COMMUNICATION, COLLABORATION, AND TRUST WITHIN VIRTUAL TEAMS

by

Courtney Boyd

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Dissertation

Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Liberty University, School of Business

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Abstract

Virtual teams have gained much popularity within in the past 20 years, and the impacts of COVID-19 have only increased their popularity and usage within organizations. Virtual teams provide an organization to be adaptable, cut costs, and increase their knowledge base; however, virtual teams are not without their challenges. The purpose of this qualitative case study was to understand how leadership can impact virtual team performance through enhancing communication, collaboration, and trust. Through participant responses, three main themes were developed. These themes were issues with communication, communication and trust, and organizational culture. Two sub-themes within issues with communication were identified as; availability and response time, and personal preference. These themes were shown to directly impact participants and their organizations.

Key words: Virtual teams, communication, collaboration, trust, leadership

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Approvals

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Dedication

I would like to dedicate this dissertation study to my parents, both of which are no longer with us, but in their heavenly home. My father who passed away many years before this journey started and my mother who passed away during this journey, were my biggest supporters. I would not be the person I am, have the determination or work ethic that I have, if it were not for them.

Acknowledgments

I would first like to acknowledge my dissertation chair, Dr. Melissa Connell. Aside from my family, she has been my biggest supporter and a great source of encouragement. I would also like to acknowledge my husband and three boys who have been on this journey with me.

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Section 1: Foundation of the Study

The objective of this section is to provide a solid foundation for this dissertation study, with the intent of understanding how leadership enhances communication, collaboration, and trust within virtual teams. Creswell (2014) highlighted the importance of an introduction to the study so that the researcher can illuminate the problem to be studied, show there is a need for further exploration on the chosen topic, and provide the foundation of the study. These elements are captured in this section through the discussion regarding the background of the topic, which illustrates the existence of the problem of leaders failing to establish communication, collaboration, and trust in virtual teams. The purpose and problem statements are discussed to define what was to be studied and the purpose of the study. Through careful consideration, a research design method was chosen. A discussion of research methods is provided, which examines the research method most appropriate.

Through the problem statement, research questions were developed and were utilized to build the conceptual framework. The conceptual framework was used to describe how the researcher explored and sought to understand the phenomena being studied (Salmon, 2013). The identification and definitions of key words were provided to enhance the understanding and phenomena of leadership and communication, collaboration, and trust within virtual teams. To increase the reliability and validity of the research, assumptions, limitations, and delimitations were defined (Creswell, 2014). The significance of the study provided an integral part to this section as it identified gaps within current research and provided justification for studying the problem identified. This section leads directly into the review of literature, which concludes this section. Through the literature review, the researcher analyzed current information about the

research topic. Through this first section the identification of the phenomena is comprehensively

discussed in preparation for research.

Background of the Problem

Through the advancement in technology and globalization of organizations, the use of

virtual teams has exploded over the past several years (Charlier et al., 2016). In 2016 a study

found, 46% of organizations use virtual teams in some capacity, this translates into an estimated

20 to 30 million employees working from home at-least one day a week (Charlier et al., 2016).

Yet, in another study performed just one year later, out of almost 1,400 organizations, 85%

reported utilizing virtual teams (Dulebohn & Hoch, 2017). The utilization of virtual teams

enhances flexibility, and allows for larger diverse commercial, operational, and strategic projects

(Morley et al., 2015). The use of virtual teams also allows an organization to maximize employee

time, provide a continuous workforce availability, and exploit the diverse knowledge and

experience of employees within the team (Morley et al., 2015). Virtual teams also allow for a

reduction in transportation and moving or relocation costs for both the employee and employer

(Kligler, 2017). Organizations who offer virtual employment can attract employees they may

have not been able to attract due to the appeal of working from home (Kligler, 2017). Working

from home is shown to promote creativity and innovative thinking for some employees that

would not have been obtainable through a typical office environment (Kligler, 2017). Along with

increased creativity and innovation, virtual teams also promote increased productivity from team

members (Savu, 2019).

In a Wall Street Journal Report in 2017, several large organizations, including IBM and

Bank of America, have cut back on or ended their remote work options (Brokaw, 2017). This

could be due to the nature of virtual teams being difficult to manage (Savu, 2019). Because of

the nature of virtual teams being geographically dispersed, communication, team cohesion,

cooperation, and team efficiency present unique challenges (Kramer et al., 2017). An efficient

team enables and promotes healthy relationships which are directly dependent on good

communication (Savu, 2019). Virtual teams also face challenges with trust and collaboration

(Savu, 2019). These challenges make it difficult for leaders to effectively manage virtual teams

(Liao, 2017). The success of virtual teams depends largely on the effectiveness of its leader

(Liao, 2017). Gibbs et al. (2017) conclude that poor leadership, as a contributing factor for

decreased team performance, is due to a lack of trust, communication, and collaboration. Leaders

face the challenges of managing, mentoring, and monitoring employees in virtual teams due to a

lack of communication and face-to-face contact (Youness et al., 2018). Pathak (2015) stated

virtual teams will likely lack cohesion and inadequately produce if there is not effective

knowledge management. While the success and efficiency of a virtual team does not lie solely on

the leader of the team, much of the contributing factors for team success do (Liao, 2017).

Problem Statement

The general problem addressed is the failure of leaders to establish collaboration,

communication, and trust, resulting in poor performance in virtual teams. The use of virtual

teams by organizations provides an increase in growth through increased globalization and more

comprehensive expertise from different members (Dulebohn & Hoch, 2017). However,

managing virtual teams presents difficulties for leaders due to team members being separated.

Strong leadership is crucial for the success of virtual teams (Liao, 2017). Poor leadership in

virtual teams leads to a lack of trust, communication, and collaboration which impacts team

performance negatively (Gibbs et al., 2017). According to Marlow et al. (2017), communication

within virtual teams has been shown to directly affect the team performance stating that a lack of

communication leads to a decrease in team performance. Dulebohn and Hoch (2017) expand on this stating, collaboration, communication and a culture of trust are problems faced within virtual teams that impact management of teams and team performance. Trust within virtual teams relies heavily on communication and collaboration; and is a vital component due to the dependence on the cooperative relationship between leaders and team members and between team members (Chang et al., 2014). The specific problem to be addressed is the failure of leaders to establish collaboration, communication, and trust, resulting in poor performance in virtual teams within companies that provide services to individuals with special needs.

Purpose Statement

The purpose of this qualitative case study was to add to the existing research regarding the leadership of virtual teams. Due to the increasing utilization of virtual teams, current literature explored the various aspects which promote the success of virtual teams. Current leadership provided a foundation, highlighting the importance of strong leadership of virtual teams. This study delved further into this topic to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. Through this case study of virtual teams, best practices and solutions regarding successful leadership of virtual teams was discovered.

Research Questions

Defining research questions for a study is a key element as they show how a researcher will explore a phenomenon and guide the study (Yin, 2014). Research questions for a qualitative design begin with the development of one central research question then subsequent questions

are developed (Creswell, 2014). The central research question sought to answer the problem of the study in a broad context, whereas the subsequent research questions narrowed the scope or variables of impacted the study (Creswell, 2014). Research questions for qualitative cases studies usually begin with how or why (Yin, 2014). The following research questions were developed to answer the problem identified in this study of the failure by leadership to develop communication, collaboration, and trust in virtual teams.

The central question of this study is: How do leaders of virtual teams successfully enhance team performance? Other questions used to research and analyze the topic include:

(1) How can leaders effectively promote the use of communication and collaboration in virtual teams?

(2) How can leaders enable and promote trust within virtual teams?

(3) How can technology be used to help leaders enable communication and collaboration?

(4) What can leaders do to improve virtual team members' performance and engagement?

Nature of the Study

The following sections described the research method and design chosen as they pertain to this study. A discussion and comparison of the various research method and design approaches highlighted the similarities and differences, with the justification for the chosen method and design provided below. The three main research methods, which a researcher can utilize to conduct value-added applied business research, include: qualitative, quantitative, and mixed methods (Watson, 2015). The chosen research method was a qualitative design. Incorporated into the research method, there are different designs that can be used (Creswell & Poth, 2018). There are several different methods for a qualitative design, including case study,

phenomenology, narrative, grounded theory, and ethnography (Creswell & Poth, 2018). The

chosen research design was a case study.

Discussion of Method

Qualitative, quantitative, and mixed methods research have similar elements, such as

seeking to add valuable information to the field of study, research questions, a literature review

of historical and current information regarding the topic, and a framework of concepts or theories

that leads the research (Ratelle et al., 2019). The primary differences in these approaches relate

to how information is collected and analyzed as well as the overall goal of the study (Ratelle et

al., 2019). A qualitative research method seeks to discover the meaning behind the topic being

studied (Westerman, 2014). With the goal of this research to understand the phenomena of

leadership promoting and enabling the success of virtual teams through communication,

collaboration, and trust by exploring the thoughts, feelings, and actions of leaders and

employees, makes this study suitable for a qualitative approach (Creswell & Poth, 2018). Peck

and Mummery (2018) concluded that a qualitative method design incorporates the thoughts,

feelings, and experiences of those being studied. Another reason a qualitative approach was

chosen is due to the type of research questions being asked (Morrow, 2007). According to

Morrow (2007), topics asking "what" are best suited for a quantitative method, whereas, those

asking "how" or "why" are better suited for a qualitative method (p. 212).

A quantitative method approach is based on statistical or numerical data relying on

measurable dependent and independent variables and are used to test theories through the

formulation of hypotheses (Watson, 2015). Quantitative research design often relies on the use of

surveys to describe and explain a trait within a specific population (Ratelle et al., 2019).

Quantitative design methods also involve the researcher examining selected participants, or

cohort groups, to gather the data for meta-analysis (Mann, 2012). Mann (2012) stated case control studies, cohorts, and cross-sectional analysis are included in quantitative design methods. Kamil (2004) stated the purpose of using a quantitative method is to use the collected data to formulate a theory. A quantitative method approach was not an appropriate choice due to the lack of hypotheses, lack of controls, and lack of numerical data used to explain dependent and independent variables (Watson, 2015).

Mixed methods are a combination of the two approaches that seeks to gather data either qualitatively or quantifiably, then uses either method or both to interpret the results (Leicht et al., 2010). The differences between the different types of mixed methods research designs are the order of the research methods being conducted and the prevalence of one method over the other (Johnson et al., 2007). Creswell (2014) stated mixed methods is beneficial as a method that provides an integration of methods, internal validity checks, and an alternative and holistic way of understanding and explaining the problem. Creswell and Poth (2018) stated that while the mixed methods approach benefits from capitalizing on both qualitative and quantitative methods, the method is also susceptible to the challenges associated with both approaches. A mixed method approach was not chosen due to a lack of quantitative research and data (Creswell, 2014).

Discussion of Design

There are several designs within each of the research methods, including several qualitative design methods (Creswell & Poth, 2018). Each design has the overarching goal of explaining a phenomenon; however, the collection and analyzation of data is different (Creswell & Poth, 2018). The different qualitative design approaches also use varying forms of data (Creswell & Poth, 2018). The design approaches, including (a) case study, (b) phenomenology,

(c) narrative, (d) grounded theory, and (e) ethnography, are discussed below, with case study being the qualitative design selected.

Flexibility is an advantage in case study research design which includes extensive data collection and analysis, thus allowing for a comprehensive understanding, which is the objective (Houghton et al., 2015). Runfola et al. (2017) stated that one of the main reasons for using a qualitative case study approach is to add to or build upon theories as well as establish standards. A case study design allows for data to be collected in several ways, including journal entries, letters, and interviews (Creswell & Poth, 2018). After all the information has been gathered, the collection of data and stories is then analyzed and interpreted by the researcher (Creswell & Poth, 2018). According to Yin (2014), case studies may not be able to be specifically common or longitudinal; however, they are appropriate for generalizing over a larger group of people, experiencing the same phenomena, for the same series of events. A case study allows for one to several participants to be involved and multiple data collections to provide a holistic view of the topic, which is why this method is the most suitable (Yin, 2014).

According to Tompkins and Eatough (2013), a phenomenological design is based on understanding and describing a phenomenon through collecting first-person experiences of the event. There are seven main components of a phenomenological design; the phenomenon being studied, researching the phenomenon with those who have first-hand experience, a philosophical dialogue about the general concepts, bracketing when appropriate, collecting and analyzing data, and ending with a descriptive passage of the what and how (Creswell & Poth, 2018). Bevan (2014) stated that interviews are the most common type of data collection with phenomenological research. The objective of a phenomenological design is primarily to discover and explain the meaning of a phenomena; whereas, other research designs focus on developing a

theory (Flood, 2010). A phenomenological approach was not chosen due to the study utilizing various forms of data, and, while the participants may work within the same organizations, their experiences of leadership enhancing communication, collaboration, and trust (Creswell & Poth, 2018).

In narrative research, a researcher gathers information and explains the findings by stories (Creswell, 2014). There are different ways in which researchers using this method gathers stories (Creswell, 2014). According to Polkinghorne (2007), formal interviews, written stories, and casual conversations are ways researchers collect stories. There are two primary different types of a narrative design which include biographical and oral study (Creswell & Poth, 2018). These design methods differ in major ways, including a biographical design that is written about someone else's life; whereas, an oral study is a re-telling of data into a narrative (Creswell & Poth, 2018). The narrative design has evolved beyond the field of humanities proving its usefulness in many disciplines (Polkinghorne, 2007). Narrative design is used to examine relationships within a section of the population, organization, cultural segment, socio-economic class, and educational system (Creswell & Poth, 2018). While a narrative approach can be beneficial to explore the relationships of leaders and employees and the impact those relationships have on communication, collaboration, and trust, this approach would not allow for the study and analysis of how leaders tangibly and practically implement actions for establishing communication, collaboration, and trust (Creswell & Poth, 2018; Polkinghorne, 2007).

Grounded theory incorporates elements from other qualitative designs, as the participants of the study have experienced the same phenomenon; however, the objective of grounded theory is to create a theory about a practice or act (Creswell & Poth, 2018). Grounded theory utilizes a systematic collection of data, which is used to analyze and verify a phenomenon (Boadu &

Sorour, 2015). Grounded theory allows for some flexibility to suit the researcher and the study; however, grounded theory overall is very systematic (Boadu & Sorour, 2015). Grounded theory is used to develop a theory why a process does not work or works (Boadu & Sorour, 2015). Grounded theory can be used in different ways across different disciplines (Boadu & Sorour, 2015). For the grounded theory design, there needs to be a substantial number of participants, in contrast to narrative and phenomenology designs, where the number of participants can be as few as one (Creswell & Poth, 2018). The grounded theory is not a suitable design approach due to the number of participants needed (Boadu & Sorour, 2015; Creswell & Poth, 2018). Due to narrowing the field of study to businesses that provide services to individuals with special needs, this creates an exceedingly small group of businesses that use virtual teams (Baodu & Sorour, 2015). Grounded theory would be more appropriate if the research focused solely on businesses that use virtual teams (Boadu & Sorour, 2015).

Ethnography involves the researcher describing and interpreting values, beliefs, language, and behavior of a group sharing the same culture (Creswell & Poth, 2018). Typically, with this design the researcher gathers data through observations, stories, and interviews while immersing themselves in the culture-sharing group being studied (Creswell & Poth, 2018). There are two main forms of ethnography, to include: realist and critical (Reason, 2004). The objective of realist ethnography is to describe the situation or culture-sharing group objectively; whereas, the objective of critical ethnography is to advocate and empower (Reason, 2004). The amount of time it takes to collect data, either through observations or interviews, is extensive and generally takes a prolonged time (Reason, 2004). Ethnography was not chosen as a design because it is not applicable as a group of people sharing the same culture is not being explored (Creswell & Poth, 2018).

Summary of the Nature of the Study

Through examining the three research methods, it was determined a qualitative design is best suited, which seeks to uncover what and how of the phenomenon being studied (Creswell & Poth, 2018; Yin, 2014). A qualitative method approach allows for the researcher to explore how leaders enhance communication, collaboration, and trust within virtual teams holistically (Creswell & Poth, 2018). The case study design was chosen due to the ability to add to existing standards and procedures employed by leaders of virtual teams (Yin, 2014). Through this study, solutions to help leaders overcome the unique challenges that are involved in managing virtual teams was explored (Kramer et al., 2017; Marlow et al., 2017). The study can be applied to other virtual teams through the generalizations made from the research.

Conceptual Framework

The following section addresses the conceptual framework used by the researcher to explore and understand the phenomena that was studied (Salmon, 2013). A conceptual framework is utilized due to the qualitative research method of the study (Watson, 2015). The conceptual framework model was used for examining the failure of leaders to establish communication, collaboration, and trust, resulting in poor performance in virtual teams, as shown in Figure 1 below. Organizational problems were identified, and research questions were formulated. After identifying the organizational leadership problem in virtual teams, the researcher examined the cause-and-effect of leadership when failing to establish communication, collaboration, and trust. As leadership is included as a major influencer of virtual team success and overcoming challenges, also included in the discussion of these concepts are leadership theories, which lend themselves to the different situations caused by or impacted by these concepts in a virtual team environment (Liao, 2017). It is important to understand leadership

theories to be able to effectively problem-solve the challenges within virtual teams, which are addressed within each concept below. The conceptual framework model illustrates the importance of leaders establishing communication, collaboration, and trust in virtual teams to enhance and promote effectiveness and performance. The following six sections describe the key concepts from Figure 1, followed by the discussion of the summary of concepts.

Figure 1

Relationships Between Concepts Prior to Research
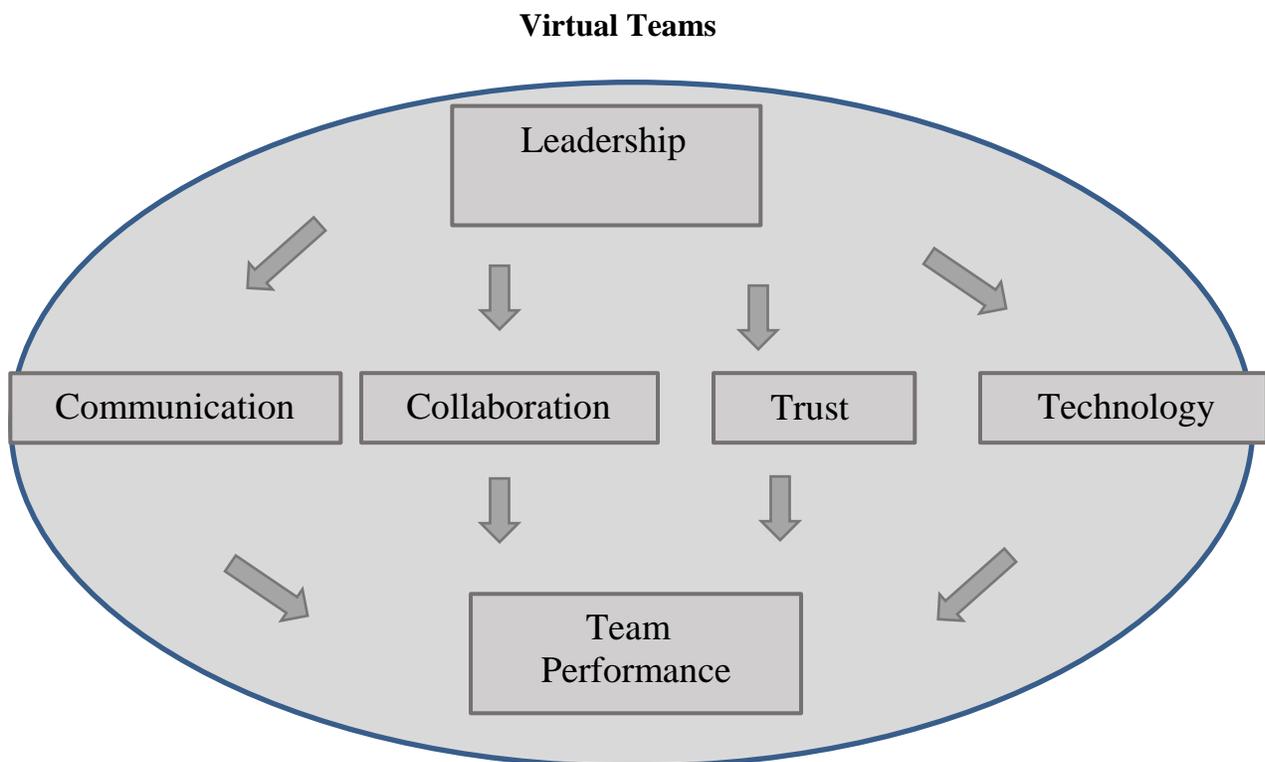
Virtual Teams

Discussion of Virtual Teams Concept

The central focus of the study was virtual teams. Virtual teams have become increasingly popular over the past couple of decades due global competition, more complicated work processes, and advances in technology (Dulebohn & Hoch, 2017). Using virtual teams,

organizations can decrease costs, increase knowledge within their workforce, and enhance

globalization (Kramer et al., 2017). However, virtual teams come with challenges that are

different than those working in the same geographic location (Kramer et al., 2017; Marlow et al.,

2017). The concepts of this study, including communication, collaboration, and trust are areas in

which leadership often fails to establish or promote within virtual teams (Liao, 2017). These

concepts are directly related to team performance, therefor can have a significant impact on the

efficiency and effectiveness of a virtual team (Liao, 2017). The remaining concepts address the

factors effecting the performance of virtual teams.

Discussion of Leadership Concept

Leadership effects each of the concepts discussed below. Leadership is a key concept in

this study, as the goal of the study is to discover how leadership effects communication,

collaboration, and trust. Leaders of virtual teams are often met with higher and unique demands

than those of regular co-located teams (Huang et al., 2010). In virtual teams as compared to

regular teams, leaders must devote more energy into coordination of tasks, relationship building,

and promoting efficient team processes (Liao, 2017). Leadership must create an environment that

promotes trust within the team, which is more difficult to do virtually (Kligler, 2017). Leadership

also effects the usage of technology which impacts each of the concept areas as well (Marlow et

al., 2017). Different leadership theories are explored relating to each of the concepts, which

highlighted the importance of leadership within each of the concepts of this framework.

Discussion of Communication Concept

Leaders must promote the use of communication within virtual teams (Marlow et al.,

2017). Leaders employing effective communication practices as well as providing

communication tools and means of feedback for team members is a vital component of a virtual

team (Marlow et al., 2017). Virtual teams that report having effective communication are found

to have better performance outputs than teams that report their communication lacking (Hill &

Bartol, 2018). Virtual teams face communication challenges due to the lack of face-to-face

interactions, non-verbal cues, and verbal cues (Pitts et al., 2012). Leadership theories that are

shown to be rooted in good communication practices are charismatic and human-oriented or

relationship theories, which focus more on establishing effective positive relationships with

subordinates (DeVries et al., 2019). The concept of communication sought to answer the

research question to understand how leaders effectively promote the use of communication and

collaboration in virtual teams.

Discussion of Collaboration Concept

Leaders must create and promote collaboration in virtual teams (Huang et al., 2010).

Collaboration includes the collecting, sharing, and transferring of knowledge between team

members; and due to the diverse make-up of virtual teams and geographic location, collaboration

can be hard to accomplish (Gao et al., 2016). Collaboration is crucial for the success of a project

where team members must work on individual parts to create a whole finished project (Choi &

Cho, 2019). Collaboration in virtual teams has been found to be a real issue when teams

primarily interact through technology, which is often a result of a lack of personal bonds between

team members and a lesser feeling of cohesion (Choi & Cho, 2019). Due to everyone having a

different role or different area of expertise and the need for effective collaboration, practicing

shared or participative leadership theory can be effective within virtual teams (Turner & Baker,

2018). Shared or participative leadership theory allows for team members to share in leadership

responsibilities as well as more actively participate in decision-making (Turner & Baker, 2018).

As stated by Turner and Baker (2018), shared leadership allows for organizations to effectively

navigate the complex environment in today's business world. This concept addressed how

leaders can promote collaboration within virtual teams. This concept addressed the research

question of understanding the collaboration in virtual teams.

Discussion of Trust Concept

Leaders must enable and promote trust within virtual teams (Hacker et al., 2019). Team

members are more effective and engaged when there is shared trust between the team members

and between the team members and the leader (Choi & Cho, 2019). Trust is a crucial component

to virtual team success and provides solutions to many problems' virtual teams face (Hacker et

al., 2019). It is also shown that trust enhances collaboration in virtual teams (Choi & Cho, 2019).

Gardner et al. (2019) link the development of trust within virtual teams to impacting the

performance and effectiveness of the team. However, trust is difficult to establish in a virtual

team due to a lack of commonalities, such as background, shared history, and culture (Tan et al.,

2018). It is shown that person-oriented or relationship-leader theory is most closely linked with

increased trust (Hasel & Grover, 2017). Due to the design and communication modes of virtual

teams, leaders focusing on relationships within the team promotes trust (Hacker et al., 2019). The

concept of trust correlated with the research question aimed at understanding how leadership

impacts collaboration.

Discussion of Technology Concept

Technology provides a vital tool in the promotion of communication, collaboration, and

trust (Marlow et al., 2017). When discussing virtual teams in any capacity, it would be neglectful

to not mention the impact technology has on team performance (Marlow et al., 2017). Different

tools made available using technology can greatly enhance team communication and

collaboration, as well as effect a leader's ability to promote trust (Huang et al., 2010).

Technology that is restrictive and not user-friendly can severely inhibit communication (Tan et al., 2018). Leaders knowing and using technology in an effective way support these concepts and the associated challenges and situation that may arise due to a break-down in any one of these concepts (Huang et al., 2010). Using technology, virtual teams can functionally perform their jobs (Marlow et al., 2017).

