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# Leadership Strategies to Create Success in Virtual Teams

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# Walden University

College of Management and Technology

This is to certify that the doctoral study by

Catherine Freeman

has been found to be complete and satisfactory in all respects,  
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Walden University  
2017

Abstract

Leadership Strategies to Create Success in Virtual Teams

by

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MPA, University of North Carolina Wilmington, 2011

BA, University of North Carolina Wilmington 2009

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2017

## Abstract

There has been a rise in remote and virtual employees over the last 10 years with roughly 20-30 million Americans working remotely at least 1 day each week. This growth in virtual employees increases business and organizations' dependency on technology and on effective strategies to lead virtual teams. Grounded in transformational leadership theory, the purpose of this explanatory case study was to explore strategies e-leaders use in leading virtual teams effectively. The study population comprised a virtual company headquartered in the United States. The data included semistructured interviews with e-leaders with at least 1 year of experience in leading successful virtual teams, an analysis of technological tools, and a review of company documentation. Thematic analysis was conducted on the data collected via tool analysis. Three themes emerged from the analysis: focusing on results-based performance, enabling communications and collaborations through the right technologies, and investing in building and modeling the company's culture. The study's implications for positive social change include the potential to provide similar organizations with effective strategies to train their e-leaders in developing and leading more successful virtual teams. Additionally, using virtual teams can enable firms to lower direct and indirect greenhouse emissions by using fewer resources at worksites and to reduce carbon dioxide through decreased travel.

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## Dedication

I dedicate this doctoral study to the love of my life, Justin. You have been in a front row seat for many years. You inspire, support, and encourage me every single day. You have never accepted any doubts I had along the way and you never allowed negative speak. As I approached the finish line, I cannot thank you enough for always reminding me why I started and why I would finish. Somehow, you manage to make me feel like the most capable and able person in the world but at the same time the most cared for and understood. The last several years during this process, I have needed reminding that I am able, but I have also needed understanding when frustration took over. You gave me all of those things and you continue to do so each day.

Also to my parents, who raised me to be independent and focused. Every quality and trait I have comes from both of you. You both have always served as examples of hard work and love. I owe each of you for your support and encouragement through my 29 years on this earth. I would have never ended up where I am in life without you.

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This process is a long one and I thank you, Dr. Dusick, for providing guidance and encouragement when I was irritated and frustrated during the proposal process. Working with you has been a wonderful learning experience and I appreciate your patience. Dr. Gaytan, you edited my drafts with such care and speed. I never waited two weeks for your feedback. You always prioritized my reviews, helping to keep me motivated, positive, and moving forward. I made it to the end thanks to both of you.

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## Section 1: Foundation of the Study

Leaders must explore new solutions to meet their customers' needs due to globalization (Lilian, 2014). Virtual teams enable these leaders to strive for competitive advantages through downsizing, subcontracting, joint ventures, strategic alliances, and other collaborative and network-based options (Gilson et al., 2015; Lilian, 2014). Virtual teams present more challenges to 21st century leaders and virtual team success relies on leadership (Lilian, 2014).

The new virtual environment and the new communications available due to technologies bring new meaning to leadership. The purpose of this case study was to explore leadership in virtual teams and to provide new insights for understanding what makes virtual teams successful. Based on a review of the literature from 2010 through 2017, the amount of knowledge available about leadership practices among distributed virtual teams was lacking. Revising some aspects of leadership in a virtual environment is necessary (Ruggieri, Boca, & Garro, 2013). By learning about successful strategies for leading these teams, business and organizational leaders may operate more efficiently and successfully to solve common organizational problems that result from the increased use of virtual project teams in business.

### **Background of the Problem**

In 2012, 66% of multinational organizations' leaders stated that they were using virtual teams, and 80% of company leaders surveyed believed this number would continue to increase (Society for Human Resource Management, 2012). Teams can now leverage collaboration tools, document sharing and cocreation, meeting tools and project

management tools, and social networking (Gilson et al., 2015). This new virtual environment and the new communications that are available due to technology have brought new meaning to leadership. Leadership is a problem facing virtual teams in organizations (Pinar, Zehir, Kitapci, & Tanriverdi, 2014).

When operating virtually, team requirements are different from those of face-to-face teams (Hosseini, Zuo, Chileshe, & Baroudi, 2015). As a result, exploring virtual teams' leadership is essential for understanding these requirements and defining the appropriate leadership strategies and managerial guidelines (Hossenini et al., 2015; Orhan, Huang, Kirkman, & Shapiro, 2014). Despite the growth in virtual teams, information on strategies for leading these virtual project teams is lacking (Caillier, 2014 & Purvanova, 2014).

Leaders can influence a group or team to use systematic procedures for analyzing complex problems by encouraging the use of helpful procedures for generating solutions, encouraging discussion on a broad range of options, and preventing a team from bypassing the cost and benefits of each option (Yukl, George, & Jones, 2010). A complex business world includes project teams that are fast and flexible to enable dynamic and creative work toward establishing objectives in a changing environment (Barnwell, Nedrick, Rudolph, Sesay, & Wellen, 2014). Leadership within this context, known as e-leadership or virtual leadership, is a new kind of leadership where leaders mediate human interaction by information and communication technology (Fan, Chen, Wang, & Chen, 2014). Organizations that operate internationally with virtual teams are subject to additional complexity and challenges resulting from more diverse team

members (Mockaitis, Rose, & Zettinig, 2012). With the growth of virtual teams, leaders should continuously evaluate their strategies to better suit their teams' circumstances (Ruggiera et al., 2013).

### **Problem Statement**

Virtual teams offer opportunities for companies to embrace globalization, reduce real estate and travel costs, and increase productivity within shorter timeframes (Barnwell et al., 2014; Lilian, 2014). Sun Microsystems saves \$70 million per year on real estate and AT&T saves \$25 million; Dow Chemical has reduced their nonreal estate costs by 33% (Goodman, 2013). The general business problem is that some virtual teams fail because of poor planning or training, insufficient leadership, poor attitudes, and lack of rapport among team members (Cohen & Alonso, 2013). The specific business problem is that some e-leaders lack strategies to lead virtual teams effectively.

### **Purpose Statement**

The purpose of this qualitative, explanatory case study was to explore strategies e-leaders use to lead virtual teams effectively. The target population for this study consisted of e-leaders with successful experience in leading virtual teams in a private virtual company headquartered in the United States. The implications for positive social change included the potential to provide other organizational e-leaders with effective and efficient strategies to train their employees in developing and leading successful virtual teams while also increasing competitive advantage and lowering environmental impacts. Employees working in virtual teams are telecommuting, which helps to reduce their carbon footprint and provides flexible schedules that suit each employee's lifestyle,

producing more satisfied workers with less stress (Orhan, 2014; Raffaele & Connell, 2016).

### **Nature of the Study**

Three research methodologies exist, including qualitative, quantitative, and mixed-methods (Yin, 2014). The qualitative research methodology was appropriate for this research study because the purpose of a qualitative study is to explore and understand individuals or groups in the natural setting, as suggested by scholars (Marshall & Rossman, 2016). By examining virtual team leadership in a natural setting, as suggested by Marshall and Rossman (2016), researchers can gain insights and discover concepts and concerns. Researchers use qualitative methods to consider and identify the strategies successful e-leaders are using (Gilson et al., 2015). Marshall & Rossman (2016) used case studies to incorporate the most effective methods by providing leaders information on determining the best strategies for e-leadership. The quantitative research methodology was inappropriate for this study because I did not seek to test an objective theory using statistical hypotheses (Marshall & Rossman, 2016; Yin, 2014). As a result, the mixed-methods research methodology was not appropriate because, according to Yin (2014), it requires collecting complementary data and conducting parallel qualitative and quantitative analysis.

The case study design approach has its foundation in the constructivist paradigm, where the claim is that truth is relative and understanding of the topic is dependent on one's perspective (Yin, 2014). In case study research, subjectivity keeps its meaning, but researchers do not reject objectivity (Yin, 2014). According to Yin (2014), researchers



should consider a case study design when the focus of a study is to answer *how* and *why*. Case study design is preferred when researchers cannot influence the behavior of participants, contextual circumstances are applicable to the phenomenon, or the confines are unclear between the phenomenon and the setting (Yin, 2014). For these reasons, I selected the case study research design for this study. The virtual environment contains new elements virtual teams must consider, which in turn affects leaders' ability to guide the team effectively (Purvanova, 2014). Phenomenological research is the preference when trying to describe participants' lived experiences (Giorgi, 2012). The focus of ethnographic research is on understanding lived human experiences and broad groups or cultures (Sangasubana, 2011). For these reasons, both the phenomenological and the ethnographic research designs were not suitable for this study.

### **Research Question**

The overarching research question for this qualitative case study was as follows:  
What strategies do e-leaders use to lead virtual teams effectively?

### **Interview Questions**

I conducted semistructured interviews with team e-leaders within an organization. The seven interview questions were as follows:

1. As a virtual team leader, describe the major leadership challenges you face that are different from leading traditional teams.
2. What barriers have you faced when leading a virtual team?
3. What do you do as an e-leader to overcome these barriers?
4. What do you do to increase members' strengths within your virtual teams?

5. What strategies did you use to address risk factors that could affect the success of your virtual team?
6. What strategies have worked best to motivate your virtual teams?
7. What else could you share that may be applicable to the study that may not have been included in this interview?

### **Conceptual Framework**

Transformational leadership is the conceptual framework for this research study. The focus of transformational leadership is charismatic leadership theory and, in the second decade of the 21st century, became Bass's (1985) transformational leadership theory. Transformational leadership includes several components: (a) the development of mutual trust, (b) fostering the abilities of others, and (c) setting goals beyond the short term (Bass, 1985).

The four aspects of Bass's (1985) transformational leadership theory are (a) charisma, (b) inspiration, (c) intellectual stimulation, and (d) consideration.

Transformational leadership occurs when leaders (a) expand and uplift the interests of their staff, (b) encourage mindfulness and acceptance of the organizational or team mission, and (c) encourage the focus to be on the good of the whole (Bass, 1990).

Transformational leadership offers an informative view into the relationships among leaders and their followers, which is important when exploring the strategies that successful e-leaders use in virtual teams.

## Operational Definitions

*E-leadership:* E-leadership, also known as virtual leadership, is a social influence process mediated by advanced information technologies to produce changes in attitudes, feelings, thinking, behavior, or performance of project teams, including individuals, groups, and organizations (Avolio et al., 2001).

*Team virtuality:* Team virtuality refers to the degree of geographical distribution and the comparative amount of e-communication media use within a team or group (Hoch & Kozlowski, 2014).

*Telecommuting:* Telecommuting is a work practice that involves members of an organization substituting a portion of their typical work hours (ranging from a few hours per week to nearly full-time) to work away from a central workplace, typically principally from home, using technology to interact with others as needed to conduct work tasks (Allen, Golden, & Shockley, 2015).

*Transformational leaders:* Transformational leaders engage in inspirational behaviors such as articulating a compelling vision, emphasizing collective identities, expressing confidence and optimism, and referencing core values and ideals (Grant, 2012).

*Virtual team:* A virtual team consists of a group of geographically distributed individuals working together using electronic communication (Lohle & Terrell, 2014).

*Virtuality:* Virtuality is the degree to which a team operates virtually based on the relative amount of electronic communication, geographical distribution, and the use of asynchronous and synchronous communication (Hoch & Kozlowski, 2014).

## **Assumptions, Limitations, and Delimitations**

In this section, I present a discussion of the assumptions, limitations, and delimitations used in this study. Assumptions are facts that are pertinent to a study that the researcher has little control or cannot completely confirm (Lips-Wiersma & Mills, 2014). Limitations are characteristics that can affect the interpretation of study results which the researcher cannot address (Brutus, Aguinis, & Wassmer, 2013). Delimitations are intentional boundaries in the research and analysis process (Bartoska & Subrt, 2012).

### **Assumptions**

As the researcher, I assumed that all potential participants would willingly participate in Skype interviews and data collection activities. I assumed that participants would be truthful and honest with their responses. I assumed that an explanatory case study was appropriate to describe the business problem in its real-world context. Additionally, I assumed the data collected in its natural setting would provide insights and concepts related to virtual team leadership.

### **Limitations**

This research study had several limitations. The participants were members of the same virtual company, which could have resulted in biased answers in hopes of being certain the company appears successful and efficient. The participants live in various time zones and work on different schedules. It was difficult to know if full concentration from participants would result in complete, well-considered answers. Some participants may not have been truthful about their leadership habits and personal characteristics.

Some limitations existed due to the data collection methods. Of the seven participants, two did not want to interview using Skype. As a result, I suggested completing the interview on the telephone. Researchers cannot observe physical cues and facial expressions during phone interviews. This case study only included one virtual organization in the United States, and the intent was to explore leadership within the virtual setting to identify the successful strategies e-leaders implement and use. Although I was not able to determine the transferability of my findings, I enabled future researchers to assess the results by providing detailed descriptions of the participants and processes without sacrificing credibility as recommended by Erlingsson & Brysiewicz (2013).

### **Delimitations**

The participants in this case study all work for the same virtual organization and their distribution was across different time zones in the United States. The focus of the case study was one virtual company and seven e-leaders received requests to participate. Each participant served in a successful virtual leadership role for at least 1 year.

### **Significance of the Study**

In a technology-enriched society, e-leadership is an organizational reality exemplified by individuals utilizing digital tools to achieve strategic goals and compete in an increasingly globalized world (Gilstrap & Hendershot, 2015). The adoption of virtual business practices is increasing in organizations for two major reasons (Purvanova, 2014). First, virtual teams contribute to savings because of a reduction in travel expenses, meeting times, duplication costs, and other logistical expenditures (Cairns,

2013; Purvanova, 2014). Second, virtual teams help to make organizations adaptable when dealing with globalization and market competition, changing organizational structure and expectations from customers and users (Purvanova, 2014).

