-teams, the finding that teams meeting more often in-person often have a higher team emotional intelligence may be perceived as a complicating factor. It is worth remembering that teams in this study have far fewer face-to-face meetings than remote meetings with most teams meeting face-to-face only twice per year. Nevertheless, this insight may inform businesses to support their virtual teams in periodic face-to-face team meetings.

Furthermore, the primary data supports that perceptions of team culture can help or hinder behaviors when differences arise. Data from this study suggests that the increased frequency of meetings and the knowledge sharing that takes place through group technologies are conditions needed to establish mutual trust and respect within the team. Group level research conducted by Edmonson (1996, 2002) showed that psychological safety is a group level occurrence. Psychological safety promotes a climate that makes it easy to speak up with uncertain thoughts. For example, when an idea is shared and
members respond respectfully it creates a pattern of behavior that encourages the sharing of different viewpoints, asking questions, and promotes exploration of differences as a normal way of conducting business.

In summary, the second finding for this study was that virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management.

**Answering the Research Question**

When viewed together, the findings answer the research question of this study. How does team emotional intelligence influence the handling of differences in virtual teams? The results have shown evidence that team emotional intelligence influences how a virtual team will handle differences. First, the 31 teams in the data set had a range in team emotional intelligence scores. The team TEI means ranged from a high score of 4.72 to a low score of 3.41. Of the 31 teams, 21 teams scored in the four range, or agree, and only nine teams that had scores in the three range or neutral. The means demonstrated varied responses amongst the groups. T-tests between the high and low scoring teams for variables analyzed showed significance in how they responded to the TEI survey. Chi-Square tests were also run to test for significant differences between high and low teams based on the number of times they identified specific variables during the interviews and showed significance for collaboration, self-regulation, and talk about it/ perspective-taking which have been identified as the top strategies for high performing teams in handling the differences. Second, integrating thematic analysis of the semi-
structured interviews and the ethnographic observations with field notes with the TEI survey results further showed patterns in the strategies and behaviors used by the higher and lower scoring virtual teams.

This research has shown that team emotional intelligence can help or hinder a virtual teams’ approach to handling differences. Integration of the quantitative and qualitative data analysis provides strong and compelling evidence that the membership on a higher or lower scoring team can influence how the team deals with differences. Virtual teams with higher team emotional intelligence demonstrate team empathy, meaning that the team exhibits cognitive empathy through behaviors such as perspective-taking and emotional empathy through recognizing feelings and emotions. Virtual teams with lower team emotional intelligence reveal behaviors of competition with each other, venting without resolution, and withdrawal and avoidance, often manifesting as silence on team calls and texts. These strategies and habits influence judgment, decisions and behaviors through the way people process the information, that is how they think and feel about it, as well as how they behave as influenced by their thoughts and feelings (Forgas & George, 2001). Also, virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management. A Spearman’s correlation showed the more frequently the teams meets, the higher the team scores for emotional intelligence. This is important and shows that frequency in remote interactions is associated with higher team emotional intelligence. Use of technology also provides a platform for teams to navigate the differences. It is here that one might see a higher scoring team pick up the phone and ask clarifying questions and focus on solutions, or
where the lower scoring teams might avoid the conversation or vent with another
colleagues independently. These behaviors form patterns within the team over time.
Psychological safety promotes a climate that makes it easy to say uncertain thoughts.
When members of the team share ideas and respond respectfully, it creates an
environment with a mutual expectation for the opinions and questions to be shared.

This study has provided a view of the lived experiences of virtual team members
in organizations. It explored factors in how virtual teams handle differences. This study
examined the stories reflecting everyday issues teams face, and the accompanying
emotions to misunderstandings and misalignments, such as jealousy, frustration, and
passion. It demonstrated how these emotions evoked thoughts, feelings, and behaviors
that were influenced by membership in that particular team. Having completed the
discussion on the findings, the following sections include reflections on researcher bias,
study limitations, as well as recommendations for virtual teams, organizations, and
academics.

Researcher Bias

Through my reflection on my positionality throughout this process, I identified
some potential biases as a researcher. There are two main researcher biases that
potentially influenced this study. The first bias is that I believe that a team is able to
influence how they interact with each other and achieve results. This belief stems from
my years working in organizations that emphasize the “what and the how” in goal setting
and performance management. One way I mitigated this bias was conducting a thorough
literature review, which covered multiple sub-literatures. This review provided
alternative perspectives on whether teams have the ability to influence how they interact. The second potential bias involved the selection of the interviewees. I used a convenience sample. During the interviews, this may have biased the stories if study participants felt more or less comfortable with me as the researcher because I worked in the same organization. To mitigate this risk, I employed member checks to gather feedback on the interview themes and interpretations. By conducting member checks, participants asked me questions and shared perspectives that improved the credibility and accuracy of the study. As an HR leader in the organization where most of the teams participating in this study work, it was important for me to be aware of biases and assumptions. I continued to reiterate that the purpose of the research was for a dissertation study and was not a company-sponsored research project. I also emphasized repeatedly that participation was voluntary. Additionally, while I was conducting the interviews and team observations I was still blind to which way the teams had scored. This served as an effective way to mitigate researcher bias. I focused the analysis on the data collected and not on information or insights I was aware of based on prior interactions with some of the teams.