Discussion of Relationships Between Concepts

The concepts of communication, collaboration, and trust are dependent on each other within virtual teams (Marlow et al., 2017). Without strong communication, collaboration of teams suffers, as stated by Glikson and Erez (2019), leaders' understanding communication concepts promote interpersonal relationships and collaboration. Trust is directly impacted by the virtual team's processes of knowledge-sharing and communication (Hacker et al., 2019). It is the responsibility of leaders of virtual teams to ensure problems in communication does not impact team collaboration, trust, and ultimately team performance (Tan et al., 2018). Understanding the challenges of these concepts allows leaders to overcome situations stemming from these challenges (Huang et al., 2010). Through communication, collaboration, and trust, team performance is affected (Tan et al., 2018). Team performance can either be greatly enhanced or significantly inhibited through communication, collaboration, and trust (Tan et al., 2018). Effective technology utilized to enhance team communication and collaboration is shown to positively affect team performance (Tan et al., 2018). The relationship between these concepts shows their interdependence not only each other communication collaboration and trust, but also the impact they have on team performance and the impact technology has on these concepts (Marlow et al., 2017).

Figure 2

Relationships Between Concepts After to Research

Virtual Teams
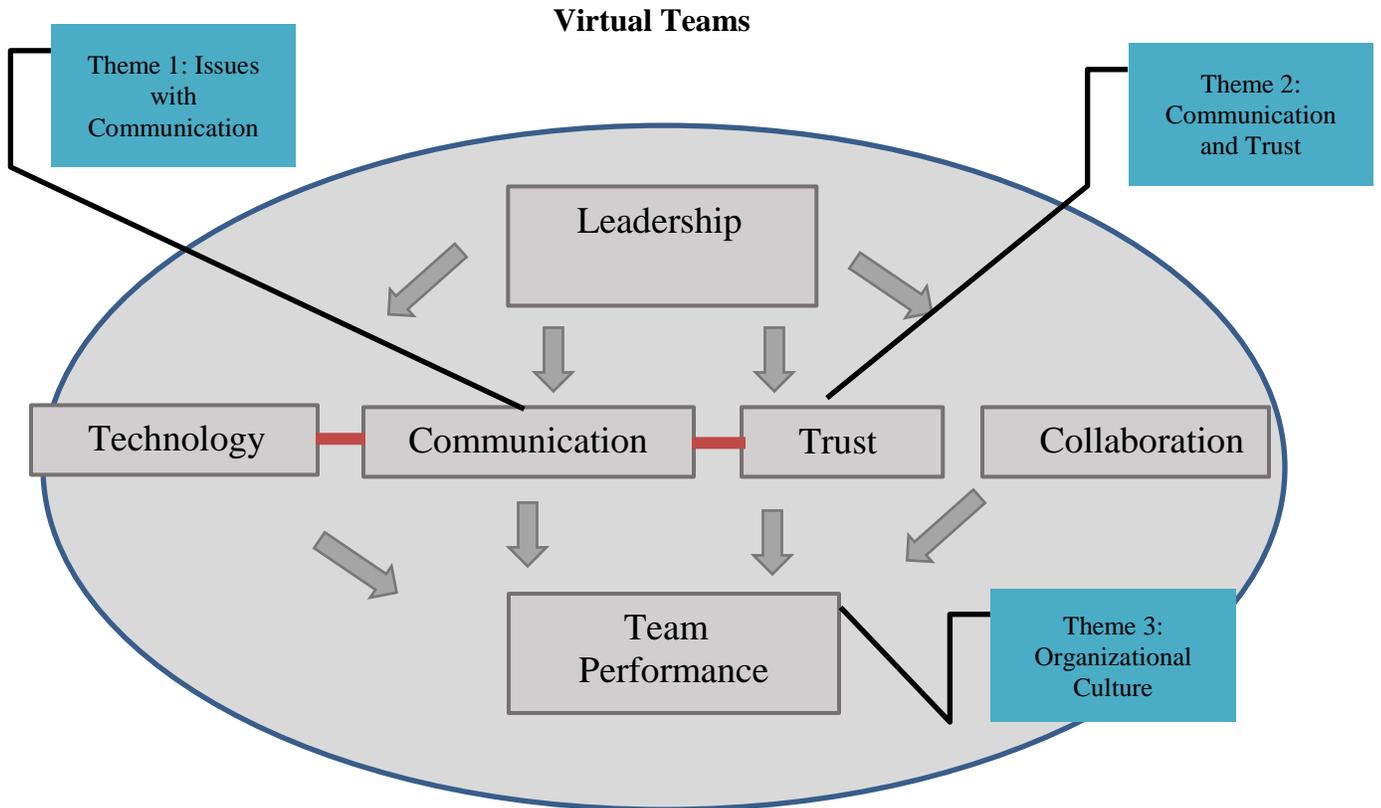
Summary of the Conceptual Framework

The purpose of the conceptual framework was to provide the methodology, as related to

the research questions (Ratelle et al., 2019). Concepts discussed in the conceptual framework

seek to answer the central research question – How do leaders of virtual teams successfully

enhance team performance? Individually, each of the concepts target each one of the other sub-

research questions. The concepts show how interrelated the concepts are to each other and the

impact they have on the success of virtual team management. As shown through the research

technology was vital for communication, communication was vital for trust, and communication

and trust led to collaboration. The importance of an open and transparent was also found to be a

major factor in communication and trust. Also addressed is the introduction of leadership theory

on the concepts of communication, collaboration, and trust. As previously mentioned, team performance is impacted by communication, collaboration, and trust; and it is the responsibility of the leader to utilize technology and establish processes to promote these concepts (Glikson & Erez, 2019; Tan et al., 2019).

Definition of Terms

The following is a list of terms, which need to be defined to provide a complete understanding related to this research. While many of these terms are known to the reader, the specific definitions within the scope of the study are provided.

Collaboration: in teams involves all members of the team working together to achieve a common goal (Cole et al., 2019). Collaboration involves team members (a) collecting, (b) sharing, and (c) transferring knowledge between all team members (Gao et al., 2016).

Communication: is the exchange of information through coordinated efforts (Rultowski et al., 2008). Communication involves transmitting information across different mediums to team members (Klunder, 2016).

Leadership: A process of influence of a leader to enhance participation of subordinates to reach a common goal (Nanjundeswaraswamy & Swamy, 2014).

Special needs: used to define an individual who is unable to perform usual tasks without assistance due to a physical, mental, or cognitive impairment (Zakiei et al., 2018).

Technology: media and electronic systems used for virtual team members to communicate and complete tasks (Olson & Olson, 2012).

Trust: happens when one can rely on another individual to complete the task(s) he or she has been assigned (Ugwu et al., 2016).

Virtual team: refers to a team where the members are located in different places, brought together to achieve a common goal over time and distance (Dulebohn & Hoch, 2017).

Assumptions, Limitations, Delimitations

To provide a comprehensive discussion and strengthen reliability and validity, the following section addresses the (a) assumptions, (b) limitations, and (c) delimitations of the study. Creswell (2014) stated assumptions, limitations, and delimitations negatively impact the reliability and validity of the research. Assumptions are included to address validation concepts within this study (Creswell, 2014). Limitations of the study are defined to address the potential weaknesses (Creswell, 2014). Delimitations are provided to define boundaries of the study (Creswell, 2014). These concepts are addressed to acknowledge and minimize the concerns of validity in the research (Creswell, 2014; Yin, 2014).

Assumptions

There were several assumptions regarding this study, to include (a) participants' truthfulness, (b) information can be generalized to encompass all virtual teams, and (c) leaders have direct influence over the topics being studied (Yin, 2014). The first assumption was that participants will answer questions or respond truthfully. Truthfulness of participants is largely affected by the participants' confidence in the confidentiality of answers (Niu et al., 2018). It is important for researchers to protect the information provided by participants of the study, not just for mitigating risks of truthfulness, but also for ethical considerations (Yin, 2014). To mitigate the risks of this assumption, the researcher gained informed consent of the participants and ensured the privacy and confidentiality for all participants involved (Yin, 2014). The second assumption was the use of generalizations. Generalizations are ideas or statements that are made based from few of a group then applied to a whole group (Yin, 2014). Generalizations are a

common issue with case studies, as it is challenging to make general assumptions for a large

group based on information gathered from a few within the group (Yin, 2014). To mitigate the

risks of this assumption, the researcher provided a thorough description of the analysis, case

themes, and provided supporting research from other studies (Creswell & Poth, 2018). The last

assumption was that leaders have a substantial impact on the concepts of communication,

collaboration, and trust. According to Ridder (2017), one of the recommendations to mitigating

this type of assumption is to identify the problem, and specify particular important variables, but

make no assumptions about the relationship between the variables; thus, allowing those to

develop over the course of the research. Tincani and Travers (2018) recommended using baseline

logic, which allows the researcher to make a causal determination among variables based on

changes in data. Yin (2014) also warned that making incorrect causal relationships is a major

threat to validity. To mitigate the risks of this assumption, the researcher clearly identified causal

relationships found through the study, while researching the variables, provided the support for

the causal relationships identified (Ridder, 2017).

Limitations

Limitations relating to this study included a small sample size, longitudinal effects, and

the type of sample. Small sample size affects the validity of the assumptions made (Niu et al.,

2018; Yin, 2014). Due to this study not exploring the concepts over a length-of-time challenged

the results as being temporary versus long-lasting (Melamed & Robinson, 2018). Stake (2010)

described qualitative studies as being long and evolving, to gather an appropriate amount of

information. The small sample size also enhanced the probability of convenience sampling

instead of random sampling to get enough data (Creswell, 2014). To mitigate the risks from the

limitations, the researcher used a purposeful sampling strategy and provide ample information

for support of sampling (Creswell & Poth, 2018). The researcher provided maximum variation of participants (Creswell & Poth, 2018). Due to the small sample, the researcher gathered extensive information and analysis about the research that was conducted and triangulated the data collected (Creswell & Poth, 2018; Stake, 2010).

Delimitations

The subject being studied was limited to organizations that utilize virtual teams to provide services to people with special needs. Organizations from different services and industries utilize and benefit from virtual teams (Dulebohn & Hoch, 2017). This delimitation impacted the limitations discussed due to the specific segment of the population being small. Another delimitation was the lack of direct observation (Yin, 2014). According to Yin (2014), when an event or phenomenon cannot be observed directly by the researcher, it is a threat to validity. Data gathered during this study were not supported by direct observation. To mitigate the risks from the delimitations, the researcher addressed counter-indicative explanations as well as provide comprehensive explanations (Yin, 2014).

Significance of the Study

This section explains the significance of this study in terms of research gaps, biblical integration, and relationship to the strategic management field of study. This study aimed to provide insight and valuable research into organizations using virtual teams to provide services to individuals that have special needs. The reduction of gaps discussion provides information on what gaps in current research this study satisfies (Kearney, 2017). The purpose of the discussion on biblical integration shows how this study fits into and promotes a Christian worldview. Through a discussion of virtual teams and leadership, a distinct application of strategic management is provided.

Reduction of Gaps

To thoroughly research and conduct a study on a problem or concept, it is important to determine what gaps the research or study will fill to provide new and current information (Kearney, 2017). Identifying the gaps in research allows a researcher to progress closer to the solution of the identified problem (Kearney, 2017). There have been numerous studies and research conducted on virtual teams (Dulebohn & Hoch, 2017). There have been several studies performed on leadership and virtual teams, as well the concepts listed in this study (Liao, 2017). This study addressed the gaps in current research involving leadership theories and practices that promote communication, collaboration, and trust, which are further explored. This study reduced the gaps in literature pertaining to communication and personal preference, communication and trust, and organizational culture. This study also added depth to the current research focusing on those organizations utilizing virtual teams to provide services for individuals with special needs.

Implications for Biblical Integration

When discussing the implications for biblical integration, the main concepts are communication, collaboration, and trust. Each of these components is integrated into biblical principles and scripture. When organizations are involved in either producing goods to enhance humanity or provide services that do the same, those organizations are engaged in work that matters to God (Van Duzer, 2010). Providing services to individuals that need help to live an independent, fulfilling life enhances humanity (Boele, 2017; Proverbs 31:8). According to Mouw (2015), enhancing human flourishing is a calling for Christians. Leadership is another key concept in this study that is integrated into biblical principles. Throughout the bible, there is also scripture concerning leadership and the leader-servant relationship (1 Timothy 3:2; Ephesians 6:9). The concepts of communication, collaboration, trust, and leadership are discussed below.

Communication is a crucial element of effective leadership which is used either as a strategy or a tool for leaders to influence expected outcomes (Ruben & Gigliotti, 2016). Throughout the scripture there are passages concerning the importance of communication, speaking wisely, and the care that must be taken when speaking (Job 15:5, Proverbs 15:4; Psalms 120:2). Words can either speak life or destroy and within a working environment; therefore, it is crucial to communicate clearly so that expectations, directions, and ideals are understood, as well as for the creation and sustainment of a competitive advantage (Falkheimer et al., 2017; Proverbs 10:11). Along with communicating clearly, Christians are called to speak life and build up one another (Ephesians 4:29; Proverbs 12:18). It is the responsibility of leaders to ensure the proper tools and systems are in place for effective communication (Ruben & Gigliotti, 2016).

Collaboration in virtual teams is difficult as the team is dispersed; however, through effective leadership, leaders can greatly enhance collaboration and positively effect performance (Hill & Bartol, 2016). Biblically, there are many scriptures referencing collaboration, and the importance of working together (Ecclesiastes 4:9-12; Psalm 133:1). In scripture, working together goes further than simply collaborating on a project. Collaboration is a way to make each other better and build one another up so that each person can use their gifts to the best of their ability (Hebrews 10:24-25; Proverbs 27:17; Romans 12:4-6). Collaboration allows for something to be created that far exceeds what an individual can create alone (Chandler-Olcott & Hinchman, 2019).

Trust within teams depends on each team member being able to rely on one another to complete the task(s) they have been assigned (Ugwu et al., 2016). Christians are to put their faith, trust, and hope in God and not man (Proverbs 3:5-6; Psalm 118:8). However, scripture calls Christians to be kind to one another, to depend on one another, and forgive one another

(Ephesians 4:32; Matthew 6:14). Working together requires a level of professional trust and is an aspect of each person doing the best job they can as scripture calls (Colossians 3:23). While leaders cannot make employees trust each other, they can create an environment which promotes trust (Wilson, 2009).

As discussed in the conceptual framework section, leadership and leadership theory are crucial components in the creation and sustainment of communication, collaboration, and trust within virtual teams (Marlow et al., 2017). Leadership qualities and characteristics are found throughout scripture (Dees, 2013). Successful leadership characteristics are applied to effectively leading a virtual team as well as providing discussion for biblical integration (Dees, 2013). Integrity and wisdom are vital components of being a successful leader (Dees, 2013). Both wisdom and leadership are concepts deeply rooted in scripture (Dees, 2013). This concept is shown in Proverbs 10:9 which states, those who have integrity walks securely however those who do not walk a crooked path. Integrity promotes a positive work environment, effectively establishes employee trust, and enhances an employee work engagement (Englebrecht et al., 2017). Wisdom can be defined as a culmination of acquiring and applying knowledge over time (Dees, 2013). In Proverbs 8:11, wisdom is described as more valuable than rubies.

Along with the different characteristics of leadership, leadership style should be discussed. The most prominent leadership style that is applied biblically or through a Christian worldview is servant leadership (Van Duzer, 2010). Servant leadership is a style not a theory; however, this style can be used in different theories of leadership (Van Duzer, 2010). Servant leadership requires the leader to behave ethically and show genuine concern for their subordinates (Schneider & George, 2011). This facet of servant leadership correlates directly with person-oriented or relationship-focused leadership theory (Schneider & George, 2011; Van

Duzer, 2010). A servant leader is empowering and promotes subordinates to be pro-active and

self-confident, which merges with participatory leadership theory (Williams et al., 2017).

Peterson et al. (2012) state servant leaders are not just concerned with their organization, but

society at large. This type of leadership and worldview is applied directly to the focus of

organizations using virtual teams to provide services to people with special needs, as stated in the

bible Christians are called to speak for those who can't and to take care of those who can't take

care of themselves (Proverbs 31:8; Romans 15:1).

Relationship to Field of Study

Strategic management allows organizations to adapt to changing situations and

environments to capitalize on growth (Jasper & Crossan, 2012). Strategic management is

incorporated into strategic planning and is utilized to increase efficiency and effectiveness and to

provide direction for activities through optimizing and maximizing resources (Arend et al.,

2017). Strategic management is described as influenced by several other fields of study to

include finance, marketing, economics, sociology, and psychology (Nag et al., 2007). The

utilization of virtual teams allows organizations to maximize resources and cut costs (Dulebohn

& Hoch, 2017). Virtual teams are part of the flexible processes initiated by organizations that are

used through the advancement of technology and innovation as well as cutting costs, which is a

major component of strategic planning (Arend et al., 2017). Employees' capabilities, including

leadership skills, must be directed by shared goals, with respect to sharing knowledge, virtual

leading, and the cohesion of the team throughout time and geographic location (Turner & Baker,

2018). Leading a virtual team requires these skills to enhance trust within the team and ensure

collaboration is beneficial (Liao, 2017). Leadership in virtual teams aid in problem-solving,

strategic-thinking, and vision-setting, which are all vital elements in strategic management

(Arend et al., 2017). Virtual teams are at the heart of strategic planning as they optimize

resources, provide a means to focus activities, and increase organizational efficiency (Arend et

al., 2017).

Summary of the Significance of the Study

This section defines the significance of this study as it relates to reducing gaps in current

literature, promoting a Christian worldview, and showing the relationship to the strategic

management field of study. This study reduced the gaps in current literature by incorporating the

effects of leadership on communication, collaboration, and trust on team performance in virtual

teams. This study also added to the current research by focusing on organizations that utilize

virtual teams to provide services to individuals with special needs. A Christian worldview is

discussed, and leadership theory is applied to communication, collaboration, and trust within

virtual teams. This study contributed to the strategic management field of study through the

utilization of virtual teams and leadership. This section provides further support for the rationale

of conducting this study.

A Review of the Professional and Academic Literature

This section is comprised of current peer-reviewed sources of information, predominately

journal articles, which provides a synthesis of the topics covered in this study (Hacker et al.,

2019). The literature review addresses current concepts, studies, and theories pertaining to this

study (Hacker et al., 2019). To ensure information presented in this literature review is current

and relevant, most sources examined have been written in the past five years. The literature

review expands on the terms earlier defined in this section. The organization of this literature

review follows the concepts laid out in the conceptual framework, to include: (a) virtual teams,

(b) leadership, (c) communication, (d) collaboration, (e) trust, and (f) technology. Virtual teams

are discussed as the concept relates to the impacts created for organizations. Benefits and

challenges are provided to demonstrate the complexity of utilizing virtual teams. Leadership,

communication, collaboration, trust, and technology are the variables and are comprehensively

discussed to provide relevance and validity to this research. Due to each of these areas presenting

challenges within virtual teams, the challenges as well as the actions leadership can take to

mitigate the impact of these challenges is examined. Leadership styles and leadership specific to

virtual teams is examined. A discussion of special needs is introduced in the literature review to

provide relevant and pertinent information as the concept relates to the specific problem of this

study addressing organizations that provide services to individuals with special needs. Each

section is thoroughly examined using current literature to develop common themes, identify

research gaps, and establish key issues pertaining to the main concepts (Creswell, 2014).

Virtual Teams

Virtual teams have been utilized and studied for the past 20 years (Caya et al., 2013). The

evolution of virtual teams came by way of tele-workers performing daily tasks at a location

outside of the organization, from there with the help of increasing technology, organizations

developed teams of tele-workers to complete projects (Maduka et al., 2018). Just five years ago,

it was estimated that by the end of this year using virtual teams, employees for processing or

Business Processing Outsourcing, would grow from a $500 billion industry to a $1.6 trillion

industry (Lockwood, 2015). In 2008, it was estimated that as high as 80% of organizations that

had over 10,000 employees used virtual methods to connect team members (Krumm et al.,

2016). Since then, virtual teams have continued to be increasingly popular for organizations to

utilize due to the emergence of more complicated tasks and globalization (Kramer et al., 2017).

Virtual teams have provided a new strategy in organizational development and change practices

(Maes & Weldy, 2018). In a 2016 study, 79% of workers surveyed reported frequently working on a geographically dispersed team (Shulze & Krumm, 2016). Grober and Baumol (2017) stated in some organizations virtual teams are the prominent strategy for work completion. As technology has become an increasing component in everyday life, virtual teams have become a normal organizational strategy rather than an exception to strategy (Grober & Baumol, 2017).

Virtual teams are utilized for a wide array of projects, to include: research and development, customer service, strategy and analytics, and software and product development (Caya et al., 2013). While some virtual teams are together for a prolonged period, many virtual teams are developed for a single task to address a specific problem then disband (Eubanks et al., 2016). The objective of using virtual teams includes: improving response time to customer needs, enhancing a competitive advantage, and increasing performance (Caya et al., 2013). Virtual teams allow organizations to bridge geographic gaps and incorporate many different cultural perceptions (Killingsworth et al., 2016). In today's current business climate, organizations must effectively manage work processes across their business network to enhance performance and attain or retain global market placement (De Bruyn, 2017). A part of this current climate is the increasing complexity of supply chains due to globalizations; virtual teams provide a solution to these supply chain challenges through the networking and collaboration of virtual team members located throughout the supply chain (Trautrims et al., 2016). Through the utilization of virtual teams, organizations can enter markets globally, increasing their scale and scope of production whether it be a service or product based (Shulze & Krumm, 2016).

Organizations can capitalize on virtual teams through the appropriate structure of work within teams, incorporating technology and communication advancements, competing for talent on a global scale, and geographically growing their business (Liao, 2017). More sophisticated

communication technology also enables the growth and success of virtual teams (Gibbs et al.,

2017). Berry (2011) went on to describe different types of virtual teams based on how and when

teams communicate, to include: same time/same place, same time/different place, different

time/same place, and different time/different place. Using this definition, Berry (2011) argued

that any team at some point in time could be defined as virtual. However, as previously stated,

virtual teams are defined as teams where members are in different areas. Throughout this

discussion of virtual teams several key topics are discussed, to include: (a) characteristics of

virtual teams, (b) benefits of incorporating virtual teams in an organization, and (c) challenges of

using virtual teams.

Characteristics. The characteristics of what makes a team a virtual team are relatively

standard across many studies (De Bruyn, 2017; Kramer et al., 2016; Liao, 2017). The main

characteristics of virtual teams include team members being in different geographical locations

and dependence on technology (Kramer et al., 2017). De Bruyn (2017) echoed these

characteristics stating that virtual teams work across physical and time barriers. Martins et al.

(2004) conducted research on virtual teams and popular definitions, noting all the above listed

characteristics. Liao (2017) expanded on these characteristics to include the structure of the team

being functional. Even though the core characteristics are the same, virtual teams can operate

differently from one another (Berry, 2011; Kramer et al., 2017). Virtual teams can vary on their

use of technology and virtuality, which is comprised of the number of virtual tools the team uses,

how often the team interacts virtually, and how centralized or decentralized is the team (Kramer

et al., 2017). Han and Beyerlein (2016) defined virtuality as the amount of technological support

required by a team, the amount of time team members are separated, and the degree of distance

between team members. Berry (2011) describes this attribute of virtualness, defining it as the

amount of time rather than the amount of tools team members spend on technology enhanced

communication. Maynard et al. (2018) stated virtuality or virtualness also includes the value

information able to be exchanged through the technological platforms.

The environment in which a virtual team operates is vastly different from a team located

geographically within the organization (Hamersly & Land, 2015). Each team member of the

virtual team is responsible for his or her own workspace, thus making it either suitable for

efficient work or a distraction from working (Hamersly & Land, 2015). Due to the

decentralization of virtual teams, there are other characteristics unique to virtual teams

(Hamersly & Land, 2015; Martins et al., 2004). Brandt et al. (2011) stated there are six

characteristics common to successful virtual teams, including: trust, cultural differences,

communication, social skills, mission and goal clarity, and rewards and recognition. These

characteristics relate directly to the three concepts in this study to include: communication,

collaboration, and trust. Another noted difference between face-to-face teams and virtual teams

is the lifecycle of the team (Martins et al., 2004). Virtual teams are more likely to have a shorter

lifecycle than those of face-to-face teams (Martins et al., 2004). Berry (2011) stated members of

the virtual team may be fluid and the fluidity of members does not impact the function of the

team.

For a successful virtual team, team members must also have the appropriate knowledge,

skills, and competencies for working on a virtual team (Krumm et al., 2016). These skills and

competencies of individual team members are even more important in virtual teams than face-to-

face teams (Krumm et al., 2016). Virtual team members must have these skills due to virtual

teams facing unique and magnified challenges, which must be overcome (Shulze & Krumm,

2016). These skills are centered on effective communication, the ability to work well with others

regardless of background and culture, and to be self-motivated (Shulze & Krumm, 2016). Not

only do team members need to be equipped with various skills and knowledge, so do the leaders

of virtual teams (Maduka et al., 2018). The various impacts leadership has on virtual teams as

well as effective styles is discussed further in this literature review.

     Benefits. Virtual teams provide a solution for organizations with complex operations

where diverse knowledge is needed and it is cheaper to leave employees in the location they are

in, versus one central location (Kramer et al., 2017). This is also noted by Brown et al. (2016)

who stated virtual teams allow organizations to utilize various labor pools, reduce costs, and

more efficiently compete in the global market. Jimenez et al. (2017) also stated the diversity of

team members in virtual teams is shown in several studies to enhance effectiveness. Virtual

teams also enhance flexibility, and allow for larger diverse commercial, operational, and

strategic projects (Morley et al., 2015). Organizations can capitalize on virtual teams through the

appropriate structure of work within teams, incorporating technology and communication

advancements, competing for talent on a global scale, and geographically growing their business

(Liao, 2017). As part of these benefits, organizations that employ virtual teams also benefit from

decreases in the amount of time it takes to get a product or service to market due to virtual team

flexibility (Savu, 2019).