The new virtual environment and the new communications that are available due to technology have led to a new meaning for leadership. Leadership is a problem facing virtual teams in organizations (Pinar et al., 2014). Technological tools and digital communication are constantly evolving, continuously challenging e-leaders, given their reliance upon these technologies (Gilstrap & Hendershot, 2015). In consequence, e-leaders must learn to balance both the strategic and technological information, which adds additional challenges to their leadership work (Gilstrap & Hendershot, 2015). Knowledge about leadership practices among distributed virtual teams is lacking. A virtual environment makes it necessary to revise some aspects of leadership (Ruggieri et al., 2013).

Previous researchers (Hoch & Kozlowski, 2014; O'Leary & Mortensen, 2010) explored the advantages and disadvantages of virtual teams versus traditional teams. Some researchers (Mesmer-Magnus, DeChurch, Jimenez-Rodriguez, Wildman, & Shuffler, 2011; Ortiz de Guinea, Webster, & Staples, 2012; Purvanova, 2014) are skeptical about the effectiveness of virtual teams. Such skepticism has led to the need for further research on virtual team leadership and the strategies that make e-leaders and their teams successful, which will result in more innovative and competitive organizations.

This study could result in positive social change. Successful virtual teams could provide economic and efficiency benefits, such as savings in real estate and travel costs,

and the opportunity to work around the clock (Verburg, Bosch-Sijtsema, & Vartiainen, 2013). Telework enables firms to lower direct and indirect green gashouse emissions by using fewer resources at work sites by further reducing CO<sub>2</sub> through traveling fewer miles to work (Burrell, Barnard-Zaffino, & Ulomi, 2014). Caulfield (2015) found that in some cities, telecommuting reduces carbon dioxide emissions up to 21%.

In 2011, organizational leaders spent about \$1.7 trillion on IT products and services to support virtual activities within their organizations (Gantz, Minton, & Toncheva, 2012). These IT products and virtual activities directly affect the economy through business creation and economic performance. Multiple industries can achieve costs savings and efficiencies that could increase their service value to the global population (Gantz, Minton, & Toncheva, 2012; Gilstrap & Hendershot, 2015). For example, healthcare organizations can provide efficient services to rural areas and universities can provide higher quality e-learning to areas of the world lacking proper education systems (Gantz, Minton, & Toncheva, 2012).

E-leaders who understand strategies for effectively leading their teams will provide benefits to their organizations. Benefits include more employees working from remote locations and a reduction of requirements for office space and facilities (Gilstrap & Hendershot, 2015; Lilian, 2014). A reduction in physical office space could lower the environmental effects that organizations have worldwide (Lilian, 2014).

### **A Review of the Professional and Academic Literature**

Despite the growth in virtual teams, information on strategies for leading these virtual project teams is lacking (Caillier, 2014; Purvanova, 2014). New virtual

environments and the new communications that are available due to technology have brought new meaning to project leadership. The new meaning requires more knowledge about leadership practices among virtual project teams. Most current research is on the advantages and disadvantages of virtual teams versus traditional teams (Hoch & Kozlowski, 2014). A virtual environment makes it necessary to revise some aspects of leadership (Ruggieri et al., 2013).

Virtual teams have moved to the forefront of organizational innovations, and the technological advances of the 21st century have brought about an increasing number of global virtual teams (Klitmoller & Luring, 2013). These new organizational forms are evolving more rapidly than scholars are able to study them. Research on global and virtual team leadership, in particular, is lacking (Zander, Mockaitis, & Butler, 2012). This lack of research leads to the need for more knowledge about leading virtual teams.

To explore leadership in virtual teams, I reviewed the relevant literature to explore and frame the current virtual environment and the ways it affects leadership requirements, and identified peer-reviewed articles and books using Business Source Complete, Sage Premier, Google Scholar, EBSCOhost, ProQuest, ABI/INFORM Complete, and Academic Search Complete. The review of the relevant literature provided insights in the current and historical research concerning this problem. The two major topics of this literature review are virtual teams and leadership. The contents of the literature review support this explanatory case study. As shown in Table 1, the study consists of 136 sources, including 130 peer-reviewed and 118 published within 5 years from the anticipated approval of this study by the CAO at Walden University.



Table 1

*Summary of Total Reference*

Total references	Total peer reviewed	Total within 5 years of CAO approval	Total peer reviewed and within 5 years of publication date
138 (100%)	132 (95.6%)	125 (90.6%)	120 (87%)

The first main topic was virtual teams and included two subtopics: the history and growth of virtual teams and the advantages and disadvantages of using virtual teams.

The second main topic was leadership. Leadership had four subtopics: (a) transformational leadership, (b) characteristics of leaders, (c) challenges of leadership, and (d) leadership strategies.

**Virtual Teams**

Teams work in different collaborative ways that are not all the same (El-Sofany, Alwadani, & Alwadani, 2014). A team is a collection of individuals who are interdependent in their work, share responsibility for results, see themselves and that others view as an intact social entity within one or more larger systems, and manage their relationship across organizational boundaries (White, 2014). A virtual team exists where one or more of the team members contribute all or a portion of their work from different locations, time zones, or a national culture than the other team members (White, 2014). The nature of managing teamwork has changed significantly because of changes in organizations and the nature of the work done (El-Sofany et al., 2014).

The leaders of numerous organizations are adopting virtual business practices for two major reasons (Purvanova, 2014). First, research findings demonstrated that virtual teams could produce significant savings due to a reduction in travel expenses, meeting times, duplication costs, and other logistical expenditures (Cairns, 2013; Purvanova, 2014). Second, virtual teams help to make organizations more adaptable with regard to rapid globalization and market competition, changing organizational structures, and high expectations from customers and users (Kanar & Bell 2013; Purvanova, 2014). Allen et al. (2015) defined telecommuting as “a work practice that involves members of an organization substituting a portion of their typical work hours to work away from a central workplace using technology to interact” (p. 44). Organizations that operate internationally with virtual teams are subject to additional complexities and challenges (Mockaitis et al., 2012).

Virtual teams may fail because of poor planning, lack of training, insufficient leadership, poor attitudes among coworkers, and lack of rapport among team members (Cohen & Alonso, 2013). Teams that work in a virtual context can work more efficiently and at a faster pace while having access to the best resources and people all over the world (Zander et al., 2012). Leading virtual teams is complex because members often have different cultural backgrounds while operating at the interface of technology and are located in various time zones (Zander et al., 2012).

Leaders can influence a group or team to use systematic procedures for analyzing complex problems by encouraging the use of procedures suitable for generating solutions, encouraging discussion on a broad range of options, and preventing a team from

overlooking the cost and benefits of each option (Yukl et al., 2010). E-leadership is a process intended to guide behaviors toward a fixed and shared goal that virtual technologies simultaneously enable (Hoch & Kozlowski, 2014). As leaders in education and other businesses incorporate virtual technologies, there is a concern that nonintuitive interfaces might be leading to information overload (Kahai, Jestire, & Huang, 2013). Leadership interventions can have an impact in a virtual world (Kahai et al., 2013).

**History.** As organizations become more diverse and new forms of organizing emerge, working in global teams is quickly becoming the rule rather than the exception (Zander et al., 2012). Zander et al. (2012) referred to multinational teams as the *heart of globalization* because the teams routinely play a key role in coping with an increasingly competitive, complex, and culturally diverse world. A complex business world requires project teams that are fast, flexible, and able to work toward achieving established objectives in a changing environment (Barnwell et al., 2014). More business leaders disperse project teams in different geographic locations due to the increase in the globalization of business (Barnwell et al., 2014).

Globally disbursed teams are a new norm in every business industry in the 21st century (Daim et al., 2012). The continuous expansion of the Internet, e-mail, and the inexpensive international telecommunications infrastructure is expediting this new norm (Daim et al., 2012). Businesses and organizations with virtual teams become more agile and flexible in responding to market demands (Mukherjee, Lahiri, Mukherjee, & Billing, 2012), and leaders of business and organizations with virtual teams can expand into

prospective labor markets and make intellectual resources in the global marketplace more accessible (Mukherjee et al., 2012).

Leadership research has experienced substantial transformation and change (Cairns, 2013). Economic challenges and changes have led the leaders of companies to move jobs and work so the skills are available for the smallest overall cost (Cairns, 2013). The new virtual environment and the new communications that are available due to technologies bring new meaning to leadership, project management, and teamwork. Leadership within this new context, now known as e-leadership or virtual leadership, is a social influence process mediated by advanced information technologies to produce changes in attitudes, feelings, thinking, behavior, or performance of individuals, groups, and organizations (Avolio et al., 2001).

Even with the increase in virtual teams, some organizational leaders do not entirely understand the impacts advanced technology has on leadership (Ziek & Smulowitz, 2014). Results from historical research on teamwork shows that pressure from the environment, management reactions to this pressure, formal organization, leadership styles, and complementary personnel are influential in individual, group, and intergroup relations (Melcher & Kayser, 1970). Leadership plays an important role in organizational culture and innovation, and it is critical for any business to achieve its mission and vision (Melcher & Kayser, 1970).

Zimmermann, Wit, and Gill (2008) compared virtual and traditional settings in organizations and suggested that even though leadership behaviors may be almost equally important in both settings, certain behaviors are more important when operating in virtual

teams. Findings from research on virtual teams indicated that traditional and more conventional ways of organizing in traditional face-to-face teams will not necessarily produce the same results in a virtual setting (Cogliser et al., 2013). Organizations that operate internationally with virtual teams are subject to additional complexity that can result from more culturally diverse team members (Mockaitis et al., 2012). Cultural differences within teams have the potential to become barriers with respect to communication, relationship building, cooperation, and trust, thereby influencing team members' views of the group and their own and others' participation in it (Butler, Zander, Mockaitis, & Sutton, 2012). Mockaitis et al. (2012) expected greater cultural diversity within a global team to result in more pronounced differences in attitudes and behavior.

### **Leadership**

Oc and Bashshur (2013) noted that influence is the essence of leadership. Research on the styles and characteristics of leadership that engender optimal team performance is significant (Sohmen, 2013). Successful teams need balance, coordination, and synergy for optimal performance toward successful outcomes, and leadership and teamwork cannot exist without each other (Sohmen, 2013). To create more successful and efficient teams, business and organizational leaders must recognize and understand the characteristics of effective leadership. A virtual environment makes it necessary to revise some aspects of leadership (Ruggieri et al., 2013).

Organizational leaders must consider leadership traits as *integrated constellations* of attributes that influence performance (Ziek & Smulowitz, 2014). Leadership requires a high-level of concentration on inspiration and strategy (Moynihan, Pandey, & Wright,

2012). Previous researchers have defined leadership in a variety of ways, but most definitions reflect the assumption that leadership includes a process where leaders have intentional influence over other people to guide, structure, and facilitate activities and relationships in a group or organization (Yukl et al., 2010). Nixon, Harrington, and Parker (2012) explained that leadership is critical because leaders oversee organizational performance and are fundamental in implementing change and motivating people in the organization.

**Characteristics of leaders.** Global companies may not have enough leaders in their growth markets or leaders with the necessary global competencies in their headquarters (Canals, 2014). Leaders of all sectors face the challenge of leading globally (Thorn, 2012). According to a global survey of human resource executives by researchers at the Human Resource Institute, executives from the United States and Asia considered leadership the most important issue for managing people in organizations (Thorn, 2012). Executives believe that developing leaders is the most important human resource goal for achieving global success (Thorn, 2012). A better understanding of the qualities and characteristics of successful leaders can bring more efficient organizations and businesses to the global marketplace.

Organizational leaders deliberate over selecting group structures, strategies, and tactics; shaping collective action frames; identifying opportunities; and mobilizing resources (Baggetta, Han, & Andrews, 2013). Followers view people as leaders because they embody their own values and beliefs, in some cases, or because they pursue new ideas (Dickson, Castaño, Magomaeva, & Den Hartog, 2012). In an increasingly

knowledge-intensive world, the most competent teams could fail if they do not measure up to the leader's objectives (Sohmen, 2013).

El-Sofany et al. (2014) posited that a combination of soft and hard skills is necessary to lead virtual teams and that technical competence is not sufficient to be successful. El-Sofany et al. (2014) identified the most important competencies as clarity of objectives, leadership or project management, communication, reliability and efficiency, teamwork, and quality management. Hoch and Kozlowski (2014) concluded that structural supports and shared leadership, but not hierarchical leadership, had a positive association with team performance. When examining moderating effects, the authors concluded that structural supports with higher levels of team virtuality had a stronger association with team performance, and hierarchical leadership had a weaker association with team performance (El-Sofany et al., 2014; Hoch & Kozlowski, 2014; Sohmen, 2013). Hoch and Kozlowski (2014) addressed the need to examine the appropriate form of measurement to capture the multifaceted concept of team virtuality.

In the early 21st century, research on virtuality was distinctly categorical between face-to-face and virtual teams (Hoch & Kozlowski, 2014). Geographical distribution and e-communication media use are other key characteristics of team virtuality (Hoch & Kozlowski, 2014). Over time, research has shifted to address the numerous dimensions that underlie different degrees and layers of virtuality (Hoch & Kozlowski, 2014). Sohmen (2013) identified a basic framework for best leadership practices. The framework is preliminary and consists of eight tenets of essential soft skills that bond leadership and teamwork in a synergetic balance (Sohmen, 2013). The tenets are vision,

integrity, communication, collaboration, creativity, goal orientation, empowerment, and team building (Sohmen, 2013). Being able to identify and use the best skills within a team to reach organizational success requires greater emphasis on the soft skills of leadership (Sohmen, 2013). With the growth in virtual teams, leaders need to evaluate their styles continuously to suit their team's circumstances more closely. Virtual teams bring new circumstances, and managers and organizational leaders must clearly understand the characteristics necessary for virtual teams' leaders.