To mitigate this bias, I maintained a researcher journal, engaged in weekly dialogue with a colleague, and conducted member checks of the emerging limitations.

In addition, I experienced first-hand some of the strategies the virtual teams were using to handle conflicts. Due to my time interacting with participants in interviews and ethnographic observation, I had one experience when a participant contacted me for advice on how to approach a colleague with whom she was having a disagreement. This outreach occurred a couple weeks after we completed her interview. We engaged in a discussion about how she could handle the situation, and she called me again later to
provide an update on how she addressed the situation based on suggestions discussed during our conversation. This behavior was reflected in my codes about a go-to person to contact to make sense of a situation and figure out a path forward. I wrote about this experience in my researcher journal.

**Study Limitations**

First, due to limited budget, time, and resources, the sample size was limited. Second, a limitation associated with convenience sampling is that by its nature, the sample is not chosen at random. Therefore, the bias in convenience sampling means that the sample is less likely to be representative of the population being studied, undermining the ability to make generalizations. However, I collected data from 34 virtual teams which helps mitigate this issue. A similar limitation is that since the participants were all based in the US, it may not be generalizable to global participants of virtual teams. The next limitation is that I was the primary coder. To offset the limitation of inter-coder reliability, I engaged in discussions of my analysis with my cohort peer and my committee members. Additionally, my husband also spent many hours coding some transcripts so that we could compare and contrast. This was useful to help me refine the codes and definitions I was applying.

**Recommendations for Virtual Teams**

The data show that teams with higher team emotional intelligence employ several strategies and practices to handle differences. There are a number of practical learnings that emerge from the findings of this study useful for virtual teams. First, allocate time to get to know each other when the team forms and throughout the lifetime of the team. In
this study, almost all the teams had a kick-off meeting when formed during a re-organization. Team leaders and members leveraged the face-to-face gathering to align on business goals and also conduct member introductions where team members shared their previous experiences, and began making connections that were leveraged for advice and information sharing. Another technique shared by study participants was to identify a team member who would welcome new team members joining the team to orient the new member to team expectations such as using group texts to communicate and approaches for handling relevant team issues. Second, insights from this study suggest virtual teams should hold regular meetings, whether face-to-face or remotely. Data showed that teams meeting bi-weekly as opposed to monthly or quarterly had higher scores on the team emotional intelligence instrument. Similarly, virtual teams leveraging group chat or text features on their mobile devices also build familiarity with each other, which seems to make raising difficult issues relating to differences easier. Third, virtual team members should implement ways to share perspectives with each other. This builds on the natural diversity in the group reflecting on personalities, styles, and experience, helps team members to think through their own logic, and understand the thinking and feeling of others. The act of perspective taking in this study was a key strategy of higher scoring teams to handle differences. One technique teams used is voting buttons on group technology. Another approach is to request every member to speak during conference calls. Implementing perspective-taking effectively may require skill-building on meeting facilitation techniques.
Recommendations for organizations

Organizations investing in their learning and leadership development portfolio could institute a number of programs or practices based on the evidence provided in this study. First, virtual team leaders and members should be trained in team dynamics with a focus on building trust, respect, and conflict management. One observation from the data is that the five teams with the highest team EI scores had tenured managers. I cannot offer a claim of causation but it is a feasible hypothesis that leading a virtual team is a higher level skill in people management and takes time to develop. By providing team leaders and team members some skill building on working in this context the organization may accelerate the teams’ and team leaders’ development and ability to work through team challenges. For example, teams could be trained on how to handle difficult situations and provided guidance for what to do when there is silence, venting, or avoidance of important topics. Second, organizations should provide the budget needed to enable period face-to-face team meetings. The data showed that teams that meet more frequently, rather face-to-face, or virtually, have higher team emotional intelligence scores. This investment in the team may yield measurable results in the team’s performance and outcomes. Third, organizations should ensure that their HR, IT, and business leaders with distributed teams have a clear strategy for ensuring the virtual teams have the resources they need to work together. Most of the teams in my study were from the same organization; however I counted several different technologies they were implementing because there was not any standard platform.
Recommendations for Academics

Academics interested in organization psychology, organization behavior, group dynamics, virtual teams, emotion in the workplace, emotional contagion, and computer-aided communications are potential beneficiaries of this study. This small study may provide ideas for future studies to dive deeper into the research question and related questions. This study provides many directions for future research. As discussed previously, there are relatively few studies with participants in the workplace. First, this study uncovered some interesting findings, because the research was conducted in a natural setting with ongoing teams. This study encourages researchers to continue to focus on the virtual team population to yield new and exciting insights. Also, further efforts on ethnographic and text-based methods will be interesting, especially if taking a longitudinal approach. The use of ethnographic observation was invaluable as a researcher for me to listen in to team meetings and to read group chats. This visibility provided my research a level of insight that was not available through other methods. Second, data collection in this study occurred over three months with relatively brief glimpses into the lived experiences of participants. Conducting a longitudinal study would yield even richer insights. Third, exploring the same research question with additional populations such as global teams or face-to-face teams would also add to the literature. Fourth, research directions could explore how norms are established in virtual teams. Lastly, as many studies on virtual teams have been conducted with college students it would be worthwhile to repeat existing research on topics such as conflict management, problem solving, trust-building, in organizations with virtual teams as participants.
Conclusion