     Allowing employees to work virtually also enhances the work/life balance of employees

(Brokaw, 2017). Kligler (2017) emphasized the impact of working from home stating that

organizations who offer virtual employment can attract employees they may have not been able

to attract due to the appeal of working from home. This also promotes creativity and innovative

thinking for some employees that would not have been obtainable through a typical office

environment (Kligler, 2017). Maes and Weldy (2018) found virtual teams can lead to increase in

productivity from employees and greater focus. The newest generation of workers (millennials) see virtual/flexible work as a necessity, so organizations who offer such work see an improvement in recruitment and retention (Brokaw, 2017). This generation of workers also see virtual work as the norm, and organizations can capitalize on this segment of the workforce that is more tech savvy than any generation before (Grober & Baumol, 2017). Several themes emerge as benefits from organizations utilizing virtual teams, including: (a) decreased cost, (b) enhance competition in the global market, and (c) diverse knowledge base of employees.

  Decreased Cost. Maes and Weldy (2018) stated the primary driver for the utilization of virtual teams is due to the associated cost savings. The decreased costs associated with virtual teams include, not only direct expense associated with an organization's bottom line, but also indirect expense of saving time (Barnowska & Kozaryn, 2018; Olaisen & Revang, 2016). Due to the organization not having to house the employees, virtual teams save the organization on operational costs as well (Barnowska & Kozaryn, 2018). Virtual teams can offer a faster turnaround time on projects and innovation; thus, saving the organization money (Mysirlaki & Paraskeva, 2019). Not only can organizations save costs through moving employees and all the overhead expenses of housing employees in a single location, but also through innovative products and practices developed from virtual teams, which contributes to increasing sales and decreasing costs (Olaisen & Revang, 2016). Organizations also reduce costs by not paying for their employees to travel from one area to another for face-to-face meetings required by traditional teams (Krumm et al., 2016). This is also confirmed by Barnowska and Kozaryn (2018), stating that the use of virtual teams allows organization to reduce operating costs as well as decrease costs to the employee. Employees on virtual teams can save not only money, but also time by not having to travel to and from work (Barnowska & Kozaryn, 2018).

Competition in the Global Market. Virtual teams and competing in the global market are impacted by each other; the increase in globalization/global market stimulates the need for virtual teams and virtual teams strengthen an organization's global market position (Rutkowski et al., 2008). Organizations can leverage their use of virtual teams to gain strength in the global market through the increased creation of valuable products and services as well as through their expanded knowledge assets (Killingsworth et al., 2016). Strengthening competition in the global market requires organizations to collaborate and coordinate services that go beyond the boundaries of the organization and geographic location (Kayworth & Leidner, 2002). Virtual teams allow for employees to be in different geographical markets and utilize a broader scope of resources due to geographic dispersion (Brewer et al., 2015). According to Heng et al. (2018), the current business climate requires organizations to be flexible and innovative to create a sustainable competitive advantage using global business services. As previously mentioned, virtual teams allow for faster product or service development, which allows the organization to increase adaptability due to market trends and pressure (Heng et al., 2018; Savu, 2019). Organizations can adopt global business services and increase their competition in the global market using virtual teams, which allow for organizations to enhance outsourcing, organizational flexibility, and collaboration (Heng et al., 2018).

Diverse Knowledge Base. Virtual teams allow organizations to choose the right mix of knowledge bases or subject matter experts to complete the objectives (Barnowska & Kozaryn, 2018). This allows organizations to gain insight from different business areas and provide multiple perspectives (Krumm et al., 2016). Differing perspectives and opinions allow for an increase in organizational learning (Berry, 2011). Virtual teams give organizations the ability to build a team of the best, most talented employees available (Piccoli & Ives, 2003). Diverse

knowledge of team members and utilizing various labor pools allow an organization to deepen

their quality of knowledge, both within the team and the whole organization (Olaisen & Revang,

2016). The diverse knowledge base of virtual teams allows for increased positive outcomes in

the areas of creativity and quality (Martins et al., 2004). Marlow et al. (2017) concurred stating,

virtual teams are shown to develop more creative ideas than face-to-face teams. Along with the

diverse individual knowledge of team members also comes a diverse pool of resources that

would not otherwise be available (Jimenez et al., 2017). Jimenez et al. (2017) stated not only is

there diverse knowledge within a virtual team, but also complementary knowledge where team

members' knowledge complements each other providing a stronger knowledge base. Placing

employees on a virtual team also increases the experiences and skills on the successful attributes

of a virtual team, which enables the employees to be effective virtual team members that can be

utilized for different project needs (Brewer et al., 2015). An organization having a diverse

knowledge base and knowledge assets can promote a competitive advantage that is sustainable

(Killingsworth et al., 2016).

      Challenges. There are specific challenges related to the utilization of virtual teams

(Krumm et al., 2016; Marlow et al., 2017). The concept areas include some of the challenges

faced by organizations and leadership employing virtual teams (Dulebohn & Hoch, 2017;

Marlow et al., 2017). In addition to the creation and promotion of communication, collaboration,

and trust, other challenging areas include: workflow inefficiencies, monitoring performance,

cultural differences, and motivation (Krumm et al., 2016). Kramer et al. (2017) attributed most

challenges within virtual teams to the lack of face-to-face communication stating there is a

decline in communication, cooperation, team cohesion, and efficiency. Pathak (2015) discussed

another challenge that needs to be considered in virtual teams, the effective management of

knowledge. Just as a diverse knowledge base is a strength of a virtual team, the leaders and team members must be able to effectively manage and share knowledge in order to be an efficient team and promote unity (Olaisen & Revang, 2016; Pathak, 2015). Another challenge organizations face when working with virtual teams is the security of information due to information having to be shared across different platforms with all the team members (Barnowska & Kozaryn, 2018). Due to the core components of communication, collaboration, and trust, those challenges are not specifically discussed in this section. However, they are discussed further in this literature review.

One challenge organizations and leaders must overcome is cultural challenges, as it effects communication, collaboration, and trust (Brokaw, 2017). Global virtual teams add multi-cultural and multi-national to the characteristics of virtual teams (Jimenez et al., 2017). This type of challenge happens primarily in global virtual teams, where team members come from vary diverse backgrounds (Jimenez et al., 2017). Cultural differences in team members most commonly involve differences in conflict and uncertainty management, individualism versus collectivism, gender roles and norms, and power distance (Cagiltary et al., 2015). Shulze and Drumm (2016) also has found cultural diversity to inhibit trust within the team and impedes team cohesiveness thus negatively impacting the function of the team. Cultural diversity in virtual teams is shown to increase conflict within the team, increase in misinterpretations, and a lack of team integration (Han & Beyerlein, 2016). The responsibility of creating an environment of inclusion and motivation for employees has largely been a human resources function; however, in recent times this responsibility has shifted to leaders who are closer to the team operations (Lauring & Jonasson, 2018). An integral part of an inclusive and motivating environment is

acknowledging and understanding the various cultures and backgrounds of employees (Lauring & Jonasson, 2018).

Special Needs

For the purpose of this paper the terms special needs and disability will be used interchangeably. Disability is the condition of an individual and special need is the specific need for accommodation (Bindawas & Vennu, 2018). As of 2010, the World Health Organization (WHO) reported over one billion individuals had at-least one disability and predicted 10 million individuals would add to that number every year (Moradi et al., 2018). Globally, the occurrence of disability is around 15% (Bindawas & Vennu, 2018). Individuals with special needs or disabilities are all ages, races, and ethnicities (Anand & Sevak, 2017). Most individuals with a disability or special needs are restricted by limited hearing, vision problems, cognitive impairments, or physical limitations (Bostad & Hansich, 2016). These limitations are long-term and effect the level participation within society (Khan et al., 2016).

These restrictions of individuals with disabilities or special needs can impact the ability to communicate, perform daily activities, and navigate their environment (Bostad & Hansich, 2016). Due to these restrictions, individuals with special needs or a disability have varying types of independence and abilities (Novikova et al., 2015). The obstacles people with disabilities or special needs face shape their everyday lives (Bostad & Hanisch, 2016). Freedom is a crucial component to individuals with special needs, and the way to create and promote independence and freedom is using accommodations (Sandjojo et al., 2019). Independence comes in many forms, one of those being employment; those with disabilities face many obstacles in employment (Schur et al., 2016). Through alleviating restrictions, individuals with disabilities are more likely to be employed (Schur et al., 2016). Alleviating restrictions or limitations allows

individuals with disabilities to have a higher level of functioning in society (Bindawas & Vennu,

2018). The next two sections broadly discuss the different types of special need categories as

well as accommodations that can be made to alleviate restrictions and increase freedom.

Categories of Special Needs. As discussed, individuals with special needs do not have

the same limitations and these restrictions vary from individual-to-individual (Bostad & Hansich

2016). Along with varying degrees of limitations, those with disabilities also have varying

degrees of health issues, including health-related behaviors and social causes of health (Zhao et

al., 2019). According to Moradi et al. (2018), disability refers to one of three categories:

disorders, activity limitations, and participation restrictions. Barr and Bracchitta (2015) also

include behavioral as a type of disability, which can be included in the disorder category of

disabilities. Included in these types of disability, Bindawas and Venn (2018) list memory and

self-care, which effect daily living. These disabilities individuals may be born with or the

conditions may happen over time or due to an accident, like spinal cord injuries (Zakiei et al.,

2018). An individual may fall into just one or all categories depending on their disability or

special need (Moradi et al., 2018). Individuals with cognitive impairments are often classified as

learning disabled or intellectually disabled (Cluley, 2017). This type of disability is classified by

the lowered ability to understand new things or learn new skills, often taking the individual

longer to perform new tasks (Cluley, 2017). Mobility disability refers to being able to physically

navigate an environment, such as loss of limb(s) (Zhao et al., 2019). Severe hearing and vision

deficits also classify as a disability as they restrict participation and activity (Moradi et al., 2018;

Zhao et al., 2019).

Accommodations. It is important not to limit individuals with special needs or

disabilities to their situation or condition (Novikov et al., 2015). The individual restrictions those

with disabilities face are common to many; however, restrictions should be assessed for each individual as he or she may have unique restrictions (Sandjojo et al., 2019). For those living with disabilities or special needs can increase their independence through limiting the amount of restrictions or constraints they are faced with (Bostad & Hansich, 2016). Limiting these restrictions by providing accommodations can greatly improve the life and freedom of those living with a disability (Bostad & Hansich, 2016). Accommodations not only increase independence, they also reduce fatigue and stress (Punch, 2016). Accommodations and interventions for those with special needs or disabilities are shown to improve work involvement and have positive psychological outcomes (Gignac et al., 2014). One such psychological outcome is improved self-esteem according to Lindsay (2018).

There are various types of accommodations for those with special needs (Darcy et al., 2016; Dolbow & Figoni, 2015). Accommodations include adaptive technology, task modification, and changes to the environment (Lindsay, 2018). Rehabilitation and/or therapy is also very useful for increasing freedom for those with physical limitations, ramps, elevators, and widened doorways and hallways for wheelchairs, which are all examples of accommodations that can greatly increase independence (Dolbow & Figoni, 2015). Other environmental accommodations include flexibility in schedules and modifications in transportation (Anand & Sevak, 2017). Technology has greatly advanced the types and applications of accommodative processes and services (Darcy et al., 2016). Through technological advances, programs assisting in speech, hearing, sight, and physical movement (Darcy et al., 2016). Technology has provided various communication applications, which greatly enhances communication for those with hearing or speech difficulties (Punch, 2016).

Leadership

Leadership is vital to the success of an organization and team; therefore, it is one of the most studied concepts in business (Pultra & Cho, 2019). Leadership is dependent on the relations and interactions between the leader and employees or followers (Alvesson, 2019). There are several factors that impact the type of leadership style adopted, most importantly the behaviors and characteristics of the leader and the objectives of the organization (Pultra & Cho, 2019). Through various studies, it is shown that there is no leadership style that can be used in all situations, and leaders cannot utilize the same style to reach organizational goals (Pultra & Cho, 2019). Just as leadership varies based on the situation, many leaders may utilize various leadership styles through the course of time leading teams (Henkel et al., 2019). A part of the situation affecting the most effective type of leadership is the personality and objectives of team members being led (Breevaart & de Vries, 2019). According to Pultra and Cho (2019), one of the greatest assets a leader can have is being able to adapt a leadership style based on the current situation.

Leadership of virtual teams are shown to be a critical component for effective teams and the success of the organization (Mysirlaki & Paraskeva, 2019). It is shown that effective virtual team leadership is the difference between an average and a high-performing virtual team (Maduka et al., 2018). Robert and You (2018) states, leadership in virtual teams is causally related to satisfaction of team members, trust, and autonomy. The primary objectives of leaders of virtual teams is to monitor team performance, motivate team members, and enhance the team's effectiveness (Nordback & Espinosa, 2019). Leaders of virtual teams are at a disadvantage due to the increased inability to directly influence members of the team primarily due to the reduced opportunities for communication (Nordback & Espinosa, 2019). An important

element in leadership of virtual teams is the effect of power-distance (Kramer et al., 2017). A

leader, taking into consideration power-distance in virtual team leadership, needs to analyze how

the team perceives power as dispersed within the team (Kramer et al., 2017). It is assumed

virtual teams require stronger leadership than face-to-face teams due to the team being dispersed

(Gibbs et al., 2017). It has also been shown that a hierarchical, top-down leadership structure is

most effective in leading virtual teams (Gibbs et al., 2017). Leadership styles and theories are

discussed below to show how these concepts relate to leading a virtual team (de Vries et al.,

2019; Hasel & Grover, 2017; Turner & Baker, 2018). Leadership styles include: (a) person-

oriented, (b) task-oriented, (c) shared/participative, (d) servant, and (e) transformational.

Person-oriented Leadership. Person-oriented leadership is also referred to as

relationship-oriented; whereby, the leader is primarily focused on the needs and well-being of

employees (Breevaart & de Vries, 2019). This leadership style ensures employees feel secure,

work in a friendly atmosphere, and are inspired (Zorina et al., 2018). Person-oriented leadership

promotes an agile work environment due to the leader acknowledging and utilizing each team

member's talents and skills and the increased focus on supportive communication (Henkel et al.,

2019). This type of leadership is shown to increase employee productivity and trust (Hansel &

Grover, 2017). Person-oriented leadership is also shown to increase communication within teams

by creating effective positive relationships (de Vries et al., 2010). Through the promotion of trust

and communication, teams that are led by a person-oriented leader can adapt faster and are more

flexible (Henkel et al., 2019). Employees that place emphasis on emotional support, confidence,

and trust are shown to prefer a person-oriented type of leadership (Breevart & de Vries, 2019).

Due to the design and communication modes of virtual teams, leaders focusing on relationships

within the team promotes trust (Hacker et al., 2019). This type of leadership is also shown to lead

to greater organizational commitment from team members and positive organizational behavior

(Breevart & de Vries, 2019).

      Task-oriented Leadership. Task-oriented leadership is also referred to as transactional

leadership which focuses on the tasks that need to be completed and the steps to accomplish the

tasks (Alvesson, 2019; Breevaart & de Vries, 2019). A task-oriented leader communicates in a

top-down approach, telling the employees the tasks, and when, where, and how to complete them

(Mikkelson et al., 2017). Task-oriented leadership is appropriate for defining communication

strategies and ensuring team members are focused on goal achievement (Breevaart & de Vries,

2019). This type of leadership is appropriate depending on the situation, such as when a team is

newly formed where expectations and tasks must be clearly defined (Henkel et al., 2019). The

formation of a team or the start of a project requires tasks to be clearly outlined, expectations set,

and roles and responsibilities discussed, which can require a task-oriented leadership style

(Henkel et al., 2019). Successful task-oriented leadership is dependent on clear communication

of tasks, knowledge of the leader, and fair and equal treatment (Hansel & Grover, 2017).

Breevart and de Vries (2019) find that employees who value self-esteem, structure, and

individualized work show preference regarding a task-oriented leadership style. This correlates

with the objectives of personnel efficiency, enabling employees to reach their goals through

short-term planning, and clear communication of task-oriented leadership as described by

Mikkelson et al. (2017).

      Shared/Participative Leadership. Shared or participative leadership theory can be an

effective leadership style due to the diverse knowledge and role attributes of each team member

(Turner & Baker, 2018). In shared leadership, the team and the team's joint work is the emphasis

rather than individual members (Alvesson, 2019). Shared or participative leadership theory

allows for team members to share in leadership responsibilities as well as more actively

participate in decision-making (Turner & Baker, 2018). Participative leadership promotes

employee engagement in the team and organization (Busse & Regenberg, 2019). Through the

sharing of leadership among team members, employees have an increased perception of team

support, valuing each other's contributions (Robert & You, 2018). This leadership style also

enables employees to be empowered and more communicative (Sax & Torp, 2015). Shared

leadership enables a team climate where collaboration is valued and team members respect and

value each other (Robert & You, 2018). Shared leadership is shown to promote a sense of work

meaningfulness through team members feeling like a valued part of the team (Robert & You,

2018). Due to the inclusiveness of participative leadership, it is shown to have a great importance

in today's business climate of globalization and a culturally diverse workforce (Busse &

Regenberg, 2019).

Servant Leadership. Similar to participative leadership, servant leadership empowers

employees and increases employee engagement (Newman et al., 2017). Servant leadership is

described as starting from the natural desire someone must serve others, then evolves into a

mindful decision to lead (van Dierendonck, 2011). Servant leadership involves the leader placing

the well-being of employees above themselves, and are generally altruistic (Williams et al.,

2017). Servant leaders also promote leadership within their employees by putting others first,

creating value for the organization and society, and acting ethically (Newman et al., 2017).

Putting employees first allows leaders to be more concentrated on the development and welfare

of their subordinates and not the bottom line (van Dierendonck, 2011). Through the

characteristics as mentioned, servant leadership also promotes a culture of trust and positive

relationships (Lee et al., 2019). These characteristics are seen through behavior and role-

modeling (Newman et al., 2017). Servant leadership is linked to positive team and employee

performance outcomes (Lee et al., 2019). According to Lu et al. (2019), servant leadership is also

related to decreased turnover and positive organizational behavior.

Transformational Leadership. Today, transformational leadership is one of the most

popular and studied leadership styles (Bush, 2018). Transformational leadership is also perhaps

the most impactful form of leadership (Breevaart & de Vries, 2019). Bush (2018) stated that

transformational leadership is more effective than transactional or task-oriented leadership and is

highly effective when restructuring is an objective of the organization. Transformational

leadership also borrows from person-oriented leadership in that a large portion of the focus is on

the employee(s), which leads to greater employee commitment and enhanced performance

(Mittal & Dhar, 2015). Part of the restructuring of the objective comes from a transformational

leader's ability to redefine employees' vision and revive their dedication to completing a goal.

Transformational leadership is also related to increased employee motivation and creativity

(Abdullah Al Harbi et al., 2019). According to Mittal and Dhar (2015), transformational

leadership is also related to charisma, intellectual stimulation, and consideration for the

individual. Breevaart and de Vries (2019) found that employees that value a collective work

experience and who identify as extroverts prefer a transformational or charismatic leader.

Transformational leadership has similar traits to other leadership styles, such as servant

leadership and participative leadership, through empowering others, behaving ethically, and

promoting inclusion (Newman et al., 2017).

Leadership in Virtual Teams. There are conflicting studies regarding successful

leadership styles and virtual teams (de Vries et al., 2010; Hasel & Grover, 2017; Turner & Baker,

2018). Most studies indicate that person-oriented leadership styles increase team effectiveness

and performance; however, one study shows this type of leadership style to negatively impact

effectiveness (Nordback & Espinosa, 2019). According to Robert and You (2017), shared

leadership in virtual teams is linked to higher levels of employee satisfaction and more engaged

employees. Overwhelming research indicates that task-oriented leadership is not an effective

leadership style for virtual teams; however, as previously mentioned, task-oriented may be

effective when a team is newly formed (Henkel et al., 2019; Nordback & Espinosa, 2019). Along

this same theory Eubanks et al. (2016) stated the main driver of performance in virtual teams is

task-oriented leadership. Gibbs et al. (2017) stated that both task and person-oriented leadership

are important and become increasingly so as the virtuality of a team increases. Maduka et al.

(2018) stated the most effective type of leadership in virtual teams is transformational due to

increased collaboration, effective conflict management, and efficient project management.

In addition to the different leadership styles mentioned, Eubanks et al. (2016) has found

three types of leadership prevalent and important in virtual teams. These types of leadership are

described as a project coordinator, implementer, and completer (Eubanks et al., 2016). Project

coordinator, implementer, and completer borrow from both task-oriented and relation-oriented

leadership style to meet the requirements of the team (Eubanks et al., 2016). Servant leadership

and transformational leadership lead to higher levels of employee empowerment and

performance outcomes; therefore, are likely choices of styles for teams including virtual teams

(Bush, 2018; Lee et al., 2019). As mentioned by Robert and You (2018), various leadership

styles are not always possible depending on the composition, mission, and objectives of the

team. A successful style of leadership is not just dependent on the situation, but also on the

personality traits of the employees within the team (Breevart & de Vries, 2019; Henkel et al.,

2019). Mikkelson et al. (2017) discussed this as well stating, leaders can adopt different styles

for the efficiency and effectiveness of the team. Regardless of leadership style, leaders of virtual

teams must be supported and trained on the various issues, challenges, and components of

leading a successful team (Ford et al., 2017).

Communication

Communication takes place one-of-two ways, face-to-face or voice-to-voice (Johnson et

al., 2019). Face-to-face communication is comprised of both verbal and non-verbal exchanges of

information (Bonaccio et al., 2016). Verbal communication is the spoken word, the actual

content of the information exchanged (Bonaccio et al., 2016). Non-verbal communication is

explained through body language and the tone and pitch of the communicators voice (Bonaccio

et al., 2016). It is through non-verbal communication that team members can derive the attitude,

personality, and intention of the other team members (Bonaccio et al., 2016). Prior to 40 years

ago, communication primarily took place face-to-face; however, through the advancements in

technology, voice-to-voice communication has greatly evolved (Johnson et al., 2019). Team

communication is defined as the interchange of information among two or more members of the

team and is a vital component as it promotes the creation and sustainment for processes and

performance (Marlow et al., 2017; Pitts et al., 2012).

Communication within teams, both face-to-face and virtual, usually are categorized by

either relational or task-oriented interactions (Glikson & Erez, 2019). Relational communication

is also described as interpersonal communication and encompasses both verbal and non-verbal

communication that happen from the context of relationship building (Suwinyattichaiporn &

Johnson, 2018). Both forms of communication are important to team performance; relational

communication promotes trust and team cohesion, and task communication allows details to be

given on completing objectives (Glikson & Erez, 2019; Marlow et al., 2017). Expression of

emotion is shown to be a key factor in relational communication, allowing team members to

engage emotionally and enable team cohesiveness (Shulz & Krumm, 2016). Communication

within virtual teams is usually measured through frequency, quality, and content (Marlow et al.,

2017). The frequency in which a team communicates is not causally related to team performance

due to the effective communication practices of efficient teams, which enable them to

communicate less frequently (Marlow et al., 2017). This demonstrates how the quality of

communication should be measured and is much more important than the frequency of

communication (Marlow et al., 2017).

Challenges. There are challenges with communication, both face-to-face and voice-to-

voice (Johnson et al., 2019). Organizations seeking face-to-face communication are often

delayed in communication due to waiting until all members are available and in the same

location (Johnson et al., 2019). Communication in virtual teams requires communication to take

place using various modes of technology and happens across different time zones, which are two

reasons why communication is a challenge (Krumm et al., 2016). Due to the reliance on

technology for communication, virtual team members miss out on the important verbal and non-

verbal cues of communication (Pitts et al., 2012). Team members can miss out on important non-

verbal cues, which can lead to misunderstandings and a breakdown in communication (Bonaccio

et al., 2016). Benbenishty and Hannick (2015) stated as much as 55% of communication is body

language and 38% is tone of voice, only leaving 7% for the actual spoken message. Although

there are some technological applications that allow for instant or synchronous communication,

many applications rely on asynchronous or delayed communication (Berry, 2011). The type of

communication, asynchronous or synchronous, changes how decisions are made, interpersonal

relationships of the team members, and comprehension of the work to be performed (Berry,

2011). Due to communication happening virtually, the quality of communication is limited (Pitts et al., 2012). A contributing factor of the limited quality is the occurrence of using fewer words to exchange information (Johnson et al., 2019). The communication limitations inhibit completion time of tasks in virtual teams (Marlow et al., 2017). Increased task complexity along with a team being highly virtual creates an environment where mistakes and misunderstandings are likely (Marlow et al., 2017). Team size also has a negative effect on team communication; the more team members the greater strain on technology, the increased chance of miscommunication, and the reliance on more members to communicate effectively (Watanuki & de Oliveira Moraes, 2016).

Another element of communication is the possibility of team members speaking different languages and being culturally diverse (Lauring & Jonasson, 2018). Language diversity inhibits discussion and team member participation in discussions (Cagiltary et al., 2015). Due to this type of diversity, team members may perceive information differently than intended, which leads to misinterpretation and miscommunication (Han & Beyerlein, 2016). Misinterpretation and miscommunication can lead to a breakdown in task completion, increased negative team perceptions, and conflict between team members (Han & Beyerlein, 2016). Conflict between team members also increases due to team members of different cultures expressing their emotions differently, which again can lead to misinterpretation (Cagiltary et al., 2015). The previous communication challenges mentioned are not only a problem in culturally or nationally diverse teams, but these challenges are amplified (Cagiltary et al., 2015).