Baggetta et al. (2013) noted that a leader's behavioral commitment connects to individual characteristics. Leaders with skills that are more relevant, available time, and aligned motivations have a greater commitment to organizations (Baggetta et al., 2013). At the organizational level, leaders are more committed when working in more complex organizations, operating more interdependently in teams, sharing work more equally, and devoting smaller time to meetings (Baggetta et al., 2013).

Jang (2013) explained the importance of interdependence in teams and concluded that virtual leaders who perceived task interdependence of their team members and their communication frequency had positive effects on level of trust. Team leaders with accurate levels of perceived task interdependence among their team members felt more trust within their teams (Baggetta et al., 2013; Jang, 2013). The higher this awareness was among virtual leaders, the more trust their team members felt (Jang, 2013). These results indicated that awareness and interdependence are important group process variables that link task structure and trust in virtual teams, and are critical to future research (Baggetta et al., 2013; Jang, 2013).



Successful teams must have balance, coordination, and synergy for optimal performance toward successful outcomes (Pinar et al., 2014; Sohmen, 2013). Leadership and teamwork cannot exist without each other (Sohmen, 2013). To create more successful and efficient teams, leaders must recognize and understand the characteristics of leaders. Coordination requirements and resource constraints are two challenges that cause project planning to be difficult for leaders in virtual teams (Pinar et al., 2014). These challenges intensify because team members are in varying locations and the resulting inconvenience of monitoring performance electronically (Nixon et al., 2012; Pinar et al., 2014). Leaders handling these challenges by determining the roles of their team members and providing mentor-like relationships are likely to be more successful (Nixon et al., 2012; Pinar et al., 2014).

Virtual teams are becoming increasingly common and leaders need to respond by continuously evaluating their methods and styles to match each team's context. Leaders in virtual teams need to determine and communicate the roles of all team members. When members trust their leaders and are able to share their knowledge openly, the entire team can benefit (Nixon et al., 2012; Pinar et al., 2014). Successful virtual leaders able to find balance among enforcing performance standards, communicating business activities, and developing strong one-on-one relationships should have more virtual team success (Nixon et al., 2012; Pinar et al., 2014). Managers and businesses must understand the new circumstances that virtual teams bring and the necessary characteristics for leaders of these teams.

**Transformational leadership theory.** A business is a system within which human energy and tangible or intangible resources change into products or services (Antonakis & House, 2014). Effective leadership mirrors actions influencing the transformation process and guaranteeing an organization's flexibility and adaptation as leaders must: (a) facilitate group interaction and (b) accomplish task objectives (Antonakis & House, 2014). Different kinds of organizations need various types of leadership. Given the dynamic nature of organizations in the 21st century, leaders are necessary to ensure goal attainment (Antonakis & House, 2014; Moynihan et al., 2012). Leaders without the essential problem-solving skills and knowledge related to their organizations cannot be effective (Antonakis & House, 2014), making the selection and training of leaders within an organization critical.

Since the 21st century has a new wave of changes in technology, leaders are bound to move their organizations toward such changes to succeed (Veisheh, Mohammadi, Pirzadian, & Sharafi, 2014). Transformational leadership is the main means by which the environmental changes of the organizations become coordinated (Veisheh et al., 2014). Transformational leadership centers on the assumption that leaders can alter followers' assumptions, behavior, and beliefs by appealing to the importance of the organization's collective outcomes (Moynihan et al., 2012; Veisheh et al., 2014).

Burns (1978) introduced the idea of transforming leadership through his research on political leaders. Burns identified the process as when leaders and followers help each other to advance to a higher level of morale and motivation. Transforming leaders set a moral example for benefiting the team, organization, and community and could to change

an organizational culture (Burns, 1978). Transforming leadership became transformational leadership in the mid-1970s (Burns, 1978). In 1985, Bass expanded the research to consider the psychological mechanisms that trigger transformational leadership, ways to measure it, and how it affects follower motivation and performance. Bass (1985) suggested that followers feel trust, admiration, loyalty, and respect for transformational leaders because transformational leaders provide followers with an inspiring mission, vision, and identity. Transformational leadership involves motivation and a leader who creates strategies and inspires others to follow the organization's goals (Bass, 1985).

A transformational leader attempts to encourage the preferred follower behavior by intellectually stimulating or inspiring followers to subjugate their self-interests for a shared purpose (Li, Tan, & Teo, 2012). A leader should affect followers in three ways: (a) increase their awareness of task importance and value, (b) change their focus to team goals rather than individual interests, and (c) activate their higher order needs (Li et al., 2012). Leaders make their presence known throughout their business or organization (Bass, 1990). Relationship building and trust in virtual teams is necessary for success, and the development of resentment could hinder that success. Bass (1990) concluded that employees not only perform at a higher level when they feel their managers are transformational leaders, but also feel more satisfaction with their organization's appraisal system.

The four aspects of Bass's (1985) transformational leadership are (a) charisma, (b) inspiration, (c) intellectual stimulation, and (d) consideration. Transformational

leadership occurs when leaders (a) expand and uplift the interests of their staff, (b) encourage mindfulness and acceptance of the organizational or team mission, and (c) encourage the focus to be on the good of the whole (Bass, 1990). Purvanova and Bono (2009) determined that in a study of face-to-face and virtual teams that the most effective leaders were those who increase their transformational leadership in virtual teams. The effect of transformational leadership on team performance was stronger in virtual than in face-to-face teams (Purvanova & Bono, 2009).

Virtual team leaders benefit from using transformational leadership styles because they can improve the cooperative climate for teams and, as a result, improve task cohesion (Kahai et al., 2013). Teams working under highly transformational leaders produce original solutions, solution clarifications, supportive remarks, and questions about solutions (Mukherjee et al., 2012). Teams also report higher levels of perceived performance, extra effort, and leadership satisfaction (Mukherjee et al., 2012). Transformational leaders transform their followers to transcend their self-interest by altering their ideals, interests, and values (Nijstad, Berger-Selman, & De Dreu, 2014). As a result, employees or followers feel motivated to exceed performance expectations (Nijstad et al., 2014).

Virtual teams have developed as an important component of organizational configuration in the knowledge-based society of the 21st century (Fan et al., 2014). Virtual teams provide organizations an extensive assortment of possible benefits and employees with improved flexibility because team members can complete tasks with more freedom by encouraging organizational flexibility and market responsiveness (Fan

et al., 2014; Odumeru & Ogbonna, 2013). Research on transformational leadership indicated that it is a form of leadership especially appropriate for fostering organizational change (Moynihan et al., 2012).

A business or company that has transformational leaders at all levels demonstrates to its clients, community, and all stakeholders that the organization focuses on the future and development of internal people (Bass, 1990). The four concepts that comprise transformational leadership are (a) idealized influence, (b) inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration (Li et al., 2012).

Idealized influence, or charisma, is the first of the four concepts that constitute transformational leadership (Bass, 1990). Charisma generates the pride, faith, and respect that leaders work to encourage their followers to have in them, their leaders, and their organizations (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012). Idealized influence involves engaging in charismatic actions that earn respect and cultivate pride (García-Morales et al., 2012). Examples include discussing important values and beliefs, communicating a sense of purpose, and encouraging a focus on collective interests (Grant, 2012).

Inspirational motivation is another concept of transformational leadership (Bass, 1990). Transformational leaders provide inspiration by motivating their followers, largely through communicating their expectations (García-Morales et al., 2012). Inspirational motivation includes articulating a compelling vision of the future (Grant, 2012). This inspiration emphasizes to employees the importance of organizational values and outcomes (Moynihan et al., 2012).

A third concept of transformational leadership is intellectual stimulation (Bass, 1990). Transformational leaders promote intellectual stimulation by promoting employees' intelligence, knowledge, and learning so they can be innovative (García-Morales et al., 2012). Intellectual stimulation involves challenging followers to question their assumptions and think differently (Grant, 2012). By challenging old assumptions about issues and practices within the business or organization, transformational leaders help followers achieve their mission (Moynihan et al., 2012). The fourth concept of transformational leadership is individual consideration (Bass, 1990). Individual consideration involves personalizing interactions with followers (Grant, 2012), which provides relevant mentoring, coaching, and understanding (Grant, 2012; López-Dominguez, Enache, Sallan, & Simo, 2013). The focus of individualized consideration is on changing followers' motives toward a consideration of the moral and ethical implications of their actions and goals (López-Dominguez et al., 2013).

Using these four concepts of transformational leadership enables leaders to motivate employees to look beyond their own self-interests to contribute to a broader vision (Grant, 2012). Transformational leadership can result in engagement, commitment, and selfless team members and staff, including employees who exceed expectations (Bass, 1985). Purvanova, Bono, and Dzieweczynski (2006) identified a positive link between managers' transformational leadership behaviors and their followers' performance. Transformational leaders are best at increasing their followers' interests, gaining commitment to the goals and mission of the group or organization as a whole, and motivating staff and team members to go beyond self-interests for the good of

the organization or team (Bogler, Caspi, & Roccas, 2013; López-Dominguez et al., 2013).

The concepts for transformational leaders can lead to successful virtual team leaders (Bogler et al., 2013; Li et al., 2012). E-leaders' success can result from their ability to motivate, inspire, and create effective team strategies (Bogler et al., 2013). Bass (1990) indicated that transformational leadership is learnable, and institutional leaders should prioritize training and development at all levels of a business or organization. Transformational leadership training can improve virtual team effectiveness and efficiency. In a turbulent and disconnected virtual environment, transformational leadership will use motivation and inspiration to empower followers (Bogler et al., 2013; Li et al., 2012), which can then increase the abilities of team members by increasing self-confidence.

By further understanding Bass's (1990) four concepts that comprise transformational leadership, leaders of businesses and organizations can overcome the challenges of virtual teams. Transformational leadership is a way to understand the complexities of the relationships among leaders and their followers, which is important when analyzing the strategies of successful e-leaders (Li et al., 2012). When leaders expand and uplift the interests of their staff, encourage mindfulness and acceptance of the organizational or team mission, and encourage the focus to be on the good of the whole, transformational leadership takes place (Bass, 1990).

**Transactional leadership theory.** In contrast to transformational leadership theory, the focus of transactional leadership is on the exchanges that happen between

leaders and followers (Bass, 1990; McCleskey, 2014). These exchanges permit leaders to achieve their performance objectives and complete required tasks while maintaining the current organizational structure (McCleskey, 2014; Sadeghi & Pihie, 2012). By motivating followers through contractual agreements, transactional leaders are able to direct the behavior of followers toward achieving established goals, which a transactional leader accomplishes through an emphasis on extrinsic rewards and a focus on improving organizational efficiency (Burns, 1978; McCleskey, 2014; Sadeghi & Pihie, 2012).

Transactional leaders use a *one-size-fits-all* approach and ignore situational and contextual issues related to organizational challenges (McCleskey, 2014). The transactional leadership approach is most suitable when clear organizational objectives are necessary, such as increasing production or improving customer service (Sadeghi & Pihie, 2012; Zhu, Sosik, Riggio, & Yang, 2012). Empirical evidence supports the relationship between transactional leadership and effectiveness in some environments, but not all (McCleskey, 2014).

Transactional leaders, also known as *managerial leaders*, emphasize the role of supervision, organization, and group performance, with the leader expecting the compliance of followers (Odumeru & Ogbonna, 2013). Transactional leaders engage followers in short-term exchanges, which can be challenging in a virtual team that already have more limited communication and rapport building opportunities (Odumeru & Ogbonna, 2013). Transactional leaders are willing to work within current systems and prefer to think inside the box for problem solving (Odumeru & Ogbonna, 2013).



These challenges create issues for transactional leadership in a virtual setting due to the continuous change and need for flexible leadership. Managers and businesses must understand the new circumstances that virtual teams bring and the necessary characteristics for leaders of these teams. Transactional leaders focus more on the reactive and less on the proactive, which does not suit a virtual environment the way transformational leaders can (Bass, 1990; Li et al., 2012).

**Leadership strategies.** As leaders of globally distributed businesses and organizations attempt to formulate new strategies to stay competitive and to ensure growth, researchers face the challenge of reconsidering the nature of leadership requirements concerning modern organizations (Mukherjee et al., 2012). Teams are complex social forms, and effectiveness is the result of multiple and often redundant practices (Cohen & Alonso, 2013). An important form of leadership influence that makes leadership essential for innovation involves improvements in collective learning about effective processes and strategies (Yukl et al., 2010). Leaders can influence a group or team to use systematic procedures to analyze complex problems (Cohen & Alonso, 2013).

Leaders can also encourage the use of procedures for generating solutions, encourage discussion on a broad range of options, and prevent a team from overlooking the cost and benefits of each option (Yukl et al., 2010). Whether an organization and its teams are able to reach an exceptional level of innovation depends significantly on its leadership (Ziek & Smulowitz, 2014). Leaders at all levels can help create conditions

favorable to innovation and organizational success for their team (Cohen & Alonso, 2013; Ziek & Smulowitz, 2014).

The nature of managing teamwork has changed significantly because of changes in organizations and the nature of work (El-Sofany et al., 2014). An increasing number of organizations are geographically distributed and leaders are realizing the importance of collaborative work. Building a high-performing team starts with making all team members aware of each other's cultural norms (Barnwell et al., 2014). Building an awareness of cultural norms may require substantial research by the project manager. Leaders must account for and consider language, time, culture, and location at all times (White, 2014). Regardless of the good intentions of a project manager, the *chemistry* has to be right with the entire team to ensure all members are working in the same direction (Barnwell et al., 2014).