Previous research has shown that virtual teams show less social interaction and emotional expression, and have more challenges with communications and conflict as compared to face-to-face teams (Jarvenpaa & Leidner, 1999). Previous research also indicates virtual teams using communication tools have a difficulty with the transferring non-verbal cues and may experience more challenges in managing relationship conflicts (de Jong, Schalk, & Cursue, 2008). Although my research did not compare and contrast virtual and face-to-face teams, it does offer findings that have grown our understanding. The findings and conclusions of this study reveal new insights as to how virtual teams handle differences and conflicts at work. This study showed that when virtual teams incorporate perspective taking, information sharing, and regulation of thoughts and feelings, their behaviors can assist with resolution of differences and conflicts. On the other hand, this study also showed that teams engaging in avoidance, withdrawal and venting without purpose can lead to unresolved conflicts and lower perceptions of team culture. Additionally, this study showed virtual teams engaging in frequent team interactions coupled with mutual trust and respect have more open communications, which enables a solutions focused and collaborative approach to conflict management.

Virtual teams continue to be used to structure the work within many organizations, and this study may assist virtual teams and organizations with actions when new teams form as well as provide support for existing virtual teams. Perhaps the findings can even be applied to teams that are primarily face-to-face. By adding to the body of knowledge, practitioners can develop interventions to help virtual teams create
and sustain a positive climate and work environment, thus allowing them to rise to the challenges and opportunities facing organizations today and in the years to come.
APPENDIX A: Voluntary Informed Consent for Interview/Observation

- You are invited to participate in this study because you are a team member of a virtual team.
- Please read this document and ask any questions before the interview begins.
- This study is conducted by Karen Bicking, a graduate student of the University of Pennsylvania.

Purpose: The purpose of this study is to understand more about the role of emotional intelligence as an influence on group dynamics in a virtual/dispersed team in a workplace environment.

Procedures: If you agree to participate, the interview will be conducted at a time and place that is convenient for you. Interviews will last approximately 60 minutes. With your permission, the interview will be audiotaped. These tapes will be erased following completion of transcription.

Risks and Benefits: This research will shed some light on virtual teams and group dynamics, and your participation will be instrumental in the process. The researcher believes there is minimal risk to you as a participant in the study.

Compensation: There will be no financial compensation for participation.

Confidentiality: You understand that information collected in this study will be kept confidential, except as may be required by law. If any publication results from this research, you will only be identified by a pseudonym, and any other information that could reveal your identity will be disguised.

Withdrawal: Your decision to participate or not to participate will not affect your current or future relations with your organization or the researcher. If you decide to participate, you are free to withdraw from the study at any time without affecting those relationships. You are also free to not answer any question during the interview or to end the interview at any time.

Statement of Consent: I have read the above information. I have asked any questions I had, and I have received answers to my satisfaction. I consent to participate in the study. I received a copy of the consent form.

Signature of Participant & Date:

Name of Participant (Please print):

Signature of Researcher & Date:

Contact Person: Karen Bicking 908-444-2064/ karenbicking908@gmail.com
Appendix B: Interview Protocol

General Introduction
Hello (name).

Thank you for your time today. I am a student at the University of Pennsylvania’s Graduate School of Education, and this interview is part of my research project on virtual teams. The purpose of this interview is to discuss some examples of working in a virtual team environment. You have all the information you need from the Study Information Sheet sent previously. Do you have any questions? I want to reiterate that participation is voluntary and you are welcome to pass on any question or stop the interview at any time. The interview will last approximately 60 minutes. Does that work with your schedule? It is useful to me if I record the interview, and I will also take notes. The recording will be erased after it is transcribed. Do I have your permission to record the interview? I also want to let you know this interview is confidential and names will be anonymized. Do you have any questions before we begin? I greatly appreciate your time and participation. Let’s get started!

1. My first set of questions focuses around the team make-up.
   a. How long has this team been together?
   b. How long have you been part of this team?
   c. How many members are there?
   d. What is your role?

2. This next set of questions focuses on how your team communicates with each other.
   a. Where do you geographically work?
   b. Where do other team members geographically work?
3. I would like to understand the formation of your team.
   a. Why did this team come together?
   b. How long have members of the team been working together?
   c. What were the first things the team did?
   d. If the interviewee was not part of the formation of the team, then ask: Tell me how you were brought into the team?

4. Teams tend to take on their own unique character. What adjectives would you use to describe the character of your team?

5. Now I’d like to explore what types of differences tend to come up among or between team members.
   a. What types of differences tend to come up among or between team members?
   b. What does difference mean to you?