Solution from Leaders. Effective communication by leaders is shown to positively affect employee performance and satisfaction (Mikkelson et al., 2017). Leaders can promote effective communication within virtual teams by setting communication expectations early, as

well as arranging a face-to-face meeting at the beginning of the team's formation (Marlow et al.,

2017). Establishing early communication expectations is also shown to promote trust within the

team (Marlow et al., 2017). Glikson and Erez (2019) described this process as the entry phase

which establishes the processes for interpersonal exchanges and decreases uncertainty. Creating

expectations from the very first team interaction also aids in team decision-making which carries

through the life of the team (Glikson & Erez, 2019). According to Glikson and Erez (2019),

leaders that promote relational-oriented communication create a team environment of positive

communication and increased performance. Ruben and Gigliotti (2016) defined three key

communication tools leaders can use to enhance communication. The three tools are focused on

leaders being able to gain the attention of their employees, influence employees' thoughts on

tasks, clearly relay the information and influence on how it is received, and enable feedback so

there is not any miscommunication or misunderstandings (Ruben & Gigliotti, 2016). To address

communication challenges related to varying cultures and languages is to promote an inclusive

environment (Lauring & Jonasson, 2018). This includes promoting team members to be open to

diversity and provide information and services to enhance communication between team

members (Lauring & Jonasson, 2018).

Collaboration

For organizations to successfully compete in today's business environment, they must be

able to effectively collaborate between employees, teams, and other stakeholders (Boughzala &

de Vreede, 2015). It is shown that effective collaboration has more of an impact on

organizational performance than market turmoil and strategic placement (Boughzala & de

Vreede, 2015). Collaboration not only enhances competitive status within in an organization, it

also increases organizational sustainability (Niesten et al., 2017). Collaboration is defined as a

process in which new products and services are created, and enhances innovation (Orellana, 2017). Collaboration enhances the effort of all team members, allowing for a better outcome than what can be achieved individually (Chancler-Olcott & Hinchman, 2019). Collaboration allows for members of a team to share knowledge, and is vital for any team especially that of a virtual team where team members must efficiently manage resources and make joint decisions to ensure the work is completed (Hamersly & Land, 2015; Nordback & Espinosa, 2019).

Collaboration not only involves knowledge-sharing, but also coordination and cooperation between team members (Choi & Cho, 2019). Knowledge-sharing is a vital component of collaboration as it allows for increased efficiency and enhanced team performance (Killingsworth et al., 2016). Collaboration is also impacted by the tool, task, and composition of the team (Zhang et al., 2018). This is echoed by Nordback and Espinosa (2019) who stated the impact of collaboration is largely dependent on the team structure and whether tasks can be completed independently. These concepts reflect the team environment and motivation of the team, which are causally related to the amount of collaboration through knowledge-sharing (Killingsworth et al., 2016). Marlow et al. (2017) stated that collaboration in teams is causally linked to performance, especially when the team is made up of multi-disciplinary members. Strong interpersonal relationships increase knowledge-sharing and collaboration in virtual teams more than solely relying on advanced communication technology (Olaisen & Revang, 2016). However, Caya et al. (2013) found that collaboration orientation in virtual teams is not a direct predictor of outcomes.

Challenges. The nature of virtual teams, being geographically dispersed, is the number one challenge of collaboration (Batarseh et al., 2018). The lack of both trust and communication in virtual teams severely hinder team collaboration (Choi & Cho, 2019). Creating and sustaining

an organizational culture that promotes collaboration is also identified as a major challenge, due

to the reliance on technology (Marlow et al., 2017). Not only must the organization value,

provide, and utilize technology, they must create a culture that values technology (Marlow et al.,

2017). The challenges associated with communication have already been discussed and those

associated with trust will be addressed in the discussion of trust. One of the key challenges of

collaboration in virtual teams is the insufficient transfer of knowledge (Gao et al., 2016). The

level of autonomy the team members have as well as task complexity also pose challenges to

collaboration (Choi & Cho, 2019). The available technology the team must use for collaborative

processes can also be a challenge if it is not adopted by all team members or the functionality is

not appropriate (Zhang et al., 2018). Challenges can also stem from the individual beliefs in the

team as to whether they have a collective or individual mentality (Cheng et al., 2016). As

mentioned in communication, the size of the team can also pose as a challenge to collaboration;

the more team members the more collaboration can be inhibited (Watanuki & de Oliveira

Moraes, 2016).

   Solutions from Leaders. For collaboration to be effective within a team, the leader must

have the proper skills and knowledge to enable collaboration (Boughzala & de Vreede, 2015).

Boughzala and de Vreede (2015) stated that delegating a collaboration facilitator within in the

team promotes and enhances team collaboration. The role of a collaboration facilitator involves

the leader creating a culture of collaboration and being a motivator for collaboration (Gao et al.,

2016). According to Cheng et al. (2016), the single most important thing a leader can do to

promote collaboration within a team is enhance team trust. One way to promote trust and

enhance collaboration is through clear and high-quality communication from leadership (Cleary

et al., 2019). Another way to promote collaboration is through participative leadership (Cleary et

al., 2019). Leadership must provide an appropriate structure for collaboration to occur, this

includes: schedules, agendas, and technology platforms (Gao et al., 2016). To achieve this, team

members must have frequent social interaction to communicate and share progress and goals

(Gao et al., 2016). Hill and Bartol (2016) concluded that sharing decision-making and providing

a supportive environment is key to increasing collaboration. It is the role of the leader to support

integration and coordination between team members for the duration of the team (Batarseh et al.,

2018).

Trust

Trust in virtual teams is dependent upon team members perceiving its members to be

honest and reliable (Piccoli & Ives, 2003). According to Hacker et al. (2019), there are six

different types of trust, to include: swift, generalized, time-based, multi-faceted, dispositional,

and institution-based. Hasel and Grover (2017) described types of trust as calculus-based,

knowledge-based, and identification-based. Maduka et al. (2018) stated the three types of trust

relevant to a virtual team are: altruistic trust, performance trust, and affective trust. These types

of trust are centered on the concern for others, reliability, and the performance of the team

(Maduka et al., 2018). These types of trust are dependent on the risk-versus-benefit of trusting,

what has been proven or what is known, and shared beliefs and values (Hasel & Grover, 2017).

The variance in these types of trust are mainly due to organizational structure, time, and the

depth of trust (Hacker et al., 2019). Each of these types of trust are important; however, for the

purpose of this study, the various types were not analyzed independently, but generally.

Trust encompasses the ability of team members to be vulnerable with each other without

the loss of the projected outcome of the team (Understanding the Currency of Trust, 2020). Trust

within teams depends on each team member being able to rely on one another to complete the

task(s) they have been assigned (Ugwu et al., 2016). The more team members trust each other, the more likely they are to exchange thoughts and ideas; thus, creating a culture of collaboration (Olaisen & Revang, 2016). This trust is built through team members observing each other complete delegated tasks (Robert & You, 2018). Hacker et al. (2019) agreed that trust promotes communication and sharing-knowledge. While teams can complete tasks and have a positive performance outcome without trust, teams with trust are able to complete tasks and increase performance more effectively and efficiently (Gardner et al., 2019). Ford et al. (2017) went further and stated a high amount of trust in virtual teams leads to more interaction, better feedback, proactive team members, and an increased focus on performance.

Challenges. It is theorized that due to the dispersion of team members in virtual teams, trust is hard to establish which in turn negatively impacts team performance (Piccoli & Ives, 2003). Due to team members being located away from each other, leadership, and the organization, often team members feel left out and ignored which diminishes trust (Ford et al., 2017). Hacker et al. (2019) also added objectives, team formulization, and hierarchy of leadership as challenges for establishing trust within a virtual team. When team members are perceived to not complete their tasks or not complete the tasks to the fullest of their abilities, then trust is also lost (Piccoli & Ives, 2003). The virtual environment of virtual teams does not allow for team members to directly observe other team members and leaders, which is a component of building trust (Ford et al., 2017). Misunderstandings of other team member's culture and background also creates challenges for a team to build trust (Ford et al., 2017).

Technology plays a part in the perception of competence in team members; if a team member is not proficient in the technology used or makes a mistake, trust is further hindered in teams where trust is lacking (Hacker et al., 2019). However, in a team with established trust, in

this type of situation a benefit of the doubt is given, and team members are more accepting

(Hacker et al., 2019). This also mentioned by Owens and Deepak (2018) who stated technology

adaptation and acceptance is the ability of a team member to perform a specific task using the

technology platform. If a team member has difficulty in doing the task, trust is hindered (Owens

& Deepak, 2018). These instances involve communication difficulties within virtual teams

(Gardner et al., 2019; Hacker et al., 2019; Owens & Deepak, 2018). Lack of communication

specifically being able to read verbal and non-verbal cues of team members has been shown to

negatively affect trust (Gardner et al., 2019). Cultural differences and short-term teams also lend

to a lack of trust (Hacker et al., 2019).

   Solution from Leaders. One of the single most important factors a leader can achieve

when leading a team is to develop trust between themselves and their employees (Hasel &

Grover, 2017). Leadership knowledge is also identified as key to establishing trust with

employees, as leaders must convey the knowledge they have, which makes them a good leader

(Koohang et al., 2017). Leaders of virtual teams are responsible for creating an environment that

establishes and maintains trust between the leader, team, and its members (Hacker et al., 2019).

Transparent communication is a crucial element in the virtual team environment for leaders to

establish to build and maintain trust (Ford et al., 2017). Maduka et al. (2018) discuss the same,

stating it is a leader's responsibility to enable team cohesion and relationship building to create

trust within the team. Organizations and leaders must implement policies and procedures that

support team communication, knowledge, and collaboration to aid in the development of trust

(Ford et al., 2017). There is research that validates the fact that leaders who engage team

members in feedback and open lines of communication promote an environment of trust

(Understanding the Currency of Trust, 2020). Using communication to ensure the goals and

objectives of the team are clearly defined, understood, and adopted by each of the team members

is also a way a leader can promote trust (Hacker et al., 2019). Leaders establishing a system for

social messages and instructions is also positively shown to increase trust within the team,

especially during the beginning stages of team development (Gardner et al., 2019). Hacker et al.

(2019) showed transformational leadership, participative leadership, and transactional or task-

oriented leadership are effective at establishing trust due the focus on clearly communicating

goals.

Technology

Organizations using technology to link virtual team members can prove to be challenging

for enabling communication and building relationships; however, technology is proven to be a

necessity in connecting team members across different locations (Peng et al., 2019; Shulze &

Krumm, 2016). Technology provides a vital tool in the promotion of communication,

collaboration, and trust (Marlow et al., 2017). An important aspect of technology, which must be

considered, is the impact training team members has on the technology that is used (Gibbs et al.,

2017). It has been discovered that technology for virtual teams is most effective when the

characteristics of the technology match the characteristics of the task (Zhang et al., 2018). As

Ford et al. (2017) stated, team members and leaders are connected by technology, with

technology connecting team members to vital resources that must be reliable, comprehensive,

and fast. These functions need to include, shared workspace, online meeting applications, group

conferencing applications, and have both video and audio functions (Laitinen & Valo, 2018).

These functions refer to the network density of the platform which measures the available

connections to the used connections; the more network density the more communication,

collaboration, and trust is enabled (Gao et al., 2016). Connection strength, which encompasses

time and intensity of the network, is also a vital component of an efficient platform (Gao et al., 2015).

The technology used should have multiple functions and have interfaces that are intuitive to the user (Zhang et al., 2018). These applications allow synchronous communication to take place between team members, as well as share information, negotiate, and make decisions (Laitinen & Valo, 2018). It is shown that technology that provides synchronous or successive communication is more effective than that providing asynchronous (Shulz & Krumm, 2016). As described by Shulz and Krumm (2016), technology provides for convergence and conveyance communication which includes the objectives of team members coming to a common understanding and the communication of information. Technology that allows for conveyance communication increases task information among team members and enhances decision making (Schouten et al., 2013). Informational platforms allow team members to exchange information (Peng et al., 2019). Visual representation platforms are also crucial for enabling team success (Peng et al., 2019). Visual representation platforms allow information to be shared visually which allows team members to process information through imagery processing, gaining a greater understanding of the information (Peng et al., 2019).

Impacts on the Concepts. Technology allows an organization to increase its flexibility as well as enable effective communication (Kramer et al., 2017). Olaisen and Revang (2016) found that interpersonal relationship-building, trust, and collaboration can be developed with various communication technology modes. Considering this, technology directly impacts the main concepts, communication, collaboration, and trust (Marlow et al., 2017). Conversely, it is shown that organizations that value collaboration are more likely to develop technological communication capabilities to enhance collaboration (Olaisen & Revang, 2016). Collaboration

has been shown to be enhanced using three-dimensional virtual platforms due to the synchronous

communication and visual exchange of information (Shouten et al., 2013). The technology

implemented must be able to support the amount of information sharing the group needs, if it

cannot handle the load of information it is not an effective technology platform (Schouten et al.,

2013). Using technology, virtual teams can develop into high-performance teams (Olaisen &

Revang, 2016). Technology allows team members to develop professional familiarity and

enables information elaboration which are shown to positively effect team cohesion and

performance (Maynard et al., 2018). Martins et al. (2004) explained this further by stating that

the use of advanced technology has been shown to directly enhance team efficiency,

effectiveness, and communication.

Challenges. Though technology is vital for virtual teams, the use of it is not without

challenges (Shulze & Krumm, 2016). The technological platform chosen must also be secure,

due to the information shared by multiple users (Ford et al., 2017). The cost of a technological

platform can be a challenge for some organizations, as the technology needs to be up-to-date and

maintained, which can be costly (Ford et al., 2017). Technology is only effective if team

members know how to use it, and the technology and is appropriate for what it is being used for;

therefore, choosing the correct platform and training team members on the selected technology is

paramount (Gibbs et al., 2017). Technology that is insufficient in providing media richness and

inappropriate technological platforms pose threats to communication and overall team

performance (Shulze & Krumm, 2016). An example of this is a team relying on asynchronous

communication, a team must be able to exchange information instantly, which is provided

through platforms like video conferences (Schaubroeck & Yu, 2017). As previously mentioned,

due to the use of technology, virtual teams miss out on important non-verbal cues in

communication, Maynard et al. (2018) also postulated that technology negatively impacts the quality of information exchanged.

Potential Themes and Perceptions

From this literature review, there were various themes and perceptions that developed. These themes and perceptions were primarily due to the repetitive information found throughout many of the sources reviewed. The themes discovered were important as they were utilized during research to fill in gaps of current research and confirm or contradict current studies (Yin, 2014). Through this process, reliability and validity will be strengthened (Yin, 2014). The major themes and perceptions that emerged as a result of this literature included: the utilization and uniqueness of virtual teams, the importance of leadership in virtual teams, and how each of the concepts of (a) communication, (b) collaboration, and (c) trust are interrelated. These themes are discussed further as they correlate to the findings of this study in Section 3.

Virtual teams have been gaining popularity over the past two decades, becoming a viable strategic plan for many organizations (Caya et al., 2013; Maes & Weldy, 2018). This strategy has allowed for over a half a trillion growth in just five years (Lockwood, 2015). This growth has led to many more organizations implementing a virtual team strategy (Grober & Baumol, 2017). Virtual teams allow for organizations to diversify, efficiently compete globally, and cut costs (De Bruyn, 2017; Shulze & Krumm, 2016). There are various types of virtual teams that can be utilized for organizations to complete their mission (Berry, 2011). The differences in many virtual teams are not only the projects or tasks in which they are to compete, but the team's reliance on technology or how much time they spend on virtual platforms (Berry, 2011; Han & Beyerlein, 2016).

The uniqueness of virtual teams creates substantial benefits for organizations; however, they create substantial challenges as well (Dulebohn & Hoch, 2017; Kramer et al., 2017). While many of the same team principles are the same for face-to-face teams and virtual teams, virtual teams are quite different (De Bruyn, 2017; Liao, 2017). Due to the number one characteristic of virtual teams being geographically dispersed, virtual teams pose challenges that may not be unique to just virtual teams, but are harder to overcome (Berry, 2011; Kramer et al., 2017). The challenges associated with (a) communication, (b) collaboration, and (c) trust are not unique to virtual teams; however, they seem to be even more challenging (De Bruyn, 2017). Insufficient and ineffective communication inhibits productive collaboration as well as trust (Dulebohn & Hoch 2017; Marlow et al., 2017). Through the research of this study, it was found communication was the biggest factor to trust being established. Another challenge organizations and leaders of virtual teams must overcome is cultural diversity, due to the geographic dispersion of the team (Brokaw, 2017; Jimenez et al., 2017). Without the proper processes and standards in place, cultural diversity can negatively impact communication, collaboration, and trust (Cagiltary et al., 2015; Han & Beyerlein, 2016). Technology, which is the number one lifeline of virtual teams, presents challenges that organizations, leaders, and team members must overcome (Gibbs et al., 2017; Peng et al., 2019). Technology was found to be vital to the successful collaboration and communication of the organizations studied. Not only the type and reliability of technology, but also the training conducted for employees on being able to effectively use the technology. There is conflicting research on which type of leadership is the most successful in virtual teams, showing just how difficult these teams can be to effectively manage (de Vires et al., 2010; Hasel & Grover, 2017; Turner & Baker, 2018). Organizations must be knowledgeable on all these

challenges so that they can train leaders to effectively lead the teams to overcome these

challenges (Dubelbon & Hoch, 2017).

Leadership is vital for any organization and team, and the influence leaders provide on

(a) communication, (b) collaboration, and (c) trust directly effects the success of the team

(Mikkelson et al., 2017; Pultra & Cho, 2019). The type of leadership style of the leader may not

be as important as originally presumed (Henkel et al., 2019). The most effective leadership style

is largely dependent on the leader and team (Pultra & Cho, 2019). The situation of the most

effective type of leadership includes the individual personalities of the team members, how long

the team has been together, and the functional mission of the team that is meeting organizational

goals (Breevaart & de Vries, 2019; Henkel et al., 2019). Regardless of the type of leadership

style used, it is the leader's responsibility to establish clear guidelines and expectations of

communication (Nordback & Espinosa, 2019). Leaders must model appropriate behavior as well

as rely on practical and functional knowledge (Koohang et al., 2017). These steps enhance trust

between the leader and team and promotes trust within the team (Hacker et al., 2019). Person-

oriented leadership style was found to be the most prominent and liked form of leadership.

Throughout the review of literature, the concepts of (a) communication, (b) collaboration,

and (c) trust were not mentioned individually. Each article, containing information about one of

the concepts, also mentions the other(s). The concept of collaboration cannot happen without

communication (Choi & Cho, 2019). Trust cannot happen without communication, and

collaboration increases when trust is enhanced due to an increase in communication (Gardner et

al., 2019). There is no way to study one of these concepts without studying the others. All these

concepts are vitally dependent on technology (Marlow et al., 2017; Maynard et al., 2018; Olaisen

& Revang, 2016). Not only does technology impact these concepts, but these concepts impact

the utilization of technology (Marlow et al., 2017; Olaisen & Revang, 2016). A common solution

for the challenges related to each of the concepts is competent, knowledgeable leadership

(Boughzala & de Vreede, 2015; Hasel & Grover, 2017; Marlow et al., 2017).

Summary of the Literature Review

Through this literature review a comprehensive discussion is provided by addressing the

key concepts outlined in the conceptual framework. Over the last 20 years, the use of virtual

teams has grown tremendously due to the amount of benefits their utilization can provide an

organization (Caya et al., 2013; De Bruyn, 2017; Liao, 2017). Benefits of virtual teams include

decreased costs, improved competitive placement in the global market, and a diverse knowledge

base (Heng et al., 2018; Krumm et al., 2016). Virtual teams are not without their challenges and

through the exploration of the concepts (a) communication, (b) collaboration, and (c) trust, these

challenges were explored (Krumm et al., 2016; Marlow et al., 2017). The concepts of (a)

communication, (b) collaboration, and (c) trust were discussed to provide a general knowledge of

what these concepts are, how they relate to virtual teams, challenges, and what leaders can do to

improve these concepts. The discussion of leadership provided information on the objectives of

leadership as well as the various types of leadership, and how the leadership is applied to virtual

teams (de Vries et al., 2010; Hasel & Grover, 2017; Turner & Baker, 2018). Special needs and

disabilities were discussed to provide a frame of reference for conducting this study.

Accommodations for overcoming limitations of those with disabilities was described to provide

information for the types of organizations being studied that provide such accommodations. The

incorporation of special needs and accommodations will assist during research and analysis.

Technology is also a crucial component to this study and as such, a literature review was

provided to examine the impact technology has on the concepts of (a) communication; (b)

collaboration; and (c) trust, virtual teams, and challenges related to the use and implementation of technology platforms (Gibbs et al., 2017; Peng et al., 2019). Issues pertaining to the concepts were explored and through the emerging perceptions discussion the concepts were tied together to show how they are interrelated (Creswell, 2014). Emerging perceptions are used going forward in this study to compare how research conducted in this study to the information gathered in this literature review.

Transition and Summary of Section 1

The purpose of this section was to provide the foundation, to include: identifying the problem and purpose, providing a background and identifying the gaps in current literature which show the need for this study to be conducted. The problem and purpose statement that provides justification for the study, showing there is a viable problem to be studied (Creswell, 2014). A thorough explanation of the various research method provides justification as to why a qualitative case study method was chosen. Through the discussion of gaps in current literature, it was shown this study has new information to offer the current information (Kearney, 2017). The assumptions, limitations, and delimitations were discussed to add reliability and validity to this study. Biblical integration and the relationship to the field of study also serve as a justification for conducting the study. The literature review, which was based on the research questions and subsequent conceptual framework, thoroughly described the phenomena being studied and provided the direction of the study. The objective of this section was to provide the needed information to conduct the qualitative research case study. From information gathered in Section 1, the following section, the project study, is detailed through data gathering and analysis.

Section 2: The Project

The purpose of Section 2 is to define the project being conducted and provide the design for this case study. The objective of this study was to address how leaders establish and affect communication, collaboration, and trust in virtual teams. Communication, collaboration, and trust are all vital components of success for a virtual team (Dulebohn & Hoch, 2017; Liao, 2017). Due to the geographic dispersion of team members, these components are challenging to accomplish effectively (Kramer et al., 2017; Marlow et al., 2017). Communication, collaboration, and trust are dependent on each other; without effective communication, collaboration and trust suffer; without team trust, collaboration suffers (Glikson & Erez, 2019; Hacker et al., 2019; Tan et al., 2018). According to Gibbs et al. (2017), ineffective leadership inhibits communication, collaboration, and trust in virtual teams, which negatively impacts team performance. The concepts of leadership, communication, collaboration, and trust are the primary variables for this study.

Clearly defining the design of this case study ensures the evidence, data, and analysis addresses the research questions posed in Section 1 (Yin, 2014). In this section, the purpose statement is restated to ensure the total design of the study is supported, and the problem is addressed (Creswell, 2014). This section is meant to be an exhaustive discussion regarding the roles, limits, data collection, and analysis (Yin, 2014). The roles of the researcher and participants are discussed as well as how participants were chosen; addressing any concerns, and explaining the expectations for both (Creswell, 2014). The use of participants and the generalizations made from analysis in qualitative research make it imperative that considerations are made to ensure the research is ethical and valid (Cypress, 2019). The research method and design are again addressed to provide justification for choosing a case study approach for this

project (Creswell, 2014). As stated by Cypress (2015), due to the high variability in conducting

qualitative research, the method and design must be thoroughly discussed. Population and

sampling are described to explain how and why the population of participants are chosen and the

method of how the participants are chosen from the identified population (Creswell, 2014). The

discussion of population and sampling are also used to promote the validity of this study

(Creswell, 2014).

The use of qualitative data is explained as pertained to this research study, so there is not

any question on where the data were retrieved and how conclusions were drawn (Yin, 2014). The

chosen instrument for this study was clearly defined; followed by how the data were collected,

organized, and analyzed. Organizing the data must be done after or during collection for the

researcher to analyze the data (Watkins, 2017). According to Watkins (2017), analyzing

qualitative data in a rigorous and quick manner is often difficult for researchers. The description

in this section explained the procedures for collecting, organizing, and analyzing the data so that

this study can be reproduced by another researcher (Creswell, 2014). Qualitative research is

susceptible to issues with rigor, trustworthiness, reliability, and validity (Maher et al., 2018). Due

to these challenges that can come with a qualitative method, a discussion on reliability and

validity conclude this section (Anderson, 2017).

Purpose Statement

The purpose of this qualitative case study was to add to the existing research regarding

the leadership of virtual teams. Due to the increasing utilization of virtual teams, current

literature has explored the various aspects which promote the success of virtual teams. Current

leadership has provided a foundation for this study highlighting the importance of strong

leadership of virtual teams. This study delved further into this topic to understand how leadership

can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. Through this case study of virtual teams, best practices and solutions regarding successful leadership of virtual teams will be discovered.

Role of the Researcher

Qualitative research seeks to understand a phenomenon through relationships, experiences, and culture (Cypress, 2015). A qualitative case study requires a researcher to be adaptive, intuitive, inquisitive, and avoid biases (Yin, 2014). The first role of the researcher is to choose a potential problem to study followed by an extensive review (Creswell & Poth, 2018). Once a problem has thoroughly been described and correlating-research reviewed, the researcher must clearly and concisely describe how the research will be conducted, procedures analyzed, and reliability and validity issues addressed, which will be discussed in Section 2 (Yin, 2014). Identification and research of current literature of the problem was addressed in Section 1. The next step of the researcher is to conduct the research, followed by interpretation and conclusions (Yin, 2014). During this section, the role of the researcher for this study will be addressed, to include communicating with participants and gathering and analyzing data.

In this study, the relationship between leadership, communication, collaboration, and trust within virtual teams was explored through interviews of employees working for organizations that provide services to the special needs population. Permission to interview employees from these identified organizations was granted (see Appendix A), potential interviewees were sent a letter of invitation that described the study (see Appendix B). After participants agreed to schedule an interview, the consent form was sent, and signatures obtained.

The researcher and participants retained signed copies (see Appendix C). Throughout the

interview process, participants were given the opportunity to expand on any questions or topics

as well as give any other supporting information not discussed during the interview process,

which according to Yin (2014) enabled the collection of more in-depth information. Names of

the participants and organizations remained confidential during the interview process. The

researcher will store the data in a password protected file for three years.