White (2014) identified that the word *team* provides a useful mnemonic for leaders of virtual teams: trust, engagement, achievement, and membership. Trust among team members is essential, and the development of a systematic approach can catalyze team members' engagement (Barnwell et al., 2014; White, 2014). The recognition of team and personal achievements is useful for building on trust and engagement (Barnwell et al., 2014; White, 2014). Membership must also always be under review, because each team member can have a significant effect on team success (White, 2014).

Researchers recognize various leadership guidelines for increasing learning and innovation. Yukl et al. (2010) described these guidelines as (a) encouraging appreciation for flexibility and innovation, (b) encouraging and facilitating learning by individuals and

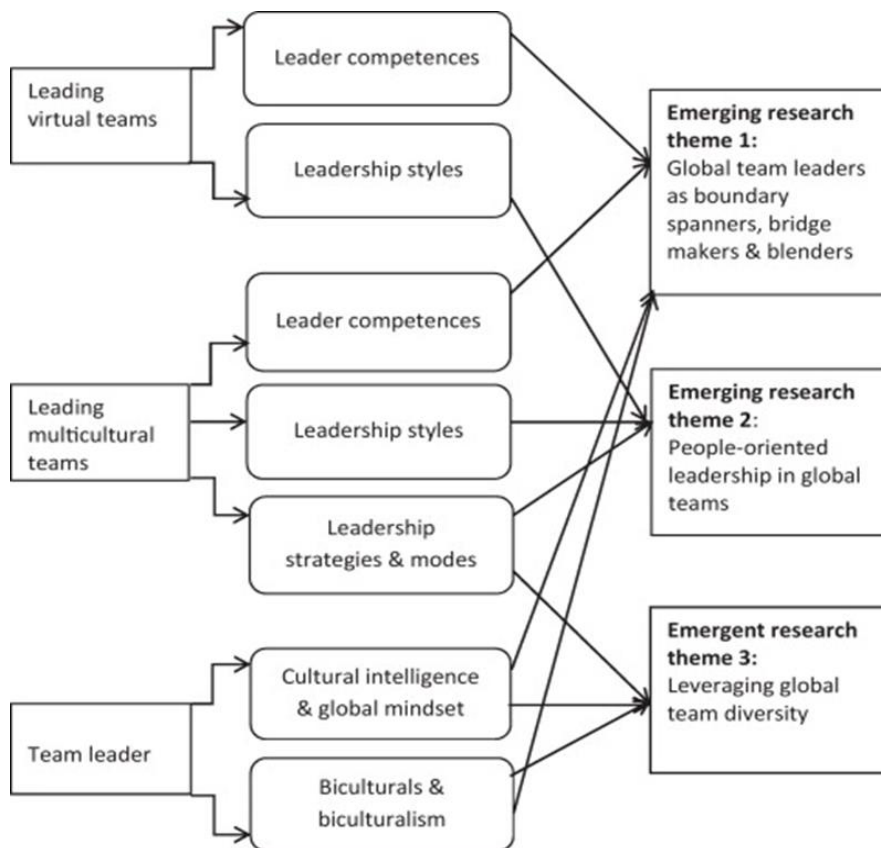
teams, (c) helping people to improve their mental models, (d) leveraging learning from surprises and failures, (e) encouraging and facilitating sharing of knowledge and ideas, (f) setting innovation goals, and (g) rewarding entrepreneurial behavior. Leaders using these guidelines are able to create positive networks where innovation can occur (Yukl et al., 2010).

Innovation will improve with strong leadership when leaders recognize the need for individual and team learning (Yukl et al., 2010). Organizations can learn more as a whole only when individuals are also learning (Hotho, Lyles, & Easterby-Smith, 2015). An organization with leaders valuing personal development and education and providing training and development programs, such as workshops, will have more individualized learning (Yukl et al., 2010). However, for personal development and training to be successful, the leaders must inform others of the opportunities and provide ways for them to take advantage of what is available (Hotho et al., 2015; Yukl et al., 2010). In addition to individual learning, leaders can encourage collective learning by providing tangible rewards to teams and individuals who acquire new knowledge and use rewards for improving performance and efficiency (Yukl et al., 2010).

Organizational learning refers to the capability of leaders and employees to maintain or improve performance based on experience (García-Morales et al., 2012; Zander et al., 2012). Organizational learning has shifted from being *optional* to *necessary* to an organization's effective performance and even survival (García-Morales et al., 2012). When new knowledge results from organizational learning, an organization is able to be more dynamic and competitive (García-Morales et al., 2012; Zander et al.,

2012). García-Morales et al. (2012) concluded that using transformational leadership through organizational learning and innovation simultaneously positively influences organizational performance.

Leading global teams is different from other teams because of their globally dispersed work environment and their multiple levels of heterogeneity (Zander et al., 2012). Zander et al. (2012) identified three themes for global team leadership: (a) leaders as boundary spanners, bridge makers, and blenders; (b) people-oriented leadership; (c) leveraging diversity (see Figure 1).



*Figure 1.* Leading global teams. Reprinted from “Leading Global Teams,” by L. Zander, A. I. Mockaitis, and C. L. Butler, 2012, *Journal of World Business*, 47, p. 598. Copyright 2012 by Elsevier, Inc. Reprinted with Permission.

Boundary spanning is important for leaders in virtual and multicultural teams (Zander et al., 2012). Boundary spanning requires identification with many groups and the ability to attain synergies between these groups (Zander et al., 2012).

Virtual leaders must achieve legitimacy with their team members because it is essential for trust to be present (Zander et al., 2012). Virtual team leaders must identify with all team members. A safe communication climate within a virtual team supports overcoming the difficulties related to virtual interaction (Gibson, Huang, Kirkman, & Shapiro, 2014). Distributed team members must have confidence that their leaders will represent them well (Zander et al., 2012). To achieve boundary spanning, a virtual global team leader must show commitment to all members and groups (Gibson et al., 2014; Zander et al., 2012).

Bridge makers enable intrateam communication and interaction while being able to resolve problems through bridging cultural boundaries among all the team members (Zander et al., 2012). Even subtle differences in team members can have large effects on team performance (Gibson et al., 2014). More conflict and lower satisfaction occur in teams with different global backgrounds (Gibson et al., 2014). There are emotion-display norms for virtual teams, but what others see as appropriate depends on the type of communication and the cultural differences (Glikson & Erez, 2013). Synergetic teams achieve success by leaders having a thorough understanding of all team members' backgrounds (Gibson et al., 2014; Zander et al., 2012). Bridge makers have the ability to

foster understanding, interdependence, solidity, and recognition across all boundaries in a virtual global team (Zander et al., 2012).

Global virtual team leaders also need to work as *blenders*. Blenders have the ability to bring together the subgroups and differences in teams that fall between being highly heterogeneous and highly homogeneous (Zander et al., 2012). Some types of direct control become difficult for team leaders, especially because the members of virtual teams and team leaders are in different locations and may be from different cultures (Pinar et al., 2014). Leaders acting as blenders do not reinforce boundaries to create conflict but encourage understanding among team members (Zander et al., 2012). Leaders demonstrating multiculturalism will be better able to unify subgroups within their teams (Zander et al., 2012).

These evolving themes are useful for practitioners for the future of business. For global team leaders, performing these roles within and among groups will occur simultaneously with the fostering of the qualities and skills necessary for leading global virtual teams (Pinar et al., 2014; Zander et al., 2012). Motivating, inspiring, coaching, mentoring, and having a personal interest in group members is vital to team members (Zander et al., 2012).

Face-to-face teams have better performance, more efficiency, better communication, shorter decision-making times, and a greater likelihood of reaching consensus than virtual teams (Purvanova, 2014). However, compared to face-to-face team members, virtual teams generate more ideas and are more likely to contribute equally to team discussions, and virtual discussions are more task-focused than face-to-

face discussions (Purvanova, 2014). A better understanding of the different expectations of team leaders and members could strengthen each team leader's abilities (Zander et al., 2012). Further research is necessary to understand if, and if so, how the simplified accessibility of electronic media for virtual interactions can lead to a changed role for team leaders or an increase in the use of alternative team leadership modes (Zander et al., 2012).

**Challenges of leading virtual teams.** Leadership is one of the most substantial problems facing virtual teams in organizations (Pinar et al., 2014). In virtual teams, distance magnifies dysfunction (Ortiz de Guinea et al., 2012; Zander et al., 2012). Virtual teams must cope with a complicated project environment that can include different languages, political climates, organizational policies, time zones, and cultures (Barnwell et al., 2014).

Working in a virtual team brings various challenges that may not be present in face-to-face teams. Virtual teams are more likely to face communication and coordination challenges that could result in work and time delays (Brahm & Kunze, 2012). Virtual project teams are also more vulnerable to *atmospheric* challenges such as a lack of team cohesion or trust (Brahm & Kunze, 2012). Because of these challenges, virtual teams often function as a virtual group with less cooperation, low interdependence, and no common goals instead of having close cooperation, high interdependence, and common goals (Barnwell et al., 2014; Brahm & Kunze, 2012).

Distributed teams with members located in various international locations face cultural differences that can affect the overall success of the team's performance

(Barnwell et al., 2014; Brahm & Kunze, 2012; Daim et al., 2012). Any language barriers and differences in cultural expectations can deeply affect a team's performance (Daim et al., 2012). Cultural differences can lead to unique communication issues that typically fall into three major categories: the functional disciplines of the members of the group, the organizational structure of the company, and the nationalities of the group members or the nation in which the groups exist (Brahm & Kunze, 2012; Daim et al., 2012).

Virtual team members generally report having low trust in teammates (Purvanova, 2014). Establishing and maintaining trust in online interactions is a recognizable problem in e-commerce already and is a significant challenge that faces virtual teams (Crisp & Jarvenpaa, 2015; Daim et al., 2012). Trust is the *glue* among virtual teams (Crisp & Jarvenpaa, 2015). Trust is increasingly critical in virtual teams because leadership cannot have face-to-face contact with the team members all the time (Daim et al., 2012). Using solely electronic modes of communication can inhibit participation and trust and can negatively affect the sense of mutual responsibility needed for teamwork (Crisp & Jarvenpaa, 2015).

Thorn (2012) interviewed 12 leaders from the International Monetary Fund, the World Bank, the Inter-American Development Bank, and the Inter-American Investment Corporation. These interviews provided understanding and information about the challenges, opportunities, and skills for making leadership better. The participants described several challenges and opportunities for the future of leadership: (a) coping with the speed of interrelated international events and crises, including the speed of technology; (b) managing and leading in the growing complexity of a global society; (c)



managing the instability and gap between world poverty and the rich; (d) becoming more adaptable and flexible in creating, accepting, and adapting to change; (e) maintaining a vision that incorporates people from different cultures; and (f) recognizing the decline of nation states (Thorn, 2012).

Different perspectives could be a major challenge among virtual teams (Barnwell et al., 2014). Project teams can include several individuals with varying viewpoints and these differences heighten when team members are from other countries where their cultural beliefs, interests, and standards are vastly different. Role conflict can be another challenge for virtual teams (Barnwell et al., 2014) because team members may have many roles and responsibilities in their home departments outside of their project duties.

Teams typically have clearly defined project leaders, but projects are dependent on a team's ability to make use of each other's knowledge and to work synchronously (Daim et al., 2012). This interdependency becomes more vital to teams working together virtually. Synchronicity and high complexity can cause unclear expectations around team members' roles, responsibilities, and goals (Daim et al., 2012). These unclear expectations can lead to weak leadership, competing lines of authority, and poor delegation within virtual project teams (Daim et al., 2012).

Conflict in time management and task priorities can affect both traditional and virtual teams' schedules. These issues can result in implicit power struggles, where a lack of leadership can lead to a power struggle within a team (Barnwell et al., 2014), which can cause leaders to overlook lower status team members' suggestions and input and cause the team and leadership to miss opportunities for creative and innovative ideas

(Barnwell et al., 2014). Zander et al. (2012) identified maintaining communication, establishing relationships, and managing conflict as the most direct challenges of leading virtual teams. Trust and communication are typical areas of focus of the literature on leading virtual teams. Trust and communication are complicated because virtual team members must rely on their leaders from a distance (Zander et al., 2012). Leaders of virtual teams must be efficient and skilled with asynchronous, synchronous, and face-to-face communication (Zander et al., 2012). Most communication takes place from a distance, and face-to-face opportunities take place infrequently and must be efficient.

Virtual team leaders face the challenge of being technologically knowledgeable across various types of media while also being approachable and available (Zander et al., 2012). Various team members located in different areas may have a variety of technology requirements to match to the team and their specific tasks (Zander et al., 2012). Time zones and cultural differences also affect communication and require leaders to be comfortable outside their location and qualities (Zander et al., 2012).

Much skepticism about the effectiveness of virtual teams versus traditional teams remains because the focus of current research is on advantages and disadvantages of virtual teams (Hoch & Kozlowski, 2014; Lohle & Terrell, 2014; Purvanova, 2014). The addition of technology magnifies the barriers of communicating in virtual teams across different cultures (Pinjani & Palvia, 2013). Team leaders should encourage open communication and brainstorming and avoid placing blame on team members (Pinjani & Palvia, 2013).

Yilmaz (2015) found that an association exists between having a negatively communicating collaborator in the group and higher group performance. Negative communication behaviors include challenging others' opinions or pushing collaborators to consider various opinions (Yilmaz, 2015). By being critical of the majority, a negatively communicating team member can have a minority influence, which can override the effects of groupthink (Yilmaz, 2015). Additionally, linguistic style matching is a stronger predictor of group performance for groups with a positively communicating collaborator compared with a negatively communicating one (Yilmaz, 2015).