6. Continuing to focus on differences that come up, I’d like to ask you about some recent events within the team where the team had to deal with differences. I’d like you to provide a brief overview of the situation, and then I'll ask some details about who else was involved, what the outcome was, and what you were thinking or feeling. *See end of document for sample probes if interviewee is stuck coming up with an example.

Let’s begin with a particular time when your team dealt really well with a difference.

- First, what was the situation?
- Who else was involved?
- What led up to the situation?
- What happened first?
- What happened next?
- What did you say or do?
- What were you thinking when this happened?
- What were you feeling when this happened?
- What was the outcome?
• Would you have done anything differently?

7. This is a similar question on differences that came up in your team. This time, please tell me about a particular time when the team did not deal well with a difference.

• First, what was the situation?
• Who else was involved?
• What led up to the situation?
• What happened first?
• What happened next?
• What did you say or do?
• What dialogue do you recall with others?
• What were you thinking when this happened?
• What were you feeling when this happened?
• What was the outcome?
• Would you have done anything differently?

8. Do you have an example of a difference or conflict that came up between your team and other groups?

• First, what was the situation?
• Who else was involved?
• What lead up to the situation?
• What happened first?
• What happened next?
• What did you say or do?
• What dialogue do you recall with others?
• What were you thinking when this happened?
• What were you feeling when this happened?
• What was the outcome?
• Would you have done anything differently?

9. Let’s shift gears now. I’d like to understand how does this team use emotion in its work? Probe example.

10. How do you try to make sense of what your colleagues are thinking and feeling in the absence of non-verbal cues?
11. We spoke a lot about how your team deals with differences. In your opinion, what are the 1-2 things your team does that helps the team deal with differences?

12. Before we finish, is there anything that we haven’t covered that you would like to add?

This concludes the interview. Thank you again for your time and participation. It has been a pleasure to speak with you.

*If person is stuck in coming up with examples:

- Information sharing
- Process decisions
- Decision-making
- Communications
- Relationship conflicts
- Differences in Values
- Differences in Experiences
- Budget/Resources
- Differences in perception
- Tension
- Conflict
- Arguments
- Debates
Appendix C: Team Emotional Intelligence Survey Conditional Use Agreement

I hereby agree that the permission granted to me by Steven Wolff and Vanessa Druskat to receive and utilize without charge the Group Emotional Competence Survey (GEC) is subject to the following conditions of which I hereby accept and acknowledge:

1. I will utilize the GEC for research purposes only and not for commercial gain.

2. The GEC and all derivatives thereof is and shall remain the exclusive property of Steven Wolff and Vanessa Druskat who shall own all rights title and interest including without limitation the copyright in and to the GEC.

3. I will not modify or create works derivative of the GEC or permit others to do so. Furthermore I understand that I am not permitted to reproduce the GEC for inclusion in my thesis/research publication. You may include a sample question for each construct.

4. I will provide Steven Wolff or Vanessa Druskat with a copy of any research findings arising out of my use of the GEC and will credit Steven Wolff and Vanessa Druskat in any of my publications relating thereto. Steven Wolff and/or Vanessa Druskat may disseminate this research and report any research relating to the GEC.

5. I will provide yearly updates of my research progress on the anniversary date of the signing of this agreement until the final write-up of the results is provided.

6. I will not provide feedback to teams or team members.

7. STEVEN WOLFF AND VANESSA DRUSKAT WILL NOT BE DEEMED TO HAVE MADE ANY REPRESENTATION OR WARRANTY EXPRESS OR IMPLIED IN CONNECTION WITH THE GEC, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

8. My rights under this Agreement are non-transferable and non-exclusive and will be limited to a period of two (2) years from the date of this Agreement.

9. Steven Wolff and/or Vanessa Druskat may immediately terminate this Agreement by giving written notice to me in the event that I breach any of its terms or conditions.

10. This Agreement may not be assigned by me without the prior written consent of Steven Wolff and/or Vanessa Druskat. Any attempted assignment shall be void.
11. Failure by Steven Wolff and/or Vanessa Druskat to enforce all or any provisions of this Agreement will not be deemed a waiver of such provision or any subsequent violation of the Agreement by me.

12. This is the entire agreement with Steven Wolff and Vanessa Druskat pertaining to my receipt and use of the GEC, and only a written amendment signed by Steven Wolff or Vanessa Druskat can modify this agreement.

_________________________________________  _______________________________  ____________________
Signature                                      Print Name                          Date
Appendix D: Interview Protocol from Pilot

1. What is your role? How long have you been in it?

2. How long have you been part of this team? How long has this team been together? How many people are there? Has this changed over time?

3. How frequently do you see your team members face-to-face versus interacting remotely/virtually?

4. What technologies do you and your colleagues use to communicate with each other? Probe specifics and then ask which they use when.

5. Describe the team culture or climate.
   a. How would you describe the team in terms of its work style, tone and effectiveness? Probe specifics.
   b. What do you like best about working with this team? Probe 2 specific examples.
   c. What is the most frustrating thing about working with this team? Probe 2 examples.