Participants

Organizations were identified and approval was received from leadership, participants

were sent a letter of invitation to take part in the study (see Appendix B). Participants were

selected based on organizations in which they work and their willingness to volunteer to be a part

of this study. Participants represented different levels of leadership and those not in leadership

which provided a comprehensive collection of data related to the influence of leadership on

communication, collaboration, and trust (Alvesson, 2019; Ford et al., 2017). The only criteria for

participants were that they are at-least 18 years of age and an active employee working virtually

with a company that provides services for individuals with special needs. The researcher

interviewed 15 participants, with 20% employed in a leadership role. Participant demographic

information was collected; however, no names or identifying information was used in the study.

Prior to the interview, participants were emailed a consent letter which described the purpose of

the study and how their information will be protected (see Appendix C). The participants

electronically signed and emailed the letter of consent back to the researcher prior to the

interview. After the researcher electronically signed the document, a copy was emailed back to

the participant. The consent letter also informed the participant that his or her involvement was

completely voluntary and could be terminated at any time during the interview process. Consent

and protection of information is vital for protecting the privacy of participants (Yin, 2014).

The case study research design relies primarily on interviews, observation, and journaling

for data collection and analysis (Creswell & Poth, 2018). This research study consisted of semi-

structured interviews, consisting of open-ended questions which allowed for greater

communication (Creswell, 2014). Participants were asked to complete a sequence of interview

questions with the possibility of follow-up questions (see Appendix D). With the possibility of

repeat contact with participants, confidentiality must continually be addressed (Cypress, 2019).

Due to the social distancing guidelines put in place because of COVID-19 and the participants

being geographically dispersed, the main form of communication for both identifying and

conducting interviews was virtually via Zoom and email. Interviews that were conducted via

Zoom were recorded using audio and video. Two interviews were conducted via email due to

participants' schedule and preference. Confidentiality was attained through assigning each

participant a numeric code corresponding with the date of when the consent was collected, for

example, 2020JUN1_1. The instrument of the study, interview, as well as data collection and

coding will be discussed later in this section. Participant interviews conducted virtually via

Zoom, or through email, are stored in a password protected file for a period of three years as

required.

Research Method and Design

The purpose of this section was to address the research method and design as it relates to

this study. The research method and design provide direction and procedures for conducting the

study, while taking into consideration the researcher's philosophical assumptions and the

problem being addressed (Creswell, 2014). As previously mentioned, once the problem has been

identified, the researcher must then determine the best research method (Creswell, 2014). Once

the research method has been selected, the researcher then must determine which design is the

most appropriate (Creswell, 2014). A qualitative research method was chosen based on the

researcher's assumptions and how the problem will be studied (Creswell & Poth, 2018). The

structure of the research, data collection, and analyzing data are taken into consideration for

choosing the appropriate research design (Creswell & Poth, 2018; Peck & Mummery, 2018). The

design chosen for this research was a case study based on the aforementioned.

Research Method

There are several reasons this study was most aptly suited for a qualitative research

design, which include: the objectivity of the study, the focus of the study, and the composition of

the research questions (Creswell & Poth, 2018; Morrow, 2007; Stake, 2010). The objective of

this study was to understand the phenomena of how leadership effects communication,

collaboration, and trust in virtual teams. Due to the research of this study focusing on the

experiences, thoughts, and actions of the participants, a qualitative method was the appropriate

choice (Creswell & Poth, 2018). Garcia and Gluesing (2013) stated the use of qualitative

research methods in business are appropriate to study processes, test relationships between

variables, and discover new phenomena. This study was not only based on understanding a

phenomenon, but also relationships between the variables of this study, which included:

leadership, communication, collaboration, and trust. Stake (2010) also speaks to the objective of

qualitative studies and relationships, stating, qualitative research utilizes words such as

influences and facilitates to describe causal relationships. Garcia and Gluesing (2013) went on to

state qualitative methods allow for processes and relationships to be examined holistically on

many different levels; thus, providing a comprehensive understanding of the phenomena. In this

study, how leaders influence and facilitate the components of communication, collaboration, and

trust was what was being researched; thus, also contributing to the selection of a qualitative

method. The focus on this study was virtual teams, specifically, those that provide a service for

individuals with special needs. When researching the unique attributes and processes of a

particular group, a qualitative research method is the acceptable method (Garcia & Gluesing,

2013).The research questions identified for this study were how and why questions, which

according to Morrow (2007), are most suitably used in qualitative studies.

Research Design

There are several reasons a case study design was appropriate for this study, including:

assumptions, flexibility, and data collection (Creswell & Poth, 2018; Houghton et al., 2015; Yin,

2014). Qualitative case study research is incorporated into a constructivist philosophical

viewpoint, that truth or reality is shaped by individual perception (Yin, 2014). Through this

research study, the reality and truth of the participants was analyzed to uncover the problem

being addressed. Participants had differing viewpoints on leadership, communication,

collaboration, and trust based on their experiences; a case study allows them to describe these

viewpoints (Baxter & Jack, 2008). Flexibility includes the type of data collected and the

processes in which it is collected (Houghten et al., 2015). Flexibility was utilized in the

collection of data using technology to conduct interviews due to the participants being

geographically dispersed. The use of both interviews also provided justification for using a case

study approach, as case studies allow for multiple sources of data (Yin, 2014). There is an

advantage of using different forms of data collection as it provides a more in-depth

understanding of the problem (Yin, 2014). Incorporating information from a variety of

participants also allows for the problem to be explored through multiple facets and allows for

more sound generalizations to be made (Baxter & Jack, 2008).

Summary of Research Method and Design

A qualitative case study research method and design was chosen for this study. The

selection of a qualitative approach is supported through the characteristics of objectivity, focus,

and the formulation of research questions (Creswell & Poth, 2018; Morrow, 2007; Stake, 2010).

A qualitative approach was also found to be the best choice based on the study of relationships

between the variables as listed above (Garcia & Gluesing, 2013). The justification for a case

study design was based on assumptions, data collection and analytical procedures, and flexibility

(Creswell & Poth, 2018; Houghton et al., 2015; Yin, 2014). By using a case study design, the

researcher can collect the individual perceptions and experiences of the participants (Baxter &

Jack, 2008). The utilization of a qualitative case study provides an in-depth discovery into the

problem being addressed and allows for a comprehensive analysis (Yin, 2014).

Participants and Sampling

The general population of this research study included both male and female employees

that work virtually for organizations that provide services to individuals with special needs. The

target population was male and female employees who are at-least 18 years old and actively

employed with an organization that provides services to individuals with special needs. In this

case study, the sampling strategy chosen was purposive as the participants are chosen based on

the type of work they perform and how they perform it (Yin, 2014). The criteria for the

participants were based on the research questions and conceptual framework (Farrugia, 2019).

The criteria were determined by the research to ensure the variables of this case study were

accurately represented (Farrugia, 2019). Purposive sampling was based on setting parameters of

the participants from the population being studied (Robinson, 2013). Participants met the stated criteria to be selected for this study. A random sampling was not feasible for this study due to time constraints, participant availability, and criteria restrictions (van Hoeven et al., 2015).

The target population was comprised of subordinates as well as individuals employed in leadership positions. Due to this, stratified sampling was also utilized, as 20% of the participants were employed in leadership roles, while the remaining 80% worked in non-leadership roles (Robinson, 2013). The stratification of the sampling was based on a clear theoretical methodology (Robinson, 2013). The stratified sampling chosen allowed for the relationships between leaders and subordinates to be explored which highlighted the different causal relationships between the variables of this study and the different leadership styles (Bryman, 2004). Dinh et al. (2014) elaborated incorporating subordinates and leaders allow for themes to be discovered pertaining to the intrapersonal dynamics which enables the discovery of how leadership is affecting the processes being studied. Stratifying the population also allowed for the effects of leadership to be studied more comprehensively (Bryman, 2004). Stratified sampling enabled the researcher to compare variations across the stratified groups, which again provides a more comprehensive understanding of the phenomenon (Farrugia, 2019).

Data Collection

The purpose of this section is to address the instruments used for data collection, data collection techniques, and the how data will be organized. Clearly defining how data will be collected and organized is crucial for explaining the study and ensuring validity and reliability are addressed (Creswell & Poth, 2018). Instruments of this qualitative case study included the researcher and the interview (Peredaryenko & Krauss, 2013). Data collection procedures are described to outline all the steps taken through collecting the data (Creswell & Poth, 2018). A

discussion of data organization is provided to examine the steps that will be taken to organize,

code, and protect the data.

Instruments

When conducting qualitative studies, the researcher is an instrument due to the

researcher's role in the data collection and research process (Peredaryenko & Krauss, 2013). Due

to the nature and composition of qualitative studies, the researcher becomes an embedded part of

the study (Moore, 2008). It is the researcher's responsibility to determine how the research will

be conducted, what type of data will be collected, and how the data will be collected (Yin, 2014).

Researchers become directly involved with the participants of the study and directly process the

data retrieved from participants (Moore, 2008). In qualitative studies, researchers must be able to

interpret the answers to interview questions, make sense of journal entries and observations,

communicate effectively and efficiently, and know when to ask follow-up questions (Xu & Storr,

2012). When conducting interviews, as in this study, the skills of the researcher directly affect

the quality of the data gathered (Xu & Storr, 2012). Due to the subjectivity and perceptions of

the researcher, the researcher must ensure measures are put in place to address bias

(Peredaryendko & Krauss, 2013). Bias can undermine reliability and validity, with these

concerns being addressed in a later section.

Semi-structured interviews were the sole source of data in this research study. According

to Creswell and Poth (2018), interviews are one of the primary data sources of case studies. In

qualitative studies, interviews are used to describe the meanings of the central themes of the

study from the perception of the participants (Moser & Korstjens, 2018). Utilizing a semi-

structured approach allows the researcher to maintain control of themes discussed; however, are

fluid to allow for the participants to provide perceptions of how he or she feels related to the

topics being discussed (Moser & Korstjens, 2018). A complete interview guide was provided in

Appendix E. Xu and Storr (2012) stated open-ended questions are the best choice when

conducting interviews for a qualitative study. The interview was made up of eight open-ended

questions for participants in non-leadership roles, and 10 open-ended questions for participants

in leadership roles. Based on the answers given by the participants, there was potential for

follow-up questions, however none were needed. Each interview question was based on the

central research question and supporting research questions of this study. The questions were: 1)

How is communication typically conducted in your organization? 2) How does collaboration

take place? 3) How do you feel trust is between team members? Between team members and

leadership? 4) How do leaders enable communication and collaboration? 5) What are the

challenges you face with communication, collaboration, and trust? 6) How do you feel leadership

can improve these concepts? 7) What technology platforms are used? Do you think they are

adequate? 8) What do you think leadership could do differently to enhance team performance?

The additional questions for leadership are 9) What tools and skills do you have to promote

communication, collaboration, and trust within your team? Do you feel they are adequate? 10)

What type of leadership style have you found to be the most effective for leading a virtual team?

The interview questions related to the problem statement, as they uncovered how and

why leadership fails to establish communication, collaboration, and trust, resulting in poor

performance in virtual teams within companies that provide services to individuals with special

needs. These questions also directly sought to answer the central research question of how

leaders enhance team performance through communication, collaboration, and trust. Obtaining

perceptions from participants in both leadership and non-leadership positions gave a more

holistic understanding of the problem. According to Yin (2014), questions such as these are

labeled as short case study interviews, used to either corroborate or challenge previously reported findings. The potential themes of this study were previously discussed in Section 1; the findings from the interviews corroborated the themes found in the current discussed literature (Yin, 2014). The other supporting research questions were addressed through the interview questions as well, with the objective of discovering how communication, collaboration, and trust is affected by leadership and technology. Relating interview questions to the problem being studied and research questions was vital for the development of themes, findings, and linking the conclusions of the study to the research questions (Smith, 2018).

Data Collection Techniques

The data collection technique in this qualitative case study was semi-structured interviews. The interviews consisted of eight to 10 pre-determined open-ended questions. Participants that were employed in a leadership position were asked 10 questions, and those in non-leadership positions were asked eight questions. There was a potential for follow-up questions based on participants' responses. Due to the social distancing guidelines put in place because of COVID-19 and the participants being geographically dispersed, the main form of communication for both identifying and conducting interviews was virtually via Zoom or by email. In recent years, virtual means of conducting interviews has become more popular due to saving costs, time, and the ability to reach more participants (Creswell & Poth, 2018). Hawkins (2018) also stated, conducting semi-structured interviews virtually is appropriate and is a preferred method for participants that are technologically savvy. Interviews that were conducted via Zoom were recorded using audio and video. When Zoom could not be utilized, interviews were conducted via email.

To allow approval to interview participants, the researcher sent a letter of permission to appropriate organizations utilizing virtual teams who service the special needs population (see Appendix A). After approval was received, employees of the organizations were sent a letter of invitation requesting their participation (see Appendix B). Yin (2014) stated utilizing an invitation or illustrative letter allows the researcher to share their study with others, introduce themselves, the study, and gain participation. According to Cypress (2018), it is often difficult to gain access to organizations; however, gaining and maintaining trust is essential for getting access. The letter of invitation is the first step in gaining trust (Yin, 2014). Due to social distancing guidelines put in place because of Coronavirus Disease 2019 (COVID-19) and the participants being geographically dispersed, the main form of communication for identifying and communicating with participants was email, with interviews being conducted virtually via Zoom or by email, when Zoom was not able to be utilized. Due to the interviews being conducted virtually, permission to use the premise was not required. Once an interview was scheduled, the participant was sent a consent form which was electronically signed both the participant and interviewer (see Appendix C). The interviewer emailed the participant a copy of the signed consent for their records prior to conducting the interview. Interviews were conducted virtually via Zoom or email. For the interviews conducted through email, the researcher sent participants a list of interview questions based on their experiences with leadership, communication, collaboration, and trust within a virtual team (see Appendix D). For the interviews conducted virtually via Zoom, the same questions as emailed were asked, with the Zoom interviews recorded using audio and video. The researcher then analyzed the data gathered from the interviews using MAXQDA. After careful analysis, correlations of the variables of this study were explored. Conclusions and recommendations were formed based on analysis. Dresch et al.

(2015) described this process as the goal for studies performed in business and management; to develop ways to improve processes and applications. Participant interviews conducted virtually via Zoom and through email, are stored in a password protected file for three years.

Data Organization Techniques

Interviews were cataloged based on the identification number the participants received. As previously mentioned, confidentiality was attained through assigning each participant a numeric code corresponding with the date of when the consent is collected, for example, 2020JUN1_1. Virtual interviews conducted via Zoom were audio and video recorded. Zoom interviews, as well as all email communication were placed in a password protected file for a period of three years. Interview data were first transcribed by the researcher in Word. Utilizing Word, in conjunction with software, allowed the researcher to review all documentation relating to the study to increase the reliability of the study (Creswell & Poth, 2018). Emergent themes and perceptions were then transferred into professionally developed software, using MAXQDA, for qualitative studies to be coded and analyzed. MAXQDA allowed for a comprehensive organization of the data for easy retrieval, which Devers and Frankel (2000) described as being a vital component to qualitative research. Through early input and organization of data, the researcher was able to identify potential new themes and potential follow-up questions (Stake, 2010). Word documents of transcriptions are stored in a password protected file for three years.

Summary of Data Collection

In this section components of data collection processes were discussed as related to this qualitative case study. Instruments used in this qualitative case study included the researcher and the interview. Due to the role of the researcher in qualitative studies, she became a primary instrument (Peredaryendko & Krauss, 2013; Xu & Storr, 2012). The interview was the sole form

of data and thus the other instrument (Creswell & Poth, 2018; Moser & Korstjens, 2018). The

data, interviews, were collected virtually via Zoom and email. The interview was comprised of

eight to 10 open-ended questions which addressed the central research question and supporting

questions, of how leaders enhance team performance through communication, collaboration, and

trust. After the collection and organization of data, the researcher then analyzed the data to

develop perceptions and conclusions (Creswell & Poth, 2018).

Data Analysis

A qualitative case study was determined to be the most appropriate research method

choice, as it utilizes in-depth data from contained in real-world settings to examine a particular

phenomenon (Bratt et al., 2010). As discussed, semi-structured interviews provide the data for

this study. The interview questions examined how and why leadership fails to establish

communication, collaboration, and trust, resulting in poor performance in virtual teams within

companies that provide services to individuals with special needs. Once interview questions are

developed, the unit of analysis must be defined (Bratt et al., 2010). The unit of analysis for this

case study included the concepts of leadership, communication, collaboration, trust, and

technology. The process of organizing the data around these key topics and research questions

allowed for the data to be analyzed according to how they compared to the expected and

potential themes identified in Section 1 (Kohlbacher, 2006). Through clearly identifying the units

of analysis, boundaries of the research were defined (Bratt et al., 2010). Utilizing semi-structured

interviews allowed for emergent themes to be analyzed (Bratt et al., 2010).

Immediately following the interview, the research documented in Word perceptions and

key elements that needed to be expound upon and easily identified themes. Interview data were

then transcribed by the researcher in Word. Transcribing the interviews allowed for early input

and organization of data, which assisted the researcher to identify potential new themes and

potential follow-up questions (Stake, 2010). After transcription, data were transferred into

MAXQDA, which allowed for the data to be further categorized, the discovery of patterns, and

meanings established (Kohlacher, 2006). Another vital component to qualitative data was

comprehensive organization and easy retrieval which MAXQDA also provided (Devers &

Frankel, 2000). Through the processes of transcribing and executing MAXQDA, emergent

themes and perceptions were coded and analyzed. According to Yin (2014), software such as

MAXQDA, allows for codes or specified words and phrases to be counted and identified in

various combinations. Open coding was first utilized to organize and analyze the data in the

major concepts of communication, collaboration, and trust (Creswell & Poth, 2018). Running

queries on key phrases such as ineffective leadership, poor communication, lack of trust, and

minimal collaboration assisted the researcher in identifying themes and potentially the need for

further refinement of codes (Franzosi et al., 2013). This process was referred to as axial coding

as it allowed the creation of additional categories to the ones first created when analyzing data

(Creswell & Poth, 2018). Selective coding was then applied to further look at relationships

(Creswell & Poth, 2018). These additional categories were analyzed to show the various

relationships between leadership, communication, collaboration, and trust through coding these

words and appropriate phrases in MAXQDA. Through analyzing the data, generalizations were

inferred (Creswell & Poth, 2018).

Summary of Data Analysis

This qualitative case study used semi-structured interviews as the source of data.

Leadership communication, collaboration, trust, and technology are the concepts and represent

the units that were analyzed. The units of analysis were derived from the key topics and research

question of this study (Kohblacher, 2006). Data analysis began with the transcription of

interviews, allowing the researcher to identify potential emerging themes (Stake, 2010).

Transcription took place through Word, then was transferred into MAXQDA so that themes

could further be analyzed through open and selective coding (Creswell & Poth, 2018). After

analyzations were completed generalizations were discussed (Creswell & Poth, 2018).

Reliability and Validity

Reliability and validity are key issues which must be addressed in qualitative research

due to the methodology of the research and the subjectivity (Stake, 2010). As discussed in

Section 1, assumptions, limitations, and delimitations were all areas that can negatively impact

the reliability and validity of the qualitative research (Creswell, 2014). Assumptions were

included to address validation concepts within this study (Creswell, 2014). Limitations of the

study were defined to address the potential weaknesses (Creswell, 2014). Delimitations were

provided to define boundaries of the study (Creswell, 2014). Saturation and triangulation of data

was discussed to show these components are being addressed in this study. These concepts were

addressed to acknowledge and minimize the concerns of validity in the research (Creswell, 2014;

Yin, 2014).

Reliability

The assumptions discussed in Section 1 which pertain to this study were, participants'

truthfulness, information could be generalized to encompass all virtual teams, and leaders have

direct influence over the topics being studied (Yin, 2014). The first assumption was that

participants will answer questions or respond truthfully. Truthfulness of participants was largely

affected by the participants' confidence in the confidentiality of answers (Niu et al., 2018). As

previously mentioned, the researcher provided the participants with both a letter of invitation

(see Appendix B) and consent form (see Appendix C) which detail how his or her information is

protected. Participants' identifying information was not shared in the data or as part of the study.

Each participant was given a code to protect his or her information, and all data are secured in a

password protected file. The second assumption was the use of generalizations. Researchers

conducting case studies must be aware of the impact of making generalized assumptions for a

large group based on information gathered from a small percentage of the group (Yin, 2014).

Through transcribing the interviews and using MAXQDA, the researcher was able to thoroughly

explore themes and relationships which will help mitigate the risks of this assumption (Creswell

& Poth, 2018). The last assumption to consider, was leaders have a substantial impact on the

concepts of communication, collaboration, and trust which can positively or negatively affect the

performance of the virtual team. To mitigate this assumption the identification of the problem,

thoroughly discussing the variables, and allowing themes and relationships to develop during the

research rather that infer assumptions was performed (Ridder, 2017). The use of baseline logic,

in which the researcher can make casual determinations regarding the variables based on changes

in data was also a mitigating strategy (Tincani & Travers, 2018). Another mitigating procedure

in place was the use of consistency when interviewing and analyzing the data (Creswell & Poth,

2018; Yin, 2014). The researcher used the same procedures for interviewing each participant and

follow the same steps in analyzing data throughout the study.

Validity

The validity of this study was affected by the limitations and delimitations (Creswell &

Poth, 2018; Yin, 2014). As reported in Section 1, limitations included a small sample size,

longitudinal effects, and the type of the sample (Niu et al., 2018; Yin, 2014). Due to this study

not exploring the concepts over a length-of-time challenges the results as being temporary versus

long-lasting (Melamed & Robinson, 2018). According to Creswell (2014), a small sample size

increases the probability of convenience sampling instead of random sampling to get enough

data. As previously discussed, the researcher used purposive sampling, setting parameters

participants must meet, so that the variables of this study were represented accurately (Farrugia,

2019; Robinson, 2013). Discussing sample size, regardless of size, saturation was achieved so

that themes and relationships can be fully developed (Creswell & Poth, 2018). The researcher

interviewed 15 participants which allowed the researcher to gather enough data for this study,

reaching appropriate saturation (Creswell & Poth, 2018). Saturation of data increased the validity

(Creswell & Poth, 2018; Yin, 2014). The researcher sought to provide maximum variation of

participants, including differences in leadership roles and organizations (Creswell & Poth, 2018).

Due to the small sample, the researcher gathered extensive information and analysis about the

research being conducted and triangulated the data collected (Creswell & Poth, 2018; Stake,

2010). Triangulation of the data allowed for increased validity (Yin, 2014). Triangulation of data

enables improved research outcomes (Jackson, 2018). Due to the only data collected in this study

being from interviews, triangulation is threatened (Yin, 2014). Through the variance of

participants and the researcher using different perspectives analyzing the same data, the

researcher was able to achieve triangulation (Jackson, 2018). The lack of direct observation is a

delimitation of this study that also impacted validity (Yin, 2014). For this study, the researcher

was not able to directly observe the virtual teams and participants which can threaten validity

(Yin, 2014). To mitigate this delimitation, the researcher provided comprehensive explanations

to include counter-indicative findings (Yin, 2014).

Summary of Reliability and Validity

The purpose of this section was to address reliability and validity concerns affecting this qualitative case study. Assumptions, limitations, and delimitations that were first mentioned in Section 1 were further explained in terms of this study and mitigating risk. Purposive sampling, thorough discussion of variables, relationships, and themes, as well as protecting participants' confidentiality are all strategies that will be employed to mitigate the impact of these assumptions, limitations, and delimitations (Creswell & Poth, 2018; Niu et al., 2018; Yin, 2014). Saturation and triangulation were discussed to show how each will be met. Saturation will be achieved through interviewing 50 participants allowing the researcher to gather ample data for analysis (Creswell & Poth, 2018). Triangulation will be achieved through the differences in participants as well as the application of using different perspectives when analyzing the data (Jackson, 2018). Through the mitigation strategies listed above, reliability and validity of this study are fully addressed.

Transition and Summary of Section 2

The purpose of this section was to provide how this qualitative case study will be conducted, to include: restating the purpose statement, the role of the researcher and participants, the research method and design, population and sampling, data collection, data analysis, and reliability and validity. The use of qualitative data was explained to illustrate how the data were gathered and how conclusions were developed (Yin, 2014). The primary instrument and source of data for this study consisted of semi-structured interviews, consisting of open-ended questions to allow for greater communication (Creswell, 2014). Purposeful sampling was utilized as participants of this study are based on specific criteria (Robinson, 2013). Letters of permission, invitation, and a consent form were defined to show how the participants were recruited and

confidentiality is maintained (Creswell & Poth, 2018; Yin, 2014). The process of data collection,

organization, and analysis were outlined to show how reliability and validity was strengthened.

The objective of this section was to provide the needed information to describe how this study

will be conducted. From information gathered in Section 1 and the processes outlined in this

section, the following section, will be composed of the presentation of the findings, including:

analysis, interpretations, themes, recommendations for future studies, and reflections.

Section 3: Application to Professional Practice and Implications for Change

The following section concludes this research study. This section includes an overview of the study, the presentation of the findings, recommendation for future research, and reflections of this study. An overview of this study is provided to highlight the processes and findings of this research. The findings from this study provide organizations with steps and processes that can improve general business practices as well as gives organizations potential application strategies. These practices and applications are described below. Through analyzing this research, there were several areas in which this research could be expanded upon, as well as opened up other areas in which future research could focus. The reflections from this study are provided, from the perceptions of the researcher and a biblical worldview. The discussions in the section show how this study has added to business and the field of strategic management.

Overview of the Study

The purpose of this qualitative case study was to add to the existing research regarding the leadership of virtual teams. The objective of this study was to address how leaders establish and affect communication, collaboration, and trust in virtual teams. Due to the increasing utilization of virtual teams, current literature has explored the various aspects which promote the success of virtual teams. This study further explored this topic to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. The concepts of leadership, communication, collaboration, and trust were the primary concepts for this study.