Zimmermann et al. (2008) found that most task-oriented and relationship-oriented leadership behaviors could be more important in virtual settings than in face-to-face settings. The relative importance of certain leadership behaviors increases with the degree of separation of the virtual team (Zimmermann et al., 2008). Team members working in mostly virtual teams consider some task- and relationship-oriented leadership behaviors to be as critical in virtual environments as they are in face-to-face environments (Ortiz de Guinea, Webster, & Staples, 2012). Task-oriented leadership (e.g., clear definition of goals, tasks, and roles) is especially critical when teams are entirely virtual (Ortiz de Guinea, Webster, & Staples, 2012). Complex communication in virtual teams can be a disadvantage and confirms the need for efficacious strategies for leading virtual teams.

### **Transition and Summary**

Section 1 of this study included a description of the issues surrounding virtual team leadership. The purpose of Section 1 was to discuss the (a) background of study;

(b) problem statement; (c) purpose statement; (d) research question and interview questions; (e) conceptual framework; (f) operational definitions; (g) assumptions, limitations, and delimitations; (h) significance of the study; and (i) review of the academic literature.

The literature review consisted of an exploration of virtual team history, leadership practices, and the challenges facing leaders of virtual teams. Developing the literature review enabled me to understand the potential relevance of transformational leadership, which is the conceptual framework for addressing the research question. Carter, Armenakis, Feild, and Mossholder (2013) explained that leadership is critical because leaders are the major players in planning and catalyzing organizational activities and, most importantly, they are fundamental in implementing change and motivating people in an organization. Globally disbursed teams are a new norm in every business industry in the 21st century (Daim et al., 2012).

A complex business world requires project teams be fast and flexible and have the ability to work toward established objectives in a changing environment (Barnwell et al., 2014). Twenty-first century research on virtual and traditional settings in organizations indicates that although leadership behaviors can be almost equally as important in both settings, certain behaviors are more important when operating in virtual teams (Zimmermann et al., 2008). Even with the increase in virtual teams, some business leaders do not understand the implications of advanced technology for leadership practices (Ziek & Smulowitz, 2014).

Section 2 includes a discussion of the purpose statement and detailed descriptions of (a) the role of the researcher, (b) participants, (c) research method and design, (d) population and sampling, (e) ethical research, (f) data collection instruments, (g) data collection techniques, (h) data organization techniques, (i) data analysis, and (j) methods for assuring this study's reliability and validity.

## Section 2: The Project

In this section, I describe the research design plan for this study, which includes the (a) purpose statement, (b) role of the researcher, (c) participants, (d) research method, (e) research design, (f) population and sampling, (g) ethical research, (h) data collection instruments, (i) data collection technique, (j) data organization techniques, (k) data analysis, and (l) reliability and validity. The purpose of this section was to review the processes used to answer the research question for this qualitative case study.

### **Purpose Statement**

The purpose of this qualitative, explanatory case study was to explore strategies e-leaders use to lead virtual teams effectively. The target population for this study consisted of e-leaders with successful experience in leading virtual teams in a private virtual company headquartered in the United States. The implications for positive social change included the potential to provide other organizational e-leaders with effective and efficient strategies to train their employees in developing and leading successful virtual teams while also increasing competitive advantage and lowering environmental impacts. Employees working in virtual teams are telecommuting, which helps to reduce their carbon footprint and provides flexible schedules that suit each employee's lifestyle, producing more satisfied workers with less stress (Orhan, 2014; Raffaele & Connell, 2016).

### **Role of the Researcher**

The role of the researcher was to design and conduct the study according to all Walden University requirements, expectations, and guidelines. Central to qualitative

research is the concept of the researcher as the principal research instrument to obtain data from respondents (Birt, Scott, Cavers, Campbell, & Walter, 2016; Chenail, 2011). The researcher's facilitative interaction creates a context where respondents share data regarding their experiences (Birt et al., 2016; Chenail, 2011).

The researcher must remain unbiased and open with the participants, data, and topics to produce valid results (Birt et al., 2016; Ben-Ari & Enosh, 2016; Chenail, 2011). Bias and external influence can be present in a qualitative study because a researcher's experience can influence validity and reliability (Ben-Ari & Enosh, 2016). Having worked in virtual teams for approximately 4 years, I believe that I was able to collect relevant and objective data for this study. As the main data collection instrument for this study, I focused on reducing any bias that could affect the data collection and analysis of the findings. All qualitative researchers must work to remove individual feelings and principles when collecting and analyzing their data (Birt et al., 2016; Ben-Ari & Enosh, 2016). I kept my personal experiences and opinions separate from my research and aimed to remain objective in both gathering and analyzing data. I work at an international company that operates virtually in many departments and the study of virtual teams was of interest to me because they are part of my day-to-day life. This relevance was the basis for selecting this business topic as central to this doctoral study.

The word *ethics* represents the standards and ideals of a group or a community of people (Akhavan, Ramezan, & Moghaddam, 2013). I followed the protocols of the *Belmont Report* (1979) throughout the study to maintain ethical standards at all times during the research process. Participants' private information and responses were kept

confidential and they had the right to privacy. Maintaining privacy and confidentiality protects participants from any potential harm such as embarrassment, distress, or damage to their employment or financial standing (DuBois et al., 2012).

Qualitative researchers wishing to know about a particular subject from the insiders' perspectives tend to structure interviews with open-ended questions and to suggest the respondents provide expansive responses that allow the researcher to use follow-up questions (Ben-Ari & Enosh, 2016; Chenail, 2011). Using qualitative interviewing can bring forth challenges in terms of bias (Birt et al., 2016). I made every effort necessary to remove bias from data collection by ensuring that my interpretations of participants' responses were what participants intended to say and by conducting member checking.

Using member checking can confirm reflecting the intended meaning of responses from participants after a thorough review of all interview transcripts (Birt et al., 2016; Harper & Cole, 2012; Onwuegbuzie et al., 2012). I summarized the data and made available the interpretation of the data. I then provided this information to the participants to review and verify the accuracy in each step, including collection, and transcription. I felt this process would result in unbiased, truthful data and valid findings.

Using an explanatory case study design, I conducted semistructured interviews using Skype, the telephone, and collected secondary data from document reviews and tool review. Transformational leadership is an area of expertise that provides an informative view into the relationships among leaders and their followers, which is important when analyzing the strategies of successful e-leaders in virtual teams (Bass,



1990). Interviews are the best method for explanatory case studies because they lead to a completeness of the data while also providing multiple perspectives (Houghton, Casey, Shaw, & Murphy 2013). The identity of the company and participants will be anonymous because I followed and maintained ethical standards throughout all steps of the process.

I utilized an interview protocol including an introduction, study details, and possible follow-up questions, as recommended by Lewis (2015) and Yin (2014). This interview protocol included a detailed introduction and the reason for the interview. This introduction also included a background review of the participant. My protocol contained possible follow-up questions for each interview question. All questions were open ended. I collected, transcribed, and analyzed the data. I used NVivo software to assist in identifying high-level themes so I could better confirm the findings. I maintained confidentiality of all participants by replacing their names with pseudonyms and keeping all the data and findings in a password-protected file on my personal computer. I will destroy all physical and electronic data 5 years after completion of this study.

### **Participants**

The primary research question for this qualitative case study was: What strategies do e-leaders use to lead virtual teams effectively? To answer this overarching research question, the participants included team leaders from a virtual private company in the continental United States. The participants work in various locations, including Eastern

Standard Time, Central Standard Time, Mountain Standard Time, and Pacific Standard Time. The chief executive officer (CEO) and headquarters are located in Colorado.

Through direct outreach, I obtained permission from the CEO and director level staff to interview team leaders. The CEO and directors had openly available contact information through the company's website. I used this information to introduce the study and myself. I then requested contact details for their virtual team leaders. I had an initial telephone conversation to review the study. I obtained a confirmation of the company's participation via e-mail. The agreement for eligibility was that each participant would provide background so I could understand that individual's role and position in the team, as well as all qualifications and experiences relevant to virtual teams. To be eligible, each participant must have been working at the company for at least 1 year and have a minimum of 1 year in successfully leading a virtual team at this same organization.

Purposeful sampling was suitable because it is a nonrandom way to assure that a study's participants have successfully addressed the research question (Robinson, 2014). I used purposeful sampling to identify available participants as recommended by researchers Lewis (2015), Porte (2013), and Yin (2014). I reached data saturation upon completing all available participant interviews. If I had not achieved data saturation after the interviews, I would have continued the member checking process with the participants until I had reached data saturation with the all participants.

I only selected leaders who (a) work for the same virtual company, (b) have been working at the organization at least 1 year, and (c) have a minimum of 1 year in

successfully leading virtual teams at this organization as identified by their manager. Using these selection criteria, I ensured interview validity with knowledge and experience of virtual teams as suggested by Porte (2013), Robinson (2014), and Yin (2014). Unstructured emails and phone calls took place to establish relationships for this case study. These working relationships further developed by providing updates to all participants as needed, using member checking, and keeping participants aware and involved in the process of data collection.

A researcher can use a small sample size in a case study because case study researchers employ several types of evidence (Fusch & Ness, 2015; Porte, 2013; Yin, 2014). Using a single-case study model, I reviewed documentation, analyzed the tools used, and conducted semistructured interviews with the team leaders, as recommended by several experts (Fusch & Ness, 2015; Porte, 2013; Yin, 2014). I used a thematic data analysis technique to facilitate a deep understanding of the leadership strategies of these virtual teams as suggested by Porte (2013) and Yin (2014). Virtual teams and their leaders use available technologies for improving the performance within the virtual teams. Successful research depends on researchers' abilities to observe people, listen to them, think and feel with them, and talk with them rather than *at them* (Baker & Edwards, 2012; Ben-Ari & Enosh, 2016; Chenail, 2011).

### **Research Method and Design**

This section includes a discussion of the qualitative research method and the explanatory single-case study design. An emphasis on social justice is a main feature of qualitative research (Denzin & Lincoln, 2011). The researcher becomes the observer

within the world of study in qualitative research (Fujiura, 2015; Keutel, Michalik, & Richter, 2014; Stake, 1995). Case study research has a long, distinguished history throughout many disciplines (Keutel et al., 2014). Researchers can conduct a qualitative case study to illustrate a unique case that has unusual interest, in and of itself, and needs in-depth description and detail (Stake, 1995).

### **Research Method**

A qualitative research methodology was appropriate for this research because, according to Marshall and Rossman (2016), the purpose of a qualitative study is to explore and understand individuals or groups in their natural setting. By exploring a subject in its natural setting, as recommended by Marshall and Rossman (2016), I gained insights and discovered new concepts or concerns. The qualitative method was suitable for considering and identifying the strategies successful e-leaders utilize. Researchers use qualitative methods to obtain a deeper understanding of the lived experiences through the viewpoints of the participants directly (Fujiura, 2015; Lee & Wong, 2012; Yin, 2014). By using a qualitative approach, it is possible to understand important managerial implications from the data to identify successful leadership strategies (Lee & Wong, 2012).

Quantitative methodologies are appropriate when testing an objective theory using statistical quantifiable data (Marshall & Rossman, 2016; Yin, 2015). A mixed-methods research methodology is appropriate only when the researcher will be collecting complementary data to conduct parallel qualitative and quantitative analysis (Enosh & Ben-Ari, 2016; Lee & Wong, 2012; Yin, 2014). A quantitative, mixed-method

methodology was inappropriate because I was conducting an explanatory, single case study. The focus of this study was to identify and explore strategies e-leaders use to lead virtual teams effectively and, consequently, the phenomenon takes place in its real-life context.

### **Research Design**

The case study design approach is applicable when its foundation is in the constructivist paradigm, where truth is relative and understanding of the phenomenon is dependent on one's perspective (Yin, 2014). In case study research, subjectivity keeps its meaning, but does not reject objectivity (Yin, 2014). According to Yin (2014) and Lewis (2015), researchers should consider a case study design when the focus of the study is to answer *what*, *how*, and *why* questions, the researcher cannot manipulate the behavior of participants, contextual conditions are relevant to the phenomenon, or the boundaries are not clear between the phenomenon and the context. Using a case study design can provide an understanding of what happens in the real world (Verner & Abdullah, 2012; Yin 2014). For these reasons, I used the case study design approach for my study.

The virtual environment brings new elements to virtual teams, which in turn affects leaders' ability to guide the team effectively. Phenomenological research is suitable when trying to describe participants' lived experiences (Giorgi, 2012). The focus of ethnographic research is on lived human experiences and broad groups or cultures (Sangasubana, 2011). The phenomenological and ethnography design approaches were not appropriate for exploring the strategies of virtual team leaders. The case study was more appropriate because researchers can gather additional data to supplement the

interviews. The explanatory case study approach was most suitable because researchers trying to explain leadership must do so within the virtual setting to identify the successful strategies implemented and used by e-leaders (Lewis, 2015; Trotter, 2012; Yin 2014).

Using a qualitative case study can contribute to the knowledge of individual, group, organizational, social, political, or related phenomena (Yin, 2014). Case study researchers select in-depth, semistructured interviews to explain a phenomenon based on the results (Trotter, 2012, Yin, 2014). The participants were able to respond honestly and without limitations to the open-ended, semistructured interview questions.