6. Have there been any critical moments that shaped the team early on? Probe 2 examples if yes.

7. What is the climate of the team like? Can you use 2-3 adjectives to describe the team and then explain them?

8. Do you think that the climate of your team influences its performance?
   a. Can you provide 2 examples?

9. What can you tell me about your familiarity with Emotional Intelligence? Probe specifics.
   a. In what ways is EI demonstrated among team members?
   b. In what ways do you see this playing out in team dynamics?
   c. In what ways are there challenges? Probe specifics.
   d. Do challenges shift when the team is in the same room vs. virtual? Probe specifics and explanation.
10. How does emotional intelligence influence your team’s ability to accomplish its work?

   a. Can you provide 2-3 specific examples? Probe their theories on these.

   b. Have you tried to work with the team if there have been conflicts? Probe specifics.

   c. Do you see a difference given the virtual piece? Probe contrast here and specific examples.

11. What strategies do you use to manage your relationship with this team who works at a distance?

12. Describe a situation when there was a conflict between or among virtual team members.

   a. Was it resolved?

   b. How was it resolved?

   c. Did it stay resolved? Probe specifics.

13. Please describe a situation where the team recognized tensions. What did they do to try to improve the situation? Probe specifics.

14. Can you think of an example when a team member or members raised difficult issues and constructively addressed conflict when you were not in the same room? Probe specifics.

15. Describe a situation when a dispute was handled well or not handled well. What accounted for this specifically? Did you see EI playing a role? Probe specifics.

16. Reflecting on these questions and your responses, I want to ask you: How do team members’ emotional intelligence influence conflict management in virtual teams? Is there a range of EI on the team and how does this surface? What do people do in moments where this is clear? Frustrating? Probe specifics.

17. From your view, how does the emotional climate of this virtual team influence its productivity? Probe specifics.

18. Before we conclude, is there anything that we haven’t covered that you would like to add?
### APPENDIX E: Timeline

<table>
<thead>
<tr>
<th>Month</th>
<th>Actions</th>
</tr>
</thead>
</table>
| July-August        | • Conduct Pilot Study  
                    | • Prepare dissertation proposal                                        |
| September          | • Prepare dissertation proposal                                         |
| October            | • Identify possible study participants  
                    | • Introductions with possible study participants                        |
| November           | • Oral Proposal  
                    | • IRB Submission                                                       |
| December-January   | • Distribute instruments  
                    | • Identify teams to continue with interviews/observation               |
|                    | • Interviews with team members and team leaders  
                    | • Weekly researcher memos  
                    | • Low-level pre-coding  
                    | • Observation highest and lowest group EI teams                         |
| February-March     | • High level coding  
                    | • Initial analysis  
                    | • Peer debriefing  
                    | • Weekly researcher memo  
                    | • Write dissertation                                                    |
| March-April        | • High level coding  
                    | • Peer debriefing analysis  
                    | • Write dissertation                                                    |
| April              | • Defend dissertation                                                   |
## APPENDIX F: Code Book