The primary instrument and source of data for this study consisted of semi-structured interviews. The interview questions directly relate to one or more of the research questions of the study. Fifteen participants were interviewed regarding their experiences in communication, collaboration, and trust while working on a virtual team. Fourteen of the 15 participants worked at the same organization, and three of the 15 were in leadership positions. All participants worked virtually for an organization that provides services to individuals with special needs. The semi-structured interviews were comprised of eight main questions for those in non-leadership roles and 10 main questions for those in leadership roles. Each main question had one to three follow-up questions. These interview questions correlated with the research questions of this study. Thirteen of the 15 interviews were conducted via Zoom. The other two interviews were conducted via email due to location of the participants and time constraints. The interviews were then transcribed and imported into MAXQDA. During the interview and transcription process, themes began to emerge that were further strengthened through open and axial coding.

The themes discovered in this study are as follows: (a) issues with communication, (b) communication and trust, and (c) organizational culture. Even though the majority of participants responded positively to the status of communication within their organization, they also reported issues and improvements that could be made. Within the theme of communication, there were two subthemes identified: availability and response time, and personal preference. Availability and response time was the number one complaint or improvement that participants said could be made. Personal preference in communication styles was identified as a key factor for how participants reported the level of communication in their organization. In the instance of this case study, the vast majority of participants from Organization A, report trust being high due to open communication throughout the organization. Open communication and technology that supports

communication between team members and leadership lead to a feeling of higher trust with coworkers and members of leadership. The importance of a strong and open organizational culture is the third theme that was identified. The culture of open lines of communication and inclusion leads to an increase in communication, collaboration, and trust. This culture starts at the very top and is displayed through upper management and front-line supervisors. Through this case study of virtual teams, best practices and solutions regarding successful leadership of virtual teams were discovered and will be discussed through improving general practices and potential application strategies.

Presentation of the Findings

The purpose of this qualitative case study was to add to the existing research regarding the leadership of virtual teams. This study further explored this topic to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. The purpose of this section is to thoroughly explain how this study was conducted and the inferences of the results from this study. The responses from participants and the themes that evolved from analyzing these responses is thoroughly detailed. Through this section, answers to the research questions proposed in Section 1, relationships identified through the conceptual framework, similarities and differences of anticipated themes discovered in the literature review, and correlation to the problem of this study are examined.

During this study, 15 participants were interviewed regarding their experiences in communication, collaboration, and trust while working on a virtual team. Fourteen of the 15 participants worked at the same organization, and three of the 15 were in leadership positions.

All participants worked virtually for an organization that provides services to individuals with

special needs. The participants were given a numeric code which corresponded with the date the

consent was received. To simplify this code when discussing participants' experiences in this

section, they will be referred to as P 1-15.

Table 1

Participant Information

Participant	Organization	Role
P1 30SEP2020_1	A	non
P2 30SEP2020_2	A	non
P3 13OCT2020_1	A	non
P4 13OCT2020_2	A	non
P5 14OCT2020_1	A	non
P6 15OCT2020_1	A	leadership
P7 06NOV2020_1	B	leadership
P8 06DEC2020_1	A	non
P9 10DEC2020_1	A	non
P10 15DEC2020_1	A	non
P11 27DEC2020_1	A	leadership
P12 29DEC2020_1	A	non
P13 14JAN2020_1	A	non
P14 19JAN2020_1	A	non
P15 21JAN2020_1	A	non

The semi-structured interviews were comprised of eight main questions for those in non-

leadership roles and 10 main questions for those in leadership roles. Each main question had one

to three follow-up questions. These interview questions correlated with the research questions of

this study. Thirteen of the 15 interviews were conducted via Zoom; the other two interviews

were conducted via email due to location of the participants and time constraints. The interviews

were then transcribed and imported into MAXQDA. During this process, reading and utilizing

memos of transcripts occurred to allow the researcher to expand upon emergent themes and track

the themes' development over the analysis process (Creswell & Poth, 2018). Participants'

answers were then coded. From the initial coding process several other themes emerged and

were coded. The following sections are a descriptive interpretation of the findings of this study.

Themes Discovered

As mentioned, themes began to emerge during the interview process, then became very

evident during transcription and open coding. Through the process of axial coding and analysis,

these emergent themes were strengthened. The researcher was able to run queries on the key

phrases and vocabulary used in coding segments to further refine the coding segments (Franzosi

et al., 2013). These themes and similarities in participants' answers allowed for the saturation of

the data (Creswell & Poth, 2018). The themes discovered in this study are as follows, (a) issues

with communication, (b) communication and trust, and (c) organizational culture.

Theme 1: Issues with Communication

The majority of responses discussed how the organizations' participants have overall

good communication from the perceptions of the participants. This frame of reference comes not

from comparing communication to typical organizations, but from a place of being remote

workers. When asked if the participant feels there is too much or too little communication within

the organization, 13 participants (86.7%) responded positively. However, 14 of the 15

participants (93.3%) did acknowledge there were some issues, and could be some improvements

made to make the communication even better. These responses are depicted in Tables 2-4.

Communication is a known challenge for virtual teams, as Pitts et al. (2012) stated, due to

communication happening virtually, the quality of communication is limited (see Table 2).

Within the theme of communication, there were two subthemes identified: availability and

response time, and personal preferences (see Tables 3-4).

Table 2

Communication and Collaboration

Participant	Comment
P5	I guess one thing that you will find in any company is that the people at the bottom don't always know what is going on at the top. And not just that, but sometimes it is unclear the role above my manager, who's directly over seeing them. So, I think if they shared more information on that it would shed light on more things for us.
P1	Small projects are very difficult to get everyone on the same page. It is like herding cats, more meetings are needed.
	But there is still something that is missing, but I don't know what is missing, that I can't put my finger on that makes communication difficult. I think communication is difficult to any organization anywhere. I think it is the nonverbal it. You learn your coworkers and bosses by seeing how they work. I'm closed in a room all by myself, I can see that others are working, but I can't see how they are working. That gives insights into them as a person and worker and helps you grow as a person and you lose that in the digital environment. I think communication is easy for quick little ideas but difficult for problem solving back and forth, that type of communication is very difficult.
P2	Sometimes things don't get explained in the meeting and you ask a manager a specific question, and sometimes they can't give a straight answer. I think the managers are stretched a little thin, it's a lower environment of engagement.
P11	I just feel like that is something that can be improved for more people to be able to go to others. To have more dedicated time to talk about things not only in the moment but in others times. Also, be flexible with the meetings which I know might be more difficult to come up with. Maybe also offering different ways of communication, depending on the personalities for agents to take advantage of.
P15	Too little communication. I've never had a job before where you can go in and work your whole shift and never speak to anyone you work with.

P4	Sometimes their (leadership) responses kind of take me to square one which feels like they don't trust me to myself, but I realize they have to approach everyone the same way because they don't know what steps you've taken. That's frustrating sometimes.

Subtheme 1: Availability, Response Time, and Frequency.

As mentioned, availability and response time is an area in which participants feel communication could be improved which is shown in Table 3. Virtual teams rely on both asynchronous and synchronous communication to complete tasks; however, due to the dependence on technology and these organizations being in a service-based industry, asynchronous communication can slow down the process of providing the service and employees getting the information they need in the time they need it (Berry, 2011; Pitts et al., 2012). The number one complaint and determining factor of good communication was response time and availability. Participants consistently mentioned response time and availability as an area for improvement with communication within the organization, despite the overall perception of open communication and a strong organizational culture of communication and inclusion.

Table 3

Availability, Response Time, and Frequency

Participant	Comment
P4	A lot of that has happened when I am urgently trying to solve a problem and I'm not getting understood or helpful responses from my supervisors.
	Sometimes I think there is too much communication on things that aren't important and too little communication on things that are.
P9	In the beginning the challenge I had with my direct supervisor, I just didn't feel like I was being prepared in the most timely manner for new things.

P11	Availability is one of the first things that comes to mind and one of the main things as far as for me personally I am more than happy to provide that support in the moment.
	Availability, other options of communication
	I would think too little in some aspects when you want to immediately engage and more opportunities to engage with your team. I feel like that could be improved.
	Availability of people being able to touch base as far as when situations come up or there is something you'd like to talk about in a face to face instance. Sometimes it's hard to talk to those people due to schedules and figuring out the best time and mode to communicate.
P8	I think it depends on what shift you work and how much communication there is in slack. I know that certain shifts are busier than others and the shifts that aren't as busy get to chat more.
	Faster response time and availability.
P1	Maybe for someone coming, fresh just starting, it is a little daunting, you may go a month without having direct communication from your boss. So in that aspect it can be daunting.
P2	We only get an update once a month. It's hard to remember what things have changes. There was an instance where something was put out in one monthly meeting and by the next meeting things had completely changed, so I had to ask my manager which one are we on right now.
P6	I think with communication sometimes because a lot of it will take place on the fly with slack, sometimes there is varying information. That will sometimes lead to a disconnect.

Subtheme 2: Personal Preference.

The second subtheme relates to issues with communication is personal preference. When asked about communication, much of the discussion was a personal preference of the participant, whether focused on their individual work ethic, personality type, familiarity with technology, or previous experience with remote work. Table 4 shows these responses.

Table 4

Personal Preference

Participant	Comment
P11	There are differently agents that I feel comfortable reaching out to, and others that don't need that.
	Maybe also offering different ways of communication, depending on the personalities for agents to take advantage of.
	In the way that I see it, it's a bit of processes and personalities. So, each and every person has their own preferred ways of communication, in the same way each person in leadership has their own style.
P4	From my experience that is a person to person preference, some prefer to have a lot of communication other prefer fewer or less communication. Not that I don't enjoy it I am used to less communication. My personality is let me understand what the objective is then let me go. Participant enjoys less communication (Personality), good level for participant.
P7	That's a whole different ball of wax because everyone learns differently, and we have to figure out how to help them in ways that they understand. How do they learn? Do you have to show them, are they hands on? We teach in group in settings. We can and do sometimes one on one but most of the time we are working with several individuals with different disabilities, so it becomes kind of tricky on how we want them to learn and understand that. But some may have barriers when it comes to their disability so how we handle it.
	There are always things that no one says but maybe implied but this generation, they lack communication. The whole thoughts of putting your thoughts on paper, writing. It's all quick texts, the older generation we don't understand that. We are used to picking up the phone and calling someone. Now it's all done via text, with a video call and we lack that face to face one on one personalization that makes it personal.
P13	I think currently what they are doing is working. It works for me and my style.
P3	I haven't experienced any challenges, however has seen coworkers are more emotional and that word has connotations. Some people are more driven and connected. So I have seen some of my colleagues that have a desire to have a more emotional connection with colleagues or management. I have seen them reaching out. It is evident they need that

connection, and it is lacking, they aren't connected as much as they would like. However, speaking for myself I don't have any difficulties with it. How they have structured everything is just superb for how I like to work.

Honestly there is not a lot of collaboration, great for the participant, independent type of personality is well respected in my organization. One of the things I think management and administration does very well is convey safe space/open door policy. We are always encouraged and feel comfortable that if anything does pop up to bring it forward. Collaboration takes place mainly through slack with coworkers, chatting is available all during the shift. I have been very surprised at this organization given the limited amount of communication you have you're your colleagues where communication is encouraged and a safe place. Chatting or slacking is available all during our shift. There are people that enjoy a lot of communication so they can chat all during their shift.

From my experience that is a person to person preference, some prefer to have a lot of communication other prefer fewer or less communication. Not that I don't enjoy it I am used to less communication. My personality is let me understand what the objective is then let me go. I enjoy less communication, so it's a good level for me.

P1	What helps me in the digital environment is that I have good time management and good work ethic. I have a set of tasks that needs to get done, they will get done, I will work tirelessly to work until I get it done. If you are not somebody who feels comfortable working on something on your own. I can see not being comfortable with that and it would be very difficult for that person. I think part of the challenges comes down to the individual person.

I think for me and how I work I think it is a good level of communication. |
| P2 | Ok, I personally like to be communicated in an honest and truthful manner. Sugar coating communication is very frustrating. I don't need many compliments, just give me the information. |

The theme of issues in communication provide insight into the communication challenges that happen in virtual teams. Even though the majority of participants overwhelmingly rated their organization as having good communication and being happy with the level and depth of communication, there are still areas in which communication can be improved (see Table 2). Improvements to responsiveness and availability was a consensus among many participants (see Table 3). There are specific times which participants feel there is a lag in communication, and

they cannot get the needed and relevant information in a timely manner. Personal preference was found to be a key indicator for participants in describing the level of communication in their organization (see Table 4).

Theme 2: Communication and Trust

One of the most significant themes that was repeated throughout the interviews in various questions by most participants was the impact of communication on trust. This is shown in Tables 5-7. This theme became prominent during transcribing and initial coding. Once this theme was identified, a separate code was established to review and categorize interview answers. As stated by Gardner et al. (2019), a lack of communication has been shown to negatively affect trust. In the instance of this case study, participants from Organization A, the majority report trust being high due to open communication throughout the organization. Open communication and technology that supports communication between team members and leadership leads to a feeling of higher trust with coworkers and members of leadership. To better understand the responses of the participants, Slack is a technology platform that is downloaded onto a phone or computer that allows for instant messaging type communication.

Table 5

Trust within the Organization

Participant	Comment
P8	I think it depends on what shift you work and how much communication there is in slack. I know that certain shifts are busier than others and the shifts that aren't as busy get to chat more and get to know each other a little better which helps trust. People that I am able to talk to more and not just in a work capacity I have more trust for. For things that are relative to improvements or challenges, I do not have trust to discuss with other agents. If it is enough of a problem then I will bring it up directly to my manager. I don't feel like I know anyone well enough to discuss those type things.

Participant	Comment
P6	I know as far as me people tell me things all the time, and if something is going on in their life they feel comfortable enough to tell me. And I've divulged things to others as well. It is a family type atmosphere; agents feel comfortable enough to talk about issues. If I have an issue or an issue with another agent I feel comfortable to talk about it.
P4	And the communication I see going on in Slack during shifts, builds my trust in my colleagues as well. I feel like I work in a devoted workforce.
P1	I know if I went right now and have an issue someone would easily come back and have an answer. If I had a terrible experience there would be someone that could sympathize and empathize.
P15	There is so much listening and communication back and forth. I feel like you can trust them.
P10	I feel like the trust is pretty good. I haven't worked there long enough to build long relationships, but everyone is quick to answer questions.

Similarly, when asked, how is leadership between team members, participants responded much the same which is depicted in Table 6.

Table 6

Trust with Leadership

Participant	Comment
P5	I think it is pretty good. There is so much listening and communication back and forth. I feel like you can trust them. There is also a good attitude coming from the leadership that nothing or no call is a bad call. Even if things don't go according to plan, they don't chastise or make you feel bad about your mistakes. It is always about moving forward.
P15	I think with the individual manager, it is easy to trust them. You have gotten to know them; you have your monthly meetings and have talked to them on one on one basis.
P2	The transparency is pretty good, manager is pretty good at enabling trust. Getting responses from upper leadership helps enable trust.
P10	Trust level is pretty high, the lead agents let you know their expectations up front.

Participant	Comment
P6	I don't see any problems with that. When I've had major things happen in my life everyone really rallied around me. Everyone is great. If I have an issue or an issue with another agent I feel comfortable to talk about it.
P1	Good. We get a once month of the whole hierarchy of the supervisor team and they are very open about what they talk about and what they are looking at. There is no secrecy to it. This is a sit down once a month and everything is all laid out what is being worked on. Obviously, there is going to be some closed door meetings with leadership, but the fact that they keep you abreast of everything that is going on that could potentially affect you, you get the sense that there is going to be no surprise.
P2	I went through some changes in management. I don't know how specific. When I first became an agent, I had a manager that I absolutely loved. It made feel more excited, then she went on maternity leave and I got a new manager. With the new manager it was different. I felt like I couldn't get any communication back. I didn't feel like working, I didn't feel like I was being guided or mentored and it was a really frustrating time for me.

The importance of communication in having positive trust within an organization was also displayed when participants responded to the question, how do team members and leadership enable trust in your organization (see Table 7).

Table 7

Enabling Trust within the Organization

Participant	Comment
P5	Communication, asking about each other.
P2	The transparency is pretty good, manager is pretty good at enabling trust. Getting responses from upper leadership helps enable trust.
P13	She positively grows trust through regular communication and keeping in touch. Another thing she is really good at doing is whenever we bring up any questions and concerns.
P11	I would say trust is high there as well. I feel that management does a good job learning what you need in a leader, whether you need a leader that will let you work independent or need one that will give you extra encouragement and build up your self-esteem. It seems to me that upper administration is telling front line management to connect with frontline employees. I'm sure that goes back to the open lines of communication

	and safe space and you can trust if you have a concern or need to talk about something someone will be there to help you out.
P6	We work to learn about each other. And I think the more you learn about each other the more you trust each other, otherwise you are just a name and a little picture on the screen. We ask questions and do team building and just play games and little things to bring people together and learn about each other to increase the trust.

Research has shown that trust and communication in virtual teams is directly related. This theme

echoed this concept and the participant responses in Tables 5-7. The importance of meaningful

and open communication in establishing trust was reinforced (see Table 7). Open communication

was identified as being important between both team members and team members and leadership

(see Tables 5 and 6). Trust was described as good between both as well.

Theme 3: Organizational Culture

The third theme that surfaced through axial coding is the importance of a strong open

organizational culture (see Table 8). The culture of open lines of communication and inclusion

leads to an increase in communication, collaboration, and trust. This culture starts at the very top

and is displayed through upper management and front-line supervisors. Leaders of virtual teams

are responsible for creating an environment that establishes and maintains trust between the

leader, team, and its members (Hacker et al., 2019). Through this culture, employees feel safe

communicating on a wide variety of issues, both personal and professional. When asked about

communication, collaboration, and trust, culture was mentioned throughout, either specifically or

through description of the organizational atmosphere.

Table 8

Organizational Culture

Participant	Comment
P6	For being a remote job, it feels like a family. Lots of communication. They have supervisors to bring camaraderie. I make it a point to talk to everyone, so they feel like part of team and not so remote. That is one thing they stress greatly, is we may not be under the same roof, but we are still part of the same team. We want the agents to know that no matter what happens they can message us, pop in a zoom meeting. Uplifting agents. We have different tiers, we (LOD) are the good guys. They can come to use open communication is stressed. I haven't had any issues with it, as far as I can tell everyone seems trustworthy. I know as far as me people tell me things all the time, and if something is going on in their life they feel comfortable enough to tell me. And I've divulged things to others as well. It is a family type atmosphere; agents feel comfortable enough to talk about issues.
P4	I feel my supervisors are open and can bring anything to them. I'll shoot an email to communicate.
P1	As an agent you can see firsthand how much everyone is doing, so you never feel this disconnect of what you are doing and what everyone else is doing. It fosters a sense of trust in that you know that somebody is going to help you out if you need help and nobody is doing more work than you are.
	There is a sense that leadership has your back. You feel everybody is not 100% at the time, but you know that even the top levels of the leadership they will not hold a bad day against you. They will ask what can be done to make it better. What leadership does is they don't make you feel bad about mistakes. You always feel that management is going to do everything they can to make like easier for you.
P2	I think the organization fosters a good community.
P9	I have never worked for a company that gives us the benefit of the doubt at all times. I don't know if it is the nature of the type of person that takes this work, or if it's the immediacy of this work, the trust is there right away. The trust is ours to lose not gain, and I think that is a benefit to the hiring. I feel like because the whole goal of the company is to eliminate challenges for a specific segment of the community, they nip challenges as quickly as possible as they arrive.

| P3 | One of the things I think management and administration does very well is convey safe space/open door policy. We are always encouraged and feel comfortable that if anything does pop up to bring it forward. Collaboration takes place mainly through slack with coworkers, chatting is available all during the shift. I have been very surprised at this organization given the limited amount of communication you have you're your colleagues where communication is encouraged and a safe place. Chatting or slacking is available all during our shift. There are people that enjoy a lot of communication so they can chat all during their shift. I've been very impressed that management allows people to communicate at a level that they prefer and create such a safe place. |
| P10 | I feel like they try to keep a really good environment and they try to be really supportive. |

The culture of the organization supports the open lines of communication and sense of community (see Table 8). This culture not only effects communication but also trust as mentioned in the previously discussed theme (see Table 7). The culture described in this theme promoted a willingness to collaborate and help team members, not only professionally but personally as well.

Relationship of the Findings

The following discussion focuses on how the findings of this study relate to the research questions, conceptual framework, anticipated themes, literature review, and problem of this study. Establishing the relationship of the findings to these areas strengthens the validity of this study (Creswell & Poth, 2018). Interview questions were constructed with the goal of answering the research questions of this study. The conceptual framework formulated the major concepts of this study and how they are related. Through the interview questions, these concepts were addressed and some of the relationships were validated. The anticipated themes were derived from the literature review, as the findings from the research study are compared with this information. All information is based on the problem identified in this study. The findings from the research are discussed in relation to the problem.

The Research Questions

As mentioned in Section 1, the central question of this study is: How do leaders of

virtual teams successfully enhance team performance? Other questions used to research and

analyze the topic include: (1) How can leaders effectively promote the use of communication and

collaboration in virtual teams? (2) How can leaders enable and promote trust within virtual

teams? (3) How can technology be used to help leaders enable communication and

collaboration? (4) What can leaders do to improve virtual team members' performance and

engagement? The interview questions directly relate to one or more of the research questions of

the study. The table below displays the relationship correlation between the research and

interview questions.

Table 9

Interview and Research Question Correlation

Interview Question	Research Question
I-1	R1, R3
I-2	R1, R3
I-3	R2
I-3	R1
I-4	R4
I-5	R1, R2, R4
I-6	R4
I-7	R3
I-8	R4
I-9	R1, R2, R3
I-10	R1, R2, R3, R4

The following describes how the research questions were answered through the interview

process.

R1: How can leaders effectively promote the use of communication and collaboration in virtual teams?

This question is answered through participants' answers to interview questions 1, 2, 3, 5, 9, and 10. All participants answered interview question 1 with the technology platforms their organization utilizes to promote communication and collaboration. For Organization A, this is done through an instant messaging type platform called Slack. Slack allows for quick communication regarding issues employees face in the moment. Slack also allows for employees to communicate about non-related work subjects to bring employees together and create an engaging environment. Organization A uses Zoom and proprietary technology to communicate and collaborate synchronously and uses email for larger quantities of information such as policy changes. Participant 3 sums up the technology platforms and their uses for Organization A concisely,

> We use Zoom for our conference meetings once a month as a team and once as an organization. Our direct supervisors also have open hours to zoom in and chat. I have never done that. I would say probably, this is a guess, the majority of employees have probably done that. It's nice that it is available. We also use slack for on the spot for text messaging for both entertainment and business purposes. Honestly slack is mostly used to have friendly cubical banter, that would be common in a brick and motor. Email is used mostly from administration to tell companywide new initiatives, changes in the organization. And then our supervisors will provide us their cell phone numbers if anyone needs to text or call.

Organization B uses Microsoft (MS) Teams and Zoom to be able to communicate and collaborate synchronously. Organization B also is reliant on telephonic communication. Email is

used in Organization B for asynchronous communication. Theme 2: Communication and Trust

addressed some of the ways leaders enable communication. Table 10 shows participants'

answers to how leaders enable communication and collaboration.

Table 10

Leaders Enabling Communication and Collaboration

Participant	Comment
P8	Team meetings, they generally happen every two months, also meet individual with managers.
	When we have one on one meetings we have gotten to a place where I will right down any questions that I have for her and as soon as we start our meeting I'll just go through those questions. That process has been really successful for me.
P15	We get at least one email every two or so weeks talking about different policies. Then once a week I have meeting with manager.
	Monthly meetings. So there are certain people that will make a point to ask a question every hour to try and get people to interact.
P9	Whenever an agent comes up with something they think could make the service better, there is a channel we can post our ideas. They are always open to those ideas and how to make the service better. Because of the nature of the calls, you can't be completely prepared, so to be able to talk to other agents is very helpful.
	They always seem available to hear your ideas. They always want your input. When I communicate with my direct boss she always finds out from others how to make service better.
	Specifically, through surveys and direct emails and company conversation.
P13	There is a link to online form where ideas can be submitted for changes in systems and/or policies.
	I think that happens more on our monthly zoom meetings. We have a monthly meeting and a smaller team meeting. I think that is where the most and best collaboration takes place.
P11	Primarily takes place on slack, chatting on things. I prefer meeting on zoom, that way you can hash out things a bit more way easy than

	constantly typing and hoping it makes sense. For me I offer the option to meet on Zoom it is easier to talk about it.
	With slack specifically we have our general channel it's a catch all channel which is a check in and try to build relationships. Some people want to check in and talk about it, and others don't. We can offer these things to build communication and collaboration, but if they don't want to or can't engage then its more difficult.
P4	They really emphasize talking to people on slack, talking to analyst. They include a little bit of collaboration on the meetings as well. They try to create as much of an office environment as they can.
P7	Now we can do those virtually through Zoom and Teams. Interoffice meetings we typically use Teams. But with outside stakeholders, Other disability organization, other advocacy organizations that we are a part of, we are doing everything on zoom. Everything is right here at our fingertips. All we have to do is minimize a screen to find the files you need and everyone can see. IT makes it a whole lot easier for partner organizations brainstorm ideas and come together.
	Updating the technology. We are in the process now of updating phone lines and phone systems so they can be directly forwarded to cell phones.
P5	So we do have a forum based page that we can go to and we can fill in different suggestions we have or the suggestions the explorer have. And that gets displayed in a spreadsheet style list that are marked with updates. It makes sure you are seeing what you have submitted and also what others have submitted
	Specifically for managers they have open office hours. And when we do our one on ones they chat with us about our lives and what's going on, so they go beyond the basics of communication.
P3	We also have a tab that we save that we Can submit innovation so that's always encouraged. So I think there is a lot of organizational things that promote communication and trust.
P2	In general, umm well I feel like this organization is fairly different because we all work from home and there is no brick and mortar, so we are reliant on technology. The tactics are a lot different for traditional versus employees that maybe work different hours. It is definitely harder in this type of environment. And it maybe because we are not necessarily we are encouraged for employees in slack to collaborate, it feels there is not much feedback. But then there is lateral communication.