Researchers use qualitative designs to explain and study issues and problems (Trotter, 2012). Data saturation is achieved when the data collection process reaches the point where there is no new information from data identifying new themes (Fusch & Ness, 2015; Morse, Lowery, & Steury, 2014). A researcher achieves data saturation when there is enough information to replicate the study when the ability to obtain additional new information has been attained, and when further coding is no longer feasible (Fusch & Ness, 2015; Morse et al., 2014, Porte, 2013). Achieving data saturation contributes to assuring the quality of research and validity (Fusch & Ness, 2015), which is especially critical when conducting interviews during data collection. Researchers achieve data saturation only when they obtain adequate information to replicate their study (Fusch & Ness, 2015; O'Reilly & Parker, 2012; Walker, 2012). Achieving data saturation through semistructured interviews is facilitated through using an interview protocol that contains the same main questions for all participants (Bernard,

2012). The depth of the data collected is the basis of data saturation (Fusch & Ness, 2015).

### **Population and Sampling**

The population for this case study was virtual team leaders within an organization located in four time zones of the United States. Purposeful sampling was suitable because it is a nonrandom way to be certain that a study's participants are capable of addressing the research and interview questions (Robinson, 2014). I used purposeful sampling to identify 10 potential participants as recommended by researchers Lewis (2015), Porte (2013), and Yin (2014). I reached data saturation upon completing seven interviews.

Participants' experiences working for a virtual organization provided the basis for their selection in this study. The participants held various internal positions but to be eligible, they must have successfully led a virtual team and met the sampling criteria. Per my sampling requirements, I only selected leaders who (a) worked for the same virtual company, (b) had been working at the organization at least a total of 1 year, and (c) had a minimum of 1 year in successfully leading a virtual team at this organization as identified by their manager. These selection criteria helped to ensure interview validity with knowledge and experience of virtual teams, as recommended by Robinson (2014), Porte (2013), and Yin (2014).

Leaders who work in a virtual environment must revise some aspects of leadership (Ruggieri et al., 2013). By learning about the best strategies for leading these teams, leaders of businesses and organizations can operate more efficiently and

successfully across all operations to solve common organizational problems that result from the increased use of virtual project teams in business. The participants for the study were team leaders from a virtual private company in the continental United States. Company management identified the employees who have successfully lead virtual teams and those with at least 1 year at the company were eligible participants.

The participant criteria required that the participants must actively use available technological tools to improve their team performance. The participants must have worked with various locations and time zones, including Eastern Standard Time, Central Standard Time, Mountain Standard Time, and Pacific Standard Time. Due to the geographically distributed participants, I used Skype and telephone calls to interview each participant with semistructured, open-ended interview questions.

A qualitative case study should demonstrate data saturation and can involve triangulation (Keutel et al., 2014). Methodological triangulation involves using more than one kind of data to study a phenomenon (Bekhet & Zauszniewski, 2012; Houghton et al., 2013). Using more than one type of data is beneficial for providing a confirmation of the findings, more comprehensive data, increased validity, and enhanced understanding of studied phenomena (Bekhet & Zauszniewski, 2012).

According to Yin (2014), semistructured, open-ended interviews can provide rich, more extensive data than survey instruments. Using a single-case study model, I reviewed documentation, reviewed tools, and conducted semistructured interviews with the team leaders. A qualitative case study with heavy detail and in-depth description can



illustrate a unique case that has unusual interest in and of itself (Morse et al., 2014; Stake, 1995).

A thematic data analysis technique will facilitate a deep understanding of the leadership strategies of these virtual teams (Yin, 2014). Data saturation indicates that the sample size is sufficient (Elo et al., 2014). Saturated data confirm replication in categories, which then confirms comprehensiveness (Elo et al., 2014; Fusch & Ness, 2015). However, data saturation is not complete if the data are difficult to group thematically to create concepts (Elo et al., 2014).

### **Ethical Research**

All researchers have an individual and collective responsibility to ensure ethical the practice of ethical studies (Vanclay, Baines, & Taylor, 2013). The application of ethics in a professional context often includes a written code, document, or agreement that stipulates morally acceptable behavior by individuals (Stacey & Stacey, 2012; Vanclay et al., 2013). The principles considered as standard for ethical research are (a) informed consent, (b) confidentiality, (c) avoiding harm, (d) cognizance of vulnerable groups, (e) the right to withdraw, (f) restricted use of data, (g) storage of data, and (h) avoiding conflicts of interest (Stacey & Stacey, 2012).

The American Psychological Association has ethical principles and a code of ethics to protect the confidentiality and security of participants. I followed the Walden University protocol to secure all of the data in this study. The Walden University protocol requires that data remain in a locked container for 5 years, after which I will destroy the data to protect the participants' confidentiality. Informed consent means

participants have enough information in advance to make an informed decision about whether they want to participate (Baines, Taylor, & Vanclay, 2013). Before participating in semistructured interviews, participants received an informed consent form with the approval from Walden University's Institutional Review Board (IRB) and each participant provided formal consent by stating "I consent" by email. The IRB approval number for this study is 11-22-16-0395759. Coding the data to prevented the disclosure of any of the participants' identifiable information and ensured confidentiality.

Participants were able withdraw at any time if they no longer wished to participate in the study by notifying me via email or phone call. I provided the informed consent form via e-mail. The consent form that each participant agreed to before the study included the option to withdraw at any time by submitting a written notice via email or by making a direct phone call to me. The Walden University's informed consent form included an option to and the process for withdrawing from the study at any time.

This study did not include incentives for participation. Professionals can find it difficult to resist the unconscious influence of incentives (Loewenstein, Sah, & Cain, 2012). Incentives can reduce the accuracy of results and produce a conflict of interest (Nosek, Spies, & Motyl, 2012).

### **Data Collection Instruments**

I was the primary data collection instrument for this explanatory single-case study model. I used an interview protocol to conduct semistructured interviews questions via Skype and telephone call. I recorded the responses as the second data collection instrument. To achieve triangulation, I reviewed documentation and technological tools

used. Using more than one data collection instrument supports the reliability of a single-case study model (Elo et al., 2014; Lewis, 2015; Yin, 2014).

The interview protocol (see Appendix A) guided each participant's interview. This protocol included an introduction, study details, principal, and possible follow up interview questions, as recommended by Lewis (2015). This interview protocol included a detailed introduction and the reason for our interview. This introduction also included a background review of the participant.

The following overarching research question was the basis for the interview questions: What strategies do e-leaders use to lead virtual teams effectively? Qualitative interviewing can entail challenges in terms of bias. Through using member checking, I worked to ensure my interpretations of participants' responses are accurate. A researcher can experience a disadvantage with Skype interviews due to technical and connection problems and, sometimes, it is difficult to notice full body language. Member checking involves an attempt to confirm the intended meaning of responses from participants during or after an interview (Elo et al., 2014; Onwuegbuzie et al., 2012; Stake, 1995). The participants will have the opportunity to access, review, and read the transcribed data and information collected throughout the research process to ensure the accuracy of the collected data.

The interview protocol and its follow-up questions helped to ensure data saturation (Fusch & Ness, 2015; Porte, 2013). By using methodological triangulation, and member checking, I was able to ensure credibility and accuracy of the data (Houghton et al., 2013; Morse et al., 2013; Porte, 2013).

### **Data Collection Technique**

After receiving approval from the Walden University's IRB, each potential participant received a formal notification regarding the study. The notification included details and explanations of the case study's purpose. Additionally, the notification included the consent form for each participant to respond and all principal questions for the semistructured interviews.

After I received consent from a participant, I worked with the participant to schedule an interview time. I asked participants to schedule a Skype interview. If they were not comfortable with a Skype interview, I suggested the telephone as a second option. Although using telephone interviews does not allow for the assessment of social cues or facial expression, the option was made available in an effort to make each participant comfortable (Morse, 2015). Every interview consisted of semistructured questions via electronic media. Semistructured interview questions establish the empirical basis of social research (Campbell, Quincy, Osserman, & Pedersen, 2013; Houghton et al., 2013). I used the interview protocol and the interview questions (see Appendix A) to guide the interview but allowed freedom for expansion (Morse, 2015; Rowley, 2012).

The advantage to conducting electronic interviews using Skype is that Skype offers more convenience for participants, who do not have to travel to the location of the interview and saves money in travel costs that would be necessary to complete face-to-face interviews (Morse, 2015). Additionally, Skype allows for some interpretation of body language that would not be possible in a telephone interview. Adversely, the

disadvantage to a Skype interview is the challenge of scheduling and accommodating different time zones between the participants and the researcher (Deakin & Wakefield, 2013; Janghorban, Roudsari, & Taghipour, 2014). Electronic interviews using Skype can also experience technical difficulties with connectivity and make developing a rapport difficult with some participants (Deakin & Wakefield, 2013; Janghorban et al., 2014).

I attempted to remediate these disadvantages by using transcript and member checking to validate the responses' intended meanings, as recommended by Elo et al. (2014) and Onwuegbuzie et al. (2012). I also used transcript checking by providing the transcribed interview data to the participants and asking them to provide additional information or to correct the transcript as they felt necessary. Member checking should take place immediately after transcription and before analysis to avoid challenges with recognizing and understanding responses (Houghton et al., 2013; Morse et al., 2015; Porte, 2013). Each participant had the opportunity to review the interview transcript and provide clarifications. Member checking can assure credibility and accuracy (Houghton et al., 2013, Morse, 2015). I requested an e-mail verification confirming the information provided in each participant's interview, which served as the documentation of approval by participants.

### **Data Organization Technique**

Recording an interview helps ensure the inclusion of all information (Nordstrom, 2015). As recommended by Qu & Dumay (2011) and Fusch and Ness (2015), I took electronic recordings of the interviews to permit the identification of common themes from participants' responses. Participants were notified of the recording in the consent

form they were required to review and consent to for participation. Additionally, I took detailed, descriptive notes in an online journal to accompany the recordings. This electronic journal was password-protected, and I replaced all identifying names with pseudonyms. For each interview, I used an audio recorder that connects to a computer for transcription. Using a recorder made transcription more efficient than manual typing (Nordstrom, 2015; Tessier, 2012). I tested the recorder for the interviews and for transcription in advance to avoid technical complications. Checking equipment to avoid complications maintains the reliability of the processes and procedures (Tessier, 2012).

After the interviews and all transcriptions were completed, I completed member checking for each transcript with each participant. The participants received a copy of their interview transcript, and they were able to make any changes they felt necessary. I then finalized the transcripts to include any changes before moving to data analysis. I imported all transcribed interview data in NVivo to assist in identifying high-level themes linked to my research question. Additionally, I imported the data from the memos and documentation in to NVivo to provide similarities or differences within the data collected in the interviews.

Five years after completion of the study, I will destroy all existing copies of the data, which will include the erasing and deletion of electronic data. Additionally, I will manually shred all hard copy data. The names of the participants will remain protected due to their replacement with pseudonyms. I will be the only individual aware of the names of the participants and the organization.

## **Data Analysis**

In a qualitative study, a researcher achieves rigor by assuring and demonstrating credibility, transferability, and confirmability (Houghton et al, 2013; Yin (2014). The sequential and logical process for data analysis will include planning, interviewing, transcribing, and analysis. The appropriate data analysis process for this qualitative case study was methodological triangulation. Using methodological triangulation can enhance the analysis and the interpretation of a researcher's findings and assist in supporting conclusions (Bekhet & Zauszniewski, 2012).

Methodological triangulation refers to obtaining multiple types of data in a study to compare and validate the conclusions and recommendations (Jick, 1979).

Triangulation of the interviews and secondary data was appropriate for this explanatory case study (Yin, 2014). Researchers utilizing several types of data can gain a better understanding of the different issues fundamental to a phenomenon (Bekhet & Zauszniewski, 2012). Methodological triangulation literature indicates that each type of data collection should take place independently from others (Bekhet & Zauszniewski, 2012; da Mota et al., 2012).

Using and analyzing more than one type of data serves as a validation process to ensure the data validity among the methods (Denzin, 2012; Jick, 1979). The use of multiple data collection sources provides a more convincing and accurate case study (Houghton et al., 2013). A researcher using methodological triangulation can explain their study at various levels and perspectives to ensure deep, rich data (Bekhet &

Zauszniewski, 2012; Denzin, 2012; Fusch & Ness, 2015; Houghton et al., 2013; O'Reilly & Parker, 2012).

This case study included data from semistructured interviews, tool review, and document review. After achieving data saturation in the interviews, I identified the key themes that aligned with the reviews and company documentation of processes and procedures. Thematic analysis led to a full examination of the virtual company to reach objective conclusions about its strategies for virtual leadership success.

I analyzed and summarized the (a) interview transcripts, (b) collected documentation, and (c) tool review data. Researchers need to code interview data for analysis (DeCuir-Gunby, Marshall, & McCulloch, 2011). Codes are labels for assigning a meaning to the raw descriptive data in a research study (DeCuir-Gunby et al., 2011). I used open coding to analyze the raw interview data and to provide data reduction and simplification. Using open coding delineates the concepts and allows for the identification and connection of concepts to support or contradict the conceptual theory (DeCuir-Gunby et al., 2011).

I provided a thorough thematic analysis of the emerging themes and their possible connections. Thematic analysis is a method to identify and analyze patterns and themes from the data (Vaismoradi, Turunen, & Bondas, 2013). Thematic analysis is suitable for examining the interview data containing participants' experiences and for documenting common issues and areas of interest (Vaismoradi et al., 2013). I used coding to assist in identifying themes with the assistance of NVivo.



The study involved coding and thematic analysis to answer the overarching research question. Methodological triangulation took place to incorporate all the data sources from tool review, interviews, and document review. The data analysis process consisted of the following steps to analyze the data by using content analysis, as recommended by da Mota Pedrosa et al. (2012). I recorded the interview data with a virtual recorder accompanied by personal notes in an online journal. I then uploaded the data and evaluated the data for relevant content. I used coding to organize the interview data and classify the results accordingly, as recommended by Houghton et al. (2013). The use of coding included categories aligned with the research problem and questions, purpose statement, and potentially, the conceptual framework. The next step involved the categorization of the data followed by thematic analysis to identify and analyze the themes and patterns from the data (Viasmoradi et al., 2013).