<table>
<thead>
<tr>
<th>Codes</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication practices</td>
<td>Participant describes ways they communicate and interact with their team members.</td>
</tr>
<tr>
<td>(daily interactions, weekly</td>
<td></td>
</tr>
<tr>
<td>interactions)</td>
<td></td>
</tr>
<tr>
<td>Perspectives on communicating</td>
<td>Participant describes texting, use of group app, conference calls, or other technologies to communicate</td>
</tr>
<tr>
<td>with technology</td>
<td></td>
</tr>
<tr>
<td>Team member relationships</td>
<td>Participant references certain relationships with team members (e.g., go to person or team leader, or whole team)</td>
</tr>
<tr>
<td>Go-to-Person</td>
<td>Participant describes interacting with a team member they speak to one on one regularly, a trusted person. They might refer to them as their &quot;go to&quot;</td>
</tr>
<tr>
<td>Actions taken during formation or when new members join</td>
<td>Participant describes how the team formed or handled new team members joining</td>
</tr>
<tr>
<td>Face-to-Face (In-person)</td>
<td>Participant describes an in-person team meeting</td>
</tr>
<tr>
<td>Meeting</td>
<td></td>
</tr>
<tr>
<td>Getting to know you discussions</td>
<td>Participant describes efforts to &quot;get to know each other,&quot; may also describe use of team-building (e.g., strengths finders).</td>
</tr>
<tr>
<td>Affective descriptions</td>
<td>Participant describes feelings (e.g., describes feelings or emotions such as passion, frustration, excitement)</td>
</tr>
<tr>
<td>Perceptions of team culture</td>
<td>Participant descriptions of their team culture/ adjectives used to describe what it's like working with their team</td>
</tr>
<tr>
<td>Socializing</td>
<td>Participant describes socializing with team members (going to dinner, events outside of work)</td>
</tr>
<tr>
<td>Trust</td>
<td>Participant states they trust a team member(s). They use the word trust in their description.</td>
</tr>
<tr>
<td>Humor</td>
<td>Participant describes self or others using humor, telling jokes</td>
</tr>
<tr>
<td>Respect</td>
<td>Participant describes having respect or mutual regard for their co-workers</td>
</tr>
<tr>
<td>Communicating openly</td>
<td>Participant references healthy discussions, talking about it, sharing perspectives</td>
</tr>
<tr>
<td>Lack of interactions</td>
<td>Participant references team members withdrawing, silence, or low responsiveness</td>
</tr>
<tr>
<td>Positive descriptions</td>
<td>Participant describes positive perceptions of working with the team (e.g., fun, terms of endearment or appreciation)</td>
</tr>
<tr>
<td><strong>Negative descriptions</strong></td>
<td>Participant describes negative perceptions of working with the team (e.g., drama, dysfunctional, &quot;high school&quot;)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Types of differences</strong></td>
<td>Participant responds to question on the types of differences their team experiences</td>
</tr>
<tr>
<td><strong>Individual differences</strong></td>
<td>Differences represent variances in the individual (e.g., personality, work style, experience, role, cultural/religious/political)</td>
</tr>
<tr>
<td><strong>Team differences</strong></td>
<td>Differences represent variances in the team (Role confusion, lack of clarity with others, disagreement with other stakeholder or management's perspective, expectations of each other or other group, responsibilities, or conflicting goals)</td>
</tr>
<tr>
<td><strong>Environmental differences</strong></td>
<td>Differences represent variances in the environment (e.g., state differences, types of customers)</td>
</tr>
<tr>
<td><strong>Team emotional intelligence</strong></td>
<td>Participant describes team emotional intelligence/team culture norms</td>
</tr>
<tr>
<td><strong>Team self-awareness</strong></td>
<td>Participant describes noticing and understanding team emotion</td>
</tr>
<tr>
<td><strong>Team regulation</strong></td>
<td>Participant applies the team awareness of emotions of others to how you behave with others</td>
</tr>
<tr>
<td><strong>Not noticing/caring about people’s emotions</strong></td>
<td>Participant describes lack of awareness or regulation in behavior to others</td>
</tr>
<tr>
<td><strong>Handling differences</strong></td>
<td>Participant describes what happened when team was handling a difference</td>
</tr>
<tr>
<td><strong>Seeking to understand</strong></td>
<td>Participant describes asking/clarifying questions, asking perspectives, or to share point of view</td>
</tr>
<tr>
<td><strong>Solutions focused</strong></td>
<td>Participant describes the team coming together to figure out a solution</td>
</tr>
<tr>
<td><strong>Confidante/Support</strong></td>
<td>Participant describes having a go to person/confidante/someone to lean on, or involving others</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td>Participant describes using collaboration – working with others to find a solution</td>
</tr>
<tr>
<td><strong>Avoidance</strong></td>
<td>Participant describes avoiding – not dealing with an issue, withdrawal, or postponing</td>
</tr>
<tr>
<td><strong>Accommodating</strong></td>
<td>Participant describes accommodating – self-sacrifice or yielding to others</td>
</tr>
<tr>
<td><strong>Competition</strong></td>
<td>Participant describes competition – pursues own interests/trying to win</td>
</tr>
<tr>
<td><strong>Compromise</strong></td>
<td>Participant describes compromise – splitting the difference/middle ground</td>
</tr>
<tr>
<td><strong>Manager or senior leader influence</strong></td>
<td>Participant describes manager or senior leader action influencing a situation</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Metaphors</td>
<td>Specific metaphors or analogies the participant uses when describing a situation</td>
</tr>
<tr>
<td>Comments on the virtual nature of team work</td>
<td>Any specific comments participants make about working virtually, not seeing each other when interacting, and related obstacles/challenges/benefits</td>
</tr>
<tr>
<td>Other</td>
<td>Other passages that resonate with the researcher not fitting into other categories</td>
</tr>
<tr>
<td>Compensation/reward</td>
<td>Participant references how self or others are paid/compensated/rewarded</td>
</tr>
<tr>
<td>Access to information</td>
<td>Participant describes gaining access to information or data</td>
</tr>
</tbody>
</table>
APPENDIX G: Inductive Thematic Coding Examples

Actions taken during team formation

The following quotations are representative examples of the inductive code, actions taken during team formation.

I think one of the first things when I moved into my new role, [manager name] reached out to me and we just had an hour conversation, just, "Hey, you know, this is kinda how I run the team. These are some of the major things that our objectives are," and it was very broad in nature. It was just kinda pressure checking each other to make sure that we were both good with everything. (Participant 0632, 2017, Personal Communication)

So it was very cold in the beginning. That's the best I can say. And poor [manager] who was awesome was trying to bring unity into the group and it was just...it was difficult. It was difficult in the beginning. (Participant 0510, 2017, Personal Communication)

Go-to person

The following quotations are representative examples of the inductive code, go-to person.