R2: How can leaders enable and promote trust within virtual teams?

Interview questions 3, 9, and 10 sought to answer this research question. According to

participants, leadership enable and promote trust through communication and through the culture

of the organization. As mentioned in the Theme 2: Communication and Trust section, it was

repeated through many participants that the open lines of communication enable trust. Also

mentioned in Theme 3: Organizational Culture, is the overall culture of the organization

promotes open communication which in turn leads to higher levels of trust.

R3: How can technology be used to help leaders enable communication and collaboration?

For both organizations, technology is the primary form of communication and

collaboration. For Organization A it is the only form and for Organization B it is the main form,

as they do have the ability to meet face-to-face occasionally. Technology is the only means

leaders have to enable communication and collaboration. With technology being a vital

component of communication and collaboration, participants were asked questions specifically

about the technology platforms used. Table 11 is the responses from participants when asked if

the technology is adequate to communicate, collaborate, and perform functions of the job.

Table 11

Technology

Participant	Comment
P1	When they work, yes. There have been some instances where they don't work. But in having the resources I need to do my job, I think they are adequate. I do think there is always a limitation to the technology, it's hard. I think the limitations come in bigger your meeting is. For one on one to three or four people it's good, anything more than that and it's not. The side conversation that typically take place in face to face meetings, help. If you have 10-15 people in a zoom everyone can't talk, and if you are talking you can't get a read on the room, even if you can see everybody. It goes back to that non-verbal communication. I'd say specifically within the organization itself there is a good balance. We have email, slack, messaging, and our own proprietary technology for tools to use for work. I think that's good. I need two windows open and don't

have to constantly go back and forth. There is a clear delimitation on what platform to use when. I think three is about perfect, no more.

P3   I think that they are good. There is definitely too few and my argument to too many they are all available and we get to choose. Most front line employees choose to use slack it's easily searchable. The slack platform is really great, seems it has been cater made for our organization.

P5   I think there are the right amount. I think sometimes emails could be slack messages or slack messages could be emails. But, I wouldn't get rid of either of those.

P6   I haven't had an issue. I pull everything up ahead of time to make sure it is up and running. We have things like malware bytes that we have to keep updated.

P4   I think it is actually pretty perfect.

P9   At this point I feel like it is exactly right. I think in the future language might become an issue with different languages. But right now everything is smooth and super effective.

P10   For me personally there was a lot of logging in things.

P11   I think that there are just enough. I've been with the organization for some time so I've gotten used to what we have and the tools we have. I think being flexible with how to use the tools, you can make it work to how you want it to work and what it's best for you.

P13   They are not without their bugs. I do believe they are totally effective in getting the job done. When things are more challenging we see get more updates being pushed through.

I will say that when I first started it was overwhelming. Now that it has been awhile, it is not a problem it's second nature.

P8   I think there are too many for sure. I think that it is just too much for new agents to learn. I think since I have been here for a year, I have a good understanding of them, but it's a lot for new agents. I feel that there is a lot of dependence on technology that allows for issues, especially with the outside technology. I do know that management feels the same way because they are working on integrating some of those platforms into our proprietary technology.

I think they are fine, sometimes there are technology issues. The issues we have with technology are expected issues that anyone would have. If it is a huge problem it will be addressed because it effects the workflow. There

Participant	Comment

is fear in communicating negative things due to people speaking out about scheduling difficulties, and generally when that would happen leadership would shut them down and tell them to address it with direct leadership. For me that doesn't give me any confidence in expressing issues with anyone other than my manager.

Technology is only good if participants can use the technology effectively and efficiently (see Table 12).

Table 12

Effectiveness of Technology

Participant	Comment
P1	In the technology for being able to clock in and do our job, very much so. With this organization it was the most training I have ever had for a job. I think having two weeks of training was absolutely spectacular and a very clear layout of this is what you need and this is how you do it. There are times when you run into certain scenarios on a call that I'd like more people to be trained it. It's not any technology the company uses, it's users that call in with a computer issue. With the small projects there are way too many platforms to use. There are million different tabs open and a million different screens. So it is completely different.
P3	I do. I do feel that we are well trained. I was more impressed with the training. This was a job that I thought would be fairly easy. I knew there were some things that I would need to learn to do but thought everything would be cut and dry and I would be able to complete the task. The training allows everyone to learn how to do things in all the same way. We are taught the process and why it is this way. For me, I was onboard immediately. Communicated the why so well that everyone understands it.
P5	For the most part. There are probably some additional things in slack that I don't utilize because I don't know about specific features. There is a lot going on on slack. I feel like zoom and Gmail are very easy.
P6	I think they are and if they ever have any issues they can come to us. So we have a software where they can sit in and watch us or senior agents take calls. That allows them get better ideas of stuff and also prompts questions. It is a pretty extensive training and from what I have seen it has gotten better than what I went through.
P4	No, I think it is pretty rough at the beginning. We have so much trainings that things we have to do that obviously only those things aren't that important. They train us a good amount slack which is like if you can

	figure out slack you can figure out everything else. I think it is just because there is a lot of things at the beginning no.
P9	Yes now I do. I don't think it started that way, but that's the nature of a new company.
P10	I think so, I felt like they did a really good job with training. They start you off at a certain level and ease you in to taking live calls. For me it was more stressful knowing
P11	Yes I think adequately trained, it takes a moment to get familiar with their tools. So even though they go through their rigorous training, there is a lot to learn on the fly as situations come up.
P13	Yes, and with options too.
P8	No not with the platforms, with our proprietary platform they are, just not with everything else. Training is not super to clear to all agents. They do not give all information on policy changes which could be helpful. I was given just very generic log on information and setting up accounts for some of the platforms and not training.

Like the answers above, the majority of participants (80%) feel that leadership is trained well with the technology and can easily answer questions when they arise. The outlier to these questions was Participant 7 from Organization B. Organization B primarily conducted services via face-to-face, but in the aftermath of COVID-19, they had to move their employees to a virtual environment and provide their services virtually to their customers. Participant 7 said this about technology platforms, "They are not adequate for those with disabilities, no captioning or interpreter services. Internet connection is not adequate." In terms of training, Participant 7 stated, "We were basically baptized by fire. We had to find our own way to do it, googling, looking up You Tube videos, using the technology with each other. We had to train ourselves." This outlier highlights an important future research study opportunity which will be further discussed later in this section.

Due to the importance of technology in virtual teams, having adequate technology platforms is vital. This is also mentioned by Zhang et al. (2017) who stated, technology for

virtual teams is most effective when the characteristics of the technology match the

characteristics of the tasks. This is evident in Organization A, as participants reported the

diversity of technology platforms based on tasks and 85.7% feeling these platforms are adequate

to perform their job. The other aspect of technology is ensuring employees are adequately trained

on the technology being used (Gibbs et al., 2017). As discussed above, the majority of

employees from Organization A feel they were adequately trained, that the organization has

improved training for new employees, and that leadership is adequately trained.

R4: What can leaders do to improve virtual team members' performance and engagement?

It is important to note that performance is different for organizations providing services

as opposed to those who manufacture. Participants responded there is not a standard measure of

performance. Participants from Organization A reported not knowing if there were standard

measures of performance, that from their perspective performance was based on how they

performed the job and if there were any issues with customers. Table 13 shows comments of

participants when asked what leadership could do to improve performance.

Table 13

Improving Performance

Participant	Comment
P4	I'm not sure. With my analyst I ask for help because I want to get better. I'm not sure that is the same interaction with other people. I think there are some agents that need extra help and I am not sure if they are helping them or if it is just taking a long time, so I don't know how to advise on that issue because I don't see the whole side of it.
P11	I think that having some more (specific measures), it's a fine line in the way that I see reviewing performance in that I think that it is very important and people need to have these concrete examples of performance. And at the same time I can see where it can be a bit too muck and make the agent self-conscious or overly concerned about it and negatively impact. I would say it would be good to have the standard performance reviewing measures.

P5	Evaluations might be helpful, something to keep on file. I never feel like I'm left alone. Putting it on paper could be helpful for some.
P15	There used to be this thing where if an explorer (customer) put on any social media or gave feedback they would announce those a couple times of day and those were encouraging. I would think there needs to be some sort of system for team building.
P14	Number of successful tasks completed over a defined period of time plus satisfaction of explorers measured by reviews.
P8	When I first started I was consistently told when explorers left positive feedback and that has stopped completely. That was a big motivator for performance. They could give the feedback to the agents. They do positive feedback things in the community meeting. I am super motivated by positive praise.
P12	Continue to focus on new technology.

These four research questions answer the central question of, how do leaders of virtual teams successfully enhance team performance. The research answered these questions. Through analyzing the responses from participants, leaders can successfully enhance team performance through establishing technology platforms which sufficiently allow employees to communicate and collaborate. Ensuring participants and leadership is adequately trained on the technology is another important component leaders must implement. Creating a culture of open communication and inclusion stimulates collaboration and enhances trust. Through the use of open communication participants felt they could trust their co-workers and leadership. Utilizing these concepts, leaders can effectively enhance team performance.

The Conceptual Framework

The purpose of the conceptual framework is to provide the methodology, as related to the research questions. Concepts discussed in the conceptual framework seek to answer the central research question – How do leaders of virtual teams successfully enhance team performance? Individually, each of the concepts target each one of the other sub-research questions. The

concepts show how interrelated the concepts are to each other and the impact they have on the

success of virtual team management. Also addressed is the introduction of leadership theory on

the concepts of communication, collaboration, and trust. The conceptual framework illustrates

the concepts the researcher found when examining the cause-and-effect of leadership failing to

establish communication, collaboration, and trust (Salmon, 2013; Watson, 2015). As previously

discussed in Section 1, the concepts identified through the conceptual framework, include virtual

teams, leadership, communication, collaboration, trust, and technology. The conceptual

framework also illustrates the relationship between these concepts. These concepts were part of

the interview questions posed to participants. Relating the research to the research questions of

this study correlated with most of the components in the conceptual framework. The only area

not thoroughly discussed was that of leadership.

As stated, in the area of communication, participants reported overall communication

being at a good level. There were areas noted where communication could be improved such as

in availability and response time. In the area of collaboration, participants agreed collaboration

was important to the success of the team and organizations. Collaboration was thought to be

handled more at higher levels of management and when working in small teams on projects.

Collaboration was described as being easier for the day-to-day operations while on shift and

more difficult on projects. Participant 1 description of collaboration followed the general

consensus of collaboration,

> Collaboration is easy for those quick answer, collaboration is really tough for more in-
>
> depth answers in the sense you can't sit down with someone. I think that is the toughest
>
> thing with collaboration. Working as an agent, collaboration works really well in that
>
> type of environment. Small projects are very difficult to get everyone on the same page.

Trust was rated overall as being high in both organizations (see Tables 5-7). Participants reported a base-line trust being established then being strengthened over time and as employees get more comfortable both in their role and getting to know each other. Communication was found to be an important element in both collaboration and trust. Participants felt they have the ways and means to communicate and collaborate when needed (see Tables 2-4). There was a direct correlation to communication and trust which was previously discussed. The conceptual framework considered the impact various leadership styles have on the concepts of this study. While the different types of leadership were not specifically addressed by the researcher or the participants, there were commonalities discussed by most of the non-leadership participants as well as the participants in a leadership role. Participants, especially those in Organization A, described leadership as being open and helpful. Technology was addressed in several a couple of the interview questions. Technology was reported as being overall good by Organization A and improving by Organization B (see Table 12). The reliance on technology was evident, as participants conveyed the reliance on technology as well as various technology platforms that enable profession and personal communication and well as collaboration. As mentioned, the effect communication has on trust, technology is deemed to vital for all of the components discussed.

Anticipated Themes

This part of the analysis is to perform pattern-matching, analyzing the anticipated themes from Section 1 to the findings from this study (Yin, 2014). From the literature review in Section 1, there were various themes and perceptions developed. The themes and perceptions were due to the repetitive information found throughout many of the sources reviewed. The major themes and perceptions that emerged because of this literature include: the utilization and uniqueness of

virtual teams, the importance of leadership in virtual teams, and how each of the concepts of (a)

communication, (b) collaboration, and (c) trust are interrelated. From the research of this study,

several of the themes match to the anticipated themes through the literature review. According to

Yin (2014), when themes established from analyzing research correspond with the anticipated

themes discovered during researching the problem of the study, the internal validity of the of the

study is strengthened.

     Uniqueness of Virtual Teams. The anticipated theme of the uniqueness of virtual teams

highlights the substantial benefits for organizations; and the substantial challenges they create

(Dulebohn & Hoch, 2017; Kramer et al., 2017). While many of the same team principles are the

same for face-to-face teams and virtual teams, virtual teams are quite different (De Bruyn, 2017;

Liao, 2017). The challenges associated with (a) communication, (b) collaboration, and (c) trust

are not unique to virtual teams; however, they seem to be even more challenging (De Bruyn,

2017). Insufficient and ineffective communication inhibits productive collaboration as well as

trust (Dulebohn & Hoch, 2017; Marlow et al., 2017). The focus of this study was solely based on

virtual teams in organizations that provide services to individuals with disabilities. Due to this

focus, there was not any comparison done between traditional face-to-face teams and virtual

teams. The focus of this study was not to highlight the differences in these two types of teams,

but to concentrate on the effect of leadership enabling communication, collaboration, and trust.

However, some of the same areas discussed in the anticipated theme of the uniqueness of virtual

teams were also evident in the analysis and interpretation of this research.

     Through the interpretation of the data and discovered themes, it became apparent that

even though most participants rated their organization as having the right amount of

communication, there are still instances in which communication is lacking and can be

improved, which is evident in the discussion of Theme 1: Communication Challenges.

Technology is another area that was present in both the anticipated theme and analysis of the

research. Technology was described as the number one lifeline of virtual teams, presents

challenges that organizations, leaders, and team members must overcome (Gibbs et al., 2017;

Peng et al., 2019).

      Leadership. There was also a focus in this anticipated theme on the various types of

leadership, and which type is the best for virtual teams. There is conflicting research on which

type of leadership is the most successful in virtual teams, showing just how difficult these teams

can be to effectively manage (de Vires et al., 2010; Hasel & Grover, 2017; Turner & Baker,

2018). Participants did not specifically mention a particular leadership style; however, many had

the same perception of leadership (see Table 13).

Table 14

Leadership

Participant	Comment
P5	I feel like you can trust them. There is also a good attitude coming from the leadership that nothing or no call is a bad call.
	Specifically, for managers they have open office hours. And when we do our one on ones they chat with us about our lives and what's going on, so they go beyond the basics of communication.
P1	We get a once month of the whole hierarchy of the supervisor team and they are very open about what they talk about and what they are looking at.
	There is a sense that leadership has your back. You feel everybody is not 100% at the time, but you know that even the top levels of the leadership they will not hold a bad day against you. They will ask what can be done to make it better. What leadership does is they don't make you feel bad about mistakes. You always feel that management is going to do everything they can to make like easier for you.

Participant	Comment
P2	I think they do a good job of matching communication and leadership style to the agent and I think that is huge. They do a great job of making you feel appreciated.
P8	I think direct leadership and personally my manager takes things seriously and likes to do team building things.

Table 14 depicts leaderships' answers when was asked about varying leadership styles.

Table 15

Leadership Styles

Participant	Comment
P11	The leadership style that I found to be most effective is being able to meet people where they are in a way that you try and figure out what people need and give them the tools and resources people need to improve their performance and confidence.
P6	I would say being compassionate and understanding, consistency is key. You have to be allowed some leeway now and then if it's an odd circumstance. Making sure you have rules laid out, which gives you room to be nicer and more compassionate. Everybody is very chipper. And we promote a feeling of togetherness despite the distance.

In Organization A, participants reported higher leadership established the means of communication and promote open communication from the top-down which can be felt throughout the organization (see Tables 2-4). Due to Organization B being thrust into a virtual environment and having to figure out technology and how to continue operations, leadership was a little different. Although, the participant reported leadership being supportive and investing in the technology to promote communication and collaboration.

     Relationship between Concepts. The final anticipated theme comes from the concepts of communication, collaboration, and trust being interrelated. Throughout the review of literature, the concepts of (a) communication, (b) collaboration, and (c) trust were not mentioned individually. Each article, containing information about one of the concepts, also mentions the

other(s). The concept of collaboration cannot happen without communication (Choi & Cho,

2019). Trust cannot happen without communication, and collaboration increases when trust is

enhanced due to an increase in communication (Gardner et al., 2019). This was never more

apparent than when discovering the Communication and Trust theme. There is a direct

relationship between communication and the trust participants have for team members and

leadership (see Tables 5-7). Even though collaboration was reported to be important and taken

seriously by management, the level of collaboration for the typical participant was low. The

impact technology has on the concepts of communication, collaboration, and trust was also

discussed. All these concepts are vitally dependent on technology (Marlow et al., 2017; Maynard

et al., 2018; Olaisen & Revang, 2016).

Literature Review

Similar to the conceptual framework, the literature review of this study was broken down

into the main parts of leadership, communication, collaboration, trust, special needs, and

technology. Through this next discussion, the relationship between the findings from the

literature review and the discoveries made during this study are compared. There are both

similarities and differences between the two. The most notable is the overwhelming positive

responses from participants; whereas, the literature was focused on the challenges. Special needs

was not specifically addressed during interviews. The discussion of special needs was provided

in the literature review to provide information on the complexity on which these organizations

operate.

Leadership. Through the literature review, leadership of virtual teams was shown to be a

critical component for effective teams and the success of the organization (Mysirlaki &

Paraskeva, 2019). The primary objectives of leaders of virtual teams are to monitor team

performance, motivate team members, and enhance the team's effectiveness (Nordback &

Espinosa, 2019). It has also been shown that a hierarchical, top-down leadership structure is most

effective in leading virtual teams (Gibbs et al., 2017). Leadership in this study was found to

mirror these statements. Support, open lines of communication, and motivation were common

concepts discussed by participants. Organization A and B both reported having a hierarchical

leadership structure. Organization B was more of a traditional style of leadership, with one main

supervisor for all of the employees. Organization A's leadership scheme was more complicated.

Although hierarchical, due to the nature of the job performed, there are also those in leadership

positions that do not directly supervise employees. Instead, they are there for support and

encouragement during the various shifts. It was important for employees to know who their

direct supervisor is, and participants reported having a positive relationship with these leaders.

Organization A participants reported having a higher level of trust with direct supervisors than

the leaders in non-supervisory positions.

The literature review highlighted the various types of leadership and their strengths.

Overwhelming the analysis of interviews shows leadership in these organizations are person-

oriented leaders. Person-oriented leadership focuses on the needs and well-beings of employees

(Breevaart & de Vries, 2019). Person-oriented leadership promotes a friendly atmosphere, strives

to make employees feel secure, supports communication, and increases trust (Hansel & Grover,

2017; Zorina et al., 2018). As shown above in the responses from participants, these are all

common themes in their description of leadership and organizational culture (see Tables 8 & 13).

The findings from the research and the literature review are in direct agreement. While task-

oriented, shared, servant, and transformational leadership all have benefits in some form to

virtual teams, these leadership styles did not match the description provided by participants.

According to the literature, the type of leadership style of the leader may not be as important as originally presumed (Henkel et al., 2019). The situation of the most effective type of leadership includes the (a) individual personalities of the team members, (b) how long the team has been together, and (c) the functional mission of the team that is meeting organizational goals (Breevaart & de Vries, 2019; Henkel et al., 2019). This was also echoed by several participants in that they felt their direct supervisors tailored their leadership style to what the employee needed, especially in the form of communication (more or less) and feedback (direct or positive). Through the research, there was the majority-support for leadership adjusting their techniques to the individual team members to lead them most effectively. As reported by leadership, P 11 stated

> Everyone goes through their own journey and evolves in their own way. In the beginning, as you have gotten all the training you can do the job, but it's how are you going to do the job. So, figuring out the aspects of how to do the job and trying to be more involved and more hands on. My job is to empower them and provide them with the tools that they need to be more successful.

Communication Challenges. The challenges with communication are well documented throughout the literature review. Several different challenges are present with communicating with virtual teams. The research of this study corroborates with several of these challenges (see Tables 2-4). However, there were some challenges discussed in the literature that did not present in the research. The most prominent challenge with communication according to the literature is the challenges that come with the reliance on technology. Virtual team communication requires the utilization of various modes of technology and the fact that communication happens across different time zones, which contributes to the challenge in communication (Krumm et al., 2016).

Virtual team employees miss out on important verbal and non-verbal cues of communication due to the reliance on technology (Pitts et al., 2012). Several participants mentioned a disconnect in communication due to the lack of non-verbal communication. Another theme in the research of this study was the availability and response time when communicating. This supports the research done by Krumm et al. (2016). Watanuki and de Oliveira Moraes (2016) stated team size can have a negative effect on team communication; the more team members the greater strain on technology, the increased chance of miscommunication, and the reliance on more members to communicate effectively. The closest similarity to this challenge was mentioned from a few participants regarding monthly meetings that while engaging did not feel like they were able to communicate due to the size of the meeting. Participant 15 stated,

> The monthly meetings are really weird because we have our one on one meetings then every month we talk to our team, then there is also a companywide monthly meeting. The ones with everybody, that one is weird because it is the higher up managers palling around and we are just the audience.

Another communication challenge mentioned in the literature review is the possibility of team members speaking different languages and being culturally diverse (Lauring & Jonasson, 2018). There was one participant response that mentioned another language (other than English), however this was in reference to providing services to customers and not internally within the organization. This particular challenge in communication was not supported by this research study.

Communication challenge solutions from leaders that were reported in the literature review include setting communication expectations early, arranging a face-to-face meeting at the beginning of the team's formation, promoting relational-oriented communication (Glikson &

Erez, 2019; Marlow et al., 2017). The only solution that was not supported by the findings of this

research is the arrangement of face-to-face meetings. Face-to-face meetings is not a viable

strategy for Organization A. Organization B began with face-to-face operations before going

virtual which may have both helped with establishing communication procedures as well as

presented problems when transitioning to virtual due to the previously established

communication practices. Several participants mentioned receiving expectations early from their

first-line supervisors. Participants also reported high levels of communication being relational-

oriented, both personally and professionally.

According to the literature many of the same reasons communication is difficult in virtual

teams are the same reasons collaboration is difficult. The geographic dispersion of virtual teams

is the number one challenge (Batarseh et al., 2018). Effective collaboration is reliant on

communication and trust, both of which can be challenges in virtual teams (Choi & Cho, 2019).

The majority of responses from participants highlight differences between the literature and the

findings in this area. Participants rated collaboration as high, communication high (however

noted areas of improvement), and trust being very high. The findings of the study correlate with

the research in the cause-and-effect relationship between these components, in that participants

do not consider communication or trust to be a challenge and report good levels of collaboration.

According to the literature, the most important thing a leader can do to promote

collaboration within a team is enhance team trust (Cheng et al., 2016). This particular concept

has been discussed in detail. Participants overwhelmingly rated trust as high which according to

the literature could be the reason collaboration is also rated high. Cleary et al. (2019) stated

participated leadership is another way to increase collaboration. This was not discussed in the

findings of this study. Leadership was described as open and trusting, but none of the

participants stated or described a participative-type of leadership. The leadership described by participants was person-oriented leadership. Hill and Bartol (2016) concluded that sharing decision-making and providing a supportive environment is key to increasing collaboration. Due to the service industry environment, shared decision making was not mentioned as a factor in collaboration. Collaboration was mainly described as being able to problem solve service-related issues directly relating to the experience of the customer. Decisions are not made to create or the logistics of creating and distributing a product. Collaboration instead takes place to help share information for customers. As described by Participant 9,

> Absolutely, yes (collaboration is important). Especially as new functions are added to the service itself. That makes me think of something I haven't said. Whenever an agent comes up with something they think could make the service better, there is a channel we can post our ideas. They are always open to those ideas and how to make the service better. Because of the nature of the calls, you can't be completely prepared, so to be able to talk to other agents is very helpful.

Participant 10 said,

> Absolutely. I think we all work hand in hand. It is something that it is rarely any one person handling. If we have down time and we work on projects we work together. They rarely expect just one person to deal with things. It is imperative to be able to collaborate and work together. And to come with different ideas and there are different techniques to do things.

Trust Challenges. Again, the common challenge in the literature review for challenges of trust in virtual teams is the separation of team members (Ford et al., 2017). As previously reviewed, participants rated trust as being very high within the organization both between team

members and between team members and leadership (see Tables 5 and 6). The findings of this

study to do not correlate with the information gathered from the literature review. While both

organizations face the same obstacles to trust as listed in the literature review, due to the

structure of the organizations these obstacles did not prove to be true hindrances. An example,

one obstacle to trust mentioned in the literature review is team members not being able to

directly see the work the other team members are doing (Piccoli & Ives, 2003). According to

Ford et al. (2017), the virtual environment of virtual teams does not allow for team members to

directly observe other team members and leaders, which is a component of building trust.

Participants in both organizations stated they know what their team members are doing. As

stated by Participant 5,

> I guess maybe the level the care of detail that we can see each other put into it. When you
>
> are active or involved in the community meeting or slack channels, when you can see
>
> everyone putting forth the extra effort and going the extra mile that really increases
>
> feelings of trust.