Employing content analysis, I then identified the emerging concepts within the existing literature to provide support for, or identify differences from, the conclusions from this case study. For the data analysis, I applied these same systematic techniques and completed this analysis. Completing these analysis steps assisted in assuring the objectivity of my case study.

### **Reliability and Validity**

In this heading, I discuss the methods for assuring the reliability and validity of my study. Researchers define reliability as demonstrating trustworthy content and rich and well-saturated data (Elo et al., 2014). Conversely, researchers define *validity* as the

establishment of trust by a researcher, participants, and readers in the study's findings and conclusions (Denzin, 2012; Petty, Thomson, & Stew, 2012).

### **Reliability**

I used member checking for assuring the dependability and credibility of my study's findings. Member checking serves to confirm the intended meaning of responses from participants after a thorough review of all interview transcripts (Onwuegbuzie et al., 2012). I used a transcript review by providing the transcribed interviews covering conclusions drawn and data collected to the participants so they could provide additional information or clarify and correct the data (Morse, 2015). During the data analysis phase, the methods, design, and procedures underwent careful consideration to assure both the validity and reliability of the findings. The focus was on major themes and comparing identifiable themes with the available peer-reviewed literature including expected findings from my conceptual framework of transformational leadership theory.

The study included the use of verifying the reliability of multiple data types, including interviews, document review, and tool review. I utilized thematic analysis, and NVivo to facilitate the identification of high-level themes. The reliability and validity within a case study directly relate to researchers' capability to echo reality with their data, analysis techniques, and conclusions (Elo et al., 2014). The means for enabling other researchers to determine the demonstrated external validity and objectivity reflect the trustworthiness of a qualitative study (Ali & Yusof, 2011). Reliability results from trustworthy content analysis results and on obtaining rich and well-saturated data (Elo et al., 2014). Assuring reliability and trust begins with thorough preparation prior to

conducting a study and providing detailed descriptions of processes for assuring care in data collection, analysis, and providing detailed reporting of the findings (Elo et al., 2014).

### **Validity**

In addition to demonstrating studies' reliability, validity is a critical concern for any qualitative researcher designing a study, analyzing results, and judging the quality of the study (Patton, 2002). Validity indicates whether the researcher has truly measured that which the researcher has committed to measure and the researcher's objectivity (Denzin, 2012). To assure credibility, I maintained a chain of evidence including all interview notes and transcription journals. In a qualitative study, to demonstrate credibility, researchers must validate the data to ensure correctness. I used methodological triangulation to strengthen this study's credibility by combining the different types of data as recommended by Bekhet & Zauszniewski (2012) and Patton (2002).

I validated all results by ensuring each participant reviewed the transcript from their interview for clarification, and by member checking. The process of providing the transcribed interviews and data back to the participants as suggested by Morse (2015) and Houghton et al. (2013) provides an opportunity to correct or provide additional data. As advised by Houghton et al. (2013), to avoid challenges with recognizing and understanding participants' responses and to increase validity, transcript review and member checking took place before data analysis. I defined the scope of the subject virtual company and used methodological triangulation to assure and demonstrate

credibility and the potential for transferability in this case study. Additionally, I clearly stated the boundaries of this study and used a purposeful sample. By using methodological triangulation, purposeful sampling, transcript review, and member checking, I was able to assure and demonstrate data saturation, credibility, and accuracy.

### **Transition and Summary**

The purpose of this qualitative, explanatory case study was to explore strategies leaders of successful virtual teams use to increase virtual team success rates. A successful private virtual company headquartered in Colorado was the focus of the qualitative case study. The participants included successful virtual team leaders from a private virtual company in the continental United States.

The participants work in various locations and time zones. Using a single-case study model, the study involved collecting data via a tool analysis, reviewing policies and documentation, and conducting semistructured interviews with the team leaders using purposeful sampling. I sent e-mails to potential participants to introduce the study. The potential participants provided formal consent via email after reviewing the provided informed consent form to participate. The interviews included seven open-ended questions with a focus on leadership strategies of effective virtual leaders. The data from the study will remain in a locked safe for 5 years.

I recorded each interview to assure the inclusion of all information and took detailed, descriptive notes in a password-protected online researcher journal to accompany the recordings. Using thematic analysis, as well as member checking and transcript review facilitated assuring the study's results were valid and reliable. Using

methodological triangulation assured the findings addressed the research question and indicated the strategies that successful virtual team leaders use.

Section 3 includes the findings and results of this doctoral study and the strategies used by successful virtual team leaders. Section 3 includes an explanation of the study's implications for positive social change and its application to professional research. The study closes with recommendations for future research, reflections of my experience in conducting this study, and my overall conclusions.

### Section 3: Application to Professional Practice and Implications for Change

Section 3 contains the overarching themes resulting from data collection and analyses. I present the findings and align the findings with key previous literature and the conceptual framework. Section 3 includes the following headings: (a) introduction, (b) presentation of findings, (c) application to professional practice, (d) implication for social change, (e) recommendations for actions, and (f) recommendations for further study. This section concludes with reflections, the summary, and my conclusions for the entire study.

#### **Introduction**

The purpose of this qualitative, explanatory case study was to explore strategies e-leaders use to lead virtual teams effectively. During the study, three main themes emerged that provide insights about strategies e-leaders can use to lead their virtual teams effectively: (a) focus on results-based performance, (b) communicate and collaborate using the right technology, and (c) invest in building and modeling the company culture. Virtual teams offer opportunities for companies to benefit from globalization, reduce real estate and travel costs, and increase productivity within shorter timeframes (Barnwell et al., 2014; Lilian, 2014). Recommendations could provide potential strategies for e-leaders of similar organizations to lead their virtual teams effectively.

#### **Presentation of the Findings**

The purpose of this explanatory, case study was to answer the primary research question: What strategies do e-leaders use to lead virtual teams effectively? To answer the research question, I conducted a single case study on a virtual company. The data

collection included semistructured interviews with seven successful e-leaders with at least 1 year of experience managing virtual teams, document review, and a technological tool review and analysis.

### **Theme 1: Focus on Results by Establishing Clear Performance Metrics**

Five (71%) participants acknowledged that they focus on results and metrics for establishing performance standards. Interviewee VTL04 stated her team tracks performance success based on productivity: “We have different metrics in place for performance measurement and we track performance more on productivity.” Interviewee VTL06 commented, “As a team, we have very extensive metrics in place.”

The company chose to keep most specific performance metrics confidential, but did provide high-level examples for two of the teams: Marketing/PR and Client Services (see Table 2). Table 2 contains examples of these performance metrics leadership uses for these two select company teams. Leadership provides quick reference documentation to outline expectations for actions (Onboarding documentation). Company leadership uses performance metrics to obtain insights into the productivity of each team. Measuring productivity is critical for these virtual team leaders. Leaders can also better understand staffing needs based on the findings. Therefore, virtual team leaders are able to produce metrics not only for the team as a whole, but also for each individual. By producing metrics for the team and every specific member, each individual can understand his or her contribution to the team’s performance.

Table 2

*Examples of Team and Individual Performance Metrics*

Team	Metric
Marketing/PR	Website traffic Conversion Page views
Client Services	Number of calls accepted Number of chats accepted Team answer rate Individual answer rate

Collaboration and resourcing are two challenges that cause project planning to be difficult for leaders in virtual teams (Pinar et al., 2014). Collaboration and resourcing challenges intensify because virtual team members are in varying locations and the resulting inconvenience of monitoring performance electronically (Nixon et al., 2012; Pinar et al., 2014). Interviewee VTL07 believed that with remote work, leaders could have concerns regarding managing the team effectively and ensuring productivity of the team members. Interviewee VTL07 stated, “We try to create very clear guidelines of what performance metrics people need to be hitting.” All seven (100%) participants expressed that in previous traditional workplaces, they had experienced resistance to remote work because of productivity concerns.

There was consensus among all participants that creating tangible metrics (e.g., as in Table 2) and evaluating performance based on results enabled the remote environment to be just as productive, if not more, than a traditional office. As noted from my review of onboarding documentation, tangible performance metrics and results-based expectations catalyze increasing productivity and collaboration by combining trust and



accountability. Nixon et al. (2012) explained that transformational leadership is critical because leaders oversee organizational and team performance, making leadership fundamental in implementing change, and motivating their team members. Successful teams need balance, coordination, and synergy for achieving successful outcomes (Sohmen, 2013). Interviewee VTL07 revealed

We give people a lot of leeway, often trust, but we also give them responsibility and accountability. I think nurturing a relationship that yields that trust creates a nice work environment where people intrinsically want to perform and are forthcoming about what issues they are facing if they're not able to. That helps with keeping people motivated to performing.

Transformational leaders are able to succeed with virtual teams because they develop metrics and strategies for team members to follow that focus on influence, intellectual motivation, personalized consideration, and inspiration (López-Dominguez et al., 2013; Moynihan et al., 2012; Nijstad et al., 2014). Successful virtual leaders are able to achieve balance among enforcing performance standards, communicating business activities, and developing strong one-on-one relationships that allows virtual leaders to have more virtual team success (Nixon et al., 2012; Pinar et al., 2014). A clear performance expectation nurtures a trusting environment for employees, which benefits the company by creating more motivated workers.

## **Theme 2: Enable Communications and Collaborations through providing the Right Technologies**

The second emergent theme involved communication needs and the tools to accommodate this communication. Some form of the word *communicate* (i.e., *communication, communicating*) was referenced 56 times across all seven (100%) participants' interview responses. Five (71%) participants believed that communication is a soft leadership skill and for leaders to successfully communicate and support their teams, they need the right combination of technological tools. Technological tools and virtual communication are constantly evolving, continuously challenging e-leaders to balance both the strategic and technological information (Gilstrap & Hendershot, 2015). Table 3 contains the analysis and frequencies of the mentions and the description of each technological tool the organization made available to the e-leaders and their team members.

Table 3

### *Tool and Platform Review and Analysis*

Tool/Platform and Description	# of Participant References
Google™ Docs/ Sheets/Calendar: Free Web-based application in which documents and spreadsheets can be created, edited and stored online; Documents only, no voice, video, or messaging	2
Sococo™: Online workplace that adds the mimics co-location for distributed teams; Voice, video, and messaging	11
Slack™: Provides real-time messaging, archiving and search; Messaging, no voice or video	18

Yammer™: Free enterprise social networking service used for private communication within organizations; Messaging, no voice, no video	9
Join.me™: Free online tool that offers screen sharing and online meetings; Voice, video, and messaging	2
Trello™: A collaboration tool that organizes your projects into boards; no voice, no video, no messaging	2

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Using only electronic modes of communication can inhibit participation and trust and can negatively affect the sense of mutual responsibility needed for teamwork (Crisp & Jarvenpaa, 2015). All seven (100%) e-leaders expressed that success requires setting communication expectations for their teams and using each tool for varying communication types based on specific situations. Leaders of virtual teams must be efficient and skilled with asynchronous, synchronous, and face-to-face communications (Zander et al., 2012).

Each of the seven (100%) respondents stated that all employees have the option to use the complete range of tools available and most team members set up accounts. Sococo and Join.me are the only required tools. Sococo is integrated with Slack. VTL02 commented, “We do require the use of Sococo because that is our virtual office space.” Sococo serves as a virtual office, allowing all leaders and team members to see when others are available and to speak using voice.

As noted from my review of onboarding documentation, leadership identifies behavior expectations and these expectations vary across teams. Leadership uses Join.me for large meetings and when recordings are desirable. Other tools are optional, such as

Yammer and Trello. Yammer serves as a more social site for relationship building outside of work related conversation. VTL03 added,

Everybody is invited to Yammer, I would say 99.5% of people take the invitation. I would say probably 65, maybe 70% of people check into Yammer on some kind of a regular basis. It is a requirement to have the account, but in terms of how you use it, we do not really have specific requirements company-wide unless your specific team does.

Five (71%) interviewees expressed that the number of tools and platforms can be overwhelming and that leaders must set expectations with their teams for using communication tools and time zone preferences. VTL04 commented, “It takes a little getting used to for sure. It seems a little overwhelming at first because you do have all these different avenues to keep up with.” After completing the interviews, all participants stated that they set the internal communication requirements for their teams, including the necessary tools for use and meeting schedules. Leadership outlines the external communication standards expected for use with clients in the onboarding documentation. Beyond these minimal requirements, team members can participate to the level they are comfortable. Participant VTL04 revealed,

I think probably the biggest thing is just making sure that everyone is super proactive with their communication and creating an environment that indicates, especially starting with the senior people, that it really is okay to be very proactive, and not only okay but also it is expected and it is necessary for success here.

Charlier, Stewart, Greco, and Reeves (2016) stated that the quality and quantity of communication plays a vital role in the development of team members' perceptions and subsequent attributions of leadership behavior. It is the e-leaders' responsibility to guide and model the expectations to the team. A safe communication climate within a virtual team supports overcoming the difficulties related to virtual interaction (Gibson, Huang, Kirkman, & Shapiro, 2014). Onboarding documentation outlines expectations for new employees in their communication roles. In support of these findings, Li et al. (2012) suggested that e-leaders with transformational leadership characteristics attempt to encourage their followers' preferred behavior. Interviewee VTL03 stated:

I am not able to walk by somebody's office and see them looking stressed or overwhelmed or super happy or distracted or any of those things, so getting people on the same page of understanding how important it is to communicate everything. We call it over-communicating, but really in our environment there is no such thing.