I think initially we’re maybe drawn to people, whether it’s professionally, personally, just for whatever reason. Maybe they have something in common or whatever. Or, in the case of a couple go-tos on my team, they’re seen as a leader on the team and respected by what they do and say and how they act. (Participant #1720, 2017, Personal communication)

I think everybody kind of gravitates to one person that they know they trust and understand completely as much as you can in a professional environment. I think that everybody seems to have their go-to person on the team that they will seek advice from, that’s who they’ll vent to, so I think that that helps people on the team (Participant 1217, 2017, Personal Communication)

Virtual team (at large)

The following quotations are representative examples of the inductive code, virtual team at large.
We genuinely like each other. Because we've spent time together outside of work, meaning...like at these meetings and stuff when we're not in a meeting, we're at dinner or something like that, where socially we can get to know each other. I think that helps because you know personalities. You can adjust for personality. Like, if you're like, "Oh, she was upset." But then you're like, "But that's just her. She'll get over it." You know. So you give them some leeway. (Participant 3022, Personal communication, 2017)

When we aren't together, when we don't have to be together, we don't hang out together. So I really don't care what they're thinking or doing when I don't have to be with them. And I'm sure it's the same way. It's definitely a different dynamic with this team than it is in past teams. (Participant #0524, Personal Communication, 2017)

Role of Manager

The following quotations are representative examples of the inductive code, role of manager.

She'll respect the way that you do your business. And she's not really someone that's telling you how to get it done, but more someone who's there for support if you need additional help or wanna brainstorm on a situation. So I think it helps us to deal with differences, knowing that we have her full support. (Participant #1230, Interview, 2017)

[Name] is good about a very comfortable, casual environment and getting to know each other sort of on a personal level, meaning sharing family information, pictures, sort of voluntary, like tell-something-about-yourself-type of thing. (Participant #3022, Personal Communication, 2017)

Perceptions about communicating with technology

The following quotations are representative examples of the inductive code, perspectives about communicating with technology.

I think it's just a constant communication with this group text. You know I mean? So it feels like people are...even though you're not talking all the time...we're in a different age nowadays from, you know, even five years ago. Texting is such a big part of our communication these days, right? Everything is just text it. Me and my friends text. You know, my wife and I text each other. It seems easier. It doesn't feel like you're as far apart as it would've been, let's say, maybe 10 years ago. (Participant #3027, Personal Communication, 2017)
**Emojis**

The following quotations are representative examples of the inductive code, emojis.

Emojis. I think that says a lot. Pictures, I don't know. Texting is very difficult, but I feel like you can say something, and depending on what emoji you put to it can change the whole vibe of the text message (Participant #3022, Personal Communication, 2017)

To some extent, it's kind of annoying because you get, you know, 25 texts back and forth about...with emojis and all that crazy nonsense. But, you know, I think at least there's an effort to get the information out there. I think that's a good thing. (Participant #1734, Personal Communication, 2017)

**Positive descriptions of team culture**

The following quotations are representative examples of the inductive code, positive descriptions of team culture.

I would definitely say interactive, open or transparent, tenured, passionate about what they do, women’s health, tenacious about getting the sales and collaborative. I would definitely say this team is one of the most collaborative teams I’ve been on. (Participant #1720, Personal Communication, 2017)

Our team culture, I think our team meshes really well overall. I hate to use the word "drama," but I know some teams have a bit of drama. We have very little, if any, in our team. Everybody gets along. Everybody's very professional. I feel like everybody likes one another. When we're at meetings, we enjoy hanging out with one another. (Participant #2531, Personal Communication, 2017)

**Negative descriptions of team culture**

The following quotations are representative examples of the inductive code, negative descriptions of team culture.

I feel like there’s a lot of underlying tension and nobody’s really working together at all. (Participant #1217, Personal Communication, 2017)
They were just rude. And why, I don't know, because we don't know each other, you know? I mean, there was stupid stuff. I think it's just stupid little things, but it's just rude and it wasn't just once or twice it was many times. (Participant #0524, Personal Communication, 2017)

**Collaborators**

The following quotations are representative examples of the inductive code, collaborators.

It's a very open environment. We don't look at it as silos, east to west. They are very versed, because we speak with some high regularity that you know they will reach out to each other independently. (Participant # 0729, Personal Communication, 2017)

I don't feel like I'm competing with the person east or west of me or north or south of me. You know, my problem eventually will become their problem. So I think there's a strong vested interest, and participating in trying to understand what people are going through with their challenges. (Participant #0632, Personal Communication, 2017)

**Competitors**

The following quotations are representative examples of the inductive code, competitors.

If they share information like 'hey, this is really working for me,' then that other person receiving that information is going to take that on and almost do better than where they received the information from, so I think nobody wants to share information at the chance that someone else is going to take a step up with them. Does that make sense? (Participant #1217, Personal Communication, 2017)

I know like that will kinda drive you a little bit harder because you see that you could do better, so you wanna make sure that you're maybe more vocal on via text or email, whatever, showing that you're sharing kind of a thing. So like kinda trying to be the first to kind of...I hate to say it, sometimes it could be a little bit like a middle school, high school kind of thing. (Participant #1537, Personal Communication, 2017)
**Monitoring and adjusting behavior**

The following quotations are representative examples of the inductive code, monitoring and adjusting behavior.