Participant 3 said, "And the communication I see going on in Slack during shifts, builds my trust

in my colleagues as well. I feel like I work in a devoted workforce." Applying what was learned

from the literature, this situation increases trusts within the organization. Hacker et al. (2019)

mentions in teams and organizations with established trust, a benefit of the doubt is given, and

team members are more accepting. This is highlighted by Participant 10,

> It (trust) is great. I have never worked for a company that gives us the benefit of the
>
> doubt at all times. I don't know if it is the nature of the type of person that takes this
>
> work, or if it's the immediacy of this work, the trust is there right away. The trust is ours
>
> to lose not gain, and I think that is a benefit to the hiring.

Solutions from leaders to address the challenges in trust include creating an environment that establishes and maintains trust between the leader, team, and its members (Hacker et al., 2019). Transparent communication was also listed as crucial in the virtual team environment for leaders to establish to build and maintain trust (Ford et al., 2017). These solutions directly relate to the findings of this study as previously discussed (see Tables 2-4). Another area in which the findings corroborate the literature is Gardner et al. (2019) solution to trust. Gardner et al. (2019) stated, Leaders establishing a system for social messages and instructions is also positively shown to increase trust within the team, especially during the beginning stages of team development. This is something that Organization A has excelled in through their utilization of Slack, the instant messaging-type technology platform that allows team members to communication in real-time about both work-related and non-work-related subject.

Technology. In the literature review, the importance of technology was discussed. As stated by Kramer et al. (2017), technology allows an organization to increase its flexibility as well as enable effective communication. According to Olaisen and Revang (2016) find that interpersonal relationship-building, trust, and collaboration that can be developed with various communication technology modes. Considering this, technology directly impacts the main concepts, communication, collaboration, and trust (Marlow et al., 2017). Organization A was found to have several different technology platforms to conduct their tasks and communicate with each other and customers. Organization B was in the process of acquiring more technology advancements to ease some of the challenges created by the virtual environment. Leadership in Organization B had also invested money in establishing technology platforms when early in the process. Participants reported typical technological glitches, but nothing out of the ordinary. Both organizations invested time and money to better equip their employees.

The Problem

The general problem addressed in this study is the failure of leaders to establish collaboration, communication, and trust, resulting in poor performance in virtual teams. The specific problem addressed is the failure of leaders to establish collaboration, communication, and trust, resulting in poor performance in virtual teams within companies that provide services to individuals with special needs. Gibbs et al. (2017) stated that poor leadership, as a contributing factor for decreased team performance, is due to a lack of trust, communication, and collaboration. This research study addressed the problem posed in Section 1. The data from this study came from interviews from participants employed with organizations that utilize virtual teams to provide services for individuals with disabilities. This specific study addressed the problem through examining the individual concepts discussed in the previous sections. This study provides support for this problem by identifying key areas which are vital for the success of virtual teams. The findings from this study highlight the importance of the key concepts through the participants overwhelming positive responses to questions centered on the key concepts.

Summary of the Findings

Throughout this section, the findings of this study were thoroughly examined and discussed. The presentation of the findings included the themes identified through analysis of issues with communication, communication and trust, and culture. In the theme of issues with communication, two subthemes were identified as availability, response time and frequency, and personal preference. These themes were supported by direct quotes from participants. The repetitive responses from participants allowed for a saturation of data to occur. The findings from this study were compared to main components in previous sections to include research

questions, conceptual framework, anticipated themes, the literature, and the problem. It was

shown how the interview questions related to the research questions and a description of how

each research question was provided. A description was provided for the relationship between

the conceptual framework, anticipated themes, and the literature. Overall, the findings from this

study correlate to the information gathered in the literature review. The findings from this study

address the problem described in Section 1.

Application to Professional Practice

This section explains the significance of this study in terms of the practical implications

discovered that can be applied to the strategic management field of study. The objective of this

study was to provide insight and valuable research into organizations using virtual teams to

provide services to individuals that have special needs. Not only has this study met this

objective, but the implications from this study can also be used in a variety of businesses and

their changing strategic operations due to COVID-19. Through this section, improving general

business practices and potential application strategies for organizations will be discussed to show

how this study has added to business and the field of strategic management.

Improving General Business Practice

As mentioned, this study had impacts of improving general business practices before

COVID-19. In the light of COVID-19, organizations must manage the occupational risks

associated with the virus (Kelaher et al., 2020). One-way organizations are doing this is moving

more processes and work forums online. Donthu and Gustafsson (2020) stated that the changes

in organizations due to COVID-19 has been the most drastic organizational transformation in

years. Virtual capabilities and services have now been moved to the forefront of general business

practices in the majority of organizations and industries in one form or another (Kelaher et al.,

2020). To remain relevant, keep employee employed, and continue operations organizations have resorted to implementing digital means (Wellman et al., 2020). Through these changes, the field of strategic management is at the forefront. According to Jasper and Crossan (2020), it is the strategic management practices of organizations that allow them to adapt to changing situations and environments. Through the utilization of virtual teams an organization can maximize resources and cut costs, which has never been more important than it has been in the past 12 months (Dulebohn & Hoch, 2017).

While this study began before the onslaught of COVID-19, the lessons learned could not be more important in the current business climate. Through looking at an organization that began its existence utilizing virtual teams (Organization A) and an organization that had to adapt to the new normal and begin implementing virtual capabilities (Organization B), sound business practices have emerged. The lessons learned through this study and the potential application strategies which will be discussed later, can be explored, and implemented by many organizations that are facing the same fate as Organization B. Through looking at what has worked, what has not, and improvements from other virtual teams, organizations can help minimize the ever present challenges that plague virtual teams. The focus of this study was on organizations that utilize virtual teams to provide services to individuals with special needs, however, the lessons learned can be applied to various types of organizations. This study highlights the importance of open and transparent organizational culture, the importance of various forms of communication provided to virtual teams, and the impact communication has on trust and trust on performance.

Organizations have had to figure out how to continue operations as virtually as possible to keep their employees and customers safe. It has become more important than ever for

organization to invest in their employees and invest in ways to keep them employed (Kelaher et al., 2020). Communication must continue and is even more important as in-person gatherings have been greatly diminished. For an organization to sustain an adequate level of communication, technology must be utilized. Organizations must invest in technology platforms that are not only functional, but user-friendly. Due to the reliance on technology for communication, organizations must invest in these technologies. As seen through the participants responses technology is a lifeline, business operations cannot happen without it. The growing pains Organization B has faced in this pandemic shows the importance of not only implementing the technology, but also adequately training employees on the technology. While the up-front investment of the technology platforms may seem too much for organizations to bear, the consequences of using inadequate technology are far more costly.

An open and transparent organization culture was repeatedly found to be vital for the success and happiness of virtual employees. While creating this type of environment may be hard in typical circumstances, it is even more challenging in a virtual setting. Organizations need to take the time and convey to their leaders at all levels the importance of relaying information timely and being available to employees when questions and concerns arise. Through trying to implement these general practices, organizations employing virtual teams will be able to more quickly overcome the challenges associated with virtual teams.

Potential Application Strategies

By looking at the general business practice that can positively impact virtual teams and themes discovered in this study, there are several potential application strategies. These strategies can apply to organizations who employ virtual teams regardless of their stage in virtual employment and the type of organization. Those in the service industry, like the organizations

used in this study, have an increased pressure to be able to uphold services they provide virtually. The following potential application strategies are developed to help leadership in organizations successfully have efficiently performing virtual teams. These potential application strategies center mainly around promoting and enhancing communication as well as creating a culture that fosters open and transparent communication and trust.

1. Leadership must acknowledge the challenges created by virtual teams in order to overcome them.

2. Leadership should develop a strategic plan to overcome the challenges, by identifying solutions and implementing them.

3. Leadership should invest in technology that allows for various forms of communication so that employees and teams can effectively and efficiently do their job.

4. Leadership should develop training programs that adequately train employees not only on their job, but the technology platforms.

5. Leadership should allow employees the opportunity to communicate in the way and frequency they feel comfortable with.

6. Leadership should promote open communication from employees and all levels of leadership.

7. Leadership should develop forums or "areas" in which employees can communicate about non-work related topics in order to boost morale and enhance interpersonal relationships.

8. Leadership should create "office" hours that allow employees to engage in synchronous communication.

9. Leadership should aim create an open and transparent organization culture through sharing information and facilitating timely communication.

10. Leadership should establish different "meetings," during different shifts (if applicable) so that various levels of leadership are able interact with employees.

11. Leadership should promote trust within the organization through actively engaging with employees and quickly responding to issues or concerns.

12. Leadership should clearly communicate expectations of employees.

13. Upper level leadership should promote a person-oriented leadership style, this should be done through leading by example, but also through training opportunities for the different leadership levels.

14. Develop on-going initiatives to monitor technology applications and services to ensure they are able to adequately meet objectives.

Through utilizing these potential strategies, leaders of organizations can make a big impact on their employees and their performance. As discussed, communication is key and greater levels of meaningful communication leads to more collaboration and more trust. It has also been shown that when employees feel heard and trusted their performance is directly positively impacted. Some of these strategies are easier implemented than others. Investing in technology and developing an adequate training program can be both costly and time consuming, however, the benefits far outweigh the initial challenges. Creating or changing the culture of the organization does not happen overnight, leadership must remain vigilant in upholding the values of an open and transparent organization.

Summary

This section explained the significance of this study in terms of the practical implications discovered that can be applied to the strategic management field of study. As discussed, the objective of this study was to provide insight and valuable research into organizations using virtual teams to provide services to individuals that have special needs. As seen through the general business practices and potential application strategies, discussion within this study has met the objective of the research. This study provides real-world applications organizations can use to overcome the challenges of virtual teams. These applications can be applied to all types of businesses, especially in the aftermath of COVID-19. This section provided discussions that add to the field of strategic management and current literature.

Recommendations for Further Study

As previously stated, the ramifications from COVID-19 have reached all types of organizations. Further studies regarding virtual teams are limitless and extremely relevant. Even without the impacts brought on by COVID-19, this study provides meaningful applications and further study opportunities. Through this study, the researcher found that almost all previous research was conducted involving organizations that were not service-based. The need for further in-depth research of virtual teams that provide services to individuals is vital. As these organizations navigate through either completely changing to or adding virtual platforms to their services, research on these service-based organizations would be a great benefit for business strategies and strategic management. Organizations providing services differ greatly from those providing products, as their performance standards and operations are ongoing, they do not stop when the product is made or delivered. Discovering practical ways these organizations can remain in business and continue to provide adequate services through virtual work is imperative

as many individuals, especially those with special needs, so desperately rely on them for

independent and enhanced daily living. Due to the prominence of an open and transparent

organizational culture, further research should be conducted on how organizations can

effectively establish this type of culture in a virtual setting.

Reflections

Through this research study, the researcher learned quite a bit both personally and

professionally. The researcher can apply lessons learned from this study to everyday life.

Through this next section, personal and professional growth will be explored. This growth will

be described in terms strictly relating from perceptions and experiences of the researcher. This

section will also include a biblical perspective. Biblical implications were already discussed in

this study, however the applications derived from this study will be looked at through a Christian

worldview.

Personal & Professional Growth

Conducting this research study and analyzing the findings has impacted the researcher

both personally and professionally. The lessons learned through this process have provided skills

and applications that the researcher can use in everyday life. This process has emphasized the

importance of persistence. The process of completing this research study was met with many

obstacles and trying times. The researcher learned more about herself and helped to build and

strengthen skills that will undoubtedly help the researcher in her professional life. Through this

process, the researcher has been able to learn lessons that she would have otherwise been unable

to.

As stated, personally the researcher learned the importance of persistence. Although this

is not an unfamiliar concept, persistence of the researcher has never been tested as much as it

was during this process. The obstacles seemed overwhelming at times, but through hard work and lots of prayer, the researcher was able to overcome them. This process further strengthened the researcher's faith in God and provided yet another lesson in God's timing. God has shown the researcher time and time again that His timing and plan is far greater than anything the researcher could plan. The researcher also learned the importance of time management and the fine-line of balancing work, family, and school. This lesson was tested many times throughout this process. Personally, the researcher's confidence has grown in the areas of persistence and time management.

Professionally, the researcher has seen much growth as well. The researcher's writing abilities have improved significantly from the start of this study. The researcher is a more confident writer and is more able to clearly convey thoughts and ideas. The researcher's analytical thinking skills and reasoning was improved through conducting the research and analyzing the results. Through interviewing, transcribing, coding, and utilizing the software MAXQDA, the researcher was exposed to applications and skills the researcher has only used minimally, if at all, before. Through conducting the interviews, the researcher enhanced interviewing skills and became a more confident speaker. These skills discussed will help the researcher in future professional endeavors.

Biblical Perspective

As previously discussed, the major components of this study are integrated into biblical principles and scripture. According to Van Duzer (2010), organizations that are involved in producing goods or providing services that enhance humanity, they are engaging in work that matters to God. The focus of this study on organizations that utilize virtual teams to provide services to individuals with special needs to live an independent and fulfilling life enhances

humanity (Boele, 2017; Proverbs 31:8). The concepts of communication, collaboration, trust, and

leadership are further discussed as related to the findings of this study. The themes discovered

through this study and the potential application strategies are explained through a Christian

worldview.

Communication was one of the most important themes discussed in this research study.

Open communication was found to be vital in being able to perform tasks as well as creating and

establishing trust within the organizations. The subject of communication can be found

throughout scripture. Individuals should speak wisely and thoroughly think about what they are

going to say (Job 15:5; Proverbs 15:4; Psalms 120:2). Words have the power to speak life or

destroy, and this is also implied in a working environment. In an organizational environment, it

is important to communicate clearly so that expectations, directions, and ideals are understood,

as well as for the creation and sustainment of a competitive advantage (Falkheimer et al., 2017;

Proverbs 10:11). This along with communicating clearly, Christians are called to speak life and

build up one another (Ephesians 4:29; Proverbs 12:18). It is the responsibility of leaders to

ensure the proper tools and systems are in place for effective communication (Ruben & Gigliotti,

2016). This concept is seen in this study, both from participants in leadership positions and those

in non-leadership positions. Several of the potential application strategies listed the importance

of communication and establishing efficient ways to communicate.

Even though collaboration was not heavily weighed by participants, participants did feel

like it is an important part of their job to be able to provide the best services. Collaboration as

discussed in the literature review, is more from the perspective of product-based organizations.

Biblically, there are many scriptures referencing collaboration, and the importance of working

together, and these scriptures can be applied to both product and service-based organizations

(Ecclesiastes 4:9-12; Psalm 133:1). In scripture, working together goes further than simply collaborating on a project. Collaboration is a way to make each other better and build one another up so that each person can use their gifts to the best of their ability (Hebrews 10:24-25; Proverbs 27:17; Romans 12:4-6). This aspect of collaboration speaks directly to the type of collaboration participants discussed. Participants relied on their co-workers and leadership to be able to collaborate with based on prior experiences, differing knowledge bases, and camaraderie. Collaboration allows for something to be created that far exceeds what an individual can create alone (Chandler-Olcott & Hinchman, 2019).

Trust was another main theme is this research study, and the impact communication has on trust. Christians are to put their faith, trust, and hope in God and not man (Proverbs 3:5-6; Psalm 118:8). However, scripture calls Christians to be kind to one another, to depend on one another, and forgive one another (Ephesians 4:32; Matthew 6:14). Especially participants from Organization A, described this type of behavior in their organization from their coworkers and their leadership. Working together requires a level of professional trust and is an aspect of each person doing the best job they can as scripture calls (Colossians 3:23). While leaders cannot make employees trust each other, they can create an environment which promotes trust (Wilson, 2009). Creating this environment directly correlates with the theme of communication and trust. Creating this type of environment also directly relates to the organizational culture described in the findings of this study.

Successful leadership characteristics are applied to effectively leading a virtual team as well as providing discussion for biblical integration (Dees, 2013). The most prominent leadership style that is applied biblically or through a Christian worldview is servant leadership (Van Duzer, 2010). The most prevalent leadership style associated with this study is person-oriented

leadership. Person-oriented leadership involves the leader being primarily focused on the needs and well-being of the employees (Breevaart & de Vries, 2019). Servant leadership is a style not a theory; however, as previously mentioned, can be used in different theories of leadership (Van Duzer, 2010). According to Scheider and George (2011), servant leadership requires the leader to behave ethically and show genuine concern for their subordinates. This component of servant leadership directly correlates with person-oriented leadership that is presented in the findings of this study (Scheider & George, 2011; Van Duzer, 2010). Peterson et al. (2012) stated servant leaders are not just concerned with their organization, but society at large. The description of this type of organization describes the organizations focused on in this study, as they provide invaluable services to those who need it. Christians are called to speak for those who cannot and to take care of those who cannot take care of themselves (Proverbs 31:8; Romans 15:1).

Summary

Reflections of this study provide important concepts related to the researcher and implications of a Christian worldview. This research study allowed the researcher to learn both personally and professionally. The skills and lessons learned throughout this process will continue to stay with the researcher far beyond the completion of this research. The skills and lessons learned will be applied in all areas of the researcher's life. The biblical perspective given in correlation to the findings and applications of this study show that not only are these findings and application relevant in the business world, but they are also relevant for Christians. The major concepts of this study relate to a Christian worldview as do the findings.

Summary of Section 3

The purpose of this qualitative case study was to increase existing research regarding the leadership of virtual teams. Through this study, the phenomena of how leadership can promote

and enable the success of virtual teams through enhancing communication, collaboration, and trust was explored. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. Section three concludes this research study through providing an overview of the study, presentation of the findings, applications to professional practice, recommendation for further study and reflections. The objective of this study was to provide insight and valuable research into organizations using virtual teams to provide services to individuals that have special needs. Through the discussions of the presentation of the findings and applications to professional practice, this objective was met. This study provides key information organizations can learn from to increase or enhance their efficiency utilizing virtual teams.

Summary and Study Conclusions

The purpose of this qualitative case study was to add to the existing research regarding the leadership of virtual teams. Due to the increasing utilization of virtual teams, current literature has explored the various aspects which promote the success of virtual teams. This study further explored this topic to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem was explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. The objective of this study was to address how leaders establish and affect communication, collaboration, and trust in virtual teams. Not only has this study met this objective, but the implications from this study can also be used in a variety of businesses and their changing strategic operations due to COVID-19.

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Appendix A: Permission Request

June 14, 2020

Dear xxxx,

As a doctoral student in the School of Business at Liberty University, I am conducting research as part of the requirements for a doctoral degree in Strategic Management. The title of my research project is *Communication, Collaboration, and Trust within Virtual Teams*. The purpose of my research is to address the failure of leaders to establish communication, collaboration, and trust, resulting in poor performance in virtual teams within companies that provide services to individuals with special needs.

I am writing to request your permission to contact members of your staff to invite them to participate in my research study. Participants will be asked to contact me to schedule an interview to be held via Zoom. Participants will be presented with informed consent information prior to participating that details the study and how their information will be kept confidential. The interview will take 30-45 minutes to complete. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission please respond by email to xxxxxx@liberty.edu.

Sincerely,

Courtney Boyd
DBA Student

Appendix B: Letter of Invitation

[Date]

Name
Address

Dear xxx:

As a doctoral student in the School of Business at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to address the failure of leaders to establish communication, collaboration, and trust in virtual teams that provide services to individuals with special needs, and I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older and be actively employed as a virtual employee. Participants, if willing, will be asked to sign an informed consent detailing the protection of their privacy and to contact the researcher to schedule an interview.

In order to participate or for more information, please contact me at (xxx) xxx-xxxx or xxxxxx@liberty.edu.

When the interview is scheduled your name and position title will be collected. Also, a consent document will be emailed to you upon scheduling. The consent document contains additional information about my research. The consent document needs to be electronically signed and emailed back to me. I will also sign, and a signed copy will be provided to each participant. Your information will remain confidential, all electronic documentation will be kept in a password protected file and all hard copy documentation will be kept in a locked filing cabinet for three years as required by the university. The interview will take approximately 30 to 45-minutes.

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life. No fee will be paid by the interviewer or to the interviewee to participate in this study. You may decline as an interviewee or withdraw from participation at any time without consequences or retribution.

Sincerely,

Courtney Boyd
DBA Student
(xxx) xxx-xxxx
xxxxxx@liberty.edu

Appendix C: Consent

Title of the Project: Communication, Collaboration, and Trust within Virtual Teams
Principal Investigator: Courtney Boyd, Doctoral Student, Liberty University

Invitation to be Part of a Research Study

You are invited to take part in a research study about communication, collaboration, and trust within virtual teams. The researcher is inviting employees 18 years old and above in all level of leadership and those not in leadership positions to be in the study. This form is part of a process called informed consent so that you will understand this study before deciding whether to take part.

Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of this study is to add to the existing research regarding the leadership of virtual teams. The objective of this study is to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem is explored through an in-depth study of organizations that use virtual teams to provide services to individuals with special needs. Through this case study of virtual teams, best practices and solutions regarding successful leadership of virtual teams will be discovered.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:
1. Participate in an interview consisting of 8-10 standard questions, with the possibility of additional questions. When available Zoom will be used to conduct the interview and the interview will be recorded using audio and video. The interview will last approximately 30 - 45 minutes. Participants selected in this study will be given pseudonyms to ensure confidentiality.
2. Permit the research from the interview to be published.

How could you or others benefit from this study?

The primary benefit of this research study is to understand how leadership effects communication, collaboration, and trust in order to provide practical application for leadership to enhance team success.

What risks might you experience from being in this study?

The risks involved in this study include risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress, and becoming upset. Being in this study does not pose a risk to your safety or wellbeing. Another risk associated with this study is the potential fear of providing personal opinion, which could lead to uneasy feelings from pervious experiences. To mitigate this risk, the researcher will advise the participant of the option to skip the question.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records. The researcher will not use your personal information for any purposes outside of this research project.

- Participant responses will be kept confidential using codes, your name or anything else that could identify you will not be included in the study reports. Interviews conducted via Zoom will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted
- Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.

Is study participation voluntary?

Participation in this study is voluntary. If you decide to participate, you are free to not answer any question or withdraw at any time.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Courtney Boyd. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at (xxx) xxx-xxxx and/or xxxxxxx@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Melissa Connell at maconnell@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record and video-record me as part of my participation in this study.

_____
Printed Subject Name

_____
Signature & Date

Appendix D: Interview Questions

The central question of this research study is: How do leaders of virtual teams successfully enhance team performance?

1. How is communication typically conducted in your organization?

2. How does collaboration take place?

3. How do you feel trust is between team members? Between team members and leadership?

4. How do leaders enable communication and collaboration?

5. What are the challenges you face with communication, collaboration, and trust?

6. How do you feel leadership can improve these concepts?

7. What technology platforms are used? Do you think they are adequate?

8. What do you think leadership could do differently to enhance team performance?

Additional questions for leaders:

9. What tools and skills do you have to promote communication, collaboration, and trust within your team? Do you feel they are adequate?

10. What type of leadership style have you found to be the most effective for successfully leading a virtual team?

The central question of this research study is: How do leaders of virtual teams successfully enhance team performance?

1. How is communication typically conducted in your organization?

2. How does collaboration take place?

3. How do you feel trust is between team members? Between team members and leadership?

4. How do leaders enable communication and collaboration?

5. What are the challenges you face with communication, collaboration, and trust?

6. How do you feel leadership can improve these concepts?

7. What technology platforms are used? Do you think they are adequate?

8. What do you think leadership could do differently to enhance team performance?

Additional questions for leaders:

9. What tools and skills do you have to promote communication, collaboration, and trust within your team? Do you feel they are adequate?

10. What type of leadership style have you found to be the most effective for successfully leading a virtual team?

Appendix E: Interview Guide

Introductory Statement

First I would like to take the time to thank you for volunteering to be a part of this study. The title of this study is *Communication, Collaboration, and Trust within Virtual Teams*. The purpose of this qualitative case study is to add to the existing research regarding the leadership of virtual teams. The objective of this study is to understand how leadership can promote and enable the success of virtual teams through enhancing communication, collaboration, and trust. This larger problem is explored through an in-depth case study of organizations that use virtual teams to provide services to individuals with special needs. Through this case study, best practices and solutions regarding successful leadership of virtual teams will be discovered. I will be asking you approximately 8-10 questions. Depending on your answers, I may ask additional questions. Also, if at any time you would like to provide your perceptions on anything I did not directly ask about but pertains to the subject of this study. Please feel free do so. Now, if you are ready let us begin.

Main Interview

1. How is communication typically conducted in your organization?

Additional questions: Do you feel there is too much or too little communication? What changes in communication do you think could be made to make it better?

2. How does collaboration take place?

Additional questions: Do you feel collaboration is important to the success of the team? Do you feel leadership takes collaboration seriously?

3. How do you feel trust is between team members? Between team members and leadership?

Additional questions: How does leadership affect trust within your team? How do you and your teammates enhance trust?

4. How do leaders enable communication and collaboration?

Additional questions: What process are in place?

5. What are the challenges you face with communication, collaboration, and trust?

Additional questions: Are these challenges personal to you or are they impacted by processes? Technology? Personalities?

6. How do you feel leadership can improve these concepts?

Additional questions: Processes? Technology? Changes in leadership style?

7. What technology platforms are used? Do you think they are adequate?

Additional questions: Are there too many, too few? Do you think employees are adequately trained with the platforms? Is leadership adequately trained with them?

8. What do you think leadership could do differently to enhance team performance?

Additional questions: How do you define team performance? Is there a standard measure for team performance in your organization/team?

Additional Questions for Leaders:

What tools and skills do you have to promote communication, collaboration, and trust within your team? Do you feel they are adequate?

9. Additional questions: Did you receive specific training? Are you afforded the opportunity to increase your skills through training?

10. What type of leadership style have you found to be the most effective for successfully leading a virtual team?

Additional questions: What experience do you have with different leadership styles? Have you

changed leadership styles based on current role? Does the organization promote one type of

leadership over another?

Closing Statement

Do you have any questions or comments you would like to discuss? If I have any other questions

or need clarification I will email you. Just to remind you, your information will remain

confidential. Your name or any identifying information will not be used as part of this study. All

information and data will be stored in a password protected file for three years. Again, thank you

for your time.