Virtual teams are more likely than nonvirtual teams to face communication and coordination challenges that could result in work and time delays (Brahm & Kunze, 2012). Correspondingly, transformational leaders improve team solidity and shared understanding, facilitate the open communication and perspective across project teams, and stress the development of follower self-management skills (Aga, Nooderhaven, & Vallejo, 2016; Bass, 1990; Bogler et al., 2013; Kahai et al., 2013; Li et al., 2012; López-Dominguez et al., 2013; Moynihan et al., 2012; Nijstad et al., 2014; Veiseh et al., 2014).

All seven (100%) participants expressed that the best strategy for maintaining healthy, trusting teams was to communicate frequently and using the appropriate technologies.

### **Theme 3: Invest in Building and Maintaining a Strong Company Culture**

The third emergent theme is the extreme importance of investing in building and maintaining the desired company culture. In total, the seven participants mentioned the term *culture* 33 times. Four (57%) interviewees expressed that leadership plays an important role in effecting organizational culture and that it is critical for any business to saturate all levels of the company with a consistent company culture. Interviewee VTL04 summarized

I feel like our culture can be looked at in a couple of different ways. I feel like one, it is intentional and programmed, in terms of events or tools or things that you consciously do to engage and connect with people and make them feel like they're a part of something. Then there is a culture that I think is actually, not to sound too cosmic, but I think of it almost as like the soul of the company, and it is how we get work done.

Our culture is in how we interact with one another and it very much starts from the top. In our case, it is from our founder and CEO. The things that she values are things like integrity and honesty and being fair. She built the company with those certain traits in mind, it is how she wanted to do business and she has built this team around her. It is how we operate with one another and with our external clients. I think that does a lot to feed into the culture, which is very much woven into the company.

All interviewees claimed that these types of engagement activities help to build culture. All participants provided examples of engagement opportunities, including team trivia and wellness activities such as desk yoga. Interviewee VTL07 commented that one learns more about someone in 15 minutes of play than from a whole week working together. The company culture provides numerous engagement opportunities and regular communication. There is a top-down approach through leadership to solidify and drive the company culture consistently. VTL05 revealed,

As much as I make an effort to be sure my team feels connected to what we are doing and to the overall mission of the company, it is equally as important that I feel connected to the other directors and my colleagues, and to make sure that I am still connected to the overall mission of the company.

Furthermore, all participants expressed their devotion to the mission of the company and that the mission drives the culture. During the hiring process, leadership focuses on finding people to join the company who are passionate about this mission. Interviewee VTL04 commented, “We are more interested in the greater good than individual success for the most part.” Correspondingly, a transformational leader attempts to inspire followers to subjugate their self-interests for a shared purpose (Li et al., 2012).

After hiring, leadership is responsible for continuing to support the culture and to model this behavior for their teams. Similarly, transformational leadership occurs when leaders (a) expand and uplift the interests of their staff, (b) encourage mindfulness and acceptance of the organizational or team mission, and (c) encourage the focus to be on

the good of the whole (Bass, 1990). This third theme directly aligns with the conceptual framework of this study because all participants focused on their need as leaders to inspire meeting the mission and concentrate on the *big-picture* effects of their team's work. Considering this description, participants identified characteristics and strategies in their leadership roles that transformational leaders reflect.

A transformational leader affects followers by changing the followers' focus to team goals rather than individual interests and by motivating employees to achieve higher order needs (Li et al., 2012). All participants stated that success as e-leaders occurs because of their ability to motivate and develop new ways to improve team performance, which directly aligns with transformational leadership qualities (Bogler et al., 2013; Kahai et al., 2013; Li et al., 2012; Moynihan et al., 2012; Nijstad et al., 2014). Transformational leadership includes developing teams' goals and identity, personal relationships, and reinforcing the importance of attaining goals through shared reward and focus on higher needs (Bass, 1990; Bogler et al., 2013; Kahai et al., 2013; López-Dominguez et al., 2013; Moynihan et al., 2012; Nijstad et al., 2014; Veisoh et al., 2014).

### **Application to Professional Practice**

The findings from this study are potentially applicable to professional practice by providing strategies for organizations and their leadership to use for leading virtual teams effectively. By learning about successful strategies for leading virtual teams, business and organizational leaders can operate more efficiently and successfully to solve common organizational problems that result from the increased use of virtual project teams in business.



Organizational leaders could use the conclusions from this study to enhance their understanding of effective ways leaders use to lead virtual teams, such as the development of performance metrics and processes for increasing virtual team members' engagement. Potential resources for leaders to use when implementing and using virtual teams within their organization are identifiable in this study. There are implications for professional practice for businesses employing virtual teams, such as providing potential pathways for addressing challenges and reducing project failure rates.

This study's findings align with the findings from current literature on leadership strategies for increasing virtual teams' effectiveness in improving project success rates. For example, leaders must explore new solutions to meet their customers' needs that evolve constantly due to globalization (Lilian, 2014). Using virtual teams enables international organizations' leaders to achieve competitive advantages through downsizing their number of physical locations, subcontracting, forming joint ventures, creating strategic alliances, and utilizing other collaborative and network-based options (Gilson et al., 2015; Lilian, 2014).

### **Implications for Social Change**

The implications for positive social change include the potential to provide other organizational e-leaders with effective and efficient strategies to train their employees in developing and leading successful virtual teams while also increasing competitive advantage and lowering environmental impacts. Benefits include more employees working from remote locations and a reduction of requirements and costs for office space and facilities (Gilstrap & Hendershot, 2015; Lilian, 2014). A reduction in physical office

space could lower the environmental effects that organizations have worldwide (Lilian, 2014).

Successful virtual teams can provide both economic and social benefits, such as savings in real estate and travel costs, and the opportunity to employ workers all over the world located in any time zone (Verburg, Bosch-Sijtsema, & Vartiainen, 2013).

Employees working in virtual teams are telecommuting, which reduces their carbon footprint and provides flexible schedules that suit each employee's lifestyle, producing more satisfied workers with less stress (Orhan, 2014; Raffaele & Connell, 2016).

Telework enables firms to lower direct and indirect green gashouse emissions by using fewer resources at worksites by further reducing carbon dioxide (CO<sub>2</sub>) through traveling fewer miles to work (Burrell, Barnard-Zaffino, & Ulomi, 2014).

Caulfield (2015) determined that in some cities, telecommuting reduces CO<sub>2</sub> emissions up to 21%. Multiple industries can achieve costs savings and efficiencies that could increase their services for befitting the global population (Gantz, Minton, & Toncheva, 2012; Gilstrap & Hendershot, 2015). For example, healthcare organizations can provide efficient services to rural areas and universities can provide higher quality e-learning to areas of the world lacking proper education systems (Gantz, Minton, & Toncheva, 2012).

E-leaders possessing an understanding of strategies for effectively leading their teams may provide benefits to their organizations. More employees could work from remote locations and could produce reduction of requirements for office space and facilities, saving money on travel and contributing less to pollution levels (Gilstrap &

Hendershot, 2015; Lilian, 2014) International organizations can reduce their global effects on the environment by reducing their requirements for physical assets (Lilian, 2014). Virtual teams bring more flexibility to the employee and the employer.

Organizations using virtual teams can recruit talented employees from all over the world. This flexibility can offer more, and more meaningful work to the workers living in remote locations with limited access to job opportunities.

### **Recommendations for Action**

The recommendations for action are that e-leaders review and determine the relevance and use of the identified strategies' potential for creating virtual teams that are more effective and successful. These strategies include: (a) focusing on results-based performance metrics, (b) communicating and collaborating using the right technologies, and (c) investing in building and modeling the company culture. Roughly, 20-30 million Americans work remotely at least 1 day each week (Charlier, Stewart, Greco, & Reeves, 2016). Even with the increase in the number of virtual teams and remote workers, some organizational leaders do not entirely understand the effect advanced technology has on leadership (Ziek & Smulowitz, 2014). E-leaders should identify metrics and use results-driven performance measurements. Businesses and organizations utilizing virtual teams should invest in resources for creating a culture of engagement and communication that starts with the teams' leadership. Additionally, companies using virtual teams should engage their e-leaders in the hiring process for their team members to ensure consistent expectations and messaging.

I will present the data from the study to the virtual company that was the focus of this case study. Furthermore, I will publish my paper in ProQuest and continue to research this subject in the literature. Businesses currently using or planning to use virtual teams can use the findings from this study to help develop e-leadership training. E-leaders could review and use the findings of this study to develop tangible strategies for e-leaders to overcome challenges and lead their teams effectively to remain competitive and profitable.

### **Recommendations for Further Research**

Researching the strategies e-leaders use to lead virtual teams effectively led to the discovery of three themes that future researchers should explore in more detail. A single, virtual company in the United States was the focus of this study. Focusing on the following themes in future studies would be useful: (a) specific processes for creating team performance metrics, (b) a quantitative study on the effectiveness of different communication tools and platforms, (c) a qualitative study on specific processes virtual teams use for increasing engagement and creating a consistent culture, and (d) a quantitative study on the effectiveness of each strategy for increasing virtual team productivity.

I recommend future researchers use the themes from this study to develop and test a strategy to identify performance metrics for virtual teams. Virtual leaders face more challenges in assessing their team's performance. Researchers should use a qualitative methodology to identify and explore performance indicators for use in virtual teams.

A single virtual company that does not have any physical office locations was the focus of this case study. Future researchers should focus on strategies relevant to hybrid companies that use both physical office locations and remote workers. Future researchers should conduct a qualitative study on strategies for leaders with teams that are both virtual and co-located in an office. Future researchers should also explore the effectiveness of new, innovative technologies used by these virtual teams as the technologies become available.

One limitation for this qualitative research design study was that the participants were members of the same virtual company. The participants' responses could have resulted in biased answers in hopes of being certain the company appears successful and efficient. Therefore, future researchers should use a qualitative study to explore the strategies used by a larger sample of e-leaders from varying companies to encourage verification of the transferability of my findings, conclusions, and recommendations.

### **Reflections**

As I reach the end of this research study, I find myself both tired and relieved. I knew when I started the program that I was interested in virtual teams. This fact made the research process less frustrating, as I did not have to search for a place to start. After completing the literature review and proposal process, I concluded that I did not see sufficient discussion of leadership in virtual teams related to specific strategies and skills a leader could use for more efficient, successful virtual teams. This discovery made me confident in my topic and the derivative research question for this study.

I felt optimistic and positive throughout most of the research process and found the participant interviews to be the boost I needed to complete the study. I experienced enthusiastic and passionate conversations with the participants. They provided significant amounts of insightful and revealing information for leading effective virtual teams. I was surprised to find very consistent feedback and responses among the respondents.

Each interviewee mentioned some of the most expected topics, such as the need for consistent, thorough communication. Responses from all participants support each of the three overarching themes. Every interviewee mentioned how critical hiring the right people is and how to structure an onboarding process when a new employee joins the company and their teams. Common challenges I noted included the need to focus on time worked on a task instead of productivity. Furthermore, all participants expressed the importance of developing and deploying performance metrics that help reward and provide recognition for team members.

### **Study Conclusions**

Successful e-leaders helped to produce the results of this research through sharing their insights and expertise regarding strategies for effective virtual team leadership. Data analyses revealed three principal themes that provide e-leaders with strategies for catalyzing their teams' performance: (a) focusing on results-based metrics, (b) communicating and collaborating using the right technologies, and (c) investing in building and modeling the company culture. Leaders' understanding of the strategies

they use for managing virtual teams is essential for creating more efficient, successful teams.

The findings from this study exhibit that when facing challenges, e-leaders improved team performance when they applied the identified strategies. Several researchers have shown that appropriate behavior by team leaders plays a crucial role in team success (Aga et al., 2016). The findings could help business leaders and e- team leaders understand and implement strategies to lead virtual teams effectively and improve the success rates of virtual teams. After determining the strategies' potential relevance to their organizations, business leaders can incorporate the strategies within their virtual teams and train their e-leaders on how to implement these strategies. As a result, deploying these strategies could reduce project failure rates of active and future virtual teams while increasing virtual teams' efficiencies for higher profitability.

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## Appendix A: Interview Protocol and Questions

- I. Introductions:
  - a. Names, background, problem and purpose statements
- II. Consent Form:
  - a. Review consent form and signature
  - b. Answer questions and concerns of participant
  - c. Provide copy of consent form to participant
- III. Recording
  - a. Remind participant the interview is recorded as stated in consent form
  - b. Turn on recording device
- IV. Begin Interview:
  - a. Introduce participant(s) with pseudonym/coded identification
  - b. State the date and time
  - c. Begin with question #1
  - d. Follow up with additional questions.
- V. Closing:
  - a. Review next steps with participant:
    - i. Transcript review
    - ii. Member checking
  - b. Thank the participant for their time and participation in the study
  - c. Confirm contact details for participant for follow up questions and concerns

VI. End protocol.

#### Interview Questions

1. As a virtual team leader, describe the major leadership challenges you face that are different from leading traditional teams.
2. What barriers have you faced when leading a virtual team?
3. What do you do as an e-leader to overcome these barriers?
4. What do you do to increase members' strengths within your virtual teams?
5. What strategies did you use to address risk factors that could affect the success of your virtual team?
6. What strategies have worked best to motivate your virtual teams?
7. What else could you share that may be applicable to the study that may not have been included in this interview?

## Appendix B: Invitation E-mail

Dear \_\_\_\_\_,

As a professional member or leader of a virtual team, you are being asked to participate in a doctoral case study regarding strategies for leading successful virtual teams. The purpose of this case study is to research the strategies used by successfully virtual teams

If you agree to participate in this study, you will be asked to participate in a semistructured interview that takes no longer than 2 hours to complete, but extra time will be allowed as needed for responding to the interview questions. Your participation in the doctoral study is strictly voluntary.

Any information that is provided will be kept confidential.

Thank you for your consideration.

Sincerely,

Catherine M. Freeman

Walden University

## Appendix C: Elsevier License

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