I think it's me being cautious of tone and inflection over the phone. Because that's actually much more important than even the words we use. So it's more just being respectful of each other and being cautious of how we show frustration, even when we're frustrated with others, you know, in our team. You have to recognize that no one can see you to your face. So you have to be very cautious about it. (Participant #0725, Personal Communication, 2017)

I was like, well, why did she just do that. It just made me kind of take a sigh like why would she just do that and how is it not obvious what that does for team morale. (Participant #1217, Personal Communications, 2017)

**Respect**

The following quotation is a representative example of the inductive code, respect.

I'd say the culture is one of respect. We don't have to worry that if we ask something that we feel is, you know, maybe a dumb question or whatever...she makes us feel very open, and so do all the members of the team, to be able to ask anything and to ask for help if we need it. (Participant #1230, Personal Communication, 2017)

**Lack of Respect**

The following quotation is a representative example of the inductive code, lack of respect.

I think that people feel really frustrated and not respected to a certain extent where they not everybody wants to share information as they get information. People just don’t want to be open with each other and I would say adjusting to… But it seems that the morale is down but the tension is high, to where not everybody feels comfortable discussing information if they get information from. (Participant #1217, Personal Communication, 2017)

**Trust**

The following quotation is a representative example of the inductive code, trust.
And trust, there's a lot of trust there. So I think that just creates this really cohesive team environment that just...You know, there's a lot of opportunity for collaboration and there's expectation that, you know, we will be professional adults and find solutions when there's challenges. (Participant #0725, Personal Communication, 2017)

**Lack of Trust**

The following quotation is a representative example of the inductive code, lack of trust.

I wonder if everybody trusted each other and we actually all could come together and discuss that type of a challenge. It seems like when we’re in a team environment everybody kind of puts on their professional happy face and we all just push forward and then as soon as we’re in our regions again by ourselves, that’s when the chatter and tension seems to continue. (Participant #1217, Personal Communication, 2017)

**Perspective-taking**

The following quotations are representative examples of the inductive code, perspective-taking.

A lot of times I feel like I’m saying `okay, can you clarify that for me ’or` let me make sure I understand exactly what you’re saying here.’ So it’s a great question because there’s so many different personalities and different I guess levels of transparency and how to communicate, so I guess clarification is my biggest thing and that I’m learning. Over the years, I have definitely gotten better with `tell me more of what you meant by that,’ but trying to really clarify because sometimes I think I understand what they’re asking me and I’m way off, so getting that clarification, definitely. (Participant #1720, Personal Communication, 2017)

I mean I think there's often times where we may disagree with each other, and usually we'll have a conversation and say, "I don't understand your point of view and I need to better understand it. So can you maybe clarify? Like, what am I missing?" (Participant #0725, Personal Communication, 2017)
**Information sharing**

The following quotations are representative examples of the inductive code, information sharing.

It's just an environment of, "Hey, you know, I got information, and this is what I see." We all are seeing really similar stuff so it really helps out. I don't think anybody's trying to hide anything. Let's put it that way. I don't think anyone's trying to hide anything from anybody to try and better themselves. I think everyone feels like everyone's really honest and open within our team, for sure. (Participant #3028, Personal Communication, 2017)

**Learning from each other**

The following quotations are representative examples of the inductive code, learning from each other.

Part of the reason we do these best practice conference, because what you might think would work with your customer, you hear it on a call and hear the success that actually happened from what that person tried, even though it may be very different and out of your comfort zone. (Participant #1720, Personal Communication, 2017)

Well, we could always learn stuff, and that's one of the things we always agree on, is there's always an opportunity to learn. I mean, from each other and then from other folks, and we all try to do better. So I know our whole team would want to. (0636)

**Venting**

I think that everybody seems to have their go-to person on the team that they will seek advice from, that’s who they’ll vent to, so I think that that helps people on the team. (Participant #1217, Personal Communication, 2017)

Then, that conversation, it starts to bring some of the situation to light but I think what eventually happens for right or for wrong is frustration builds up because of that difference in expectation and then sometimes that frustration boils over into some chatting about that person which, again, right or wrong, I think part of that is very much part of human nature. But if that person ever finds out about it, it becomes very unproductive. (Participant #1515, Personal Communication, 2017)

**Silence**
When it's announced and there's dead silence...I mean, you don't have to see somebody or know what's going on. And then you can talk to them afterward and say, "Hey, yeah. I mean, are you thinking what I was thinking?" Or, "What's your take on this?" So, I mean, there's certainly some things that aren't said that are helpful in trying to understand things. (Participant #0633, Personal Communication, 2017)

And I also think if you're unsure...in my situation, if I'm unsure about sort of the tone, I won't respond. Like if I know it's a joke, then you joke back. But if you're not quite sure, then I will just be quiet. So silence would be the answer. (Participant #3022, Personal Communication, 2017)

**Solutions-Focused**

Whereas we can sit down and have conversations and can agree to kind of disagree and come up with solutions. (Participant #0518, Personal Communications, 2017)

Some at times were a little territorial in giving things up. But in the end, we communicated with one another and made the best decision for the business and the customer. I definitely feel that it was good for us to have those discussions and be open not only separately, but have it be observed by others how one another handled the situation. (Participant #2121, Personal Communication, 2017)
REFERENCES


167


